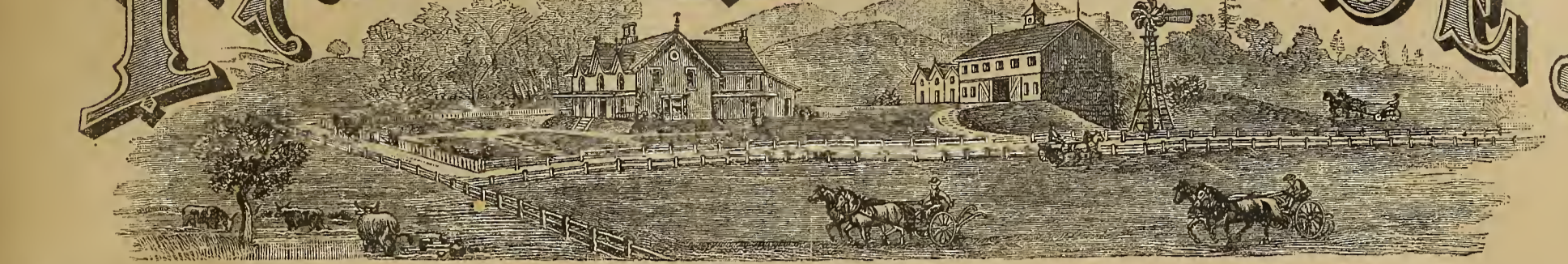


FARM & FIRESIDE



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Current Comment.

REFERRING to the effects of the tariff legislation of the last congress, the president says:

"A brief examination of the statistics of the treasury and a general glance at the state of business throughout the country will, I think, satisfy any impartial inquirer that its results have disappointed the evil prophecies of its opponents, and in a large measure realized the hopeful predictions of its friends. Rarely, if ever before in the history of the country, has there been a time when the proceeds of one day's labor or the product of one farmed acre would purchase so large an amount of those things that enter into the living of the masses of the people."

After presenting the statistics of our exports and imports, which show that our foreign commerce in the first year under the McKinley law was over one hundred million dollars greater than in any previous year of our history, the president says:

"There is certainly nothing in the condition of trade, foreign or domestic, there is certainly nothing in the condition of our people of any class to suggest that the existing tariff and revenue legislation bears oppressively upon the people or retards the commercial development of the nation. It may be argued that our condition would be better if our tariff legislation were upon a free trade basis, but it cannot be denied that all the conditions of prosperity and general contentment are present in a larger degree than ever before in our history, and that too, just when it was prophesied they would be in the worst state. Agitation for radical changes in tariff and financial legislation cannot help, but may seriously impede business, to the prosperity of which some degree of stability in legislation is essential. I think these are conclusive evidences that the new tariff has created several great industries, which will, within a few years, give employment to several hundred thousand American workmen and women. In view of the somewhat over-crowded condition of the labor market of the United States, every patriotic citizen should rejoice at such a result."

THE sixth annual report of the commissioner of labor of the United States contains a comprehensive statement of the results of an investigation, provided for by act of congress, June, 1889, into the cost of producing iron and steel, and the materials of which it is made, in the United States and Europe, and the earnings, efficiency and cost of living of the men employed in such production.

The three great iron and steel producing

countries are Great Britain, the United States and Germany. A quarter of a century ago Great Britain was so far ahead that she had almost undisputed possession of the world's markets. Today the United States produces nearly one third of the world's production of iron and steel. Her progress has been wonderful. She will soon pass Great Britain and leave her far behind.

The statistics gathered from hundreds of establishments and thousands of workmen in the United States and Europe, show that the cost of production of iron and steel is higher in the former than in the latter. They also show that the efficiency of the American workmen is greater than that of the European.

The tabulated statements that relate to the income and condition of families and the cost of living, fill nearly eight hundred pages of the report. The investigations were full and complete, and the report gives valuable and interesting information about the condition of the wage earners engaged in the iron and steel industries. The following is a summary of contrasted family income and expenditure:

| Nationality of husband. | Families. | | Expenditure per family for— | | | | Income per family from— | | Balance per family. | | | | |
|-------------------------|-----------|---------------|-----------------------------|---------|-----------------|---------------|-------------------------|--------------|---------------------|----------|----------|----------|---------|
| | Total. | Average size. | Rent. | Food. | Other purposes. | All purposes. | Husband. | All sources. | Families. | Average. | Deficit. | Average. | |
| <i>United States</i> | | | | | | | | | | | | | |
| American..... | 1,294 | 4.8 | 236 | \$71.43 | \$220.57 | \$244.32 | \$522.29 | \$520.43 | \$583.68 | 810 | \$127.55 | 469 | \$50.91 |
| Anstrian..... | 6 | 5.0 | 1 | 61.60 | 213.34 | 202.32 | 466.99 | 445.79 | 457.79 | 3 | 72.10 | 3 | 90.50 |
| Belgian..... | 2 | 5.5 | ..... | 46.50 | 190.18 | 129.75 | 366.43 | 392.56 | 437.56 | 2 | 71.13 | ..... | ..... |
| Bohemian..... | 11 | 4.6 | 4 | 56.57 | 233.88 | 243.21 | 513.09 | 485.04 | 525.04 | 8 | 53.35 | 3 | 98.45 |
| Canadian..... | 7 | 4.9 | ..... | 85.71 | 309.67 | 323.19 | 718.57 | 679.15 | 752.01 | 4 | 118.75 | 3 | 80.31 |
| Danish..... | 4 | 4.0 | 3 | 84.00 | 198.84 | 162.95 | 382.79 | 448.14 | 457.89 | 4 | 75.10 | ..... | ..... |
| English..... | 238 | 5.1 | 49 | 75.62 | 256.63 | 260.03 | 575.33 | 584.17 | 636.86 | 143 | 145.57 | 88 | 70.40 |
| French..... | 24 | 4.8 | 5 | 63.89 | 232.02 | 214.34 | 496.93 | 463.77 | 563.82 | 18 | 94.11 | 5 | 17.77 |
| Fr. Canad..... | 10 | 6.7 | ..... | 45.80 | 301.39 | 197.81 | 545.00 | 370.18 | 623.28 | 6 | 154.98 | 4 | 36.77 |
| German..... | 276 | 5.0 | 106 | 83.31 | 246.62 | 245.79 | 542.52 | 569.57 | 635.30 | 192 | 165.37 | 77 | 79.79 |
| Hungarian..... | 13 | 6.4 | 2 | 67.09 | 205.29 | 179.05 | 441.11 | 415.60 | 580.03 | 11 | 166.09 | 1 | 20.94 |
| Irish..... | 385 | 5.5 | 95 | 80.70 | 290.68 | 280.21 | 631.89 | 551.48 | 695.90 | 234 | 148.53 | 150 | 67.41 |
| Italian..... | 9 | 4.3 | 1 | 71.13 | 215.70 | 175.62 | 454.55 | 535.76 | 552.42 | 7 | 131.15 | 2 | 18.60 |
| Norwegian..... | 1 | 4.0 | ..... | 90.00 | 334.80 | 163.80 | 588.60 | 620.00 | 620.00 | 1 | 31.40 | ..... | ..... |
| Polish..... | 21 | 5.2 | 2 | 72.63 | 194.79 | 175.53 | 436.04 | 496.10 | 534.38 | 17 | 197.51 | 4 | 60.59 |
| Scotch..... | 62 | 5.9 | 11 | 74.22 | 305.18 | 300.62 | 666.85 | 572.05 | 740.88 | 45 | 125.86 | 13 | 82.59 |
| Swedish..... | 8 | 4.8 | 2 | 63.83 | 211.27 | 169.25 | 428.39 | 388.80 | 423.80 | 5 | 27.14 | 3 | 57.47 |
| Swiss..... | 8 | 6.0 | ..... | 43.63 | 147.64 | 153.12 | 314.39 | 327.63 | 327.63 | 2 | 4.20 | 6 | 23.74 |
| Welsh..... | 111 | 5.4 | 23 | 85.68 | 302.68 | 331.51 | 702.12 | 614.86 | 769.46 | 68 | 162.73 | 38 | 94.49 |
| Total..... | 2,490 | 5.0 | 540 | 74.58 | 243.65 | 254.50 | 555.81 | 534.53 | 622.14 | 1,580 | 137.87 | 869 | 60.59 |
| <i>Europe.</i> | | | | | | | | | | | | | |
| Belgian..... | 118 | 5.7 | 7 | 32.46 | 175.65 | 163.37 | 369.28 | 241.06 | 389.26 | 63 | 74.28 | 55 | 42.24 |
| English..... | 293 | 5.1 | 7 | 50.20 | 224.81 | 187.12 | 460.93 | 416.92 | 496.75 | 179 | 62.07 | 26 | 23.67 |
| French..... | 22 | 5.0 | ..... | 29.65 | 199.06 | 151.45 | 380.16 | 307.55 | 432.18 | 16 | 83.56 | 6 | 32.11 |
| German..... | 66 | 6.3 | 13 | 29.60 | 171.64 | 149.15 | 344.11 | 253.51 | 345.03 | 30 | 41.89 | 36 | 33.22 |
| Irish..... | 38 | 4.6 | ..... | 45.24 | 214.79 | 168.00 | 428.03 | 355.14 | 457.46 | 26 | 45.85 | 3 | 24.69 |
| Italian..... | 1 | 9.0 | ..... | 47.45 | 324.52 | 100.80 | 472.77 | 202.45 | 504.18 | 1 | 31.41 | ..... | ..... |
| Polish..... | 38 | 5.4 | ..... | 11.79 | 136.87 | 114.02 | 262.38 | 235.67 | 256.80 | 14 | 11.88 | 23 | 16.45 |
| Scotch..... | 114 | 5.6 | 1 | 50.30 | 335.25 | 215.36 | 600.47 | 533.65 | 669.40 | 68 | 118.56 | 9 | 22.58 |
| Welsh..... | 80 | 4.6 | 3 | 35.42 | 214.10 | 155.13 | 403.32 | 324.99 | 436.50 | 44 | 61.18 | 9 | 18.86 |
| Total..... | 770 | 5.3 | 31 | 41.76 | 222.52 | 175.40 | 437.83 | 368.30 | 470.96 | 441 | 69.52 | 167 | 30.85 |
| Grand total..... | 3,260 | 5.1 | 571 | 65.50 | 238.66 | 235.82 | 527.94 | 495.27 | 586.43 | 2,021 | 122.95 | 1,036 | 55.79 |

WHAT President Harrison says in his annual message to Congress bearing directly on agriculture is given herewith:

RECIPROCITY.

The work of the state department during the last year has been characterized by an unusual number of important negotiations and by diplomatic results of a notable and highly beneficial character. Among these are the reciprocal trade arrangements which have been concluded, in the exercise of the powers conferred by Sec. 3 of the tariff law, with the republic of Brazil, with Spain for its West India possessions and with San Domingo. Like negotiations with other countries have been much advanced, and it is hoped that before the close of the year further definite trade arrangements of great value will be concluded.

MEAT EXPORTS.

The law of the last Congress, providing a system of inspection for our meats intended for export, and clothing the president with

power to exclude foreign products from our market in case the country sending them should perpetuate unjust discriminations against any product of the United States, placed this government in a position to effectively urge the removal of such discriminations against our meats. It is gratifying to be able to state that Germany, Denmark, Italy, Austria and France, in the order named, have opened their ports to inspected American products. The removal of these restrictions in every instance was asked for and given solely upon the ground that we had now provided a meat inspection that should be accepted as adequate to the complete removal of the dangers, real or fancied, which had been previously urged. The state department, our ministers abroad and the secretary of agriculture have co-operated with unflinching and intelligent zeal for the accomplishment of this great result. The outlines of an agreement have been reached with Germany, looking to equitable trade concessions in consideration of the continued free importation of her sugars, but the time has not yet arrived when this correspondence can be submitted to Congress.

THE DEPARTMENT OF AGRICULTURE.

If the establishment of the Department of Agriculture was regarded by any one as a mere concession to the unenlightened demand of a worthy class of people, that impression has been most effectually removed

eral congratulation that success has at last been attained, for the effects of an enlarged foreign market for those meats will be felt, not only by the farmer, but in our public finances and in every branch of trade. It is particularly fortunate that the increased demand for food products, resulting from the removal of restrictions on our meats and from the reciprocal trade arrangements to which I have referred, should have come at a time when the agricultural surplus is so large. Without the help thus derived, lower prices would have prevailed. The secretary of agriculture estimates that the restrictions upon the importation of our pork products into Europe lost us a market for \$20,000,000 worth of these products annually.

The grain crop of this year was the largest in our history, fifty per cent greater than that of last year, and yet the new markets that have been opened, and the larger demand resulting from short crops in Europe, have sustained prices to such an extent that the enormous surplus of meats and breadstuffs will be marketed at good prices, bringing relief and prosperity to an industry that was much depressed. The value of the grain crop of the United States is estimated by the secretary to be, this year, \$500,000,000 more than last year, \$150,000,000 more, and of all products of the farm, \$700,000,000 more. It is not inappropriate, I think, here to suggest that our attention in the contemplation of this enormous addition to the national wealth should be clouded by any suspicion of the current which it is measured, and in which the farmer is paid for the product of his fields.

THE state department is kept busy negotiating reciprocity treaties.

The last one announced is a commercial reciprocity agreement between the United States and the British West Indies and British Guiana. In return for free sugar and coffee these British colonies are to enlarge their free list and make large reductions in their duties on agricultural and other products of the United States.

Reciprocity treaties are now pending with Mexico, and with several Central American and South American countries. Action will doubtless be hastened by the important announcement that the president will exercise the power vested in him by a section of the tariff bill, and issue a proclamation reimposing duties on the sugar, coffee, tea and molasses coming from those countries that have failed to negotiate reciprocity treaties with the United States. The provisions of the act referred to read as follows:

That with a view to secure reciprocal trade with countries producing the following articles, and for this purpose, on and after the first day of January, eighteen hundred and ninety-two, whenever, and so often as the president shall be satisfied that the government of any country producing and exporting sugars, molasses, coffee, tea and hides, raw and uncured, or any of such articles, imposes duties or other exactions upon the agricultural or other products of the United States, which, in view of the free introduction of such articles, he may deem to be reciprocal and unreasonable, he shall have the authority to suspend, and it shall be his duty to suspend, the provisions of the act relating to the free introduction of such articles, sugar, molasses, coffee, tea and hides, the production of such country, for such time as he shall deem just; and in such case and during such suspension duties shall be levied, collected and paid upon sugar, molasses, coffee, tea and hides, the product of or exported from such designated country.

The duties to be restored are from seven tenths to two cents a pound on sugar, four cents a gallon on molasses, three cents a pound on coffee, ten cents a pound on tea, and one and one half cents a pound on hides.

by the great results already attained. Its home influence has been very great in disseminating agricultural and horticultural information; in stimulating and directing a diversification of crops; in detecting and eradicating diseases of domestic animals; and, more than all, in the close and informal contact which it has established and maintains with the farmers and stock raisers of the whole country. Every request for information has had prompt attention, and every suggestion merited consideration. The scientific corps of the department is of a high order and is pushing its investigations with method and enthusiasm. The inspection by this department of cattle and pork products, intended for shipment abroad, has been the basis of the success which has attended our efforts to secure the removal of the restrictions maintained by the European governments.

For ten years protests and petitions upon this subject, from the packers and stock-raisers of the United States, have been directed against these restrictions, which so seriously limited our markets and curtailed the profits of the farm. It is a source of gen-

FARM AND FIRESIDE.

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Our Farm.

SOME SUGGESTIONS FROM THE STATION BULLETINS.

BY JOSEPH (TUSCO GREINER.)

NOTES OF TOMATOES.—Prof. L. H. Bailey, in his bulletins from the Cornell University Experiment Station, never fails to give us interesting and valuable material. The subjects of these bulletins in 1891 are as follows: No. 26, experiences with egg-plants; No. 29, experiments in the forcing of tomatoes; No. 30, some preliminary studies of the influence of the electric arc-lamp upon greenhouse plants; No. 31, the forcing of English cucumbers; and No. 32, notes of tomatoes. All these are of great value to gardeners, especially to market gardeners; and everyone interested in these subjects should try to get hold of the bulletins. They can probably be had for the asking; at least, it is announced in the bulletin that "those desiring this bulletin sent to friends will please send us the names of the parties."

The last bulletin, "Notes of Tomatoes," has just been received. In it Prof. Bailey puts on record a number of experiments with fertilizers on tomatoes. His observations show that the common notion that heavy fertilizing of tomatoes tends to lessen yields, is open to criticism. His tests uniformly give larger yields in heavily fertilized land. Yet there is undoubtedly some reason for the widespread belief to the contrary. The soil, as well as the character of the fertilizer, must be considered. If the plants find a large amount of available plant foods right from the start, they will, of course, push along rapidly in the early season and set fruit early. Productiveness in the tomato is largely a matter of earliness, or of the plant's ability to give a maximum number of pickings before frost. Raw and coarse stable manures, in which the plant foods are not readily available, will help the plants but little in the beginning. Consequently, the early growth must be slow and fruit setting and ripening retarded, especially as the manure, becoming gradually available later on, stimulates vigorous growth at a time when such vigorous growth is not needed. Prof. Bailey tells us that in these experiments he used the best and most thoroughly disintegrated manure which could be obtained from the stables.

His experience corresponds with mine. If we desire to grow a large crop, we must, first of all things, have a large growth of vine, and we cannot get the latter too early in the season. For best results, therefore, the land must either be rich from the start, or plenty of old manure, or other quickly available fertilizer, must be applied early in the spring; or better, in

the fall, if the manure is in the least coarse or not readily available for plant food. Dwarf growers should be treated with especial liberality in this respect.

In my own tests in 1891, nitrate of soda applications seemed to have absolutely no effect on tomatoes. Prof. Bailey, however, has come to different conclusions, and agrees with Prof. Vorhees, of the New Jersey station, about the favorable results to be obtained from such applications. Much probably depends on the original fertility of the soil and the availability of the other fertilizers applied. Nitrate of soda supplies nothing but nitrogen, and consequently should not be used to the exclusion of other fertilizers, unless the soil is already rich in potash and phosphoric acid. Upon poor soils it is of little advantage when used alone. Early applications under the right circumstances appear to produce early results. Two or three moderate applications, made at intervals of a week or two, are preferable to a single large application early in the season; but these applications should not extend beyond midsummer.

Another important point mentioned by Prof. Bailey, and upon which considerable stress should be laid, is that tomato-plants set early in open ground, are less injured by inclement weather than is generally supposed. Early setting on well-prepared land seems to be advisable. Of course, the plants should be strong and stocky, and well hardened off. I find that such plants suffer very little, if any, even in nights with light touches of frost, when sappy, tender, hothouse plants would be entirely killed.

I am not a particular friend of transplanting, and avoid it unless I can see particular advantages from it. Often I sow seed in flats and let the plants grow on until the time they are taken to the field. More usually I sow thickly in flats, then prick out into other flats, or directly in cold-frame, three or four inches apart each way, and leave them there until ready for field setting. This plan has given me entire satisfaction. Prof. Bailey says that two transplantings gave better results than three, but so much depends on condition of plants—their age and the way in which they are handled—that generalizations cannot be made upon the subject.

Years ago I was quite enthusiastic in favor of cuttings, and I use them yet in an emergency. At any rate, it is an easy and quick way of increasing one's stock of plants when insufficient. Some time ago I told in these columns how I saved some of Henderson's 400 tomato-plants, that were received in bad condition, by rooting some of the uninjured tip ends in cotton batting. These plants did nobly. Prof. Bailey, in a general way, tells us that seedling plants have given better crops than cuttings of the same age during two seasons, but this year cuttings gave somewhat earlier fruit.

The following are a few more points of interest mentioned in the bulletin:

Trimming the plants during July and early August appears to be beneficial. Single stem training of tomatoes gave twice as much yield per square foot as ordinary culture, somewhat earlier results, and greatly decreased injury from rot. The system can be recommended for early market or choice trade or for home use.

Hilling plants seems to be of no advantage. Leggy or badly-drawn plants may produce a fair to good crop when set deep and a large portion of the stem buried; but they do not appear, even then, to be equal to stocky plants. Little, if anything, appears to be gained by selecting seeds from first ripe fruits without reference to the character of the plants from which they come. Upright and open training tends to decrease injury from rot, and such training allows of more easy and thorough applications of fungicides when spraying is necessary.

Do varieties mix? Decidedly. Seeds, if wanted pure, should be selected from plants somewhat removed from other varieties. I have learned this lesson very thoroughly the past season.

Tomatoes run out, or lose their distinguishing characters. Even the most popular varieties of ten years ago are not often obtained true to type at the present time. In well-marked varieties of recent introduction, great dissimilarity may exist between stocks from different seedsmen. Many inferior stocks of Ignotum,

introduced in 1890, are now on the market. This Ignotum is the best variety for all purposes grown on the station grounds the past season.

Among the introductions of the year the following are most promising: Cumberland Red, Long Keeper, Mitchell, Potomac, Red Mikado, Stone. All these are things well worth remembering.

HORTICULTURE AS A VOCATION.

There are several matters to be considered in choosing a vocation or calling in life. Its effects upon our personal character, our social standing, and our health, should be carefully noted. Our natural taste or aptitude will also come in as a determining factor. A man who has no aptitude for mechanical construction is not likely to succeed well as a carpenter or builder. A person who has no taste for mathematics, who is unable to solve simple geometrical problems, is not likely to be a signal success as a civil engineer. Other things being equal, we should choose a calling that we find congenial. The labor that we hate is not likely to be done well, and adds nothing to our pleasure and happiness. A person may adapt himself to any useful occupation, and habit will oftentimes make it agreeable; but as a rule, the best work is done by those who choose their vocation because they like it.

The plans and purposes of men, both young and old, are frequently counter-changed. Necessity is our master, and accident is often more potent than choice or purpose. In other words, we are all governed by force of circumstances. Whenever a free choice can be exercised, the controlling motive with many is the financial prospect. Perhaps the first objection raised against the vocation of horticulture is this: "It don't pay."

If this is true, it is a serious and valid objection. To earn a livelihood is the first and most indispensable requirement. We have all got to live, and we must first live before we live well. Food and raiment we must have. This cold, rocky planet, with its harsh, capricious climate, shows very little hospitality, even to the "lords of creation." Nature is grudging and stern until wed by labor and science. Man must first work in order to live. He does not live merely to work, but he works in order to live. Naturally, he seeks that kind of work, that vocation or profession, that will best reward his labor. Let us see if the vocation of horticulture does not offer as fair a prospect of success, as full an assurance of reward for earnest, persistent, scientific labor as any other honest calling among the various pursuits and professions of life.

HORTICULTURE.

There are probably few bold enough to assert that the man who has a well established fruit farm or vineyard, a well located market-garden, seed-farm or nursery, cannot or is not making a good living. Yet there are many who unhesitatingly assert that he who has little or no capital to begin with, cannot live and thrive by following the vocation of a horticulturist. Of course, there are failures and risks to be met in this pursuit, as well as in others. Ignorance and shiftlessness will bring defeat in horticulture as well as elsewhere. Here, as elsewhere, businesslike methods are essential to good annual dividends. With the same energy and skill applied to each, I believe there is no vocation which, when compared with horticulture, is so certain of financial success.

Carefully collected statistics show that over ninety per cent of all who embark in the mercantile profession or some form of trade, fail. Although this estimate appears large, it is easy to see that a large proportion must fail, because in all branches of trade competition is sharp and the business overdone. If one hundred men attempt to do a business, the legitimate profits from which will comfortably support but ten, it is morally certain that a large majority must fail sooner or later.

I have never seen a community where there were too many horticulturists, while in most sections the number might be many times increased, and the profits of each in no wise diminished. The means of transportation and preservation of even the more perishable fruit and vegetable products are now so excellent that a market can easily be found for all first-class articles. The demand for such products is constant and ever-increasing,

a good supply stimulating and multiplying it. I have lived in several of the best developed fruit-growing sections of our country, and I have yet to learn of a single instance of failure where horticulture was energetically and intelligently pursued, while in almost every instance a moderate competence was secured.

I believe there is no vocation that offers a better return for a given amount of industry and skill than does this. Let me not be misunderstood. There are risks in horticulture as elsewhere, and these ought to be fully considered. Frost, hail, drouth and flood will sometimes wipe out the profits of a year or more of well-directed labor. The hopes of an equally bountiful and profitable harvest may at times be blasted by the devastation of insects and fungus diseases. Some of these disasters are beyond control, but many of them can be overcome or provided against by judicious management. The really skillful and thoroughly scientific horticulturist reduces these risks to the minimum. He carefully studies the adaptability of varieties, he acquaints himself with the characteristics and peculiarities of soil and climate, he gleans all the information possible as to the best methods of warding off insect and vegetable parasites; in short, the aid he receives from science, together with his own well-directed energy and intelligence, makes him master of the situation.

In addition to its prospects of financial reward, horticulture has other advantages as a vocation that should not be overlooked. It was the first, and may justly be regarded as one of the most useful pursuits. Unlike many other vocations, it is a calling in which success is in no way complicated with the misfortunes of others. A good doctor may be a very useful citizen, but he prospers upon other's adversity. An honest lawyer may be helpful, but he thrives upon the weakness of poor human nature. It is different with the horticulturist. His calling is to supply the human race with daily food, by means of which life is prolonged, strength is maintained, gardens, groans and food produced or suffers horticulture helps to feed the world by cultivating the soil. He is a transformer. By his art the crude, useless elements of the soil and air are combined, forming products that please the eye, gratify the taste and support the life of man.

In addition to its usefulness, horticulture has other advantages that must not be overlooked. It is a healthful calling. Few vocations promote that fullness of strength and vigor that is here to be found. As a rule, continued good health is only vouchsafed to those who spend a large part of their waking hours in the free, pure air and open sunshine. This, together with the invigorating, healthful bodily exercise incident to this calling, adds much to its desirability. Good health means happiness in this life, and wealth is a poor compensation for its lack. I do not mean that everyone engaged in horticulture is healthy and prosperous. There are some that do too much work and some who do too little. Men may wear themselves out by excessive and unintermitted toil here, as elsewhere; or they may go to the other extreme and fancy that because they are horticulturists in name at least, thrift will follow idleness, profits will be realized from light crops, and they are somehow or other going to attain success without corresponding effort.

Perhaps there is no vocation more conducive to genuine independence and thorough manliness of character than horticulture. No one expects a man in this profession to curry favor by cringing, or to bow to any prejudice, or defer to any irrational public opinion. His products will sell for what they are worth, irrespective of his politics, religion or opinions on social questions. He suffers little or nothing from the intolerance of views or current topics adverse to those generally accepted by the community in which he lives. He is not obliged to suppress his convictions for fear his business will be injured. He is not called upon to sacrifice his self-respect or compromise his integrity in order to be successful. The merchant, the journalist,

the lawyer, the doctor and even the minister and teacher are often tempted, and not infrequently compelled to suppress their convictions, because they are in opposition to the equally vehement and irrational views of the community in which they labor, and where favor is to them the breath of life.

Another point in favor of horticulture. What calling tends more constantly and more powerfully to incite a regard for truth than does this occupation? The horticulturist deals directly with nature. He is controlled and governed in his operations by her immutable laws. There is no temptation to cheat or defraud in these transactions, because man very soon learns that nature never has and never can be cheated. Man may cheat himself, he may defraud his neighbors; but he cannot in any way deceive nature. The scriptural injunction, "Whatsoever a man soweth, that also shall he reap," comes directly and immediately true to him who deals with her. No deception is possible, no juggle or trick can avail. If you sow the seeds of noxious weeds, noxious weeds will appear. We "cannot gather grapes of thorns or figs of thistles."

In speaking thus of horticulture, I would not be understood as depreciating or trying to disparage any other calling. Many of them are honorable, some are indispensable. A man may be a useful citizen without cultivating the soil and raising valuable food products; therefore, I do not know that horticulturists as a class are better than other men. I have simply pointed out some of the possibilities, some of the more obvious tendencies of this vocation. I trust that some of our young men who are soon to choose a calling will thoughtfully consider the advantages of horticulture, and in view of the reasons given above, will decide to make it their life work.

WILLIAM R. LAZENBY.

Ohio State University.

AN HONEST CONFESSION.

Some weeks since FARM AND FIRESIDE published an article of mine upon cotton picking in the South, in which the following opinion regarding picking cotton by machinery was expressed:

"As to a cotton-picking machine supplanting the human hand, there seems to be great doubt. At all events, hand-picked cotton will, in all probability, long continue to be in demand, even should a successful machine harvester be brought out. It is hardly probable that any machine could gather cotton as satisfactorily as can be done by hand, except as to rapidity of work."

The above opinion was at the time my honest, candid conviction with reference to harvesting cotton by machinery. I am free to admit that I have recently become fully satisfied that the cotton crop of the South will in the near future be gathered entirely by machinery. By the close of the present decade, picking cotton by hand will have become as obsolete as separating the seed and lint with the fingers now is.

Whitney's great invention of the cotton-gin brought the annual production of American cotton up from a few thousand pounds to tens of thousands of bales, and Cunningham's cotton-harvester is destined to revolutionize the entire system of cotton growing in the South. I am thoroughly convinced of this from seeing the machine in practical operation during the late Texas state fair at Dallas. Every afternoon for two weeks this machine made a field trial in the presence of scores of practical farmers and gin men, many of whom, like myself, were firmly of the opinion that a machine cotton-picker was an utterly impracticable and visionary idea. The machine did gather the cotton, though, and did it well. It also made converts of all disbelievers who saw it work.

The cotton is gathered roughly; that is, hulls and whatever leaves and stems may be upon the stalks at the time are gathered with the cotton. From five to eight acres can be harvested per day, two mules drawing the machine with ease. In this rough state the cotton is emptied into wagons, and either stored in pens or houses, or hauled direct to the gin. Before going through the gin, however, it is run through a cleaner or separator, also the invention of Mr. Cunningham, which removes all the hulls, stems and other

trash, making it much cleaner than the average hand-picked cotton. Indeed, this separator is a wonderful and valuable machine itself, and it would pay every gin man to run one for hand-picked cotton alone, until the cotton-harvester thoroughly supplants hand picking, as it is destined to do.

It cannot now be predicted with certainty what the ultimate effect of the machine cotton-harvester will be in all its bearings upon the future production of cotton in the South. Its influence will doubtless result in good to the producer and the world at large. It will no doubt greatly increase the amount of cotton raised in the South, and may greatly decrease the production in other countries, from the fact that the densely populated lands of the Orient are wedded to the most primitive methods of agriculture, and would hardly adopt so radical an improvement as a machine to gather cotton. Machinery in America can produce the staple cheaper than the poorest laborers in Egypt and India can make and gather it by hand.

The machine will also stimulate a more intensive system of farming, as it will gather an acre of good cotton at about the same cost of harvesting an acre of poor cotton. It will also tend to the development of early-maturing, short-limbed varieties, as these can be harvested with the least trouble and with the least amount of trash. It will enable cotton growers to have more time to devote to other crops and to stock, because it reduces the cotton-picking season from three months to three weeks or less. It will exert a great influence for general good by reducing the cost of harvesting a crop of cotton from fifty to sixty-five per cent of present cost. Many other now unforeseen good results will doubtless follow the machine cotton-harvester.

DICK NAYLOR.

AN ETHICAL VIEW OF SPECULATION.

Regulating the price of wheat, or of any commodity that enters largely into the consumption of all classes, by reason of speculation, is pernicious, not to say dishonest.

The claim set up by frequenters of "grain pits" and "bucket shops," that the farmer is greatly benefited by having his products speculated in, and that therefore they are philanthropists in disguise, is so mythical that it is undeserving of serious thought. It is to be deplored that the great benefits thus bestowed have never been appreciated by the beneficiaries.

A nation that annually produces more breadstuffs than are necessary for home consumption, and is ever capable of lending a helping hand in supplying deficiencies abroad, should never be even threatened with a bread panic; and to assume that a sharp rise of one cent a loaf in bread, under such conditions, could be within the range of possibilities, seems unreasonable.

I read with some interest and much curiosity, B. P. Hutchinson's article on "Speculation in Wheat," which appeared in the October number of the *North American Review*, and it did not surprise me that there was a noticeable absence of argument and logic that would make it at all convincing that his business benefited any one but himself, or that it was even entitled to be called anything more respectable than gambling.

In 1888 he and his associates had a current of philanthropic electricity pass them, the result of which was to make a successful "corner" in wheat, which so advanced the price of bread as to make imminent a bread panic, causing, thereby, unhappiness, deprivation and probably, if the truth were known, starvation to a shockingly large number of the ultra-poor. By this transaction they were enabled to pocket more than one million dollars (in this way the farmer receives his benefaction) that should have been shared between the producer and the consumer, which would have materially lessened the financial burdens of both. I wonder whether these benefactors of the farmer would not have relinquished their calling for a brief spell could they have heard the cries for bread issue from a thousand little throats that were silenced from sheer exhaustion!

Stringent laws forbidding gambling in most forms are enacted, yet a form of gambling that robs two classes, the pro-

ducer and consumer, is countenanced, because we have clothed in too priestly robes the actor and the action, thereby, to a degree, legitimatizing it. It is sanctioned because it meets with practically no opposition. It is encouraged for the reason that this economic octopus finds innumerable small-financial fish to feed upon. The time has arrived for congress to pass a law that will so discourage speculation that its disciples will seek more legitimate means of livelihood, and, let us hope, become contributors to the general welfare of mankind.

Mr. Hutchinson's rather cold-blooded suggestion, that "in years of scarcity make the loaves small and advance prices to prevent waste," is an unmeaning generalization.

The following statement shows the yearly production of wheat and the amount in farmers' hands on the first of March for the past ten years:

| Years. | Am't grown—measured bushels. | Am't remaining in farmers' hands March 1. |
|--------|------------------------------|---|
| 1881 | 383,280,090 | 145,000,000 |
| 1882 | 504,185,470 | 98,000,000 |
| 1883 | 421,086,160 | 143,000,000 |
| 1884 | 512,765,000 | 119,273,000 |
| 1885 | 357,112,000 | 169,411,360 |
| 1886 | 457,218,000 | 107,337,030 |
| 1887 | 456,329,000 | 122,266,270 |
| 1888 | 415,868,000 | 132,094,880 |
| 1889 | 490,560,000 | 111,766,530 |
| 1890 | 399,262,000 | 156,435,550 |

Will he kindly indicate in which of the years in the above statement it was necessary to "cut the loaf short?" Oh, no, we know no such thing as a year of such absolute scarcity as would necessitate "making loaves small" and "putting up the price to prevent waste."

Mr. Hutchinson asserts that "the market price on a given day is the universal price the world over, and against which no man or set of men can stand." This is somewhat vague, but I interpret it as meaning that the market price is uncontrollable; that is, from the producer's standpoint. I vividly recall that it has not been long since the market was shaken to its very foundations, and prices went "kiting," all of which was the result of artful manipulation by these friends of the farmer.

If our rural brother would market his wheat or other products with greater judgment, allowing the demand to seek the supply, instead of the supply seeking the demand, he would reap profits that are now being pocketed by a class of men who ever seek to degrade his industry, and thus effectually stop this gambling which Mr. Hutchinson implies is an impossibility. The farmer is anxious to rush to the market immediately after harvest that he may realize promptly upon his labor. While this is a natural desire, it has a tendency to so depress prices that a very narrow margin of profit is realized. The injudicious marketing this year carries with it a lesson that will prove an expensive one to the producer, but it is hoped that this experience will teach him to be more wary in the future.

Notwithstanding our grain markets have been widely extended during the year, the farmer is not receiving increased profits in proportion to the increased demand. Why? One hundred million (100,000,000) bushels of wheat have already come forward this year, and of this, between seventy-five and eighty million bushels have been exported, with the result that every bushel that has gone abroad represents a sacrifice of from six to thirteen cents to the producer. This can be properly charged to the speculators. The "bearish" movement has been on for some time, and has been reasonably successful (getting one hundred million bushels out of the farmer's hands), and when these benefactors have gulled the farmers to the extent of about seventy million bushels more (an exportation of one hundred and seventy million bushels of wheat, and wheat as flour can reasonably be expected), prices will immediately go up. This result will not surprise any one except, probably, the producer.

Mr. Hutchinson does not admit that the farmer receives no benefit whatever from increased speculative prices. It is true, nevertheless; and why? The "bulls" turn "bears" for a time, and operate to depress the value of wheat so that they may buy for a rise. Well and good. They then operate to force the price up, not to buy (unluckily for the farmer), but to sell. The "bear" is even a wilder animal than

the "bull," and sells what he does not own for future delivery. Isn't this bear a comical trickster—selling what he does not own for future delivery, then working with superhuman efforts to depress the market price so that he may not only guard against loss, but make a big "scoop" when the time arrives to deliver? Imagine your tailor selling you clothes when he does not own or have in his possession one yard of cloth! Would you claim this to be a strictly honest transaction, or humbuggery and deception?

It has long since been established by experience, and appreciated by the producer, that the only benefit accruing to him is derived from legitimate demand; and by that I mean demand for actual consumption. The mode of supplying this demand more directly presents a problem that economists must solve before the producer and consumer are relieved of the burdens they now bear; and until the solution is arrived at, farming will not be so profitable as it should, and living will be unnecessarily expensive.

What better evidence is needed to show that speculative demand is hurtful and fictitious; than that it depresses prices to the producer and increases them to the consumer; and that more wheat is sold in one day than is produced in one year throughout the whole world? This demand has no warrant for its existence, and would be impossible were it not for the pecuniary rapacity of this non-producing and all-consuming class of financial adventurers.

The meager argument offered by Mr. Hutchinson in support of his nefarious calling reaches the climax of absurdity when he says: "Now, each of you inhabitants of the planet can have your share and as much as is good for you; but these are times of dearth, and in order to keep you from using more than your proper share, the price must be raised on you."

Without giving any thought to the facts we immediately say: How noble this is in capital to "put up the price to prevent waste" and to dictate what each shall consume, thereby insuring an equitable distribution to all. When we consider, however, that we contribute annually one fourth of the world's commercial supply, we can say with reason: How ignoble this is in capital to force the price up to such a degree that the poor, who are the largest consumers of bread in America, are compelled either to forego their usual diet or contribute, to a ruinous extent, to the coffers of the capitalists.

"A man can fling diamonds into the sea with a better conscience than he can waste bread when the world is hungry," is a beautiful thought beautifully expressed, but when we know that the recorder of that thought is one of a class to whom all the hunger of this country can be more properly attributed than to deficient supply, we readily conclude that his remarks are the result of puerile reasoning, or that they are hypocritical. However this may be, arguments advanced heretofore in behalf of speculators have not been any stronger or more logical than the one recently presented by Mr. Hutchinson, and they but show to what extremes they are driven to maintain an outward appearance of respectability, and to prevent the world from classing them with other professional gamblers.

Thus it is shown that the producer and consumer are both gored by the "bull" and hugged by the "bear," and until these two animals engage in mortal combat, relief from conditions created by them seems remote. Speculation exacts fortune, health, happiness, and in many cases life from its devotees; yet these sacrifices do not deter the many from rushing into this seething whirlpool. There is but one conclusion to be drawn; that where the risk of making these sacrifices is so willingly assumed, there must necessarily exist the possibility of abnormally large profits, and it is to be feared that these profits will be pocketed by speculators so long as the farmer does not realize that as much judgment is required in marketing a crop advantageously as is required in producing it successfully. E. M. THOMAN.

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SUCCESS IN MARKET GARDENING AND FRUIT GROWING.

BY JOSEPH.

UNDER favorable conditions it is comparatively easy to produce good vegetables and fruits. Having done that, however, the market grower has only arrived at a midway station to success. It is often a much harder task, and much more expensive, to get a good price for one's garden and fruit crops than to produce them. Agricultural lecturers and essayists often point out that the market end is really the most important part of the business; and this is only too true. The best ways and means to get the products into the consumer's hands need just as much study and thought and effort as to grow the crops.

I am not much of a market grower, although I grow vegetables and fruits far beyond the needs of a family. Still, I grow for experiment and pleasure, and for a good crop of knowledge, much more than for the sake of making money in this business. On the other hand, I always have lots of garden stuff to spare, and if I can turn it into money, I am not opposed to doing so, provided this does not entail much labor or effort upon me. For an amateur, I grow onions rather extensively. The crop is an expensive one, and I am really more anxious to get a reasonable amount of money back from it than I am concerning the returns from any other crop. Now, I have a pretty fair local market in Niagara Falls, and if I could take the pains to sell my few hundred bushels in retail to the consumer, by peddling, I could easily get one dollar a bushel and upwards as an average for the entire crop. Anybody that peddles garden stuff regularly can do it, and thus get top prices. But I cannot. I have neither the time nor the inclination, nor the proper rigs for such business. Consequently, I am obliged to consign my whole crop—a small part excepted, which goes to some groceryman in Niagara Falls—to commission merchants in Buffalo, or perhaps in some Ohio cities, and get about one half the prices which the peddler could obtain from the consumer directly. In other words, it costs me half or more of the price ultimately paid by the consumer to get it into his hands. This is a pretty large share of the proceeds; but I see no way for me to avoid paying it. The regular market gardener, however, can get around it easily, and if he grows a superior article, such as well-cured Prizetaker or White Victoria onions, he need not even take much pains to sell them. All he has to do is to expose them for sale in proper places, and the proper manner.

I have found out one thing. In whatever locality I happened to carry on my garden work, I never found any trouble in selling really first-class vegetables, whenever I had a surplus, to the full limits of the consumptive capacity of my own neighborhood. When your garden is along the highway, and people see fine tomatoes and rows of celery and onions, etc., especially when such products happen to be in prime a little in advance of those in other people's gardens, or when they are especially fine, people will pass along once or twice, then stop long enough for an inquiry; soon they will ask you for the privilege of buying this or that at your own prices, and finally they come pretty often and are grieved when you have to tell them that your available stock is all gone. A good gardener can always work up a pretty fair local trade in this manner. A location next to the public highway, of course, is a great aid, and when the gardener has this advantage, he should follow it up to the utmost by making his fields next the road a sort of exhibition grounds. They should receive the best and most manure, and the most thorough cultivation. Let everything be neat, tidy and attractive, and the vegetables grown on them excel in size and general appearance. It is also a very important point to have the rows run crosswise with the highway, and always as straight as a string can make them. A garden thus managed looks its best when viewed from the road, and certainly vastly more attractive than one with rows running parallel with the road.

Another important point in marketing is the proper cleaning of the vegetables. They not only look better, but even seem to taste better to the buyer, when they were washed nice and clean. A tank with water running through it, if possible, is a real necessity to every market gardener, and an assortment of brushes for cleaning coarse vegetables is likewise a good thing.

One of the big mistakes often made by gardeners and fruit growers, and ordinary farmers as well, is to put up articles of different sizes and qualities in one and the same package. Fruit growers now begin to use the new-fangled "assorters" or "graders" for the purpose of having plums, peaches, etc., all of one size in one package; and this pays well. Potato growers, onion growers, etc., should make use of similar devices just as much. It will pay them just as well. In bunching radishes, beets, carrots, etc., the specimens in one bunch should always be as near alike as they can be. Common honesty, of course, demands that we put the same grade of any article in the middle and bottom of a package that we put on top, facing with a few fine specimens only being permissible and commendable.

Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

THE FARMERS FOURTH-ACRE FRUIT GARDEN.

BY M. A. THAYER.

(From a paper read before a joint session of the Wisconsin Horticultural and Agricultural Societies, February, 1891.)

If the farmers of Wisconsin fully appreciated the great advantage of a fruit garden, few would be without one.

You can get from it more health, more comfort, more inspiration and more dollars for the same labor than from any other portion of the farm.

Now, I have not come here to introduce some new, untried, high-priced novelty; I am not here to sell plants of any kind; neither have I come to ask any considerable portion of your best land or very much of your time. I simply ask your attention to one little one-fourth acre of land, and propose to illustrate how any person with ordinary intelligence can have fresh fruit, for the family or market, throughout the season, and produce thirty bushels on this one-fourth acre.

Now, I want to select this one-fourth acre on your farm near your house, where your wife and children can look after it.

It is your garden; now be generous and let us have a good piece.

I want it four rods wide and ten rods long, nearly level and well drained.

If you raised corn or potatoes on this piece last year, and it was rich, there is little to do to prepare it for planting, but if a part of an old meadow or pasture, and all run down, we have work to do.

First put on a heavy coat of well-rotted manure, plow very shallow and cut the sod fine with a disk or acme harrow; then plow again deeply, manure as before and harrow until fine and mellow.

For several weeks we have, of course, been studying the varieties we want and those that are hardy and do well in our vicinity.

We also want thirty bushels of fruit coming in succession throughout the season.

This may be easily produced by adhering to the directions and illustrations of "The Farmers' Fruit Garden."

Our garden being 66 feet wide and 165 feet long, and wishing to do all labor possible with a horse and cultivator, we stake off the ground in rows 150 feet long and seven feet apart.

Strawberry rows to be one half this distance, leave a head land $7\frac{1}{2}$ feet wide at each end for turning. Make the first row three feet from the outside and set as follows:

| | Production. |
|--|-------------|
| 1st Row—13 Plums and Crab-apples—5 Desoto, 2 Cheney, 3 Transcendent, 3 Hyslop. | 5 bushels. |
| 2d Row—50 Blackberries—40 Ancient Briton, 10 Snyder. | 3 bushels. |
| 3d Row—50 Black Raspberries—40 Ohio, 10 Gregg. | 2 bushels. |
| 4th Row—50 Red Raspberries—25 Marlboro, 25 Cuthbert. | 2 bushels. |
| 5th Row—50 Currants—25 Victoria, 25 Red Dutch. | 4 bushels. |
| 6th Row—50 Currants and Gooseberries—25 White Grape Currants, 15 Downing, 10 Houghton. | 5 bushels. |
| 7th, 8th and 9th Rows—300 Strawberries—Warfield No. 2, Jessie, Crescent, Wilson. | 5 bushels. |
| 10th Row—17 Grapes—3 Moore's Early, 6 Wonder, 5 Delaware, 3 Concord. | 4 bushels. |
| Total..... | 30 bushels. |

These suggestions are based on practical experience in growing forty acres of small fruit, twenty-five acres of same in blackberries and raspberries.

First in season comes the strawberry. The strawberry grows in every climate, on all kinds of soil and with most any kind of treatment, but best results can be obtained only by good fertilization and high culture. The ground should be covered with barn-yard manure, well plowed in and top-dressed with rotted manure. This should be thoroughly mixed with the top soil by harrow or drag. Thorough preparation will save much labor in caring for plants and greatly increase the crop. Use a line to get rows straight, and a spade or trowel for making holes. Plants should be prepared for setting by trimming off old leaves and runners, roots straightened out and cut back to four or five inches in length. The roots should never be dry or exposed to the sun and wind, and should be set out as soon as possible.

SETTING.—One man with spade or trowel; insert it to the depth of five or six inches, push forward while a boy takes plant, and with fingers spreads roots out fan-shape and inserts same in hole, holding until the spade is withdrawn and dirt packed securely around plant with foot. Care must be taken to have roots well spread, the earth firm around them and just even with crown of plant, neither too deep nor too shallow. If the season is dry, cultivate or rake over the ground at once, and every week during the season. Weeds must not be allowed to grow. Frequent cultivation keeps the ground moist and mellow. Permit no fruit to grow first season; pick off all buds and blossoms. First runners should be cut off; later ones allowed to grow and trained to form a matted row, with clean paths between.

When ground is frozen in the fall, cover lightly with clean straw, marsh hay or coarse manure, and in the spring rake between the rows to hold moisture and keep the berries clean.

All plants are either staminate or pistillate (male or female), and pistillate varieties should have staminate planted with them about every third row. Many fail to raise good crops because they do not understand this law.

Strawberry beds should be renewed every two or three years. To do this in our garden, we will set only two thirds of the bed this year and plant the balance to potatoes; next year the potato ground will be set to strawberries, with plants from your own grounds. After second year, plow up one or two rows of oldest berries every year and plant to potatoes, following with new vines. Thus always having a part new setting, a part bearing one year and a part bearing two years, and a continuous renewal of healthy plants.

For planting black raspberries, prepare the soil the same as for strawberries, make straight rows seven feet apart and plant three feet in row. The roots should be well spread out in their natural position and the dirt well firmed about them, but not planted too deep. Cultivate thoroughly and keep free from weeds.

A mulch of coarse manure, or, what is better, green clover, cut in the blossom, will hold moisture, prevent weeds from growing, keep the ground rich and the berries clean. When new shoots are fifteen or eighteen inches high, pinch them off. This will cause laterals to grow, which should be cut back in the spring to twelve or fifteen inches in length. When the fruit is all gathered, cut out old and young weak canes and burn them.

Red raspberries are treated in the same manner, excepting they should be planted deeper and are not cut back in the spring. They spread very rapidly, and all plants, excepting five or six stalks for main hill, must be treated as weeds and hoed out.

Blackberries require same preparation of soil as for strawberries and raspberries. Plant in hills three feet apart and in rows seven feet apart. Hoe, cultivate and mulch same as for raspberries. When new growth is fifteen or eighteen inches high, pinch them back. Cut out old canes after bearing and burn them.

Blackberries and most kinds of raspberries need winter protection in this climate, and are best covered with fresh earth. In laying them down (the rows running north and south), commence at the north end, remove the dirt from north side of hill about four inches deep, gather the branches in close form with a wide fork, press gently to the north, at the same time place the foot firmly on base of the hill and press hard, bending the bush in the row until nearly flat on the ground, and hold until second man covers with dirt. The top of succeeding hills will rest near base of preceding hill, making a continuous covering. This process is an important one and will be easily acquired by a little practice. In the spring, remove the dirt carefully with a fork and raise the bush.

We support blackberries and raspberries by a No. 12 wire on each side, attached to posts at each end of the row and resting on nails driven in stakes about twenty-five feet apart. This support protects bushes from heavy winds, the fruit from dirt, and makes hoeing, cultivation, mulching and picking much easier. Blackberries require no trimming in the spring, except to prevent too large a growth of fruit. For large fruit, trim freely.

Currants and gooseberries can be as easily grown on rich, deep soil as potatoes. Set in rows six or seven feet apart and three and a half feet in the row. Cultivate them thoroughly and keep center of bush well trimmed out. Both are subject to the attack of the currant-worm, which can be as easily exterminated as the potato-bug, by using white hellebore (one ounce dissolved in three gallons of water), and apply with sprinkler on lower and center leaves at their first appearance, about the time the fruit forms. Repeat the application a second time, or even a third, if necessary.

In the growing of small fruits, I make no iron-clad rule to govern all minor details. The selection of a location, the quality of soil, the varieties to grow, the manner of planting, trimming and many other things must be determined by circumstances and your own good judgment. There are, however, certain essentials which cannot, under any circumstances, be omitted without loss, if not certain failures. The ground must be rich and well prepared. The plants must be vigorous and adapted to your needs. The roots must be well spread and earth firm about them. The ground must be frequently cultivated and free from weeds. Winter an abso

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Our Farm.

Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

INQUIRIES ANSWERED.

Rust.—A. M. C., Saugus, Mass. The disease to which you refer is the quince-rust. For life, history and remedies, see reply to A. C. R., in FARM AND FIRESIDE for November 15.

Leaf-rust.—J. W. D., Dotham, Ala. The plum leaves received are affected with what is commonly known as leaf-rust. The remedy is to spray the foliage early in the season, and at intervals of about two weeks, with Bordeaux mixture, or the carbonate of copper solution.

Rubber-plant.—J. F., Newport, Ky. The *Ficus elastica*, or rubber-plant, may be propagated from cuttings of the green wood, taken off at almost any time of the year and kept at a warm temperature. I have often taken off the cuttings in the fall with two buds and one leaf, inserted them in moist sand, in a warm corner of the greenhouse, and they would be well rooted by spring. Greenhouse men sometimes shorten the time by giving them a high bottom heat.

Pear Scions.—F. M. P., Rolling Prairie, Neb. Scions of Le Conte and Kelfer pears should be taken off in the fall or at commencement of winter. The new growth is used for cuttings. They do not root well at the North, except when they have very careful treatment; and the soil should be over a slow hotbed, or else several times plowed in the spring and warm manure worked into it to warm it. Several northern growers are sending their wood South to be rooted on account of the greater facility with which it can be done there.

Seedling Peaches—To Promote Growth of Fruit-trees.—A. L. B., New Philadelphia, Ohio, writes: "Will a peach come true from this seed?—What should a person do to promote the growth of apple, cherry and peach trees, and to insure large fruit?"

REPLY:—No; but some varieties come nearly true.—There is no remedy for insuring large fruit and a good growth on fruit-trees any more than there is a remedy that will insure good health and long life to animals, but by careful study a great deal has been learned about the best way to keep our plants in health. If you have any disease or insect injuring your trees, I will try to help you overcome it as plainly as I can.

an Pecans.—Is there a good walnut in the altitude he suits the trees grow in. At what age will they bear? Are they subject to insect pests? 6. Which is likely to be most profitable to grow, the English walnut or the American pecan which grows through this section? 7. Would you recommend fall or spring planting?"

REPLY:—1. There is. 2. Yes; but they might be a little tender when young. The hardier varieties should be selected. They have been grown quite successfully in Bergen county, New Jersey, since 1854, and in a few places in New York. 3. Rather slow. 4. At about ten years from planting. 5. Yes; there is a weevil that sometimes seriously injures them. 6. I believe the improved American pecan is likely to be far more profitable than the English walnut. 7. Plant in spring.

Cherry Grafts and Varieties.—J. L. P., Clark's Station, Ky., writes: "What time is best to cut grafts of the cherry, and how should they be worked? Which is the best variety of cherries for this section of country?"

REPLY:—Cherry scions (grafts) should be cut in the early part of the winter and should be stored in moist forest leaves, in a cold cellar or outdoors. With very hardy kinds there is but little danger if the scions are left on the trees until spring, but it is always safer to cut them early. They should be grafted the same as the apple, but the work should be done before the buds start at all. If you cannot graft early, then the buds on the scion should be as much advanced as the stock, if you graft late. When the stock is much more started than the scion, failure is very sure to attend the operation. Grafting is not generally considered an easy operation, and budding is much more successful. The Early Redmond is one of the most prolific and is very hardy. Early Purple Guine is also very good.

Four Good Peaches—Leaf-blight.—J. L., Harlock, Md., writes: "Tell me four of the best peaches, which ripen in August, for market.—What ails my quince-trees? The leaves began to die on them in June. On one I cut off all dead limbs and leaves and it seemed to

stop; then the others were affected in the same way; fruit all blasting. Give a remedy."

REPLY:—Perhaps the four following are as good a collection as I can name for a medium season: Foster, Early Crawford, Old Nixon, Stamp the World. As I have often written in these columns, it is impossible to name a list of fruits that will suit everyone, on account of the adaptation of varieties to different soils and to the difference in management adopted by various parties. It is generally best to plant those kinds that are successful in your immediate vicinity.—They are affected with the leaf-blight. The only remedy so far known is a preventive one, and consists in spraying with Bordeaux mixture early in the season, as soon as the first leaves are formed, and repeat at intervals of from ten to fifteen days. In addition to this it would be well to spray the bushes with a simple solution of sulphate of copper (blue vitriol), made by dissolving one pound in five gallons of water, just before the buds begin to swell.

Black Rust.—E. B., Harrison City, Pa. The specimen sent is affected by what the French call *Broussius*, and which is called in this country black rust of the grape. The disease, so far as I know, has only been imperfectly studied; but Professor Viala, in his work, "Maladies of the Vigne," says in this connection: "It appears, however, that frosts have destroyed the generative cell-layers at certain points, and about these points the unaltered bark and cambium cells multiply in an abnormal manner, producing the tuberculous malformations which constitute *Broussius*. Von Thuner hastened to show that this disease was the result of a parasitic fungus whose life luster he could not follow, but this opinion now seems erroneous." I have tried to find a more complete history of this disease and a more rational history of its origin, but without result. It is not a trouble that is general throughout the country. Besides being found quite generally in Europe, it is found in California, where it has done much damage, and also at several places in Pennsylvania, where it has occasioned some alarm. From the fact that the disease is so localized and that the remedy seems to be the cutting off and destruction of the infected parts, it seems to me that it is more than likely that it results from fungus, or other parasite, working in the tissues. All the canes with the swellings on them should be cut off and burned, even if it is necessary to cut the vine back to the ground. The new sprouts that will come on a vine so cut back will probably be healthy.

EXTRACTS FROM CORRESPONDENCE.

FROM FLORIDA.—Lake City has three railroads, and is prettily situated among small lakes, with two of them within the corporate limits. Private owners of the lakes have their boat-houses and boats, for rowing and fishing. Around these lakes are fine locations for strawberries, which grow for four months from February 1st. Fortunes are waiting for strawberry-raisers, and also for vineyardists. Some vines have grown twelve feet in one season, and, when properly attended to, bear in ten months after planting. All vegetables and many kinds of fruits abound. Turnips weighing nine pounds are grown here. Oranges are 50 cents per hundred. The great advantages of this region, besides being a sanitarium for health, are educational. The United States Agricultural College, with its military adjunct, has fourteen professors and is well equipped in every way. The city high school has six teachers, and the Female Lake City Institute is an important consideration for families. The State Agricultural Experiment Station is also here. Society is unusually good and the moral and religious influences are especially prominent. With more capital and energetic people in and around the town there would be more growth of all its interests. *Lake City, Florida.* C. R. C.

FROM ARKANSAS.—There are not barns enough in Arkansas to hold this season's crops. At our county fair sixteen varieties of beans, seven varieties of corn and the entire pumpkin family were exhibited by Mr. W. H. Harrell. In November we enjoyed the benefits of our autumn gardens, which our long season enables us to have. We found in market radishes, string and Lima beans, lettuce, second crop of Irish potatoes and many other vegetables, which continued until frosts. With its delightful climate and wonderful products, Arkansas is well denominated the land of many crops, flowers and sunshine. The oleander, frequently grown as a house-plant, is poisonous to men and cattle, if they swallow the milky juice which runs out when the small branches are broken. Children have been poisoned by eating the flowers. A party

here lost two valuable calves from eating a few leaves. This state is a wonder in itself, excelling all other parts of the country. It produces every kind of agricultural product grown in the United States. It has more varieties of coal than any other state. It has every class of clay used in the ceramic art. It has the only deposit of soapstone in the Mississippi valley. It has the largest tract of valuable timbers in the country. It has received the first award for fruit at every exhibit made from the northern lakes to the Gulf of Mexico, and from the Atlantic to the Pacific ocean. It has more noted mineral springs than all other states, and a climate not excelled. It now claims the most wonderful cave in the land, which is an underground fairland. Timber lands are selling at \$2 to \$3 per acre, and when cleared are worth from \$10 to \$40 per acre. The large white oak timber is being cut into staves for eastern manufacturers. A cypress log, six feet long, four feet through, weighing 14,400 pounds, was recently cut near Fordyce, this state; it showed its age to be 334 years. Cotton-seed meal sells at from \$16 to \$17 per ton; cotton-seed hulls are worth \$3 per ton and cotton-seed alone sells for 12½ cents to 15 cents per bushel, which is extensively fed, mixed with bran. Milch cows sell all the way from \$6 to \$35. There are in this state sixty-eight nurseries, worth \$119,000, and the acreage is 767, with an increase every year. It is estimated that there are, in pile, 85,000,000 feet of lumber in this state. *Beebe, Arkansas.* J. W. W.

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Our Fireside.

AUNT JACK'S SECRET.

BY MARY A. DENISON,

Author of "That Husband of Mine," "If She Will, She Will," Etc.

CHAPTER IV.

"Behind, pursuing through the twilight haze,
The phantom people of the past appear."

The GIRLS pleaded for an excursion one soft, autumn afternoon. They went first to their father, but he was in the midst of a philosophical argument which had cost him a great deal of thought and plodding through dull, old-time books to accomplish; and he excused himself by stating that the paper in question must be finished that day, in order that it might appear in a certain periodical that was due on the following month. He husied himself much of the time in writing for the press, and as the pleasure of seeing his name in print and being read by a few literary savants was all the compensation he expected, his papers being well written, if a little pedantic, were generally accepted with thanks.

Then Aunt Mary was interviewed, and the proposition laid before her, with sundry hints of cold chicken and plum jelly and other good things to eat in the green little snugery they had found in the woods, not quite half a mile away; but even Aunt Mary had objections, it seemed, on this particular day. Her large-lidded eyes were heavy and her manner listless. She seemed pre-occupied, was sleepy, she said, and unfit to be company, and begged them to excuse her. So, like well-bred children they desisted in their efforts to enlist her in their scheme. Their disappointment was so evident, however, that the soft-hearted woman relented as soon as she had gained her point, and roused herself to make ready. She had felt in a languorous, dreamy state all day, but had shaken off the lethargy that depressed her, and perhaps, she reasoned with herself, a walk in the woods, new sights, brighter surroundings might aid her still more in resisting the influences evidently at work to lull her senses into forgetfulness.

The day was bright and beautiful, with a frolicsome wind that lifted the tiny tendrils of fair hair just touching Nest's eyebrows, and fluttering the ribbons of Jack's big straw hat, under which the laughing blue eyes and faintly-flushed cheeks looked delight at everything seen and every word spoken. Jack darted here and there wherever a bit of weed or flower-petal attracted her attention, but Nest walked quietly by the side of her great-aunt, looking thoughtfully, now at the clouds, now at the long stretch of distance, yet apparently enjoying her thoughts.

The road was yellow with dust, yet there were little side paths bordered with wild roses, quite fresh and grassy, and before long they were in the vicinity of rocky ledges and old forest trees which led to a path quite sequestered, to the very heart of the woods.

"Let's stay here by the brook," said Nest, as she carefully hung up her pretty sun-hat on a low branch and stood looking down on the narrow, sparkling stream as it ran over the white pebbles and broke into flashes of diamond lights where it leaped over an obstruction of larger rocks, which were as white and clear as crystal.

"Here, aunty, is just the seat for you," said Jack, who was always thinking of the comfort of her friends, and she spread a gray shawl over the trunk of a fallen tree that answered for seat and table. On this, after a frolic, such as Nest laughed at and then joined in, they took their baskets and spread out the chicken and goodies which Mrs. Spruce had bountifully provided.

"I should like to live always in the woods," said Jack, cuddling down at Aunt Mary's feet. "Wouldn't this be the loveliest place for a little cottage just big enough for four? I think I should be perfectly happy, shouldn't you, Nest?"

"No." And Nest held the bit of chicken she was eating firmly between her napkin-covered fingers that it might not soil them, and shook her brown head deliberately. "I should die."

"Oh, Nest!" cried Jack, her blue-gray eyes opening wider, "I thought you liked dear old Haven!"

"So I do, now," said Nest, carefully wiping her fingers and laying the napkin aside, "but I don't want to live in the country forever."

"Just hear her, Aunt Mary," cried Jack; "she's tired of us!"

Aunt Mary, it is probable, had felt that the premature development of her charge prevented her from taking pleasure in the simple life which seemed to be her inheritance, but she had never before heard her give utterance to her convictions. She listened to the two children eagerly.

"Then what would you like?" asked Jack, rising to let the crumbs fall.

"I haven't quite thought it out," said Nest, deliberately, leaning the elbows of her beautifully-rounded arms on her knees and letting her cleft chin fall into two rose-buds of hands whose dainty fingers were pink to the nails.

"I wouldn't like to live here forever and ever and die and be buried in the old graveyard, I know."

"Oh, Nest, when our dear, dear mother lies there!" said Jack, reproachfully, her big eyes swimming in tears.

"That's the only thing that redeems the ugly place," said Nest, with a softened voice. "But even that don't make me love it. On the contrary, if I was rich I would have her body taken up and put in one of those beautiful suburban cemeteries, and then she should have a lovely carved pedestal of the finest white marble, and all above and around her should grow the most charming flowers. But I shall never be rich, I suppose." And her voice changed to a sadder cadence. "I should like to be; oh, how I should like it!" She changed her listless attitude and clasped her hands passionately, while her voice rang out loud and clear.

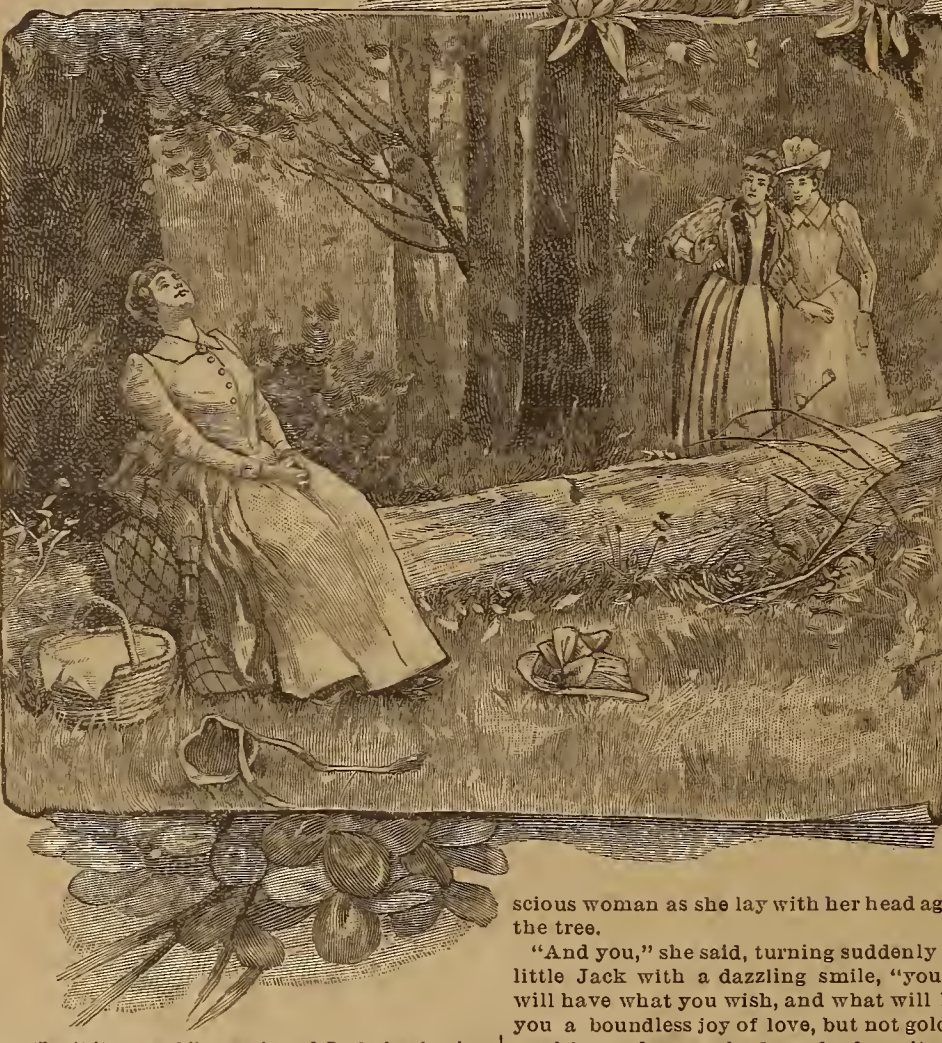
"I never thought of such things in my life," said Jack, and both voice and manner resented the implied dissatisfaction in her sister's voice and manner. Then she turned to her aunt. "Aunt Mary," she said, "talk to her; tell her how foolish she is."

But Aunt Mary seemed not to hear. Her head had fallen against a tree trunk. The sun sent a crimson line across her forehead and the roughened bark, and fell over the mossy path that grew red in its light. Jack started to her feet.

"Nest, Nest," she called, in a low, anxious voice, "Aunt Mary has fallen asleep while we were talking."

"Why, so she has," said Nest. She came forward and looked at the quiet figure, the hands clasped in the lap, the eyes closed. "Doesn't she look a little strange?" she whispered. "Would you waken her?"

Both girls stood still before the unconscious woman, whose features began to work, though no part of her body stirred, and the face gradually brightened into a smile.



"Isn't it queer?" questioned Jack, beginning to laugh; but Nest watched her great-aunt in a somewhat frightened maze.

"She looks so much like mamma," she whispered. "Oh, please wake her up." And she turned away her head.

"Aunty, dear," Jack began, but a quick, positive "Hush!" from the sensitive lips of the sleeping woman sent her back a step or two, where she stood alternately eying the face before her and the baskiness of the woods beyond, from which she more than half expected some elfish object to spring out. For fully a moment she stood there, breathing quickly, not being able to grasp the situation.

"Nest, what is it? Are you frightened? She spoke just now. Come with me and try to waken her," Jack said, drawing Nest towards her.

"Riches!" said the sleeper, with a slight nervous movement, pointing toward Nest. "My child wants riches. She shall have them—money in plenty. All things that she desires will fall into her hands, and that before long. There are two men who came this way through a very strange accident. One of them has everything the world can give—fame, honor, money."

Nest drew still nearer, a vague unrest in her eyes and a wild excitement thrilling all her frame.

Almost unconsciously to herself, or, perhaps I should say without an exact knowledge of the power or her own impulses, she coveted wealth and the luxuries it brings. The ordinary habits of a limited household were distasteful to her. If her belongings were not

of the choicest she disdained them. Aunt Mary had long ago found out that the best of all her delicate work must be reserved for her dainty elder niece, in whom generations of dignity and culture seemed to find their legitimate culmination. For little Jack, the common things of life were the best. The little house and garden flowers were as welcome to her as the costliest children of the conservatory, while Nest vainly wished that Jacqueminot roses grew everywhere, and never wore the best that the garden afforded because they were too common. Therefore this strange proceeding on the part of Aunt Mary, and the language that voiced her own longings, of which she had never spoken until to-day, not only startled her, but absorbed her attention.

"They will both love my beautiful child," the speaker went on, lifting a delicate forefinger to emphasize her words, "but the poorer, younger and handsomer man will go by the board, and wealth will win the day."

"Oh, Nest, what does she mean?" exclaimed Jack, who was now very badly frightened and trembling from head to foot. "That some one will carry you away from papa and me? Oh, Nest, wake her. I can't bear to hear her talk that way."

"Hush, dear," said Nest, secretly exultant, while she passed an arm around Jack's shrinking form; "let her say all she will. I understand. You know you are four years younger than I am."

"But, Nest, what does it mean? I never saw anything like this before. I am afraid." And the girl snuggled closer to her sister, still keeping her fascinated gaze fixed upon the uncon-

looking from one face to the other, an incipient judgment in her voice and manner, as if aware of standing before the tribunal of unsuspecting innocence. "My dears, tell me what I have said."

"You told me I should have a rich husband," issued from Nest's pretty, red lips, and her smile betrayed that the information was not unwelcome.

"But were you really asleep, Anny?" asked Jack, her voice trembling a little, and her eyes still wet with the dew of deep feeling.

"Ah, I don't know, child, what it is," her aunt made reply in a fatigued voice, and with an expression of perplexity. "It comes over me sometimes when I am least prepared for it, and then I never know what I say. How foolish it must have been of me to talk such nonsense to children."

"But, aunty," said Nest, drawing up her perfect figure, "you know I am nineteen. I must be married sometime. I am tired of this poky, old village, where the women wear sun-bonnets and sing through their noses in church, and the men have such red faces that you could light a candle by them. I like gentlemen like my father. But it is all very strange, too, for you were asleep, aunty—so sound we couldn't wake you."

"Let us talk no more about it," the woman said, with a gesture of impatience. "I felt it was best not to come out to-day. Oh, why am I not wiser?"

"We're to blame, aunty, for coaxing you," said Jack, her tender glance noting the drawn look in her aunt's face, its palor and unrest.

"Nobody is to blame," said Aunt Mary. "These moments catch me unawares, but not often, darlings, I am glad for your sakes."

"But I should like you to go to sleep every day," said Nest, whose capacity for romance and delight in the regions of the unknown was enormous, "if you would tell us what is going to happen."

"No, no, my child; anything but that," said her great-aunt, rising with a little shudder and pulling her shawl over her shoulders. "Have we had enough of the woods for to-day, children?"

"Quite," said Nest, her soul full of vague aspirations, a secret exultation in her manner as she smoothed out the folds of her dress, creased by contact with the log on which she had been sitting. "A pale rose tint," she murmured to herself, "with white silk trimming and a train. If I do marry a rich man, that will be one of the first things I shall get."

A soft, fine haze enveloped the fields, and the far-off river seen through this luminous mist lent a fairy-like enchantment to the view. Nest walked on air, more content, elated, picturing to herself visions of a better and a future all rose color, for Nest was of the very earth, very earthy, and thought a great deal in her secret soul of her own bright, beautiful self.

"I'm going to run up-stairs to my own room the first thing," she said, as they stopped at the front door.

"Why?" asked Jack; but Nest made her no answer.

CHAPTER V.

"The flying joys of life, the gifts that please,
The gold and gems that others find so fair."

HER aunt had said there were two men coming this way through a chance accident. Would they come? Had they come already? She went to the hallway and listened. Voices sounded pleasantly in the silence, but they were those of Aunt Mary, her father and Jack.

"At any rate, one might as well be prepared," she said, smilingly, a spot of red in either cheek, and went across the room. From the goodly row of dresses hanging on the nails of the wardrobe built in the wall she selected one of a pale gray, almost verging into lilac, and threw it across the bottom of her dainty bed. Then, after deftly arranging her hair in shuving coils as well as its curly ripples would allow, she invested herself and stood before the mirror the very incarnation of a beautiful, refined and well-dressed woman. In this gown she looked two or three years older than she really was, and her beauty was something remarkable. The embroidery on the overlapping folds of the waist, the sleeve bands and the narrow hands just above the elbow was the work of Aunt Mary, and it was done in the finest thread of gold on a pale blue ground. Nest had seen a picture of this costume in some foreign periodical sent to her father, and worn by some gracious countess on the occasion of a royal wedding. Forthwith she had planned a dress for herself, which, with the aid of a village dressmaker, Aunt Mary and her own faultless taste fitted her to a charm. Arrayed in its classic folds,

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scious woman as she lay with her head against the tree.

"And you," she said, turning suddenly upon little Jack with a dazzling smile, "you, too, will have what you wish, and what will be to you a boundless joy of love, but not gold, not wealth, my dear, at the first; far from it. Your little garden-spot will abound in very common-place flowers, at the first, but there are golden grains, even for you, in the future. Sweetheart, you will be as happy as the years are long and many before you. Never into your sweet nature will enter the evil imaginations and spiteful jealousies of ordinary human nature. Life for you is a long, sunny, summer day. The sunshine of the heart will keep you always well and beautiful. Still," she moved uneasily, "you must wear the displeasure of the conventional world, but it won't hurt you, child. Hurt you! You will never know it, secure in your innocence and happiness. You dear, little flower, come and kiss me, for in your unselfishness and because of the purest compassion that the heart can know, you may save the souls of others who suffer."

All this time Jack was clinging to her sister and listening, if not with positive terror in her mein, with a certain sense of fear and helplessness, while the tears had rushed to her eyes.

"Oh, aunty, wake up," she said, tremulously, "and then I will kiss you; not now," as the outstretched arms of her great-aunt wavered and sank down, "for I am terribly afraid of you."

The two girls stood looking on as the woman before them slowly came to consciousness. For a moment she seemed very much bewildered, and gazed slowly about her. Then a wave of remembrance suffused her face and lips.

"Oh, children, what have I said?" she cried,

she had imagined herself a princess, and all manner of phantasmal thoughts chased each other through her brain.

"I should like," she murmured to herself, as the glorious face opposite smiled out of the mirror, "to go to England and marry a peer of the realm, perhaps a count. My father has always seemed like a nobleman, and really he is very handsome. What a pity that there are no counts in America!"

Her thoughts took on this complexion, in spite of the training of her father, who thought a simple country farmer the peer of any titled gentleman, and who had striven to inculcate the right kind of American ideas in the minds of his children. But all in vain in this case. Some strain of ancestral blood had filtered into her veins, blue with the color of titled pedigree that had been the boast of her dead grandfather.

Hanging up in the spare room of the farmhouse was a coat-of-arms worked in sampler fashion by fingers that had been dust for over a century. The girl often stood before it conjuring out of its faded colors past splendors. She saw a long array of noble ancestors, and loved to picture how they looked, how they danced and dressed, and with what courtly fashion they moved and spoke. Then she would stand before the mirror and imagine herself one of them; invent robes of exceptional elegance; manage trains of wonderful length and fabulous beauty, and by the force of the shadowy world within and around her, play her little part in courts and palaces, bow before queens and princesses, herself greater than any of the royal offspring, by virtue of her beauty alone.

She seldom spoke of these fancies to Jack. The child would not have understood her, for her abode was in the kingdom of contentment, and her every-day surroundings gave all the play to her fancy that she ever longed for. To help Mrs. Spruce about the great kitchen; to look for wild flowers and bits of fairy love amidst the treasures of the outdoor world; to help make life less somber to her father by her innocent inventions and happy temper; to read to him, fuddle him, keep his papers in order and aid him in every possible way, constituted the sum of her happiness. Looking to all these for her pleasure, every little incident in the home and farm pleased her. The hens and chickens and the young life of all the stock were her delight. Flowers and birds made for her the poetry of existence. She saw what of beauty even in what are called the deformities of nature, twisted trees, barren

would py, to ig and ew or brain. never titful, though she delighted in color and her riotous health. Everywhere, indoors and without, she was a sunbeam, and she never went slugging past her father's door, or opened it and looked in with her merry greeting to "papsy," but a thrill of joy went through and through the heart of the lonely man, which Nest was not capable of creating. She was a creature all smiles and dimples, being given to show the perfection of God's handiwork in the simplicity of her life and nature. All helpless things were her care and delight.

"The very critters on the farm prick up their ears, and I do declare if there isn't something human in their eyes when they gets a sight of little Jack," the farmer would say, for she was always little Jack. Nobody thought of her as growing into womanhood, and yet there were phases in her character that made her seem more mature, at times, than her elder sister. One of these was on an occasion of illness, when she nursed her father through a fever, while Nest wore herself out in worry and wringing of hands, but never volunteered to help.

All that evening, after the incident in the woods, which had begun to color her life, Nest was preoccupied. She sang at her father's request, while Aunt Mary was busy at her knitting, and Jack wandered from one scheme to another, finding amusement in everything. She had an excellent though unformed voice, and sang ballads with exquisite accent and feeling.

"That child ought to take lessons in singing," said Aunt Mary, letting the work she was busy on fall to her lap.

"Just what I was thinking myself," said Mr. Denerby, "only I don't know how I could manage it, even if I could afford it. It costs money for a good teacher, and there would be the additional expense of the fare to the city. Still, if I am put upon the staff of one of the city magazines, as I have lately had an intimation that I may be, I shall try to give Nest a musical education."

"Oh, you dear papa! Of all things, that would please Nest most," said Jack, who overheard the conversation. "I can't imagine how she can fulfill her destiny without every gift that could be showered upon her, she is so beautiful!"

"And how about my little Jack? Shall I slight her?" her father asked.

"Oh, no matter for me," piped the sunbeam. "I can do without, because you know, papa, I really don't care if I can only please you and sing and play a little, but Nest, why, she ought to have everything, as I said. Besides, she will probably be a great lady. To me it seems as if that was what she was born to be." And her color heightened as she caught Aunt

Mary's eye. The dear little woman was fearful that Jack might disclose the history of that afternoon; but the look in Jack's eyes reassured her.

"You are all talking about me," said Nest, leaving the piano. "My ears burned," she added, holding over them her dainty pink and white fingers.

"Yes," her father said, "we were discussing the probability of giving you some lessons in voice culture. It is just possible you have an extraordinary gift."

"And I should have to go to the city for my lessons?" said Nest, in a kind of exultation that jarred on her father's heart.

"Yes, to that terrible city," her father said, trying to make it sound like a jest.

"Why, papa, it can't be terrible; I dream every night of its splendors. Sometimes I am in great rooms surrounded by such beautiful things; crowds of people come and go, and some way it is always I they come to see. It is as if I were a real queen."

"And when do you think I can go, papa, dear?" she asked, seating herself on the arm of his great chair, her perfect face beaming down upon him, her arm encircling his neck.

"That I cannot say, my dear, but I hope in the near future. They talk of calling in an assistant editor of the M— magazine, and I am spoken of as the man. That will increase my income by several hundred dollars, so that I can do more for my darlings."

"Oh, papa, then you will go to the city to live," said Nest, springing up, her face aglow.

"Oh, no, there is no need of that," he made grave reply. "I have no love for the city. This little country home seems like heaven to me; it always did. I can do my duties as an editor without leaving my home."

Nest's speaking countenance fell.

"But you needn't live here all your life," said Jack to Nest, as she settled herself to basting a long white seam. "You know if you take lessons and become a marvelous singer, as you will, of course, you can get an engagement in some city choir. That would be so delightful! You could stay in the city then a part of the time, for, of course, they would pay you a large salary."

"I don't intend to work for my living," said Nest, her eyes sparkling with indignation. "I never thought of such a thing."

"Nor shall you, my darling, while papa lives," said Mr. Denerby, drawing her towards him; "but if I should be taken away dear ones, great heaven! what would you do?" he exclaimed, as if the horror of the thought had but now dawned upon him.

"Why, papa, I'd marry a rich man," said Nest, with such utter confidence that her father looked up at her with an astonishment that was not assumed.

"Rich men don't stand on every corner, my dear, waiting for penniless girls," he said, trying to make the remark jocose, but failing.

"But Nest is so lovely, papa," said Jack, "though it gave me the cold shivers to hear you talk of leaving us. No, you must live to be an old, old man, and we will take such care of you that sickness and death will pass you by and spare you to us for many a long year. If the rich man comes here and falls in love with our Nest, why, I suppose we must let her go," she went on, laughing.

"I never heard my little girls talk of such things before," said Mr. Denerby, gravely.

"I'm the only little one, papa," said Jack, "and I don't often talk that way. But Nest is nineteen; by the time she is twenty, of course, she'll be married and away, but you'll still have me, papsy, to read to you and keep this bright fire going in this very same pretty room so full of lights and shadows, for oh, ever so long a time. For I shall never think of marriage. I'm not pretty, like Nest, and oh, I do dearly love the country, and my hens and chickens, and even down to the very tiny pigs. I never want to be married, but grow into a sweet old maid, and love and take care of you."

"Perhaps you think I want to leave papa," said Nest, pouting and jealous. "I guess I love him as well as you do."

"No, indeed," said Jack, laughing quietly; "but you see destiny has settled things for you. I'm too young for destiny to meddle with me. Anyway, you are going to be a great singer first, and then, when you live in your splendid home and give big parties, you can charm everybody with your lovely voice, just as you charm papa and Aunt Mary and me."

Nest accepted the compliment and smiled, and really she was so beautiful when she did smile that it was no wonder the little home circle worshiped her, or that Aunt Mary racked her brain for new inventions to make her darling still more lovely.

Mr. Denerby turned again to his book, Aunt Mary knit on, and Jack sewed industriously.

"You are all so busy," Nest said, with a sigh of discontent, looking around. "I wish I could do something."

"Take your pencil and draw," said Jack. "Sketch us all in with Moke and the cat." Moke, the pug, and Sally, the cat, made a pretty picture side by side, asleep on the wide hearth rug.

"I don't feel like it," said Nest.

"Make some poetry," suggested Aunt Mary.

"I hate poetry," said Nest.

"Go up-stairs and get that pretty little diary that papa gave you, and go to work," said Jack. "You've never written a word in it. You said you were keeping it for epochs. Make to-night an epoch, and commence."

Nest's face changed a little; it gathered

interest, and then her lips broke into an amused smile.

"Perhaps the time has come," she said, laughing, and looking into Jack's honest eyes. Jack nodded back; they understood each other. That scene in the wood, so novel and suggestive, was certainly worthy of record. The girl took a candle and ran up-stairs. She came down breathless and shining, her red lips parted. Then she took her own little desk, sat down, opened the covers and began to write. Jack watched her, now and then flushing a little.

"Am I to read it?" she asked. And Nest's answer startled her.

"Yes, when I am dead."

CHAPTER VI.

"Oh, love, sweet love, who came with rosy sail And foaming prow across the misty sea."

Nest woke up the next morning at the sound of the early bell, but delayed rising till it was nearly time for breakfast. It was so pleasant to lie there and watch the clouds and build castles in the air. When at length she left her pillow, she brushed the riotous curls into what Aunt Mary often called, rebukingly, a great mop. But Aunt Mary was not there to see. A good night's rest had given her a lovely color, and the sparkle of her eyes was brighter than the costliest diamond. Then she threw on a white dressing-gown, fresh but yesterday from the wash, tied a pink sash carelessly about the waist, and perhaps realized how, in this negligé costume, she seemed to surpass herself in youthful loveliness.

"So sorry I'm late, papa," she said, as she entered the dining-room, "but—" And there she stopped. A handsome young man, a stranger, sat opposite her father, and Jack was just handing him a cup of coffee.

"This is my eldest daughter, Nest," said her father, "and this, my dear, is Mr. Margerie."

Nest bowed quietly and sat down, sending questioning glances to Jack, who was very busy buttering a biscuit, and who answered with quick, intelligent signs, while Mr. Denerby went on talking of commonplace matters, not much relishing the start of astonishment and the quick flush that told how much the stranger appreciated what seemed to him the most beautiful vision he had ever seen.

Nest had little appetite for breakfast, and hurried to her room, where she waited impatiently for Jack or Aunt Mary, both of whom seemed strangely laggard. Jack, she knew, always staid behind to arrange things for her father, but where was Aunt Mary? It seemed an hour, even as she bustled about setting things to rights, before Jack made her appearance, beaming with secret intelligence, which she said she had been bursting to convey to her sister.

"Isn't he nice-looking?" she asked, as soon as the two girls met. "I've only come up for some paper papa wants, and I can't stop a minute," she added, breathlessly. "Aunt Mary will tell you all about it."

Nest fell into a chair almost wrathful at Jack's disappearance, when at that moment Aunt Mary came in, and so saved her the trouble of going in search of what she felt assured must be remarkable news.

"Well, my dear, I suppose you saw a stranger at the table," was her aunt's first remark.

"Yes; who was it, and why weren't you there, aunty?"

"Simply because I was busy tending the other man," said Aunt Mary, leaning back like one exhausted with weary vigils.

"The other?" Nest leaned forward with a hundred questions in her lovely eyes.

"Yes; your father and I were awakened at twelve o'clock in the night by a loud knocking at the door, and presently your father learned that a horse and vehicle were outside; that two gentlemen had been thrown down a steep incline and one of them was injured badly; that by almost superhuman efforts the younger of the two men had caught the horse and placed the body of his insensible companion in the carriage. We took them in at once, calling Farmer Spruce and Minta, and the hurt gentleman, quite insensible, was carried into the spare room. The young man then drove off for the doctor, while Minta and I did all we could to bring the elder gentleman to. When the doctor came, the stranger was conscious, but he is quite seriously, though not dangerously, hurt. I have been up all night; so has Mrs. Spruce."

"And all this has been going on while we slept!" Nest cried. "Why, papa might die in the night and we not know it! Anything might happen. And only think, I had given up all hope of it before I went to bed!"

"All hope of what?" her aunt asked. "Of what you told me in the wood. I can never forget the words, though I have not before repeated them: 'There are two men who came this way through a strange accident. One of them has all the world can give—fame, honor, money.'"

Aunt Mary's face had undergone curious changes while her niece was speaking, but none of them pleasing. Her general aspect was that of one distressed and anxious.

"Did I say that?" And she wrung her hands. "What motives could have impelled me? What strange influence possessed me? Did I say that?"

"Indeed, you did, Aunt Mary. And stranger still, your prediction has come to pass."

"Child, you won't tell your father?" Aunt Mary's accents were almost imploring.

"Why should I tell papa? But the fact remains. Which of them is to be my husband?" "You are too young to talk of a husband, my dear. I beg you to dismiss the whole matter. I did not know what I was saying."

"But you told the truth, Aunt Mary, nevertheless, and I am quite old enough to talk about the matter, since I long to get out of this miserable country place. Mamma was married when she was eighteen. I am nineteen, and, of course, I shall probably wait a year or two. The young man I saw at the table is very handsome—handsomer than I ever imagined a man could be. His face is not baked by the sun, as the farmers' are about here, and he has lovely manners. Oh, I quite admire him," she went on, with an enthusiastic movement. "Such beautiful eyes!"

"But, my dear, he is not the millionaire," said Aunt Mary, rising and moving nervously from object to object.

"A millionaire? Oh, too delightful!" cried Nest, springing to her feet. "A millionaire! Aunt Mary, who is he? What's his name, and how does he look?"

"The younger man mentioned his employer's name to the doctor, who knew him at once. Yes, he counts his money by the millions, and the younger man, every way worthy and delightful, is only his private secretary."

"Then the man who was hurt is my—is the rich stranger?" said Nest, her eyes luminous. She made Aunt Mary resume her seat in the little, low rocker, and in a twinkling was on the floor, her elbows on the lap of the elder woman, her perfect face aglow with interest.

"Now, aunty, tell me all about him. If he

is as hideous as an ogre, I ought to like him for his millions. I must! I will!"

"He is by no means an ogre, child," said Aunt Mary, "though he is probably three times the age of his private secretary. Why, my darling, his hair is white, and he is—partly—bald!" She whispered the last word.

"Is he forty, fifty or sixty?" asked Nest, almost holding her breath.

"More than forty; possibly fifty, but not yet sixty, I think," said her aunt, a certain kind of hesitation in her voice. "Too old, too old, my child, for you; quite too old!"

"But his millions!" said Nest, with wonderful composure.

"Let me look at you, Nest," her Aunt Mary exclaimed, with unfeigned astonishment. "Can it be possible so young a girl, and the child of one of the sweetest women I ever knew, can be so mercenary?"

"If it comes to liking money and fine things, and a way out of this miserable place, yes, aunty," said Nest, pushing back the hair that had fallen over her face; "but don't you see it is destiny? You yourself prophesied it, word for word: 'The poorer and handsomer man will go by the board, and wealth will win the day.' Those are the exact words you used, and I have an exact memory, you know."

"Nest, my darling, tell me nothing more of that unlucky sleep that locks my senses, impelling me to say things that would be an absolute horror to me when awake. I cannot bear to think of it."

"Is it anything terrible, aunty, that I should become wealthy, and the benefactor of all who know me? Do you suppose I alone should enjoy the privileges money gives? There is my father, here are Jack and you, who would all be the objects of my care and my love. I can't tell what beautiful things I wouldn't do for you all. Papa might still live in the country, but I would surround him with luxuries. You should have a house and horse and carriage of your own, and Jack—oh, she should have every advantage that money could give her, and marry rich, too. Aunty, I wonder you don't see how splendid it is for me and everybody!"

"But the love, my darling, the love that every wife should bring to the man who honors her with his love!" said Aunt Mary.

"I love everybody who is kind to me," pouted Nest. "To be sure, I'm not like Jack; I never kissed a cow, and I'm certain she has. I've seen her hang on Dainty's neck and fondle her. I couldn't do that; but if people are good to me I love them, that's all. I never should die of love, Aunt Mary."

"No, my dear, I don't think you ever would," said Aunt Mary, sadly.

"But tell me," asked Nest, still leaning on her aunt's lap, holding the curls out of her eyes with both hands, "how does he look—I mean he with the millions?"

"Well enough," said Aunt Mary, shortly.

"Hasn't he even a grand air?" asked Nest, a little wistfully.

"A grand air? On his back, with his head bandaged, nothing to see but his nose and mouth?" Aunt Mary exclaimed, almost laughing.

"Never mind, it's romantic," said Nest, lifting herself and going to the glass.

"I would advise you, deary, to fix your hair," said Aunt Mary, to whom just now the whole matter looked a dreary farce, though she tried to regard it as a thing that would pass away and leave Nest heart-whole to find her true mate, for Aunt Mary believed in old-fashioned integrity, and the possibility of a true, unselfish love.

Then Jack came in all aglow with exercise. Aunt Mary was wanted in the sick-room, so, presently, the girls were alone together, and volubly exchanging opinions.

"And Nest, for a moment he was alone with me, and he asked me so many little things about you. Don't you like him? I fancy I should like a brother just as tall and handsome."

"But Jack, have you seen the sick man?" asked Nest, impatiently.

"Oh, yes; the doctor came just now. I showed him the room and opened the door. They had just taken off the bandage, and I must say, Nest, he was frightful, with his eyes rolling about so. Big, black eyes, though, like the other's, but then the other is his nephew, and oh, so sweet and kind in his way! Nest, I don't believe a word that aunty said. Mrs. Spruce says she has fits; you won't marry either of them. Say you won't, Nest, dear. It frightens me to think of it."

[To be continued.]

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ABOUT HUSBANDS.

Johnson was right. I don't agree to all
The solemn dogmas of the rough old stager,
But very much approve what one may call
The minor morals of the "Urso Major."

Johnson was right. Although some men adore
Wisdom in women, and with wisdom cram
her,
There isn't one in ten but thinks far more
Of his own grub than of his spouse's gram-
mar.

I know it is the greatest shame in life;
But who among them (save, perhaps, myself)
Returning home, he asks his wife,
What beef—not books—she has upon the
shelf.

Though Greek and Latin be the lady's boast,
They're little valued by her loving mate;
The kind of tongue that husbands relish most
Is modern, boiled, and served upon a plate.

Or, if, as foud ambition may command,
Some home-made verse the happy matron
shows him,
What mortal spouse but from her dainty hand
Would sooner see a pudding than a poem?

Young lady—deep in love with Tom or Harry—
'Tis sad to tell you such a tale as this;
But here's the moral of it: do not marry,
Or, marrying, take your lover as he is—

A very man—with something of the brute,
(Unless he proves a sentimental noddie),
With passions strong and appetite to boot,
A thirsty soul within a hungry body.

A very man—not one of nature's clods—
With human feelings, whether saint or
sinner,
Endowed, perhaps, with genius from the gods
But apt to take his temper from his dinner.
—John G. Saxe.

HOME TOPICS.

DICKLED OYSTERS.—Drain the oysters from their liquor and wash them. Strain the liquor and put it over the fire in a saucepan. When it is hot, put in the oysters and leave them five or six minutes, stirring them once or twice. Pour them into a colander and let them drain while you heat to boiling enough vinegar to cover them, seasoned with salt, pepper and spice to suit your taste. Put the oysters into a jar, pour the vinegar over them and cover tightly. They will be ready for the table as soon as cold, but if kept in a cool place will keep good for two or three days, and are very nice for luncheon or tea.

PRESSED MEAT.—I sometimes use only beef, but often take pieces of beef, lamb and veal. Boil the meat until it is tender and will slip from the bones, then chop it up quite fine and season with salt, pepper and spices, if desired. Let the water in which the meat was cooked boil down while you are chopping the meat, until there will be only enough to moisten it. Have a tablespoonful of gelatine dissolved in a little cold water and add it to the water before removing it from the fire. Pour the water over the chopped meat,



No. 1.—UMBRELLA-CASE.

stir it well together and press it down tightly into a dish of suitable size and shape. It will be firm and solid when cold, and can be cut in thin slices for the table.

BOILING VEGETABLES.—Now, what is there to say about boiling vegetables, except to put them over the fire and let

them boil until they are done? That is the point—"until they are done," but not a minute longer. So general is the custom of overboiling vegetables, cooking them in a careless, haphazard kind of way, that few people realize their superiority when cooked just the right time and served as soon as done.

A general rule to be observed is, that all vegetables must be put into fast-boiling water, brought to the boiling point again as soon as possible, and kept boiling until done.

Potatoes, if of medium size, require thirty minutes to cook; of course, if they are small, fifteen or twenty minutes' boiling is sufficient. Care must be taken that all are of nearly the same size. Carrots and turnips require forty-five minutes when young and an hour in the winter. Beets, an hour in summer and an hour and a half in winter; or if very large, two hours is not too long. Onions, if of medium size, will be done in one hour; when small and young, half an hour is sufficient. Cabbage and cauliflower should not boil over thirty minutes. If onions, cabbage, cauliflower or turnips are boiled in a large saucepan, with plenty of water, kept boiling rapidly and with no cover over them, the odor of these vegetables will not be noticeable in the house. I did not believe this until I tried it.

THE FAMILY SITTING-ROOM.

—In the arrangement of the home, no one thing tends more to the comfort and happiness of the family than a bright and cozy sitting-room, where all may gather after the work of the day and spend the evening in pleasant occupations and amusements. It needs no expensive decoration or costly furniture, but only such comforts and adornments as the taste and purse can easily supply. No loneliness, gloom, private vexations or petty trials should be allowed an entrance; only love, sympathy, good humor and pleasant feelings should control its inmates. It should freely admit every member of the household and their friends, if they conform to its unwritten rules.

There is no better preparation for the duties and cares of life than a childhood and youth spent in a happy home, and its memory will always be a powerful aid in resisting temptation, and its influence a most successful teacher of pure and noble qualities.

Neither father nor mother can alone make such a home, no matter how much wealth they have at their command. Both must work together to secure it; both must bring sympathy, kindness and good will; both must leave self behind and devote themselves to the pleasures of the rest, not forgetting their own youth and its hopes and desires. If we keep our hearts young as the years go by, that we may enter with interest into the plans and pleasures of our children, they will never grow away from us, but each year the ties that bind their hearts to ours will grow stronger. MAIDA McL.

SUNDAY VISITING.

Sunday is the day to which we look forward as a day of rest, but often the busy housewife declares this to be one of her hardest days; and perhaps it is, because she chooses to make it so; or else, through long practice, the habit of making it a busy day has become so established that it is difficult to bring about a revolution.

I sometimes wish that Sunday company dinners might be put down as a custom obsolete, never to be revived into general favor.

To be a little lenient, I do not mean that on this day our doors should be closed against a neighbor or a friend, or that our tables should be debarred from their presence, for the house whose comfort is for its inmates alone, lacks sadly in a home atmosphere. I mean that the day ought not to be set aside for general feasting and entertainment.

The host, "We had seventeen for dinner yesterday, besides our own folks," has

its glory overshadowed in the assertion, "We brought Lucy Stone, who is just convalescing from a long fever, home with us yesterday for a little drive and change."

"But," the housekeeper says, "all of my other days are so full that unless I visit or entertain my friends on Sunday, I have no other time, and I must have some diversion." That is all right about this diversion, my sister, and I hope every busy woman in the land will not only claim it as her privilege, but look upon it as an actual necessity, that she must often seek a change from her daily work. But there are ways of diversion and there are ways of diversion. On Sunday try to take yours in some house of worship. The drive, the change of dress, the meeting of friends in those visits before and after the sermon, which are not only permissible but delightful in country churches, the singing, the words which fall from the lips of the good man who seeks to feed you spiritually, will grow to be more of a rest and an enjoyment to you than the pleasure gained by an all-day Sunday visit, which consumes treble the amount of time and usually means a hard days work in the kitchen for your hostess.

SUNDAY DINNERS.—A bright little woman, whom it is my good fortune to know, never fails to add a little attraction to her Sunday dinner. On this day there is no need of the hurry and rush which seems to be a part of the inheritance of the average American, and, consequently, the family linger around the table, which is spread with its prettiest linen and the favorite dishes.

The masculine portion of the dinner always has an investigating eye for the "surprise," which he knows is forthcoming, to supply the "inner man."

This same good housekeeper always manages to have a portion of the day to herself, and in order to do this, she begins the day before. If chicken is to grace her table, the Sabbath stillness is not broken by a chanticleer's farewell to this mundane sphere, for on Saturday he gives up his ghost and becomes prepared for the next day's dinner. While the baking is in progress some Saratoga chips, all brown and crisp, which are just as good the next day, are made. Thus, with a warm drink, a dish or two easily prepared, my friend finds her Sunday dinner a credit to herself and costing but little trouble. In the afternoon she is not too tired for a little reading, a short drive, a little walk or a friendly call. MARY D. SIBLEY.

CARE OF FLAT-IRONS.

It is so easy to keep the flat-irons in good condition that there is little excuse for any housewife neglecting them, no matter how busy she may be. Any woman can easily tell at a glance when these articles are well kept. Some housewives will have in their possession irons that have been their mother's before them, and though they have been in constant use for years, are still as firm and smooth as any one could wish. Other women with the same kinds of irons, would, by neglect and carelessness, in a year or two render them unfit to use.

Where there are many starched clothes to be done up weekly, it is a good plan to wash the irons once a week, but where plain clothes and only a few starched clothes are to be done, once a month is often enough. Take some clean ammonia soapsuds, and with a cloth wash the iron well, afterwards wiping with a dry cloth; then put them on the back part of the stove to dry thoroughly. To clean the irons, always have a piece of coarse sand-paper or a handful of coarse table-salt, or a piece of wrapping-paper in which to wrap them. Always have the top of the range perfectly clean before putting on the irons, and never allow them to get too hot. If such a thing does happen, cool them by setting up on end on the hearth.

Some women, when in a hurry, cool irons by plunging them into cold water, which will very soon spoil them. Don't keep the irons on the stove when not in use, for it is sure to harm the temper of the iron; and don't have irons on the stove when cooking, more particularly when the article cooking is one that is apt to flow or boil over, or while frying. After taking an iron from the stove for immediate use, first rub it over a piece of heavy wrapping-

paper kept for that purpose, then rub the smooth part with a cloth in which is encased a bit of wax. Rub the iron well over a clean cloth, and then it is ready for the clothes. In ironing starched clothes, if any of the starch sticks to the iron, always scrape it off with a knife before placing it on the stove to heat. Irons should be kept in some closed, dry place. If kept on a shelf, they are always dusty when wanted.—Housekeeper.

A CARVED AND PAINTED SCREEN.

Although a handsome screen is expensive, it is so useful and lasts so long that one can well afford the price in view of its beauty and utility.

The three panels given you as a suggestion were published in the *Art Amateur*. You can hardly find designs more pleasing which have no more difficulties in execution. Do not turn up your noses and say that "cat-tails and flags are common." Nothing is "common" which is well painted. The old masters, and indeed modern painters, have never ceased to paint the Madonna, nor do we ever tire of seeing beautiful conceptions of this eternal subject. There is a long distance between the Madonna and a simple flower, but there is one likeness between them. A flower may be painted by thousands of artists thousands of times, but it is not common so long as it is graceful and true to nature.

The designs on this screen recommend themselves, because you can easily study them from some book or pond near your home. Cat-tails grow very tall, so you can have your panels at least fifty inches high by twenty inches wide. There are different qualities in canvas, but the reasons. If you wish to paint very lightly—that is, with your paint thinned with turpentine—get a canvas with a coarse grain; this gives an atmospheric effect, but if you intend to go over your painting twice, a smoother canvas will do. Concerning the matter of economy, when you order your panels inquire whether the dealer has canvas that will cut to advantage. You might change the dimensions of the stretchers an inch or two if it would make much difference in the economical use of the canvas, as it often does.

As the panels are continuous, you must paint the sky on all three at the same time, so that they will be of one tone throughout. Use cobalt and white (with that inevitable wee bit of ivory black) at the top, blending into yellow ochre and white in the middle, and at the horizon mix in some cadmium and rose madder.

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A few clouds will give a pleasing variety. You can take these from nature.

For the cat-tails, which should be of a rich yellowish-brown, take burnt umber, burnt sienna and yellow ochre. Drag over the lights a little gray, composed of cobalt, ivory black and white. The leaves must be varied in tint, some much yellower than others. For a cool gray-green, mix cobalt, yellow ochre and white; for a yellow-green, mix pale lemon, chrome,



SILK HOOD.



DRAPED BED.



No. 2.—UMBRELLA-CASE.

emerald green and white, with a dash of raw sienna in it. For a dark green, take Antwerp blue and raw sienna; in the very darkest parts, a touch of burnt sienna and indigo. The cat-tails in the center panel, being farther back in the picture, must be altogether grayer and less strong in tone. For the flags, make the dark leaves very rich and velvety. Antwerp blue and crimson lake, put on alternately, quite pure in the first instance, with a little white added on the lights, will give the exact effect required. In the dark leaves, red should predominate. The lighter leaves must be bluer in tone. The same colors mixed with a great deal of white will serve for the flower. At the back of a green leaf a little black may be added to lower the tone. On the top of the dark leaves touch in a little chrome and white. For the foliage and arrow-heads in the foreground, the greens already mentioned may be used. Paint the sandy bank with raw umber, yellow ochre, black and white. Add a touch of rose madder. Drag a little cobalt over the lightest parts. The water in front must reflect the blue sky; as it recedes it must be much grayer in tone. The distant reeds are gray and faint in tone.

The kingfishers must be painted very brilliantly; they give life and interest to the whole scheme. Shade them broadly with raw umber only to begin with; then mix separately some cobalt and white, and emerald green and white. Load these colors on alternately. In the lightest parts, here and there, introduce a touch of lemon yellow. In the half tones and darkest parts, paint in Antwerp blue, raw sienna and emerald green separately. For the yellow marking under the eyes and on the breast, use cadmium and a little rose madder. The birds must be painted crisply and with decision. The only way to make them effective is by painting them as directed, as directed, on the palette.

A young girl who has put her two small feet in nearly every country on the globe where a young woman's feet may safely go, has brought back with her boxes full of original things and a head full of original ideas. Two of the most delightful things that she brought outside of her head were for headwear. One was Japanese and one came from Brittany. Both of these she has adapted for evening wear—to slip on over her crinkly locks when she tosses them up into a light crown on her dainty head, before she goes out to dine or to dance. The Japanese one is made, as one would expect, of silk crape and looks like the illustration when she has it on. The crape was in one straight piece, two and a half yards long and three fourths of a yard wide. It is gathered at the top with a chenille rosette and at the neck it is plaited in fine little plaits, where it ties under the round cleft chin with wide strings of watered ribbon. About the face the crape is embroidered in scallops, and blue violets are tossed here and there in delicate needle-work. They finish the ends of the broad scarf, and when Madelaine draws the silky thing about her head and gives the long scarf just the proper coquettish twist about the neck and looks up at you, you wish you could write rondeaus to tell her how she looks.

KATE KAUFFMAN.

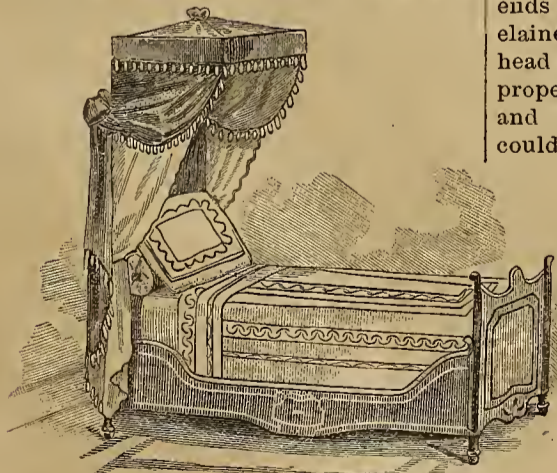
HOME CONVENIENCES.

Are we all of one mind on a rainy day? "Where's my umbrella?"

"Who's taken away my overshoes?" The cries penetrate the house. No one has seen any of them. Are you sure you brought them home? No, no one is sure of anything. And so it goes on every rainy day.

A box for overshoes, or hanging pockets on some one's closet door, is a great help; but this is useless unless it is some one's especial business to clean them up and put them there.

The case we give for umbrellas is made



DRAPED BED.

of heavy linen, trimmed in heavy braid and worked in cross-stitch; that, however, could be dispensed with. After the umbrellas are dried, they could be put here for the next rainy day.

BABY SLIPPER.—A bed-slipper, to slip on baby's feet, is a very comfortable thing these cold nights.

Crochet in afghan-stitch a square the

length of the foot. Fold to the middle the corners of one side on the straight. Then sew up the two opposite sides for the heel. The foot brings it into shape.

BEDS AND BED-LINEN.—The illustrations we give show two prettily made-up beds. The top sheet is trimmed around



SCREEN PANEL.

three sides, leaving it to hang over at the sides. The blankets and other cover can be added when needed. Spare beds can be made up in this way to make the room look nicely and not leave them unmade, as I have seen in some houses.

The round bolster is very popular; it can be covered in silk, the same as the spread. One pillow laid on this with a pretty sham of some kind would be sufficient. Pillows of eider-down of large size can be had for \$1.50 apiece. These stand up very nicely.

TWO PRETTY HOODS.

The other hood is the covering the Brittany peasants wear on their heads, adapted in material to this country and Madelaine's own tastes. It is of dull blue cloth, lined with dull yellow silk and having a delicate pattern in gold thread wrought about the outer edge. The back of the hood is cut after the following outline, but larger, and a straight, plain piece is gathered slightly onto it for the body of the hood. If desired, this piece may be cut wide enough so as to fold back from the face, showing a yellow lining for an inch. Pale yellow strings tie under the chin. And when it is Madelaine's chin, you are sure it is an up-to-date Priscilla who stands before you.

Exchange.

HOME-MADE CANDY.

PEACH PASTE.—Take half a pound of sweet, dried peaches, cut in small bits and put in a teacupful of water. Boil until tender; strain through a sieve and boil down. Stir in a pound and a half of sugar and boil until a thick paste. Pour in a pan;



when partly cool, mark off in squares. When cold, take up and roll in sugar.

CREAM WALNUTS.—Take two pounds of sugar, a teacupful of water and boil until it threads. Take from the fire and stir until white and creamy. Have walnut meats ready; make the candy in small, round cakes, press walnuts in the sides and roll in granulated sugar.

CREAM CANDY.—Four cupfuls of white sugar, one of water, half a cupful of vinegar, one cupful of cream, a tablespoonful of butter and a pinch of soda. Let boil until brittle and take from the fire; flavor with vanilla. Pour in buttered plates and pull.

BUTTER-SCOTCH.—Take three pounds of sugar, a quarter of a pound of butter, a teaspoonful of cream of tartar and the juice of a lemon; add water to dissolve the sugar; boil until brittle. Pour in a

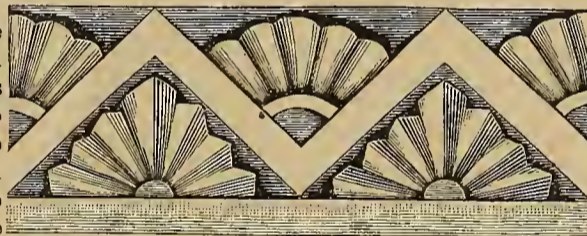


FIG. 2.—CARVED BORDER.

large, shallow pan and when stiff work off in squares.

HOARHOUND CANDY.—Boil a handful of hoarhound in a pint of water. Put two pounds of sugar in a kettle, pour the water over and boil until brittle. Pour in buttered dishes; when partly cool, mark off in squares.

MOLASSES CANDY.—Boil two cupfuls of molasses and one cupful of sugar until thick, add two tablespoonfuls of butter and half a cupful of vinegar; boil until brittle. Pour in greased dishes, let cool and pull.

TAFFY.—Take a pound of sugar and four ounces of butter, boil with enough hot water to dissolve the sugar. Just before

it is done add a tablespoonful of vinegar. Pour in buttered dishes; when cool, pull and form in little cakes.

ELIZA R. PARKER.

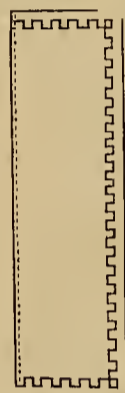
ANSWERS TO FLORAL QUERIES.

BY GEO. W. PARK.

SHIPPING HARDY ROSES.—Miss Myra Smith, of Kansas, wishes to know how to ship hardy roses.

ANSWER:—They are dug in the autumn or early spring, care being taken to preserve as many of the roots uninjured as possible. The roots are then dipped in a thin mortar and wrapped in damp sphagnum moss. A box is obtained just large enough to accommodate the plants, and the packing is done by placing layers of plants at each end of the box, the tops facing or overlapping each other and the layers secured by a slat fitted in over the balls of moss at each end. When all are in, the lid is nailed on and the label attached. Plants packed in this way will keep for many days and are safely forwarded by freight. Small plants from pots may be packed together in a small wooden box for mailing. The roots are first washed, then impacted in moss and wrapped in oiled paper, and the box is lined with oiled paper. One of the secrets in packing to mail is to fill the box. Loose packing is never satisfactory.

ROSES NOT OPENING.—"I have some rose-bushes of the cabbage-rose variety, so-called. They are always full of blooms, but will not open out more than a fifth of what they should be in size. The outside leaves seem to become dry and tough so



FRONT OF PRISCILLA HOOD.



BACK OF PRISCILLA HOOD.

as to prevent the flowers from expanding. Bushes are healthy, vigorous growers and are large." M. LEON.

Delta, O.

ANSWER:—Dig about the plants early in the spring, and at the same time cut away all dead or decaying branches. As soon as the buds begin to show, mulch heavily with well-decayed barn-yard manure. Opening buds are often injured by the sun shining upon them just after a shower when the moisture is still upon them, or in the morning before the dew has disappeared. If planted on the north side of a tree or building this trouble with the buds is often overcome. Peonies, lilies and many other flowers are complained of for dropping their buds, but in most cases the treatment above recommended—culture in early spring, mulching in summer and partial shade from the hot sun after showers—will entirely remedy the evil.

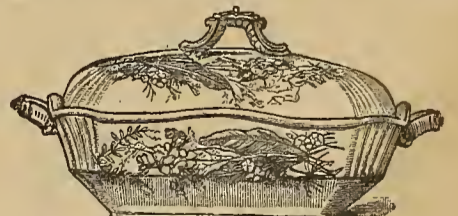
THE PERSONAL DISCOMFORT, and the worry of a Constant Cough, and the Soreness of Lungs and Throat which usually attend it, are all remedied by Dr. D. Jayne's Expectorant, a safe medicine for Pulmonary disorders and Throat Affections.

TOKOLOGY, a complete Ladies' Guide in health and disease. Lizzie N. Armstrong writes: "If I knew I was to be the mother of innumerable children it would have no terrors for me, so great is my confidence in the science of TOKOLOGY." Prepaid, \$2.75. Sample pages free. Best terms to agents. Alice B. Stockham & Co., 277 Madison St., Chicago.



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THE LONDON TEA CO., 795 Washington Street, Boston.

Our Sunday Afternoon.

JESUS AT EVENING PRAYER.

Meek and sweet in the sun he stands,
Drinking the cool of his Syrian skies;
Lifting to heaven toil-wearied hands,
Seeing his father with those pure eyes.

SEVEN SCENES IN THE LIFE OF A WOMAN.

A mother is carefully putting
her favorite doll to bed. With
teuder solitudes she carefully
removes each dainty garment
and fastens on the tiny night-
gown. Then, with a fond
kiss, she hugs her treasure to
her and places it in its little
cradle. After patting it gently, she tip-
toes out of the room as the twilight peeps
curiously in.

A fair maiden stands before her looking-
glass adding the last touches to her
evening toilet. Her lover will soon be
here! Her eyes are full of innocent love-
light! She looks eagerly at her reflection
in the glass! How glad she is that she is
pretty! She frowns a little at a crimp
that will not stay just as it should. A
ring comes at the door and she hastens
away to meet her beloved.

A young wife sits anxiously watching
for her husband. At each approaching foot-
step her heart beats rapturously and then
grows heavy with disappointment! She
will not go indoors, it is so sweet out
there! The creeping shadows cheer her
trembling soul—so she waits and wishes,
and the shadows lengthen into darkened
night.

A mother is rocking her baby to sleep.
He looks at her gravely while they move
to and fro, as if asking why the bright
sunshine must leave and the ugly shadows
hide her dear face from him. There is a
wealth of wisdom in his great, sweet eyes!
He holds tightly to her dress, as if to keep
her near him!

When at last his eyes are closed, she dis-
engages the loving hand, kisses him light-
ly—he must not be awakened—and arises
to put him into his crib. Then she sinks
back into her chair and begins to rock
him again. It is so pleasant to rest in the
twilight, and he is so sweet to nurse!

A woman kneels by a fresh-made grave.
The headboard stares coldly at her and
seems to say over and over again the
words inscribed upon it: "He was her
only child, and she was a widow." With
tear-laden eyes she bends down lower and
lower, till her lips rest upon the earth.
She longs so to kiss the quiet form it is
hiding from her! And the twilight seems
to hurry past and lose itself in the dark-
ness.

A care-worn old lady sits watching the
shadows come—they are friends to her;
friends that she welcomes—for they al-
ways sing the same song to her, "One day
nearer home." And she smiles to them
her thanks. She, too, repeats, "One day
nearer home." And so life—woman's
life—goes on in the twilight till rest comes
to her weary body and joy to her aching
heart; till her spirit reaches its home,
where never a shadow can fall upon it.—
New Orleans Picayune.

HOW TO READ FICTION.

A reading of fiction which throws off
care, or a reading of fiction which brings
knowledge to men's minds—as does much
of the fiction that is written nowadays—
such a reading is beneficial. He who
reads fiction to rest himself, to refresh
himself, to lift himself above the dead-
level of the vulgar real, reads it to his ad-
vantage and profit; but he who reads it to
abide in it, never giving back a better
man to his every-day household or busi-
ness duties, is hurt by it.—Henry Ward
Beecher.

SIN'S FATAL FASCINATION.

When once a young man has done a
wrong thing, it has an awful power of at-
tracting him and making him hunger to
do it again. Every evil that I do may, for
a moment, create in me a revulsion of
conscience, but stronger than that revul-
sion of conscience, it exercises a fascina-
tion over me that is hard to resist. It is a
great deal easier to find a man that has
never done a wrong thing than to find a
man that has only done it once. If the
wall of the dyke is sound it will keep the
water out, but if there is the tiniest hole
in it, it will all come in. So the evil that
you do asserts its power over you; it has
a fierce, longing desire after you, and it
gets you into its clutches.

Beware of the first evils, for as sure as
you are living, the first step taken will
make the second seem to become neces-
sary. The first drop will be followed by
a bigger second, and the second, at a short
interval, by a more copious third, until
the drops become a shower, and the shower
becomes a deluge. The course of evil is
ever wider and deeper and more tumultu-
ous. The little sins get in at the window
and open the front door for the big house-
breakers. One smooths the path for the
other. All sin has an awful power of
perpetuating and increasing itself. As the
prophet says in his awful vision of the
desolate city, "None of them shall
want her mate. The wild beasts of the
islands." Every sin tells upon the
character, and makes the repetition of
itself more and more easy. "None is bar-
ren among them." And all sin is linked
together in slimy tangle, like a seaweed,
so that the man once caught in its oozy
fingers is almost sure to drown.

TRUE COURTESY.

True courtesy is the "beauty of the
heart." How well it is that no class has a
monopoly in this kind of beauty; that
while favorable circumstances undoubt-
edly do render good manners more common
among persons moving in higher rather
than in lower spheres, there should, never-
theless, be no positive hindrance to the
poorest classes having good manners.
Here is an illustration of true politeness
exhibited by both classes of society. One
day, in hastily turning the corner of a
crooked street in London, a young lady
ran with great force against a ragged little
beggar boy and almost knocked him
down. Stopping as soon as she could, she
turned around and said very kindly to
the boy, "I beg your pardon, my little fel-
low. I am very sorry that I ran against
you."

The poor boy was astonished. He looked
at her a moment in surprise, and then,
taking off about three quarters of a cap,
he made a low bow and said, while a
broad, pleasant smile spread itself all over
his face: "You can hev my parding, miss,
and welcome; and the next time you run
agin me, you can knock me clean down
and I won't say a word." After the lady
had passed on he returned to his companion
and said: "I say, Jim, it's the first time I
ever had anybody ask my parding, and it
kind o' took me off my feet."—Religious
Telescope.

KEEP BUSY.

If you expect God to choose you for a
great work, be busy; he seldom selects
idlers. When he wished a deliverer for
Israel, he went into the wilderness for
Moses, who was watching sheep; when he
wanted a man to save his people from the
Midianites, he sent for Gideon, who was
threshing wheat; when he wanted a man
after his own heart to be king of Israel, he
sent for David, who was keeping sheep.
Idlers do not suit. The Lord wishes
those who are not only willing to work,
but who are hard at it. Idlers are too often
lazy, and that may be the cause of their
idleness. Such seldom have enough am-
bition to take care of themselves, let alone
caring for the Lord's work. But idlers
suit Satan exactly. He likes such as have
no ambition; they make the best slaves.
The devil wants slaves for his work, but
God wants something better. He wishes
men and women who have ambition—who
take an interest in their work; he wishes
servants who are anxious to rise, for he
means to promote them some day. From
servants, he adopts them into his family
and makes them his children.—Forward.

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Success. Students and references from every State.
All ages taught. A Trial Lesson and Catalogue free.
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You can't impose on some people
without resistance; others, though quite as
sensitive, are slower to protest. The same
is true as to some organs of our body:
The stomach will promptly resent
imposition—the lungs will suffer long
in silence. The first fact is disagree-
able; the latter dangerous.

Beware of Colds. They are
the recruiting officers for the Silent
Army. They have an affinity for
weak people and their weak parts.

But how shall the cold be kept out, or put out? By means of
Drs. Starkey & Palen's COMPOUND OXYGEN. No drug. Just en-
riched and magnetized air. That's all. What keeps you alive, will
in an enriched form, make you stronger. Is that reasonable? Yes,
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STRINGER is claimed to be the greatest improvement
of them all, and without it the highest attainable
excellence is simply impossible.
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EVERY HOUR
YOU WORK

is not easily earned in these times, but it can be
made by any one of either sex in any part of the
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light and pleasant, and you run no risk whatever.
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NATURE'S SURE CURE FOR ASTHMA. No Pay until Cured,
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Trial Case, sent by Mail, address, Central Office Kola
Importing Co., No. 132 Vine Street, Cincinnati, Ohio.
See New York World and Philadelphia Press, May 18 and 19, 1890; also
Christian Observer and Medical Journal, April 9, 1890. The Christian Evangelist, May 30, 1890, says editorially: "The
Kola Plant is a gift direct of God, to sufferers from Asthma, and His blessing will rest upon Stanley and associates, explorers
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QUICKLY DISSOLVED AND REMOVED WITH THE NEW SOLUTION

MODENE
AND THE GROWTH FOREVER DESTROYED WITHOUT THE SLIGHTEST
INJURY OR DISCOLORATION OF THE MOST DELICATE SKIN.
Discovered by Accident.—In Compounding, an incomplete mixture was accidentally
spilled on the back of the hand, and on washing afterward it was discovered that the hair was
completely removed. We purchased the new discovery and named it MODENE. It is perfectly
pure, free from all injurious substances, and so simple any one can use it. It acts mildly but
surely, and you will be surprised and delighted with the results. Apply for a few minutes and the
hair disappears as if by magic. It has no resemblance whatever to any other preparation ever used
for a like purpose, and no scientific discovery ever attained such wonderful results. IT CAN
NOT FAIL. If the growth be light, one application will remove it permanently; the heavy
growth such as the beard or hair on moles may require two or more applications before all the
roots are destroyed, although all hair will be removed at each application, and without slightest
injury or unpleasant feeling when applied or ever afterward. MODENE SUPPLIES ELECTROLYSIS.
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same as cash. (ALWAYS MENTION YOUR COUNTY AND THIS PAPER.) Cut this advertisement out.
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Our Farm.

THE POULTRY YARD.

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

SHIPPING HEALTHY FOWLS.

The OBJECT in raising poultry on the farm is not only for producing eggs, but to supply meat to consumers. We doubt if many have given consideration to the matter of responsibility assumed in supplying poultry. There is a responsibility connected with the sale of poultry that is just as binding as any, yet there are so many channels of trade, and so many interested parties to the several transactions, that to compel a faithful observance of the laws of health is difficult. But the farmer bears a heavy responsibility, however, whether others share it with him or not, and in his hands is the safety and protection of whole communities, as the sources of food are on the farms.

In all sections, and in every town and village, we find persons of sound health and others diseased. The same rule applies to animals, and even with the aid and advice of skillful physicians, it is at times impossible to locate and determine the nature of some diseases, and if an occasional disease occurs now and then in a family of a few, how much more so are the liabilities of outbreaks where hundreds are together.

The attention of the reader is invited to the consideration of these facts with a view of impressing upon each the necessity of strictly guarding the flocks against diseases. When a flock has been subject to roup, the hens will not again reach that condition of health which fits them as food for humans, for roup is of a scrofulous nature, and though apparent cures may be effected, yet the birds may not be in health. This fact has been demonstrated frequently and in some

that may be subject to disease, or which have contracted malignant diseases, be marketed after they recover from their disadvantages?"

That such birds can be sold is true, but whether the farmer is willing to assume all responsibility for the results is something for him to consider, not that he violates any legal act, but has he the right to overlook his moral obligations in selling?

As a class, farmers will not sell diseased animals or birds (though an occasional exception may happen), and they suffer loss from that cause, but they often unknowingly send animals and birds to market that are not as healthy as they should be. To avoid this to a great extent, it would be to their advantage to pen up their fowls for a week or ten days and attempt to fatten them by heavy feeding, the result being that the healthy fowls will show better appetites than those not in as good condition, and though such a method will not avoid the difficulty entirely, yet it will largely assist in the shipping of better food in the shape of poultry. The higher quality of the poultry, and the increased prices obtained, will more than return to the farmer any extra labor bestowed or food allowed, and all classes will be benefited.

SWELLED HEADS AND EYES.

We receive more inquiries in regard to this trouble than of any other diseases afflicting poultry. When a hen is on the roost at night, and a cold draught of air comes down over her, as is usual with ventilators, the result is swollen head and eyes. If a draught, or even a slight current, comes in through a crack or knot-hole, the side of the face next the crevice will be affected. This explains why it is usual to find only one eye swollen, and the cause of the ailment may be a hole no larger than a pin-head. As the bird suffers pain, it will change position on the roost the next night, exposing the

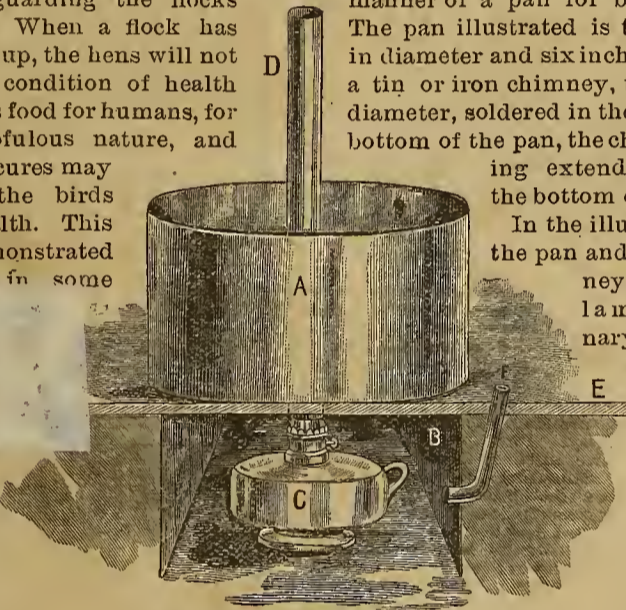
other side of the face in order to relieve the one affected, and the result is that both sides of the face are in the same predicament. The first duty is to search for the cause. The next is to anoint the face of the bird with something; glycerine, melted suet, vaseline or sweet-oil will answer, but the usual remedy is a mixture of one part spirits of turpentine and three parts sweet-oil, a few drops being rubbed on the face and eyes twice a day. If the birds do not quickly recover, it is better to destroy them than to waste time and labor on them.

THE POULTRY SHOWS.

More shows are held annually by the poultrymen than by any other class of breeders. During this winter over fifty shows will be held in different sections of the country, and at some of the large shows as many as 3,000 birds are expected. It is to the advantage of the farmers to encourage these shows, not only by attending, but also by carefully observing and comparing the breeds. Shows and fairs educate the amateurs and attract the experienced. There are also educational advantages in shows that are beneficial to others than the farmers. The consumers learn which fowls are the best, and a knowledge of how to bring the producer and consumer together is advanced to a certain extent.

A NON-FREEZING WATER-PAN.

Those who are annoyed by the freezing of the water in the fountains will appreciate the use of the contrivance here given. It is simply a sheet-iron pan, which can be made by any tinner, something after the manner of a pan for baking cakes. The pan illustrated is twelve inches in diameter and six inches deep, with a tin or iron chimney, two inches in diameter, soldered in the center of the bottom of the pan, the chimney opening extending through the bottom of the pan.



A NON-FREEZING WATER-PAN.

In the illustration, A is the pan and D the chimney. C is a small lamp (an ordinary night-lamp will answer), the globe of which should enter the opening of the chimney (D), the lamp being under the floor in an excavation (B) ten inches in diameter, E, E showing the level of the poultry-house floor. Air is allowed the lamp by the tube, F. If preferred, no chimney need be used, provided the pan is raised an inch off the floor, and in which case any kind of pan will answer. The weight of water will prevent the fowls from tipping it over.

DOUBLE WALLS.

Whether double walls should be used or not depends upon the cost of material. If half-inch boards, clapboards or any cheap lumber can be had, with a plentiful supply of sawdust or chaff convenient, it will be an advantage to nail boards on the outside walls, to strips placed there for that purpose, and fill the space with the sawdust, so as to add to the warmth. A thickness of only one or two inches of sawdust will be found beneficial, as it will serve to stop up the cracks and crevices, and keep out the cold winds.

BEGIN THE NEW YEAR RIGHT.

No correct knowledge of the results of your operations can be obtained unless you keep an account with your flocks. There are hundreds of little items which assist in increasing the expense, but which would be unnoticed but for showing on the books. When strict accounts are kept, economy will be practiced, for no farmer or poultryman will add expense in his management when he knows that a loss is certain. Do not forget to keep an account, also, of the poultry and eggs used by the family and of the eggs used for incubation, as the hen is as justly entitled to the credit of supplying the home market as any other. Above all, begin the new year with a resolution to improve the flock, and do not hatch any chicks unless you aim to have something

better than those you have. If this one object—improvement—was kept in view always, it would add many dollars to each farmer's pocket, and it is more important with poultry than with other stock, as the fowls mature early and become producers the first year.

COOKED MEAT AND BROTH.

Meat from the butcher is the best food that can be fed to the laying hens, as it is egg producing and does not make them fat, if the meat is lean. Ground meat may be mixed with the morning meal. To feed meat, cook it to a broth and thicken with ground oats, or chop the meat fine. A pound of meat to sixteen hens, three times a week, is about the proper quantity, which, however, depends on the kind of hen. If she is laying well, she may be given meat every day with advantage.

BULKY FOOD.

What the hens should have at this season is more bulky food and less grain. Chopped clover, scalded, is excellent, and so are cooked potatoes and turnips. Even corn fodder, cut very fine and scalded, will be eaten readily by geese and ducks. A big mess of cooked turnips, with a small quantity of bran added, will be found the cheapest and best food for ducks.

INQUIRIES ANSWERED.

Heavy Male.—A. S. W. L., Peoria, Ill., writes: "My young pullets droop their heads forward, lose the control of their necks and finally die, being poor and thin."

REPLY:—The details mentioned are not sufficiently explicit. It is probable that the male is very large and heavy, and should be removed.

Prefers Small Turkeys.—W. G. J., Terrell, Texas, writes: "I want the smallest and plumpest turkey I can get. Which breed do you suggest?"

REPLY:—The White Holland.

Too Fat.—S. R. B., Geneva, Ohio, writes: "I had a Cochin pullet, healthy, to all appearances, which would sit on the nest for hours, but did not lay. One morning I found her with her hind parts dragging. I killed her, and found her nearly filled with what seemed to be the yolk of an egg. What was the cause? Also, what would be a fair price for poultry droppings?"

REPLY:—The pullet was overfed, became fat, thus obstructing the generative organs, causing what is known as "caked egg," a very common occurrence. Droppings sell at from one to two dollars per harrel.

Monitor Incubator. Bristol, Conn.

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Dow's Caponizing Instruments Are Simple, Plain and Cheap.
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A comb that combines the strength of metal with the elasticity of a brush. Efficient, humane, convenient and durable. Descriptive circulars on application. Send 50c for sample by mail. If not sold by your dealer.
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This beautiful miniature **UPHOLSTERED PARLOR SET** of three pieces (for the next 60 days) will be sent to any address on receipt of 95 cents to pay expenses, boxing, packing, advertising, etc. This is done as an advertisement and we shall expect every one getting a set to tell their friends who see it where they got it and to recommend our house to them. This beautiful set consists of one sofa and two chairs. They are made of fine lustrous metal frames, beautifully finished and decorated, and upholstered in the finest manner with beautiful plush (which we furnish in any color desired). To advertise our house, for 60 days, we propose to furnish these sets on receipt of 95 cents. Postage stamp taken. No additional charge for boxing or shipping, order immediately. No attention paid to letters unless they contain 95 cents.
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Milkmen, Creamerymen and Dairy-men can keep Milk and Cream fresh a week without using ice. Healthful, tasteless, odorless and inexpensive. SAMPLE, enough to make test, mailed for ten cents.
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KENSINGTON STAMPING was never more popular than to-day. Many ladies making high wages working at home, odd hours. Besides beautifying your own home you can make 15c. every 5 minutes you stamp for others. If you only devote 3 hours a day to it, the snug little sum of \$5 and over comes in, as the prices range from 5c. to \$1 for each pattern you stamp. An inventive genius has lately modernized machinery for turning out these patterns by the hundred yards as fast as you can reel off a ball of yarn. Their cost is barely nothing to what it was last year. We send the patterns on strips about two feet long and seven inches wide. Nearly as good as many 60c. and \$1 ones now being sold. We buy so many of this one kind that we can lead every other dealer on price. Our beautiful combined outfit consisting of nearly 100 of the largest variety of patterns, each from about a foot long down to single alphabet letters. We cannot describe them, not having room to go into detail, but in order to introduce our magazine, "Comfort," with its greatly improved departments, we will send the above outfit, free, postpaid, to all three months' (12c.) subscribers, and also send a new book or Manual of Instruction in the art of stamping, 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 FREE to all who send 25 cents for 6 months subscription to "COMFORT," the best Home Monthly now published, or if you send for more than one lot as above, "COMFORT" goes for one year.
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Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge.

Spreading or Piling Manure.—A. M. T., Remington, Ind., writes: "I wish an answer as to the advisability of spreading well-rotted manure on meadowland during a very dry summer like the past, or would it have been better to have thrown into piles and spread it later?"

REPLY:—Spread the manure as fast as you haul it out. It is a waste of labor to put it into piles and spread it afterwards; besides, the spots under the heaps get more than their share.

Amount of Feed for Sheep.—S. P. S., Mercer, Pa., writes: "Will you please tell me how many pounds each of cut hay, roots and grain it will take to keep ten ewes through the winter, and how much pasture for them and their lambs in summer?"

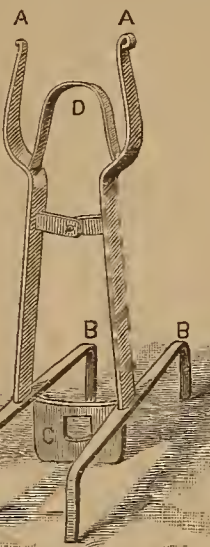
REPLY:—We cannot tell. The amount required will depend upon the size and condition of the sheep, the kind of shelter provided, the severity of the winter, the quality of the food, etc.

To Destroy Johnson Grass.—D. W. H., Chattanooga, Tenn., writes: "Have you had any experience in destroying a Johnson-grass meadow, or is such a thing possible?"

REPLY:—We would like for some one who has had experience to send a reply. Johnson grass is a coarse perennial, with large root-stocks that penetrate the ground in every direction, every joint of which can send up stems.

Destroying Moles.—W. B. H., Milford, Ohio, wishes to know how to destroy moles, which are so numerous in his locality that many fine meadows are being ruined by their work.

REPLY:—They can be poisoned, but the better way is to trap them. We republish from our "Garden Gossip" the following description and illustrations of a good mole-trap that can be made by your village blacksmith out of band iron and a piece of spring steel.



MOLE-TRAP.—SET.

Insert the trap thus: Set lengthwise of the run, so that the trigger, which is cut out in the middle, forms a kind of obstruction to the passage of the animal, and cover the run up again with pieces of sod or slate.

VETERINARY.

Conducted by Dr. H. J. Detmers, Professor of Veterinary Surgery in Ohio State University.

To regular subscribers of FARM AND FIRESIDE, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should enclose a fee of one dollar, otherwise no attention will be paid to such a request.

Thumps in a Pig.—C. W. C., Logan, Ohio, writes: "I have a pig that has thumps. It eats well but does not thrive. Please to give remedy."

REPLY:—It is not quite clear what you mean by "thumps." Perhaps your pig has had an attack of swine-plague, or so-called hog-cholera. If so, there is no remedy. May be that time will effect improvement.

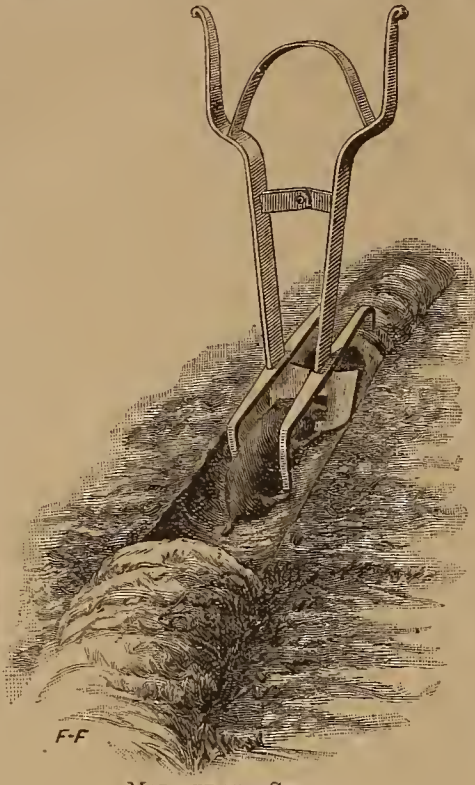
A Cribber.—T. W. S., Whiting, Iowa, writes: "Can you give a remedy for a horse that cribs? Is it a habit or disease?"

ANSWER:—I cannot. It is generally considered a bad habit.

Wants Jockey Books.—J. W., Fergus Falls, Minn., writes: "Have you any good horse-jockey trick-book, or could you put me on the track of where I could obtain the best?"

ANSWER:—I have not what you want; am not a bookseller and cannot answer your question. Ask some sporting man.

What Ails the Cow.—A. B., Fyan, Mo., writes: "What ails my cow? About two weeks ago a small knot came on her right



MOLE-TRAP.—SPRUNG.

hind leg, opposite her flank. The knot was very small at first, but grew rapidly and is now six inches or more across."

ANSWER:—I cannot tell you; your description is too vague. If the swelling, which you call a knot, were on the outside of the abdominal cavity it might be a hernia, but since it is on the leg, I have no idea what it may be.

A Crippled Colt.—F. J. C., Mohawk Village, O., writes: "I have a colt that is crippled in the left front leg. It was foaled that way. The main cord appears to be too short to let its pastern-joint come to its place. It was foaled cross-legged. Can you give me the reason for that and tell what to do for it?"

ANSWER:—Maybe you bred a small mare to a big horse, which is a very bad way to get big colts. If anything at all can be done in your case, it must be by an operation, consisting in a subcutaneous cutting of one or two tendons.

Frozen Back.—R. P. M., Detroit, Kansas, writes: "I have a cow that had her back frozen when she was two years old; she had to stand outdoors all winter with no shed or tight board fence to get out of the way of the wind. The man that owned her then said it would get well in time. Since I bought her she has had the best of care, but the sore got bad. Can she be cured?"

ANSWER:—If your cow will be sufficiently protected against the inclemencies of a Kansas winter by being kept under good shelter, and if the loss of skin and other tissue is not too great, you may be able to effect a healing by powdering the wound at least once a day with iodoform. A one-ounce bottle of iodoform costs about fifty cents.

Lolls the Tongue.—A. H., Turbotville, Pa., writes: "Is there any remedy for a colt three years old that has formed the habit of letting his tongue hang out of his mouth whenever he has a bit in it?"

ANSWER:—If the habit, which the animal formed because an unsuitable bit was used, is a confirmed one, hardly anything can be done. You may try different bits, and see to it that the one chosen rests equally upon the toothless borders of the lower jaw and upon the tongue.

Wants to Sell Horses.—J. A., Fort Collins, Col., writes: "I am a breeder of horses, and would like to know what kind of a horse-market there would be in your town next spring. Would like to know what kind of horses would sell the best, draft horses or driving horses. I also have a great many unbroken mares and geldings I would like to sell. I wish you would be kind enough to let me know how such horses will sell at your place, and at what figure. If you are not posted please hand this card to some horseman that you think will answer."

ANSWER:—Ask a dealer in horses. Your question is altogether out of my line and I cannot answer it. The principal horse-market in the West is Chicago, and if you address J. L. Cooper, Union Stock-yards, you will receive a reliable answer.

Swelling on the Shoulder.—L. T., North Fairfield, O., writes: "I have a horse, somewhat old, that has a large swelling on his right shoulder, on the upper part near the withers. His head, back of his ears, is swelled some, also. The swellings do not appear sore, neither does there appear to be any fever in them. His appetite is good. He is in fairly good condition and is well fed, but seems weak and has no life. Is not lame, but was some time ago in right foot. Can anything be done for him?"

ANSWER:—You fail to state the nature of the swelling; at any rate you give only negative symptoms. It is therefore impossible to prescribe a treatment. Still, as the horse is old and without life, and as the swelling does not cause any lameness, it may be best to leave it alone. Else, if you desire treatment, have the animal examined by a veterinarian.

Slight Attacks of Garget.—F. S., Springfield, Mo., writes: "I have a young cow which, with her first calf, had some swollen places on her udder. Had to milk her once or twice before she dropped her calf, because her udder was hard. The calf sucked about two or three weeks after I took it away. The swelling is

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mostly on the back part of udder and around one front teat. It increases and then she gives less milk than usual, sometimes but very little. Sometimes the swelling is nearly all gone and then she gives more milk; otherwise she is in good health. Will you please tell me if there is anything I can do to make her udder all right, and if it is safe to breed her again? She is of Jersey stock and I don't like to lose her."

ANSWER:—Your cow suffers from repeated slight attacks of garget. Frequent and thorough milking constitutes the remedy. Until the udder is in perfect order, milk at least six times a day, and every time milk clean.

Poll-evil.—G. F. R., Nortonville, Kansas, writes: "I have a mare which has a lump about the size of an egg just back of the ears. The lump has been there more than a month. It does not seem to grow any larger, yet seems to be sore and hard. What should I do?"

ANSWER:—Rub in, once every four or five days, a little oil of cantharides, prepared by heating for one hour in a water-bath, one part cantharides and four parts of olive-oil, as repeatedly stated in these columns. By doing this you will probably succeed in causing an absorption of the swelling, provided you see to it that no friction on or any bruising of the sore part takes place, either by the halter, the headstall of the bridle or anything else. If it should come to suppuration, the abscess has to be opened at the lowest point; then, first caustics and afterwards antiseptics have to be applied. For further information see numerous answers in recent numbers of FARM AND FIRESIDE concerning poll-evils and fistules.

A Lame Mule.—J. H. J., Totten, Ark., writes: "I have a mule three years old that was worked some. Last spring she got lame, first in a hind leg and then in a fore leg, something like sweeny. Part of the muscle shrunk away. The skin is loose over the shoulder-blade. She drags her foot on the ground when made to step backwards."

ANSWER:—Your description of the case does not enable me to make a definite diagnosis. It somewhat points towards founder or laminitis. If this supposition is correct, the time for efficient treatment has passed, and hardly anything can be done except to ease the animal by putting on bar shoes, which throws part of the weight upon the frog, and which must be very concave inside of the nail-holes so as to free the sole from any pressure whatever. Founder or laminitis should in all cases receive rational treatment at least within three days, else perfect recovery is out of the question.

Quantity of Corn and Hay.—J. R. L., Fillmore, O., writes: "How many pounds of hay and corn ought an ordinary-sized horse to have a day through the winter season to keep him in good condition, where he is kept on a farm and has but little work to do?"

ANSWER:—Your question can be answered only conditionally, because the number of pounds required depends, first, upon the quality of the hay and the corn; secondly, upon the breed, age, temperament, size, condition and constitution of the animal, and thirdly, upon the temperature of the atmosphere in the premises where the animal is kept. If no work is required, fifteen pounds of good, sweet hay and five pounds of corn are, on an average, considered sufficient for a day's food for one thousand pounds of live stock, but if the animal is kept out of doors or in a cold stable, especially if the winter is a hard one, considerably more will be needed.

Blind Stagers.—J. W., Ludwick, Ohio, writes: "I have a three-year-old horse that had blind staggers about two months ago. He would reel and wobble along and would fall sometimes when he attempted to run. He slanted his head when he looked at anything."

ANSWER:—If your horse was affected with "blind staggers" two months ago, and does not act all right yet, there can be no doubt that your horse has now, and forever will have, "blind staggers." Still, the symptoms you give may possibly be due to other causes. "Blind staggers," that is, pressure upon the brain tissue by a chronic effusion of serum into the ventricles, etc., of the brain, must be considered an incurable disease, which, at best, can only be mitigated by keeping the animal in a cool place and by feeding in such a way or such food as will prevent constipation. Exposure to heat or to direct rays of the sun, especially in summer, and also overfeeding and hard work must be avoided. Horses thus affected are dangerous and should, under no circumstances, be used on public roads.

Wants Good Care.—J. C. W., Hillsdale, Pa., writes: "Please tell me the best way to clean a horse and the feed for same, so he will be free from worms and bad blood."

ANSWER:—Feed liberally with good oats and good, clean and sweet hay; give a thorough application of brush and curry-comb every morning; give some exercise during the day, and during the night keep the horse in a clean and dry stall, with an abundance of dry and clean bedding, in a stable which, though well ventilated, sufficiently protects against cold and inclement weather. Worms can be expelled by anthelmintics, but without the treatment mapped out above, medicines are of not much use. One of the best worm medicines for horses is tartar emetic. It may be given in one dose of three drachms, combined

with half an ounce of powdered licorice-root, half an ounce of powdered marsh-mallow root and just enough water to make two pills, which have to be given on an empty stomach, and after they have been given the horse should fast at least six hours. Pure water for drinking, preferably from a good, deep well, is essential, because worm-brood, as a rule, is introduced with dirty water from ditches, stagnant ponds, etc.

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The above Rebus is an OLD SAYING, familiar to every one. WHAT IS IT? We will give to the first person from whom we receive the correct answer on or before February 29th, 1892, \$100.00 in gold. To the second, \$50; to the third, \$25; to the next five persons, a Handsome Silk Dress Pattern of 16 yards in Black, Blue, Green, Brown or Gray. To the next 10 a Solid Gold Genuine Diamond Ring, and to the next 15 sending in the correct answer, \$100 each. To the person from whom we receive the last correct answer, we will give \$100.00 in Gold, to the next to the last \$50, to the next \$25, the next 5, a Handsome Silk Dress Pattern of 16 yards in one of above colors. To the next 10 a Solid Gold Genuine Diamond Ring, and to the next 15 (should there be so many sending in correct answers) \$50.00 to each. We prepay all shipping charges on presents, and send in accordance with this offer on the same day the answer is received. All answers must be sent by mail and received by us not later than February 29th. With your answer send us 25c in silver or 80c in stamps for a vial of DR. HOBBS' LITTLE VEGETABLE PILLS.

REMEMBER, you pay nothing for the presents as they are absolutely GIVEN AWAY to introduce and advertise Dr. Hobbs' Celebrated Pills. As to our reliability you can write to any bank or business house in Chicago. We guarantee perfect satisfaction or money return. AGENTS WANTED immediately after Feb. 29th a printed list giving the names and addresses of the successful contestants will be mailed to each person who has sent in an answer. Address HOBBS' MEDICINE CO., Cor. Dearborn and Harrison Streets, Chicago, Ill. When our readers answer the above advertisement please mention the Farm and Fireside.

Our Miscellany.

THE woman who "broke into song" now has a cracked voice.

THE gardener is not a lover of vice, but he is, nevertheless, always interested in the rake's progress.

AN old detective says women are especially qualified for detective work, being generally closer observers than men.

ONE of the peculiar customs of the East Indian coolies, called Lascars, is the putting of a ring on the great toe when they marry.

GLADWIN COUNTY, MICH., boasts of having the largest frame barn in the world. It is 156 feet long, 50 feet wide, and in its construction 500,000 feet of lumber were used.

THERE are forty thousand women studying in the various colleges in America. And yet it is only twenty-five years since the first college in the land was opened to women.

CORK covering for steam pipes has proved so successful, says *Invention*, that in some cases it has been found to make a difference of 100 to 124 degrees from the temperature of uncovered pipes.

AN instep pad is a new fad of those fair women who are so unfortunate as to be possessed of a "low-bred" foot. It is simply a little linen pad fitted in place directly over where the instep should be, but very often isn't.

IF the eyes are tired and inflamed from loss of sleep, by sitting up late or long travel, apply in the morning, soft, white linen dripping with hot water—as hot as you can bear—laying the cloth upon the lids. You will feel the eyes strong and free from pain or distress in half an hour.—*Chicago Tribune*.

TEDDY is a little city boy who paid a long visit to his grandpa's farm. He stayed until harvest time and was, of course, very much interested in everything he saw. One day grandpa was husking corn. Teddy wanted to help, but he wasn't quite sure how to ask about it. Pretty soon, however, he burst forth, eagerly: "Grampa, may—may I help you undress that corn?"

THE home, at North Conway, New Hampshire, of Lady Blanche Murphy, a daughter of the Earl of Galnshorough, has been sold at auction and will be made into a hotel. Lady Blanche ran away with Thomas P. Murphy, her music teacher and her father's organist, was disinherited, and came to this country. Here, in her home among the hills, she wrote for the papers and magazines, and thus aided in the support of the family. At her death, a number of years ago, the Gainsborough family claimed her body, and it is interred in the burying-ground of Gainsborough Castle. Her husband survived her until last fall.

THE World's Fair committee of the American Jersey Cattle Club, has addressed a circular letter to every breeder of Jersey cattle in America for the purpose of enlisting his aid in securing for the Jersey breed a creditable representation in the live-stock department of the exposition and in the dairy tests which are to be made. This committee is composed of J. J. Richardson, of Iowa; W. J. Webster, of Tennessee; John Boyd, of Illinois, and F. E. Shaw and P. J. Cogswell, of New York—all of whom are well-known cattle-breeders. In their circular letter they say that it has been decided to show at the fair a herd of fifty Jersey cows in milk, and that the association will bear all expense of transporting, caring for and feeding them. The breeders are asked to furnish one or more of their finest cows to this herd. The letter gives also the terms of the proposed milk and butter tests. The prospects are most encouraging that all of the chief breeders of dairy cattle will be represented by herds of fifty exceptionally fine animals, and that the tests will be so successfully conducted that the results will be quoted as standard authority for years to come on the question of the relative merits of the respective breeds.

GASOLINE AS A WINE COOLER.

Talking about gasoline, a group of oil operators agreed that its dangers had not been painted half dark enough. In describing its volatile powers, one of them said that a bottle of wine rubbed briskly with a gasoline-saturated towel would be cooled as completely as if it had been frozen in ice.—*Philadelphia Inquirer*.

WHEN WOODS DECAY.

Tests have been made to determine the variations in the length of time that is required to produce decay in different kinds of woods, when buried under the surface of the ground. The birch and aspen were both found to decay in three years; the willow and the buckeye, in four years; the maple and the red beech, in five years; elm and ash in seven, while the larch, juniper and arbor vitae were uninjured at the expiration of eight years.

CARE OF MATTING.

In sweeping the pretty and economical straw matting that is growing to be very popular with housekeepers during warm weather, do not use a broom, for it will tear the strands in a short time. A writer in the *Housewife* says: "A long-handled bristle brush, such as is used for oilcloth, is the nicest and will remove the dust best, for the soft bristles can go into

crevices that a broom would miss. Always, when possible, brush the matting the lengthwise of the grain, and the strands of straw will not wear and break as quickly as though brushed across.

WOMEN'S WORK IN SCIENCE.

The steady increase of patents granted to women, since scientific studies have been opened to them, explains in part why inventions by that sex have been heretofore so rare. A list recently published gives the number of patents granted to women inventors by the United States government from the year 1790 to July 1, 1888, as 2,300. After 1809 to 1815, only one patent was issued. From 1837 the number of women inventors increased rapidly. In 1870 the number was 60; in 1887 the number reached 170. If last year's list were published it would probably show a still more rapid advance. And these inventions take a wide range, from mere household and dress inventions to railroad journal boxes and submarine telescopes. In addition to the better scope and invitation for inventive genius which wider knowledge gives, the more independent position of women now requires less moral courage on their part to apply for patents than would have been necessary at an earlier period.—*New England Magazine*.

TALENT AND GENIUS.

A reader wishes to know the difference between talent and genius, if there is any. There is a great deal of difference, and its manifestations are in very marked contrast.

Talent is a development of the natural understanding. It may be inherited or it may be an original gift. At any rate, it is a special natural inclination in any certain direction, as for language, for music, painting or what not else. Cultivation perfects it mechanically and develops it to its fullest extent.

Genius is the action of reason and the imagination. It is thoughtful and creative where talent is merely mechanical and imitative. Talent treats of what it sees. Genius creates something to treat about. Talent reflects ideas and objects. Genius produces ideas and subjects in order to inspire them with life.

In the way of familiar illustrations, it may be said that Charles Dickens was a genius, and Charles Reade a man of talent. Anthony Trollope was a talented man, and Thackeray a genius. With this hint the reader can go ahead and make up a contrasted list of what he considers the geniuses and the talents of the universe for himself.

THE GYPSIES ARE DISAPPEARING.

There is a fascination about "Gypsy lore" which is perhaps increasingly felt now that these normandic insurgents are being gradually—slowly, it may be, but surely—absorbed by the environing civilization. The altered conditions of modern society make their wandering life more difficult; their language is invaded by gaujo elements; mixed marriages attenuate the strength of the Romany blood, and dotted over the map of Europe there are now little stationary colonies of house-dwelling Gypsies, who no longer take the road or "fold their tents like the Arabs."

The Gypsies have been clearly visible in Europe for four centuries and a half. They have been the Ishmaelites of the modern world. If at the present day the law has ceased to treat them harshly, the social pressure is probably greater, so that it is now or never for those who wish to make a scientific study of these wanderers. A volume entitled "The Gypsies," by Adrian A. Colocci, forms an excellent introduction to such a study. The persecutions of the Zingari have been many and bitter. Even in the last century they were accused of cannibalism. To their foreign appearance and strange mode of life they added the practice of arts that were regarded as irreligious and heathenish.

It will be news to many to learn that it was not until 1856 that, by the abolition of Romany slavery in Dacia, the freedom of the Zingari in Europe was completed. Colocci agrees with other observers in regarding the Gypsies as practically destitute of religion, although willing to adopt nominally the prevailing faith of any country in which they may be sojourners. In England they are Protestants; in Turkey, Mohammedans. Morally, they are untrained children, indifferent to everything but the satisfaction of the desire of the moment, whether that desire be the offspring of love, or greed or hate.

While there is but little Gypsy poetry among the English tribes, the "gift and faculty divine" appears profusely both in Spain and in the remoter parts of Europe; and one of the most interesting portions of this book is that which gives specimens of the Romany muse. The pieces are mostly short, often strange in form, but not infrequently inspired by genuine poetic feeling. This sometimes finds expression in modes so unexpected as to have almost the quality of genius. The Gypsy sings the beauty of his sweetheart, apostrophizes the sun and stars with heathen fervor, and celebrates the success of the knavish ruses by which he has gained an advantage over the busuo. Filial affection also finds a place in his songs. While he shows the frankest enjoyment of the material side of life, there is often a spirit of profound melancholy manifested in these lyrics. The Zingari have always been famous for their love of music. The estimate which gives the Gypsy race 1,000,000 souls is probably far below the truth.—*The Academy*.

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Always mention this paper when answering advertisements, as advertisers often have different articles advertised in several papers.

Smiles.

A PROFITLESS LIFE.

The miser through his life's brief day
But little knows of joy or mirth,
And foolishly throws heaven away
To get the earth.

His cup of life is filled with gall,
He hoards until his eyes are dim,
And doesn't get the earth at all—
The earth gets him.

WISHES.

I wish I had a thousand tongues
To sing my lady's praise;
I wish I had a thousand eyes
To see her winning ways;
I wish I had a thousand banks,
With all their legal tender—
A thousand banks that I might buy
Rich presents for to send her;
I wish I had a thousand hearts
To squander love upon her;
And I wish I had a thousand swords
To kill the man who won her.

—Puck.

ECONOMY IN DRESS.

A LITERARY lady who writes for the magazines met a friend on the streets of Galveston.

"You seem to be in high spirits. Heard some good news? Going to get married?" asked the friend.

"Oh, no, it's better than that. I've just got a letter from the editor of *The Ladies Magazine*, inclosing a check for fifty dollars in payment of my article on 'Economy in Dress,' and I am going right now to buy me a new brocade, silk velvet dress, made in the latest style, if it takes every cent of the fifty dollars."

FIXING IT UP.

Young Tutter—"I just dropped in to say that I am getting up a little straw-ride for Christmas, Miss Maude, and I thought perhaps you would like to go."

Miss Maude Twickenham (doubtfully)—"Well, I don't know. Mother is very particular about my going on straw-rides, Mr. Tutter. You know, she has some very strange notions. I presume you will drive—as usual."

Tutter—"Yes, I expect to."
Miss Twickenham (brightly)—"Well, I guess perhaps I can arrange it. I will promise mother to sit on the same seat with the driver."—*Life*.

RIGHTEOUS INDIGNATION.

Mrs. Suburb—"Why can't you come and do the washing as usual to-morrow?"

Washerwoman (angrily)—"Cause I got ter stay ter hum and mend ther childer's clothes—that's why. It's y'r own fault, too, that ye can't get y'r washin' done this week, and you've got to do it y'rself er go dirty."

"My fault? How can it be?"
"What business had ye to go an' put a barbed wire fence around y'r apple orchard, I sh'd like ter know!"—*Good News*.

AN IMPORTANT EVENT.

Sunday-school teacher—"Now, children, we must bear in mind that between our last week's lesson and this quite a period of time is represented as having elapsed. During this time a very important event has taken place. Yes, Annie (noticing a little girl at the head of the class smiling knowingly), you may tell us what it is."

"We've all got our winter hats."—*Texas Siftings*.

SHE TRIED TO MAKE HOME ATTRACTIVE.

"I don't see why I can't keep my husband at home," said a distressed looking little woman. "Why don't you try to make home attractive to him?"

"I have. I've taken up the parlor carpet, sprinkled sawdust on the floor and put a beer-keg in the room, but some way or other it doesn't seem to make any difference."

UNSTATSMANLIKE.

"There goes a man who left congress poorer than he was when he entered it."

"Ah! A good proof of his splendid integrity."

"Oh, no! Of his miserable luck at poker."

A HINT.

"Well, John," said his employer, "how do you feel after your vacation?"

"Like a new man, sir."

"Well, it's a good thing, John. I've been thinking I'd try a new man at your work, but perhaps you'll do."

AN INNOVATION.

Hunker—"What do you suppose Miss Filpp said when I asked her to marry me?"

Spatts—"I suppose she said, 'Oh, George, this is so sudden!'"

Hunker—"No, she said, 'I've been expecting you to propose for three months.'"—*Epoch*.

FAIR FARE.

The talkative passenger—"What kind of a fair are you going to have in ninety-three, anyway?"

The Chicago restaurateur—"Oh, much the same as usual, I guess; roast beef, pork, ham, bacon, eggs, beefsteak, fried liver."

THE WRONG MALADY.

Doctor—"You should not drink so much Bourbon; it will do you no permanent good. You should drink milk, for it contains all the elements of the blood."

Patient—"But I'm not bloodthirsty."—*Pharmaceutical Era*.

A FIENDISH PLOT.

Laura—"Yes, I know she has a pretty nose, but you were the last one I should have expected to tell her."

Flora—"She'll look at it so much now that she will be cross-eyed within a month."—*Indianapolis Journal*.

"Don't you know how to do it, dear?" asked a young husband, as they gazed solemnly at the turkey.

"Yes," said she, "it's all quite clear, but it says, 'First clean your turkey,' and I was wondering whether one should use toilet or regular scouring soap."—*Chicago News*.

Jack Rounder—"Isn't Miss Belle a beauty?"
Miss A—"Yes, but you know beauty is only skin deep."

J. Rounder—"Well, I'm no cannibal. That's deep enough for me."

STATE OF OHIO, CITY OF TOLEDO, } ss.
LUCAS COUNTY,

FRANK J. CHENEY makes oath that he is the senior partner of the firm of F. J. CHENEY & CO., doing business in the City of Toledo, County and State aforesaid, and that said firm will pay the sum of ONE HUNDRED DOLLARS for each and every case of Catarrh that cannot be cured by the use of HALL'S CATARRH CURE.
FRANK J. CHENEY.

Sworn to before me and subscribed in my presence, this 6th day of December, A. D. 1886.
A. W. GLEASON,
Notary Public.

Hall's Catarrh Cure is taken internally and acts directly upon the blood and mucous surfaces of the system. Send for testimonials, free.
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Of Roxbury, Mass., Says:

Strange cases cured by my **Medical Discovery** come to me every day. Here is one of Paralysis—Blindness—and the Grip. Now how does my **Medical Discovery** cure all these? I don't know, unless it takes hold of the Hidden Poison that makes all Honor.

VIRGINIA CITY, NEVADA, Sept. 9th, 1891.
Donald Kennedy—Dear Sir: I will state my case to you: About nine years ago I was paralyzed in my left side, and the best doctors gave me no relief for two years, and I was advised to try your **Discovery**, which did its duty, and in a few months I was restored to health. About four years ago I became blind in my left eye by a spotted cataract. Last March I was taken with La Grippe, and was confined to my bed for three months. At the end of that time, as in the start, then it struck me that your **Discovery** was the thing for me; so I got a bottle, and before it was half gone I was able to go to my work in the mines. Now in regard to my eyes, as I lost my left eye, and about six months ago my right eye became affected with black spots over the sight as did the left eye—perhaps some twenty of them—but since I have been using your **Discovery** they all left my right eye but one; and, thank God, the bright light of heaven is once more making its appearance in my left eye. I am wonderfully astonished at it, and thank God and your **Medical Discovery**.
Yours truly,
HANK WHITE.

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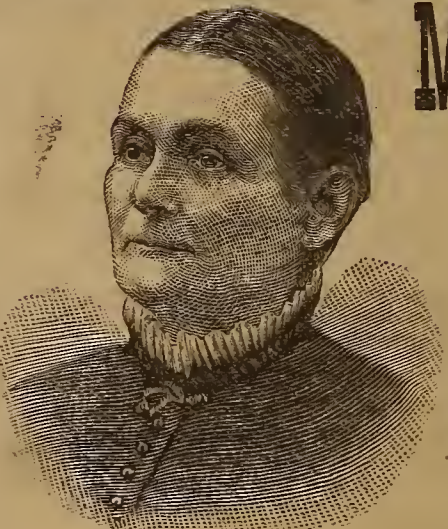
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If afflicted with sore eyes use Dr. Thompson's Eye-Water



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CURED

Of Neuralgia, Headache, Stomach Troubles, Liver Stones, Constipation and Female Weakness in a Worst Form.

NORTH SYRACUSE, N. Y., Sept. 14, 1891.
DR. A. OWEN, Chicago, Ill., Dear Sir:—After being worn out with pain for five years, and doctoring all those long years, I chanced to see Mrs. Ella Trautman's statement in the National Tribune. As I read it, I thought, as a last resort, I would try one of your Electric Belts, for I had doctored with physicians in Syracuse, only receiving temporary relief, and began to think there was no hope for me. I purchased one of your No. 4 Electric Belts and found relief at once. I could feel my diseases gradually disappearing. It is now seven months since I commenced wearing the belt, and I have not taken a drop of medicine since the first day I commenced wearing it. I have worn the belt according to instructions every afternoon since I received it, and to-day I am thankful to you for your wonderful discovery. For two or three years I suffered with dyspepsia, had terrible pains in my side, my food refused to digest. Now I can eat almost anything without any distress in the stomach.
For two long years I did not have a good night's sleep. I was so dreadful nervous it seemed as if I would be wild. I used to tell my husband if I could not get rid of this nervousness I did not wish to live, as life was almost a burden. Worn out and completely discouraged, I at last found relief in your No. 4 Electric Belt, and that is more than doctors did for me. I also had severe pains in my head. At times I could hardly see one go around the room. I can not tell how much I suffered, but the belt has taken away all pain and nervousness and I can sleep good once more. When I began wearing the belt, I could hardly walk around the house, but after the first week I began to get stronger, and have continued to improve ever since until to-day I feel like a new person. The belt has given me new life and I can enjoy company once more. Doctor, you don't know how good it seems to get out. It seems as if I was let out of prison. My husband wears the belt in the forenoon for kidney trouble and it is helping him. He joins with me in their highest praise. If I could not replace it, I would not take any amount of money for my belt. I would not give my Electric Belt for all the doctors and drugs in Syracuse, if I could not get another. I would say to ladies, who are suffering from diseases peculiar to our sex, to try one of Dr. Owen's Electric Belts and you will find relief at once, for it did for me what medicines could not do, and I trust it will do the same for you. It will also take away that tired feeling and give you rest at night. Now, doctor, please accept my thanks. You have my permission to use this letter if you so desire. I feel it a duty to inform people of your wonderful discovery.
Yours respectfully,
MRS. CHARLES FRANK.

NOTICE—The (only) Owen Electric Belt and Appliance Co. is incorporated under the Laws of the State of Illinois, with a cash capital of \$50,000.00. President, Dr. A. Owen; Treasurer, S. M. Owen; Secretary, C. E. Meigs. The Main Offices, Head Salesrooms, and only Factory are located at 191-193 State Street, Chicago, Ill., with a branch office at 826 Broadway, New York City. We are in no way responsible for representations of agents or any other persons selling goods of our manufacture, or making contracts for advertising in our name. Customers purchasing from either of the above offices may rely on whatever representations are made.

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Selections.

SPONGING OUT A HEADACHE.

In case of the ordinary nervous headache from which women suffer so much, says an authority, remove the dress waist, knot the hair high upon the head, out of the way, and, while leaning over the basin, place a sponge soaked in hot water, as hot as can be borne, on the back of the neck. Repeat this many times, also applying the sponge behind the ears, and, if the assertion of the writer is not a mistaken one, in many cases the strained muscles and nerves that have caused so much misery will be felt to relax and soothe themselves out deliciously; and very frequently the pain promptly vanishes in consequence.

Every woman knows the aching face and neck generally brought home from a hard day's shopping, or from a long round of calls and afternoon teas. She regards with intense dissatisfaction the heavy lines drawn around her eyes and mouth by the long strain on the facial muscles, and when she must carry that worn countenance to some dinner party or evening's amusement, it robs her of all the pleasure to be had in it. Cosmetics are not the cure, nor bromides or the many nerve sedatives to be had at the drug shop. Here again the sponge and hot water are advised by the writer quoted, bathing the face in water as hot as it can possibly be borne; apply the sponge over and over again to the temples, throat and behind the ears, where most of the nerves and muscles of the head center, and then bathe the face in water running cold from the faucet. Color and smoothness of outline return to the face, an astonishing freshness and comfort results, and, if followed by a nap of ten minutes, all trace of fatigue vanishes.—Health and Home.

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In putting up a lunch for traveling, it is desirable that it be not composed of articles of a "mussy" character, neither those liable in any way to offend the senses of the lookers-on. An exchange very sensibly suggests that "to avoid lunch odors there should be two or three baskets or packages. Every article should be carefully wrapped in clean, soft, white paper." Of course, there should be plenty of knives, forks, spoons and napkins, that the food may be handled and eaten in a dainty and creditable manner. The basket, when opened, should be a picture of order and neatness, and this should be preserved throughout, so far as may be. In order to facilitate this, one individual of the party should be elected to have sole charge of the putting up and giving out of the lunch; no one being suffered to "dive" promiscuously into the basket for anything he or she may happen to want. Each time after the dealing out of the food, this same person should carefully rearrange the lunch.

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An old physician, retired from practice, had placed in his hands by an East India missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh, Asthma and all Throat and Lung Affections, also a positive and radical cure for Nervous Debility and all Nervous Complaints. Having tested its wonderful curative powers in thousands of cases, and desiring to relieve human suffering, I will send free of charge to all who wish it, this recipe in German, French or English, with full directions for preparing and using. Sent by mail, by addressing, with stamp, naming this paper, W. A. Noves, 820 Powers' Block, Rochester, N. Y.

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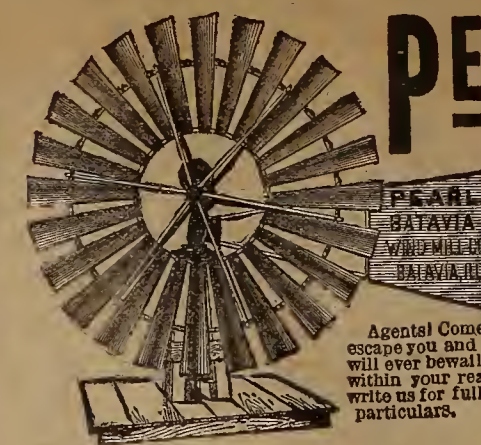
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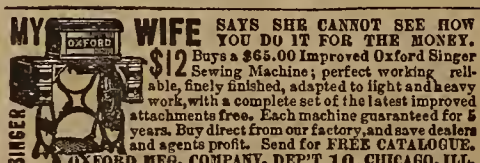
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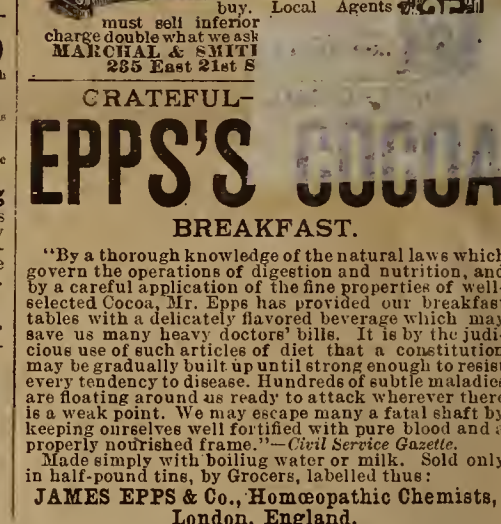
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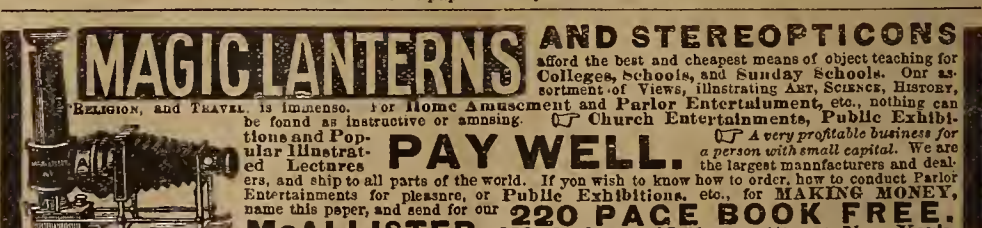
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Current Comment.

LAST summer, when peaches were selling in some of the larger cities of Ohio for over \$2 a bushel, thousands of bushels were rotting on the ground in the fruit districts not seventy-five miles away. In the midst of the season there came a time when the prices received by the growers would not pay the cost of picking, packing and shipping. Freight rates and high prices for fuel kept the fruit out of fair prices paid by the consumers. There is something about the transportation and marketing of our home-grown fruits, when, in years of abundance, high retail prices keep the fruit-hungry masses of the large cities from enjoying what is going to waste in the orchards of the growers only one or two days distant from the big markets.

An improvement in the methods of transporting and marketing that would reduce their cost, would place the fruit on the market at moderate prices within the reach of all, pay the carriers and middlemen fair wages and leave a profit to the growers, would be an all-round blessing to humanity. It is a burning shame that choice fruit should rot on the ground, when thousands of people in the cities are kept from buying it by the high retail prices fixed by the greed of the middlemen. Read and reflect on the report on fruit prices to the state horticultural society, found in the first article on the next page.

ONE of the most striking and valuable object lessons ever made to illustrate the benefits of spraying fruits was prepared by the Ohio Experiment Station. For a long time orchardists despaired of getting a remedy for the apple scab, but it has been found. Spraying with the proper mixtures at the right time will completely destroy the fungus, and give us smooth and perfect apples. Read, in the first article on the next page, what Prof. Green says about it.

IT is astounding that the citizens of any one of the United States should be nearly evenly divided on the question of permitting a gigantic swindling concern to carry on its business under a charter from the state. This seems to be the case in Louisiana now.

The Louisiana Lottery Company demands an extension of its charter for twenty-five years, and in return for having its swindling operations legalized, offers the state a bribe of many million dollars.

One political party there has already been disrupted, and it is said that the other will be. The next state election will be a

fight between the lottery men and the anti-lottery men. The lottery question has become the main one in state politics. With its ill-gotten gains for a big bribery fund, the lottery is making a vigorous struggle for life. There is hope that in the coming election the voters will redeem Louisiana from what is a deep disgrace to the state and the nation.

The lottery finds some of its strongest support in New Orleans and the river parishes, because it has offered to donate \$350,000 per annum toward the maintenance of the levees. Let Congress cut down on some of its lower Mississippi river appropriations, and such a bribe will lose its force.

THE composition of the various committees of the House indicates the lines along which discussion and legislation will take place in Congress. The ways and means committee represents a policy of party expediency. Instead of reporting a general tariff bill, it will report special bills amending the McKinley law, and placing iron, coal, wool, etc., on the free list. As to currency legislation, the following from the New York Press tells what is to be expected:

"The committee on coinage, weights and measures of the national House is the most extreme free-silver committee that has ever been known in that body. There have been coinage committees which were prepared to put the national currency issues on a silver basis, but they had only small majorities of one or two, and the free-silver men differed so much among themselves that their reports and the bills they presented were in the nature of compromises. The present committee, composed of thirteen members, has a majority of four who are openly and avowedly, not merely in favor of free silver coinage, or willing to vote for it, but earnest advocates of that dangerous proposed legislation. The free-silver men on the committee, it should be noted, are among the ablest men upon their side of the silver question who sit in Congress. Mr. Bland, the chairman, is literally rabid in his constant demand and his persistent argument for the coinage of silver on a basis described by an eminent financier as 'stamping fiat value on metal instead of paper.' He has been flanked with a Republican lieutenant in the person of Mr. Bartine, of Nevada, whose zealous support of the white metal is always at white heat. Williams, of Illinois. Pierce, of Tennessee, Robertson, of Louisiana, and Kilgore, of Texas, were all in the last Congress and participated in the currency contests in that body with ability and force. So there are at least six members of the coinage committee who have had experience as legislators, and who are able, as parliamentarians and as speakers, to conduct a masterful contest for their hobby. Upon the other side of the silver-coinage issue Mr. Crisp has appointed George Fred Williams, one of the two Bay state statesmen who refused to cast their votes or be placed on record when he was elected speaker. This discourtesy to the speaker handicaps Williams before the House. Mr. Tracey, of this state, is said to be opposed to free coinage, but he is a Democrat who will obey caucus rule. Of the Republicans, one opposed to free coinage is a new member, and Mr. Taylor, of Illinois, who is serving his second term, is set down as in

favor of free American coinage, and therefore not to be relied upon in debate. The obvious and dangerous purpose of forming the coinage committee with such a predominance of free silver coinage members is to provide that free silver shall have free swing in the lower branch of Congress. There can be no other conclusion than this from the facts already stated."

NOT long since we called attention to the recent discovery of the process by which leguminous plants absorb the free nitrogen of the atmospheric air. The active agents in the process are minute organisms, or bacilli, which live on the roots of leguminous plants forming the nodules and absorbing the free nitrogen of the air. The nitrogen thus gathered is assimilated by the plant and afterward yielded up to the soil. In this way, clover, peas and other leguminous plants store up nitrogen in the soil, thus becoming the most valuable renovators of worn-out soil.

In referring to this, the suggestion was made that clover, sown on sterile soil, should be assisted by a light application of well-composted barn-yard manure, which contains these specific bacteria by the millions. There are few farmers who have not noticed the wonderful effect of a dressing of barn-yard manure on clover sown on poor soil. The effect was due, not alone to the plant food supplied, but also to the supply of bacteria needed for the full development of the clover plants, and which is deficient in some soils.

Some leguminous plants are better nitrogen collectors than others, though all possess the power to some degree. In England they are now experimenting with one of them which is claimed to have more of this power than any other. It is similar to alfalfa, and is called Flat pea, *Lathyrus silvestris*. It is of a slow growth, taking three years to come to maturity, but after once established, lasting a long time and yielding large crops of very nutritious fodder. It is a very promising plant, and will be tried in this country.

INQUIRERS for seeds, plants and trees can read their answers in our advertising columns. Seed and nursery catalogues for 1892 are now ready for distribution, and those who publish them spare no pains and expense to make them attractive, interesting and instructive, and also to tell where they can be had for the asking. If you have a garden, a flower-bed, an orchard or a farm, send for these catalogues and find out what florists, seedsmen and nurserymen have to offer.

IN his remarks on granular butter, on the next page, Mr. Crosby tells the whole secret of making butter that will keep. But in fact, there is no secret about it; it has been known for years. The trouble is to get all butter makers to adopt the easy, simple way of making granular butter. So many of them stick to the old methods that the supply of poor butter on the market is almost unlimited. The problem is to get them out of the ruts. Consumers might get them to change their methods by refusing to buy poor butter; but so many of them have been accustomed to poor butter so long that their taste is vitiated, and they really do not know what choice butter is. The work of reformation goes on very slowly.

REFERRING to the exports of wheat, the New York Tribune says:

So much depends upon the movement of breadstuffs to market that the exports this year are watched with unusual interest. Although it is generally known that the shipments have been much larger than usual, there is perhaps little appreciation of their real magnitude. In order to appreciate the extent of the movement, it is necessary to compare the shipments this year, not merely with those of last year, when the wheat crop was comparatively short and exports during a great part of the year were suppressed by speculation at Chicago and here, but with the movement in previous years when the crop was full and shipments comparatively unchecked by speculative influences. The largest movement recorded in any year for the last decade was in 1886, and in the following table the exports of wheat, including flour reckoned as wheat at the rate of 4½ bushels to the barrel, are shown for each month of the year 1891, in comparison with shipments for 1890 and 1886:

| | 1891. | 1890. | 1886. |
|----------------|------------|------------|------------|
| January..... | 9,155,588 | 7,997,354 | 6,873,823 |
| February..... | 7,791,615 | 9,376,763 | 7,683,661 |
| March..... | 10,596,207 | 10,077,654 | 7,923,466 |
| April..... | 10,872,949 | 9,913,515 | 8,679,732 |
| May..... | 10,240,119 | 8,884,635 | 11,576,881 |
| June..... | 10,422,769 | 6,857,142 | 12,747,122 |
| July..... | 13,695,899 | 7,892,532 | 11,017,552 |
| August..... | 26,277,682 | 9,428,115 | 16,102,123 |
| September..... | 25,797,080 | 5,418,085 | 14,462,379 |
| October..... | 19,610,046 | 7,571,682 | 11,470,981 |
| November..... | 20,101,989 | 7,157,940 | 12,649,233 |
| December..... | ..... | 9,613,685 | 12,319,943 |

From this statement it appears that since the movement of the new crop began in July, the shipments have been each month not only larger than in 1890, but larger than in 1886, or any other year of the last decade. In the four months, August, September, October and November, the exports were over 91,786,797 bushels, flour included, against 54,684,716 bushels in 1886, when the movement was larger than at any other time during the last decade. Moreover, in December the exports have been maintained at nearly the same rate, although the complete official statement has not yet been published, and for the month of November in the above table, the figures given include only the exports from the principal ports.

NEARLY every progressive gardener and farmer tests promising new varieties of grains and plants for himself. He may be shy of the high-priced novelties introduced by enterprising seedsmen, but new varieties that take their place in the standard list he wants for his main crops. However well they may do in other places, the only way for him to be sure that they will be adapted to his climate and soil is to test them for himself.

The testing of new varieties adds much interest and pleasure to the gardener's or farmer's work. From the time the seed is planted until the crop is grown, does he watch the progress and hope for the promised results. And there is scarcely a doubt that the crop will receive more attention and better cultivation than are given ordinarily. The interest in the growth of the new varieties contributes not a little toward better farming and gardening. In the long run it pays to be judiciously experimenting with seeds and plants that really promise to be an improvement.

IN marked contrast to the harmonious deliberations of the National Grange were the proceedings of the National Farmers' Alliance, held in Indianapolis. Briefly, the Alliance has split on the sub-treasury scheme and the regular has been captured by the politicians. With its national treasury bankrupt, its state organizations delinquent, its membership far below its claims, and the lack of confidence in the integrity of some of its officials, the Alliance appears to be rushing toward self-destruction.

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OHIO STATE HORTICULTURAL MEETING.

REPORTED BY L. B. PIERCE.

The

OHIO HORTICULTURAL SOCIETY held its annual meeting in Ravenna, Portage county, on December 9-11, with a more than average attendance and interest.

The first session was devoted to hearing reports from *ad interim* committees and local or county societies. The complaint was general that the frost of May 17 did extensive damage, the only exception being along the shores of Lake Erie. In spite of this frost, however, there seems to have been a general supply of all kinds of fruit, the lack being supplied by shipments from other sections. The great difference in prices in localities not far removed was notable. For instance, around Dayton, pears sold as low as forty cents per bushel, and summer apples were a drug. In Akron, one hundred and seventy-five miles from Dayton, with direct railway communication, summer apples were scarce at seventy-five cents per bushel, and pears brought from eighty cents to \$1.75 per bushel; peaches brought \$1.80 to \$4. In the hill counties of Carroll and Tuscarawas, less than seventy-five miles away, they ruled very low, common peaches bringing but twenty-five cents. Ottaway county shipped 150,000 bushels of peaches, and had a large apple and plum crop. The poorest grade of peaches brought \$1 per bushel. The highest grade sold at fine prices, and most of them went to Chicago. Buyers were on hand to take all, growers merely delivering at wharf or warehouse. All peaches were graded to different sizes by machinery, so that each basket of a certain size was a duplicate of all the rest. This facilitated sales and nothing was lacking except flavor, which seems to have been sacrificed by too early picking. One gentleman said the peaches suffered from poverty of soil, overbearing and dry weather; hence, small size and deficient flavor. On the other hand, apples were exceptionally fine and highly colored, and plums of good size and yield. Some singular effects of the frost were reported from Portage and Summit counties. Pears were seedless and had only rudimentary cores. Some were of singular elongated or crooked form, owing to retarded development of a portion.

An interesting report on spraying was made by W. J. Green, of the experiment station. Charts were exhibited showing results of spraying with Bordeaux mixture for apple scab. He showed that the effects of the scab was to reduce size and diminish keeping qualities. The experiments were made among orchards of

thirty acres that produced 1,000 bushels of apples, so the scale was large enough to warrant his conclusions and be of practical value commercially. Scabby apples numbered 317 to the bushel, unscabby, made so by spraying, 202, the former being but two thirds as large. Scabby ones weighed 2.8 ounces, the others 4 ounces. A table was given showing the actual results in sales. A given quantity of Newtown Pippin, nnsprayed, brought \$22.80, sprayed, \$48.91; Benoni, \$28.60 and \$56.70; Northern Spy, \$41.90 and \$65.95; Roman Beauty, \$39.70 and \$73.44.

The orchard was three miles distant, and two men were employed to do the work. It cost fourteen cents per tree. Four sprayings were given, the first with Bordeaux mixture alone, the next two with Paris green added for codlin moth, and the last pure. There was a marked difference in the appearance of the sprayed trees; the foliage hung on later, the fruit matured more perfectly and was really more valuable, aside from its finer appearance. The mixture was: Four pounds of sulphate of copper, four pounds of quicklime, fifty gallons of water. For second and third sprayings, four ounces of Paris green was added. The cost for fifty gallons was thirty cents.

A good deal of anxiety was expressed by members in regard to the raspberry disease (*Anthraxose*) that was destroying the blackcaps.

Green's report on new, small fruits was listened to with a good deal of interest, as his known conservatism and carefulness gives it a value much above that of interested parties growing plants to sell. The frost made it difficult to give as full a report as could otherwise have been made.

Of strawberries, the Dayton was reported a perfect-flowered variety, of good quality and productiveness, and early. Somewhat of the Sharpless type and worthy of trial. Greenville, a competitor of Bubach, having several points of resemblance. It is smaller but firm. Mr. Green thinks it very promising. It is not yet introduced. Brunette is fine in appearance and quality. A good family berry. Michel's Early and Stevens not what Ohio growers want; the former too small, but a good pollenizer for early varieties. Stevens has very weak foliage. Enhance had many good points and should not be discarded without thorough trial. Parker Earle was small and makes very few runners. For a narrow, matted row this was the variety par excellence, as it would never make anything else. Enhance and Parker Earle were least affected by frost of any of one hundred varieties.

Mr. Ford, the introducer of the Crandall currant, was called upon to recount its history and give the cause of its non-productiveness. He referred to visitors who had seen his plantation in fruit and to photographs, but failed to explain why plants all over the country failed to give satisfaction. Reports from others failed to give the Crandall a high standing as a desirable fruit to grow.

On peaches, Pierce and Farnsworth bore testimony as to the beauty of Hale's Hardy, as seen at the pomological exhibition in Washington, in September. This is a yellow peach of medium size and great beauty and fine flavor. It ripens early in September, and has proved exceptionally hardy in southern New Hampshire. N. H. Albaugh was strong in his praises of the Elberta and Diamond. The former was a yellow freestone of good quality and large size, ripening with Alexander. It originated twenty-five miles south of Macon, Georgia, and was being planted largely in that state. Three hundred bushels shipped in peck boxes brought \$2,000 net in New York City. Wm. Miller had 500 trees of Elberta; was sorry he had not planted 5,000. L. B. Pierce spoke highly of Lemon Free, a peach originating in Summit county. It ripened just before Crawford's Late, but would keep a week longer. It was a pure yellow in flesh and skin, of large size and very hardy. It had been disseminated several years and tried sufficiently to warrant its being generally planted. Nurserymen of northern Ohio generally grow it.

Mr. Albaugh was enthusiastic in favor of planting the Keiffer pear, and said a Georgia company was planting 50,000. Others spoke more guardedly. Farnsworth and Ford said it overbore and must

be carefully grown to get best results. It was a good canning pear. Farnsworth planted it along the roadside to protect his orchard from boys. One bite at a Keiffer was enough, and judging the rest of the orchard by this standard they went no farther. N. Ohmer would plant the Keiffer for part of a commercial orchard. He had been successful with Lawrence. Two trees had yielded \$20 worth of fruit. Farnsworth and Pierce spoke favorably of Bossouck, and would give it a place in every orchard. The former also recommended the Howell.

A paper upon the "Perfect Potato," by Frank Ford, was listened to with attention. He has had much experience, having grown several hundred varieties. As a rule, potatoes that were great yielders were of coarse texture and inferior quality. Earliness and fine quality went with light yield. The perfect potato could only be found in one place, and that was in the seedsmen's catalogues.

Prof. Lazenby gave a paper upon the "Perfect Apple," which went somewhat into theoretical detail as to the elements constituting such a fruit. He claimed that the coming perfect apple would be of widespread adaptation, and instanced King as one lacking in elements of perfection, while Newtown Pippin came near perfection, doing well over a large part of the country. He claimed large size as one of the elements of perfection. A perfect apple should be seedless and coreless, if such a thing could be attained, as these detracted from the pleasure of eating or using apples and were of no value to the consumers of apples. It took as much mineral elements to grow one pound of apple seed as one hundred pounds of the pulp.

B. F. Albaugh said dealers and consumers preferred medium-sized apples. A large portion of the apples eaten out of hand were consumed by children, and medium-sized apples would go farther and give better satisfaction than very large ones. N. H. Albaugh thought the Ben Davis would score more points of perfection than any apple grown. Its wide range of adaptability, its fine appearance and its productiveness were unequaled by any other.

L. B. Pierce objected to making a wide range of adaptation a leading element of perfection. He thought we should breed fruits as the English bred animals—for particular sections. In England there is half a dozen breeds of sheep and about as many of cattle, and these breeds are restricted to small, definite limits, the character of the country deciding the limits and the characteristics of the breed. He thought we should find after awhile that this was the way to improve fruits, adapting them to certain localities where they originate and thrive the best. John Hurst did not believe in looking for one perfect variety, nor half a dozen for that matter. He had forty varieties on exhibition and would be troubled to decide what to discard, as some succeeded one year and some another. Mr. Clymens, a commission merchant, of Cleveland, said the grower must consult his market. In Cleveland there was no apple that sold as well as the Rhode Island Greening.

Prof. F. M. Webster gave an illustrated address upon "Our Silent Partners," it being a history of some of the parasitic insects which keep in check the insects injurious to food production. The best known insect referred to was the snowy tree-cricket, which lays its eggs in raspberry canes. This lives upon the larvae of many injurious beetles, including the potato-beetle.

Rev. S. D. Gammel gave a very eloquent address, entitled, "The Best Crop on the Farm," referring to the boys and girls, and intimated that some farmers gave more attention to blooded stock than they did to properly rearing their own children.

Of business matters coming before the society, the two most important were, plans for making a fruit exhibit at the Columbian exposition, and a resolution looking to the passage of a law providing for the suppression and extinction of black-knot. Both matters were entrusted to a committee.

The following officers were chosen: President, G. W. Campbell, Delaware; vice-president, O. W. Aldrich, Columbus; secretary, W. W. Farnsworth, Waterville; treasurer, N. Ohmer, Dayton.

MAKING BUTTER THAT WILL KEEP.

Some butter makers put various substances in the butter, such as sugar and saltpeter, under the delusion that it will make it keep. Butter to keep well needs to have nothing put in it; all we want is the pure butter itself; the nearer we come to that, not only will we have the best keeping butter but the best eating butter as well. In making butter according to the granular system, we can get it freer from all deleterious substances than by any other method of manufacture. Why is it that so many farm butter makers are so averse to trying the granular plan? I have been asked questions about butter making by those who were not very successful, and on inquiry I found that they invariably gathered the butter in the churn and then tried to work out the buttermilk. I would tell them about the grain system and how to wash and salt the butter with brine, but they preferred the old way. Butter, to keep, must be free from buttermilk and as nearly free from sugar and casein as it is possible to get it. Now, it stands to reason that when the churn is stopped while the butter is in small grains, there will be but little of any foreign substance locked up in those grains, and what is on their surface can be easily and thoroughly washed off, whereas if the butter be gathered in lumps, no subsequent manipulation will free it from the agents destructive to its good keeping qualities that it is filled with.

HOW TO KEEP BUTTER.

Granular butter making offers the easiest and best method of keeping it. After the grains have been thoroughly washed in weak brine the butter can be placed (while still in small grains) in strong brine and it will keep for months. When required for use, take it out of the brine, wash it with water and work it up into rolls or print it as may be preferred. Some wash it with fresh milk instead of water, and some use buttermilk, but if the butter be first-class when put in brine, it will only need to be washed with pure water or perhaps weak brine. A friend of the writer's, Mr. George Parr, of Dakota, packs his butter in brine, but he puts it down in rolls wrapped in parchment paper. He writes that butter packed in summer when the price was very low, sold the following winter at top prices, and his customers could not tell it from freshly made. Mr. Parr packs in new whiskey barrels and finds it a profitable business.

COW FEED

this winter is high, with a prospect of being still higher. Mill feed is unusually high, and in view of much of it being badly adulterated, will prove an expensive and unsatisfactory feed. Corn will play a more important part in our cows' rations than usual, and it is fortunate that the crop is a good one, otherwise dairymen would be badly off indeed. With corn-meal and linseed-meal (and the latter is selling at a reasonable price as compared with mill feed), clover hay and corn fodder, or ensilage, we can do very well without buying adulterated mill feed.

High-priced feed calls for good cows to feed it to; it will not pay to put expensive feed into poor cows. Many will be tempted to save feed by feeding less of it. This is poor policy; if a cow is worth feeding at all she is worth feeding well. There is no doubt but there will be thousands of cows fed this winter that will not pay for their feed, because they are not good dairy cows in any sense of the word. One of the biggest losses in dairying is made just here; by feeding poor cows. And it is so easy, comparatively, to raise good dairy cows—simply to breed to a pure-bred dairy bull. One having good cows can afford to feed costly feed, for he knows that the profit will be there, but the owner of scrubs is sure to lose money when feed is high, for he can barely cover expenses when feed is low. It seems to be almost as hard to persuade some dairymen to improve their stock as to improve their butter making methods. This winter will open the eyes and empty the pockets of many, I am afraid.

THE CARE OF THE COWS.

Given good cows they must have good care if any profit is to be made from them. The stable must be warm and the cows be well bedded. It would appear needless to say this; one would suppose that com-

mon sense would teach everyone that cold and exposure are fatal to success in keeping cows, but the many herds seen shivering in and out of the stable testify to the fact that some men do not believe in making the cows as comfortable as circumstances will admit of. A cold stable is an expensive one, and causes a constant loss of feed and milk. Yet many stables are so full of cracks that the snow drifts in till it covers the floor. In grain growing sections straw is cheap, and it makes one of the best non-conductors of cold that can be used. The whole stable can be lined with straw by means of lath nailed to the studding, and it makes the warmest kind of a wall. If the stable is a lean-to, with nothing but the roof between the cows and the sky, then the roof should be lined with straw also. Few recognize the fact that a single story building is the hottest in summer and the coldest in winter of any. The roof in summer gets hot and heats the room below; in winter it gets cold and makes the space below cold. Therefore the roof should be straw-lined or ceiled with roofing felt; and this will pay as well in summer as in winter, for a cow suffers almost as much from being kept in a stable too hot as one too cold.

A CHEERFUL VIEW.

A dairyman who understands his business, who has good cows and knows how to feed and care for them, can take a cheerful view of the situation, for while feed will be high this winter, the prospects are that dairy products will bring a good price, and good dairy products will be quick to sell. There is always a good demand for the best, and when it is known that it is about as easy to make the best as to make second or third quality, why need there be so much of the latter grades? On the whole, the dairy interest has much improved during the past few years, improved in many ways, and a time like the present will have a tendency to make still further improvement by forcing unsuccessful dairymen to change their methods of doing business. And one change I would especially urge some of them to make, and that is, to breed their cows for the winter dairy. Too many cows calve in the spring; plenty of grass and so many fresh cows ruin the market. But even in this direction a great change for the better has taken place, for there are now many more winter dairies than formerly. When we can have a fair average milk production during the whole year, prices will be steadier and profits also.

A. L. CROSBY.

THE FREE POSTAL DELIVERY SYSTEM—DO FARMERS NEED IT?

BY JOSEPH (T. GREINER.)

A great cry goes forth at this time that the farmer wants the free delivery of his mail matter. On the face of this the demand looks plausible and just, and many good reasons might be advanced in favor of such an innovation. Such free delivery might possibly stimulate the farmer's desire to read and write, and give him facilities for acquiring information more like those enjoyed by city people. In other words, such a move might lead to increased thinking among farmers, and consequently to better farming and to a general improvement in the condition of rural affairs.

On the other hand there are grave objections to the free delivery system in these sparsely settled rural districts. One is the enormous expense. Uncle Sam cannot afford to pay a man fair wages for distributing a half dozen letters over the isolated farm-houses scattered over a square mile. If the people in these rural districts demand free delivery of their mail matter, I have as yet seen no indication of it. No matter how far back a farmer lives, he wants to go to town once or twice a week; in fact he *has* to go, in order to do his trading, horseshoeing, mending tools, etc., and this also brings him to the post-office fully as often as he will think necessary. If the free mail delivery is a favor, the great mass of farmers have hardly seen it in this light, and the favor will have to be thrust upon them.

Sometimes it seems to me that this whole cry is one which originated in the fertile brain of politicians and agitators who desire to curry favor with the rural voter, and as the scheme looks so plausible the rural press was easily won in its favor.

If this is not the way the whole thing came about, please tell me who were the farmers who have started the idea and have been clamoring for this priceless boon.

But there is still another phase to this matter, and it involves perhaps the greatest objection to the scheme. The unreasonably great cost of such an innovation would diminish the post-office revenues to such an extent that further reduction of postage rates, especially of letter postage from two to one cent per ounce, and of the rate on packages (third class) from one cent per ounce to one cent for every two or even four ounces, would have to be postponed almost indefinitely. This would of course be a fine thing for the express companies, and enable them to keep up their high rates on parcel transportation; but the farmer would find far less fun in it. High postage and express rates on small packages are a great stumbling-block in the way of rural advancement and comfort. We rural people must get along without many things that we really need and want (but which we cannot get in our village stores, but would have to buy in large cities, or at a considerable distance, anyway) simply because we cannot afford to pay the high transportation rates. There can be no doubt about the stand taken by the express companies. They are heartily in favor of the extension of the free mail delivery system. The latter is a bait for the farmer, well disguised, but a bait, nevertheless.

I am sorry to see the agricultural press almost unanimously in favor of it. It is a mistake, and against the farmer's best interests, at least for the present. Why not keep up the agitation for a considerable reduction of the rates on third-class mail matter, and demand a chance to buy seeds and small tools and insecticides and necessities, right from first hand and at first cost, without having to pay an unreasonably large tax to the post-office department or to express companies? Let us first secure this real boon, and if the government then feels so liberally disposed toward the farmer, it will then be time enough to talk about extending the free mail delivery system to the sparsely settled country districts. It is a good rule for the farmer to fear the politicians and express companies, etc., especially when they offer favors unasked.

POP-CORN.

Some farmers appear to be above raising pop-corn, which they call "a boy's crop," and the cultivation, "child's play." What difference does it make what the farm-play is, provided it be right and profitable.

A farmer was asked by his son, in the presence of a visitor, if he was going to have a new sled at Christmas. The farmer replied, "I cannot tell till I look in the Christmas bank." Probably the making of presents did not depend upon the condition of what he called his Christmas bank, yet it might have something to do with it. Further conversation revealed the fact that the Christmas bank was the amount of pop-corn on hand. Every year he planted pop-corn. It is a good rotating crop, and gives a hard-worked field semi-rest. It yields well, and sometimes is as profitable as any crop in the year in which it is raised. The writer has sold green pop-corn on the cob for six cents a pound. If the price be low, or if there be little demand when harvested, then make a "bank" of it, and keep it till the price be right. That's the beauty of the crop. It is not only non-perishable, but also it improves with keeping. Therefore, stored, it is as good as money in the bank if the rats or mice do not steal.

The farmer with his Christmas bank, "tucked in" a little pop-corn wherever there was an opportunity, if it could be kept from mixing with his field corn or that of his neighbors. He planted often as much an acre, perhaps in different places on the farm, red corn in one and white in another, if it could be done and they could be kept separate. It is carefully harvested and spread in the attic and drawn upon at Christmas time.

Pop-corn is up and down, and the farmer must keep an eye on the market and take advantage of it. The pop-corn ball or cake is still a favorite sweetmeat, although it may not hold the place it did

once. It is a fact—stated as a fact, at least—that the demand for pop-corn depends upon the weather; at least, that part of the demand that comes from social entertainment. Certainly there appears to be more pleasure in popping in snapping cold weather than when it is mild. At such times the corn seems to pop better. It will pay every farmer to have a pop-corn bank. It will declare large dividends at the right turn of the market. How long corn may be kept and remain good may not be definitely known, but it is said that corn twelve years old will pop as well as that a year old. It is always salable at some price, and the price may be satisfactory if a little attention be given to the market.

GEORGE APPLETON.

TO GET CLOVER ON LIGHT SOIL.

The drouths of a few years past have very generally destroyed the clover and grass seed sown. The all-absorbing question, on light and sandy lands in particular, is how to secure a good catch of clover. When this can be done, such lands produce well and are classed among our surest and most valuable farming lands. Barn-yard manure will be indispensable in putting such wasted soils into condition to grow clover. Every farmer has doubtless observed in the fields where he has sown clover seed, that spots more fertile than the main portions of the field have been covered with a good growth of clover, showing that if the land was thoroughly fertilized the clover would grow whether the season was wet or dry.

I should advise keeping all the stock possible on the farm and buying more or less wheat bran and oil-meal to feed the stock, and so increase the value of the manure pile. I should prefer to buy commercial foods, such as I have named, for this work of renovation rather than commercial fertilizers. It might be well to try plowing under green crops, as rye or buckwheat. Sowing the clover seed without any other crop, after the land has been put in good tilth, either in spring or the last of August, sometimes proves effective. Such lands are not adapted to permanent meadows. We are experimenting with alfalfa or lucerne on lands of this character, but have not had experience enough as yet to know its value. We have an acre sown last April that has gone into the winter in very good shape. I may add that I think salt and plaster will prove beneficial on such lands. —Prof. Samuel Johnson, in *New England Homestead*.

HOW WE GET NEW FRUITS.

At a pomological meeting in Boston, a member of the Society from Iowa said: "In all the years that I have attended fruit exhibits of the American Pomological Society, I have observed that premium specimens of any variety of fruit have come from a place close by the place of origin, thereby showing that the seedlings of which we have all the fruits of this country, have been saved because of their excellence at the place of their origin, or near there, and as they spread out from there they meet with many difficulties, such as the changing of the climate and the differences caused by the cutting away of the timber, and these have changed the sorts until they have finally developed diseases."

Now, various things had set me to thinking, and I said: "Why may we not here in the West grow a race of fruits by using our own wild fruits?" And a great many others thought of it at the same time, and the work has gone on.

The Iowa State Horticulture Society, aided by the state, has established twenty experiment stations. At those stations are planted, having been bought by a certain committee, any fruit or plants, no matter from where they come, that this committee deems worthy of trial. If it is thought that they are likely to succeed, or may have a chance of success, they are bought, placed there and tested, that the people may know which are worthy of planting without trying all those experiments for themselves.

Expert botanists are employed by the society, sent out to perform the act of cross-fertilization. A man goes in armed with a little pair of pliers and a camel's-hair brush; that is his stock in trade, except that he wants a package of common sacks, such as grocers have—pound sacks.

He goes to some apple-tree, say some extremely hardy sort, and having gathered a quantity of blossoms of the very finest sorts of fruit, or those that seem most promising to use as the male pollen, he puts those specimens in a dry place and takes out the dust (the pollen). Having that ready, he goes to a tree with the little pair of pliers, before the blossom is open; taking the blossoms in his fingers, he inserts the pliers, and as they spring open they tear open the sides of the blossom; then he takes out the anthers, which answer for the male part of the blossom.

At each fruit spray that he examines he will find three or four, or half a dozen blossoms; he takes out the anthers of four at each and destroys the others before the blossom is opened. He ties a paper sack over them, slips it over with a silver wire, or fastens it with a pin, and so he puts in his work for the day. For a day and a half perhaps he will take the anthers out of the flowers on a hundred sprays, that would make four hundred separate blossoms.

Then, the next morning, he comes with his camel's-hair brush and his little sack of pollen, and, having removed each sack, one after the other, he dips into the dust with his brush and carefully dusts the pistil, the central part of the flower, with that dust and covers it up with the sack and goes on. A man, in that way, may cross-fertilize perhaps three or four hundred separate blossoms in each day's work. Now that work is done, except that in a week or two, or three, the paper sacks are usually removed and replaced by sacks of mosquito netting or thin cotton cloth, or cheese-cloth—that is used especially for plums, because it is found to be specially protecting against curculio.

This spring we have a hundred crosses on our native crab, and we have found some almost as large as small Wine-sap apples.

Many hundred crosses are made in that manner, the male part being taken from such apples as Jonathan, Grimes, Northern Spy, Baldwin and other large apples of high quality, and preferably of red color and late keeping quality.

That is the way we are trying, as pioneers, to grow a new race of fruits. We found, with all due justice to the imported fruits and their seedlings, which is all we have in an ordinary way that came from Europe originally, and from down at the south end of the Caspian sea, not far from the supposed garden of Eden, that while those fruits suffered injury in the straits of our severe season the native growths seem to enjoy life just as well after as they did before.

We are pursuing the same course with the plum, using as the male part of the work the pollen from European varieties.

We have now planted the Sand Hill cherry that comes from further west, in the Dakotas, and propose to treat them in the same manner with the best varieties of the European cherry.

We have obtained the native currant, some of the fine fruit, the best we could get from the south and west of here, and have made many crosses—hundreds and hundreds of crosses—upon that hardy shrub, using as the male principle the common currants, the best variety of the European sorts, and so on through all the list. It is from the seeds from these cross-fertilized fruits that we expect to grow fruits partaking of the good qualities of both parents, and by continuing this course we may produce in time such results as we desire. We can cross shrubs and trees, and all in the same manner.—C. L. Watrous before the American Nurserymen's Association.

Out of Sorts

Describes a feeling peculiar to persons of dyspeptic tendency, or caused by change of climate, season or life. The stomach is out of order, the head aches or does not feel right.

The Nerves

seem strained to their utmost, the mind is confused and irritable. This condition finds an excellent corrective in Hood's Sarsaparilla, which, by its regulating and toning powers, soon cures.

Indigestion,

restores harmony to the system, gives strength of mind, nerves, and body, while it also purifies the blood and removes all trace of Scrofula, Salt Rheum, etc.

Sick Headache

"Hood's Sarsaparilla has given me good satisfaction. I have been troubled at times with indigestion accompanied by sick headache. It always affords immediate relief."

Hood's Sarsaparilla

certainly does all that is claimed for it.—W. D. Buck, Ticket Broker, Middle St., Portland, Me.

Our Farm.

GARDEN NOTES.

BY JOSEPH.

GROWING GARDEN PEAS.—I am asked a number of questions on the culture of garden peas. I used to think that this was a rather simple matter; and in the right location and on the right soil it is.

Certainly no task in the garden appeared to me more easily accomplished, while I lived in New Jersey and had fairly good sandy loam to work, than to raise any kind of pea I desired to plant. My *modus operandi* was simply to open up furrows with a one-horse plow, or even with a hand plow, scatter some of Mapes', or Bowker's, or Baker & Bro.'s potato fertilizer in and about these furrows (say at the rate of from six hundred to eight hundred pounds per acre), then sow seed rather thickly, cover and firm. With ordinarily good culture afterwards (no support being given), the crop was always a very satisfactory one. In my present location (western New York) I have also had good success with similar treatment on rather stiff, and by no means rich, clay loam. On the other hand, I never had anything to brag of, so far as the very dwarf varieties, especially the American Wonder, are concerned. Even the Little Gem and the extra early smooth varieties of the Dan. O'Rourke class were nothing compared with the heavy-leaved, strong-growing later sorts. This has shown me that growing peas may be a more complicated matter than at first supposed.

The greatest difficulty in growing a miscellaneous assortment of peas, each on a small scale, where each is expected to do its best, is this: that the various types require special treatment in the way of food. This difficulty does not exist for the man who grows a single kind, or several kinds each by acres.

On the whole, however, the underlying principles are simple. The later, thrifty-growing kinds—Bliss' Abundance and Everbearing, Burpee's Quality and Quantity, Stratagem, Heroine, Telephone, Perpetual, Champion of England, and all others of these types—I find I can grow to perfection on very ordinary soil, even if almost entirely devoid of humus and nitrogenous matter, with the help of liberal applications of good fertilizers, such as the special potato manures of the different fertilizer firms, or of ashes and phosphates. If the soil is excessively rich, such as we find in old gardens, these peas will make an enormous growth of vine, most likely suffer from mildew, and give you but few sound, perfect pods. If planted on rich soil, always give plenty of space and keep the vines off the ground by some sort of support. If possible, however, use land that is not excessively well supplied with nitrogenous matter, and rather rely on applications of mineral manures.

The case stands different with the thin-leaved and dwarf varieties. These will do their best on very rich land. You can use stable manure for them very freely. Under such treatment the Alaska, Rural New-Yorker, Dan. O'Rourke, Extra Early Philadelphia, etc., will do nicely. Plenty of compost in the soil will thicken the foliage, enlarge the pods, make them more numerous and filled to bursting and improve the quality wonderfully. But support should also be given to these sorts. The American Wonder is extremely dwarf. It needs no support under any circumstances, but I cannot do anything with it, unless I plant it on very rich soil. For me it is not a profitable variety.

I am also asked about the use of nitrate of soda for peas. This substance is often recommended for early garden crops. I use it myself quite freely. But while I have seen these "wonderful" effects on beets, spinach, celery-plants, lettuce, etc. I have never observed them on peas. Perhaps others have. I do not think I am justified in using nitrate of soda, nor in recommending its use to others, so far as this particular crop is concerned. If my friends have more faith in it, let them try it for American Wonder and any of the first early dwarfish sorts, in a rather cau-

tious, experimental way. On general principles I believe in strict rotation; still, I can see no great objection to raising successive crops on the same land. Provide the needed food, and I think peas will do well enough after peas.

Growing peas for seed is, of course, a business by itself, and differing from that of growing them for table or market. I have no experience in this branch, simply because I find the weevil too troublesome. It usually ruins the entire crop of seed peas, unless promptly dealt with. Exposure of the fresh seed to the fumes of bisulphide of carbon in a closed vessel will dispose of the pest. When peas are grown for seed, even the tall varieties must remain without support. I have had a patch of Champion of England, sown broadcast, do remarkably well. When planted in rows they fall over on one side, and the part next to the ground will rot. It is a good plan, therefore, to lay the vines over by means of a hoe or rake handle, turning one way one day and another the next. This treatment should be continued until the peas are ripe, when the vines are cut and harvested in the usual fashion. The dwarf sorts, of course, do not need this treatment. American Wonder is so very dwarf that it is not easily pulled, except by hand. Whether a "bean-harvester" might be made to do service in this emergency or not, I am not prepared to say.

The vines should, in either case, be harvested as soon as the pods begin to dry. Allow them to lay a day or two, and store in a dry loft. If allowed to become wet after becoming ripe, much of the seed is liable to spoil. They may be threshed with the flail, and cleaned with a fanning-mill. Be sure that they are perfectly dry before you put them away in bins or sacks. I wonder if anybody ever made the trial of planting some sort of strong, erect-growing plant with the tall-growing peas, merely for the sake of giving support to the pea-vines. It looks to me that seed of Champion of England and similar thrifty growers might be grown with very little trouble by mixing a small quantity of corn or oats with the seed and sowing it broadcast, or even in drills, say a foot or so apart. At maturity of the peas, the whole field can be cut over with an ordinary mower and the vines gathered when dry like hay.

HOW CELERY IS GROWN WITH IRRIGATION AT PUGET SOUND.

BY H. A. MARCH.

Let me tell the readers of your valuable paper how we irrigate here on our seed farm on Fidalgo Island, Puget Sound. We make a specialty of cauliflower seed and celery for market. Our celery sells on sight; in fact, when ours is in market there is no sale for any other. We have plenty of stalks that weigh from five and one half to six pounds, three feet tall, and of the White Plume variety at that.

Our soil is a clay loam, formerly an alder bottom, fairly rich. We plow our land in the fall, leaving it in the rough during winter. For our early celery we raise but the one crop. Our late celery usually follows after a crop of Strap-leaf turnips, or Early Egyptian beets, which is all cleared off by the first of July. For our earliest celery, or that which we commence selling in July, we raise in hot-beds and prick out once in cold-frames. Now, while our plants are growing, we are working our ground; plowing, harrowing, dragging and cultivating until it is as fine as an onion bed. Before the last harrowing we sow broadcast, twelve hundred pounds to the acre, equal parts Alaska fish guano and bone phosphate. The ground is now laid off in rows three and one half feet apart. On the mark we run a heavy two-horse plow twice, turning the furrow each way; then we fill the rows about half full of fine, well-rotted stable manure.

Now for the first irrigation. On the south side of our farm we have a never-failing spring of water that gives us about forty-five thousand gallons every twenty-four hours. It is situated about twenty feet higher than any of our tillable land. This water is brought down in open troughs to the tanks, which are situated on the upper side of the field to be irrigated, and hold about twenty thousand gallons each. We turn the water into the tanks in the heat of the day, and the sun warms it up to about 60°. To distribute

the water we use hose made from twelve-ounce duck. To make this hose, we take a piece thirty feet long and cut it lengthwise into three pieces, which makes ninety feet of hose about two and one half inches in diameter. To sew the hose, we fetch the edges together, double once over, and with a sewing-machine sew through the four thicknesses twice, which makes a hose that will stand a six or eight foot pressure. To make our hose waterproof, we use five gallons of boiled linseed-oil with half a gallon of pine tar, melted together. Place the hose in a wash-tub, turn on the oil hot (say 160°), and saturate the cloth well with the mixture. Now, with a clothes-wringer run the hose through with the wringer screwed down rather tight, and it is ready to hang up to dry. A little pains must be taken to blow through the hose to keep it from sticking together as it dries. I use an elder sprout about a foot long with the pith punched out. Tie a string around one end of the hose and gather the other end around the tube and fill it with wind, then hang it on a line and it will dry in a few days and is ready for use. It will last five or six years.

To join the ends, we use a tin tube two and one half inches in diameter by one foot long. The tube is kept tied to one end of the hose all the time. To connect them, draw the open end of the hose over the tube of the next joint and tie it securely. Now, having our hose all ready, we take it in sections convenient to carry, lay it from our tanks to the third row from the outside of the field, down this row to the end of the field. Now, turn on the water. First, however, we must fix a plug and water tube.

To make the tube with which to take the water from the tank, we take a hardwood stick fifteen inches long, bore a two-inch hole through it, and with a hot iron burn it out smooth on the inside, work one end down until it will fit into the end of the hose next the tank and tie it securely; then work the other end down so that it will fit tight into a two and one half inch hole. Now, with a two and one half inch auger, bore a hole in the tank on the side next the field you wish to water, two inches up from the bottom—then no sediment or dirt will wash into your hose. Push the plug into the hole, and with a mallet give it a few gentle taps and the work is done. We now have our water running and it can be carried to any part of the field for any crop that needs it.

We are preparing now to set out celery-plants in a rather dry time. Our hose is in the third row from the side of the field. We take the end of the hose in hand and fill the row that the hose is in and the two on each side of it about half full of water, working backwards to the end of our first joint (thirty feet); cast the first joint off and go on in the same way until the five rows are watered. Have a two and one half inch plug ready to fit the hole in the tank, pull out our connection tube from the tank, drive in the plug until the hose is again laid where wanted. A man in this way will water three or four acres in a day. Now, with a Planet Jr. cultivator and one horse, we level these ridges into the furrows, then with a light drag we make the whole surface smooth and level. In a few hours the water soaks up through the dry earth and leaves a nice, moist soil that will not bake, to set our plants in, with plenty of moisture and good manure at the roots, where it is most needed. Not one in a thousand plants will die, and hardly even wilt in the hottest sun.

In setting out plants, we take pains to have them in straight rows, then we can work them the first two weeks with the wheel hoe next the plants without covering them too deep, as the cultivator would do. As the plants get larger we use the Planet Jr. to throw a little soil to the plants, and that is all the handling we give them. When the plants have grown to six or seven inches, they consume water very fast. Our man now stretches the hose down the fifth row, instead of the third, and waters nine rows at a time, for now he waters the whole ground instead of the furrows. By compressing the end of the hose he is able to throw the water eight or ten feet each way. The ground is now thoroughly soaked with our warm water. In about three days we start the cultivator.

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Last spring I offered \$500 to any person producing a 3 lb. Mammoth Prize Tomato; T. R. Harris, Abbott, Neb., won it with one weighing 3 lbs. 3/4, and I sent him my check for \$500. It measured over 8 1/2 in. in diameter. 37 tomatoes grew on one stem over 3 feet from the ground. Largest plant on record 18 ft. 6 in. tall. This mammoth strain creates a sensation wherever it goes, and is the largest ever offered. Thousands of my customers have grown them to weigh over 45 ozs. The quality is excellent; after you once test it you will grow no others. If well cared for they will produce 1 bu. to a plant (see cut) of large, smooth, bright red tomatoes, very solid with only a few seeds in each, and entirely free from rot. If started early, fruit ripens from July 4th until frost. This year I offer \$500 cash to any person producing a 3 1/2 lb. tomato. (It can be done.) Full directions how Mr. Harris grew his with each order. Plant some, you may win the prize. All my seed is saved from large specimens.

SURE HEAD CABBAGE
is all head and sure to head, very uniform in size, firm and fine in texture, excellent in quality and a good keeper. Single heads have weighed over 64 pounds.

EARLY SNOWBALL TURNIP

A PHOTOGRAPH. Is the earliest in the world, easy to grow, good size, excellent quality. Will be far ahead of your neighbors. My Catalogue, is worth 50 cts. to any one who gets it. \$500 offered largest order; \$500 for a pansy blossom; \$500 for a bean plant with 100 pods, and above tomato prize. I will send a packet each of Prize Tomato, Cabbage and Turnip, with my Catalogue of Bargains for only 25 cents. Greatest bargain catalogue ever sent out. Every person sending silver for above collection will receive Free a packet 1/2 INCH IMPROVED EXTRA EARLY TREE TOMATO, and a 50c. certificate for seeds, your choice from my bargain catalogue Free. **F. B. MILLS, Rose Hill, Onandaga Co. N. Y.**
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The ground being underdrained with drains thirty feet apart, all surplus water is immediately taken off, and this allows us to use our water at least once a week, and the cultivator within a few days after, to keep the soil from baking. Under such treatment one can almost see the plants grow. By the time the plants are about a foot high, we have them hilled up three or four inches with the cultivator. To hunch the celery, we use boards one foot wide and twenty feet long. The boards are laid along the rows with the edge against the celery, then stakes are distributed along the line, three stakes to the board; a man takes hold of each end of the board and turns it up against the row of celery and drives the stake to keep it in place. We put the boards up every two weeks until we use fifteen thousand feet of lumber. As soon as our first hanked is ready for market, the lumber is moved along to other rows.

For winter celery we only work the earth up to the plants with the cultivator, and about the first of December they are taken up and set in our celery-houses, holding from five to twelve thousand each. They are simply taken up with what earth may stick to the roots, and set on the ground floor of the houses, with a foot board set up edgewise once in fifteen inches, and no dirt or sand put around the roots. They keep fine and blanch well. We have sold up to date (December 1st), about fifteen hundred dozen, and our lowest price has been seventy-five cents per dozen roots.

Fidalgo, Washington.

Our Farm.

Orchard and Small Fruits.
CONDUCTED BY SAMUEL B. GREEN.

IOWA RASPBERRY NOTES.

A GREAT deal of interest is taken in this section in raspberry culture; in fact, small growers are becoming as thick as toads after a shower. I read an article recently (not in FARM AND FIRESIDE), on best varieties for general cultivation and profit. The Marlboro was left out, while the Shaffer was recommended as one of the leading varieties. Now, the Gregg, Ohio, Souhegan, Marlboro and Cuthbert are the leading varieties here, while the Shaffer can hardly be sold at all. The color is everything with raspberries. A purple berry is not wanted in the western market. The Gregg and Marlboro are the leading berries, with Cuthbert close behind. There seems to be a greater demand in recent years for berries than formerly. In Davenport, ten years ago, one enterprising grower would supply the market, while now a score of lively berry growers cannot supply the demand, and many cases are ordered from Chicago.

Iowa. L. W. CLEMONS.

[The Shaffer is grown in large quantities for canning purposes, in many sections, but is not a good variety to sell in the open market. It is prolific and vigorous, and seems to be growing in favor.—ED.]

INQUIRIES ANSWERED

BY SAMUEL B. GREEN.
A CORRECTION.

Black Knot of the Grape.—In my reply to E. B., of Harrison City, Pa., in FARM AND FIRESIDE of January 1st, the compositor makes me write about "Black Rust of the Grape." It should read "Black Knot of the Grape."

Book on Fruit Culture.—J. L. E., Somerset, Va. For a short, practical treatise on general propagation and growing of fruits, get "The Practical Fruit Grower," of Phelps Publishing Co., Springfield, Mass. For a good book on how to start a nursery, get "Thomas' Fruit Culturist," new edition, from Orange Judd Co., New York City.

Parice.—L. E., Morgan City, Utah, writes: "Is the insect, 'Parice,' mentioned in December 1st issue, the little white worm that is so destructive to our strawberries here?"

REPLY:—It is not the same. The insect referred to in December 1st issue is a little brown beetle that eats holes in the leaves. Please describe the injury done by the white worm you mention, and I will try to give you a remedy. There are several white worms that injure strawberries. Write whether it works on foliage, berry or roots, and whether it folds up the leaves.

Grape-vine Deficient in Pollen.—S. L. P., Canton, Ohio, writes: "My neighbor has a grape-vine that has grapes every year, but the bunches are not well filled. It is a red grape, as large as a Concord, and very sweet. The bunches appear full when the blossom comes off, but some will stay about the size of a No. 6 shot, as near as I can tell, while others on the same bunch are getting ripe. This vine has borne this way for about eight years. It is all by itself."

REPLY:—Probably the vine to which you refer is one of Rogers' hybrids, very many of which are deficient in pollen. I think you had better set out near some variety bearing plenty of pollen, such as the Concord, Ives' Seedling, Niagara or Worden. Next spring the crop might be increased by bringing in some branches of any of these kinds, when they are in flower, and placing them near the one lacking in pollen. They could be kept fresh by putting the cut end in water. Of course, such work would not pay any profit, but it might be interesting to watch the effect of the pollen on the fruit.

To Destroy Codling-moth.—J. H. F., Santa Anna, Cal. The method pursued generally through the East by the best orchardists is about as follows: When the blossoms commence to fall, the fruit is sprayed with poison in proportion of one pound of Paris green to 200 gallons of water. In from seven to fifteen days, according to the amount of rainfall meantime, the fruit is again sprayed, poison being somewhat weaker than at the first application; about one pound of Paris green to 250 or 300 gallons of water is the proportion generally used at the second spraying. The number of sprayings depends on the amount of rainfall. In a moderately dry season three sprayings should be ample. All the prematurely ripe apples should be destroyed, and for this purpose, hogs or sheep are often pastured in the orchard. Besides the above precautions, one or two bands, made of old carpet, burlap, or heavy paper, are wrapped around the trunks early in the spring. Under these the larvæ spin their silken cocoons and undergo their changes. These bands are examined every nine days throughout the summer until the last of August, and the cocoons are destroyed. The bands should not be fastened very tight. Some fasten the ends of the bands with a tack, and others by tucking the ends underneath. The bands need not be more than four inches wide, and should go twice around. It will well repay growers to take every precaution to keep this pest in check, and the results of a little effort in this direction will be quickly seen in the improved fruit.

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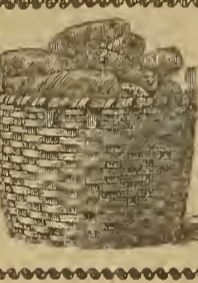
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It has over 100 pages, magazine size, with handsome illustrations, honest descriptions and helpful hints; giving plain directions how to get and how to keep upwards of 2,000 varieties of
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ONE DOLLAR

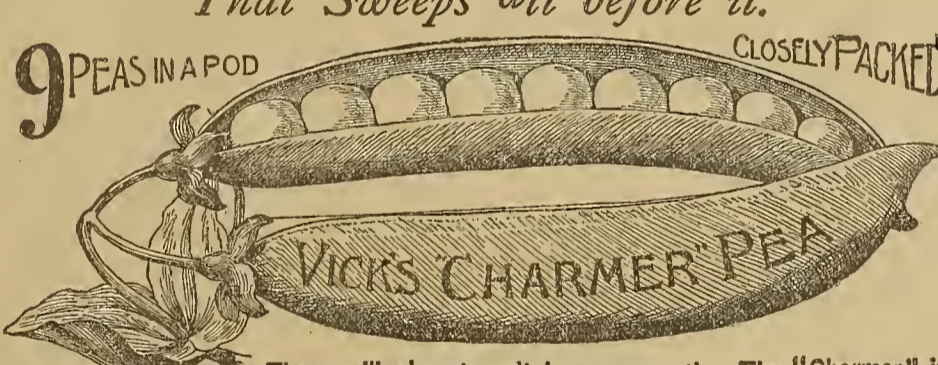
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IT WILL SOON BE SEED TIME; we have GOOD SEEDS, ready for planting,—and we know that at harvest you will report that they have yielded good crops. This WE GUARANTEE, unless failure should result from some natural causes beyond human control. You can rely absolutely that no failure will result from any fault of the seed if you plant ours.
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Write to-day for BURPEE'S FARM ANNUAL for 1892, it is a very complete book of 160 pages, with numerous engravings from photographs, and colored plates painted from nature; it describes all the best seeds, including Rare Novelties of surpassing merit which cannot be had elsewhere.
W. Atlee Burpee & Co., Philadelphia, Pa.

Cranberries.—G. H. W., Olney, Ill., writes: "Will cranberries grow along an old creek bed where the ground is marshy? Where can the plants be gotten?"
REPLY:—Cranberries will undoubtedly grow in the location you describe, but whether or not they could be grown there at a profit it would be impossible to answer. As a rule it will not pay to expend much money on getting land into cranberries, unless the fowage can be controlled at will; but sometimes, in a small way, it may be desirable to set out a small piece and take one's chances of obtaining a crop. This would of course hold true where the wild bogs yielded a fairly regular crop yearly. You had better commence in a small way, and increase your planting as experience may dictate. The plants may be obtained of nurserymen in New Jersey and eastern Massachusetts, but better still, from cranberry growers; or you can take the plants up from wild marshes that are fruitful. Care must be taken to get those that are fruitful, as some wild patches are unproductive.

Cotton-stainer.—W. F. S., Diamond, Wash., writes: "I send you bugs for name. They are doing and have done a great deal of damage to plums and some damage to pears. As soon as the plums are nearly ripe they puncture them full of holes and the plums drop off."

REPLY:—The insects received are nearly allied to the cottou-stainer, so called on account of a red dye which they secrete and stain the cotton in the boll. They have occasionally done serious injury to oranges by sucking them, leaving only the pulp and skin unconsumed. I have never before known of a case where they seriously damaged pears and plums. The only remedy suggested, so far as I can learn, is to trap them by dipping chips in sirup and laying them in small piles in the orchard. The insects can be destroyed with boiling water after they have collected to eat the sirup. You may find that they will collect under small bunches of straw of cool nights, and they may then be destroyed by burning the piles. I think it would be well for you to send specimens to the experiment station of your state, and ask them to investigate it, if they have not already done so.

Apple-twig Borer.—W. D. P., Wellfleet, Neb. The insect infesting your apple-trees is what is known as the apple-twig borer (*Bostriehus bicaudatus*). It is found more or less over the whole country. The holes seem to be made for protection only, for the small, dark-brown beetles that inhabit them. The life history of this beetle is not known, but it is supposed to breed in some of our forest trees, and to come out in the perfect form in the fall, and to then make the holes for winter protection. You have used the only known remedy, which is to cut off the infested wood and burn it at once. The burrows will be found inhabited in the winter and early spring, but they occasionally fly as early as March. The trees will probably start very strongly from the stumps you have left, and will need some careful attention in forming a new head. I would not set new trees, for they might be in as bad condition a year hence as those you now have, while the latter have now a strong root growth to aid them in overcoming any damage to which their branches may be subject. These borers are not very abundant for many successive seasons, and you may not be seriously troubled with them next year.

Grape Culture.—J. B. D., Thorn Grove, Tenn., writes: "(1) Where can I get a standard work on grape culture and wine making? (2) How do they keep the grapes they send to our market sound until winter? They are said to be from New York. (3) What varieties of grapes are best suited to East Tennessee? I want mostly wine grapes."

REPLY:—1. The best work on the subject is "Grape Growing and Wine Making," by Hussman, published by Orange Judd Co., New York City. \$1.50; 350 pages. (2) The native grapes found in our markets all winter have been kept in cold-storage warehouses. By this cold-storage process they may easily be kept until the first of February, if thoroughly ripened, and still be of good eating quality. This is especially true of those having some of the V. vinifera in their parentage, like the Brighton, Catawba, Delaware and Lindley, but the Concord, Niagara and other tough-skinned kinds, also keep well. New York and Ohio grapes have a tougher skin and keep better than those raised further south. (3) Brighton, Concord, Ives, Norton's Virginia and Cynthiana are all good wine grapes, but the three latter are generally preferred for wine.

Soil for Quince—Ashes for Fertilizer—Tree Roots in Tile Drains.—C. C., Winchester, Ind., writes: "What kind of soil is most suitable for the quince?—1. I have an acre of strawberries. The land never had much manure or fertilizer of any kind on it. Do you think a top-dressing of unleached wood ashes would be of much benefit to such a strawberry patch, and when do you think would be the best time to apply it? 2. Is there any cheaper and better fertilizer than the ashes? Two cents per bushel is what it costs me.—Will the roots of fruit-trees damage a tile ditch which is about thirty inches deep, running within about four feet of the trees?"

REPLY:—A rather moist, retentive soil, but one in which there is no standing water.—1. It certainly would be of benefit to the bed. I should apply it as soon as the frost was out of the ground in the spring. 2. There is no cheaper fertilizer for the money, but it is not a complete fertilizer, since it lacks nitrogen. If you applied with it ground tankage, such as may be obtained from rendering establishments, you would have the best cheap fertilizer I know of. The tankage would cost you about \$17 per ton in Chicago, but you would not need more than two hundred pounds for an acre to go with the ashes. If your land gives a strong leaf growth to crops it would probably not need the tankage; but otherwise it would be best to use it, since it costs so little for an acre. If the land is badly run down, and has been cultivated many years, it is probable that you will get best results from stable manure, for such land lacks organic matter, which the manure largely supplies.—There would be some danger of it, but not very much. If it only runs a short distance near the trees, the difficulty could be obviated by using glazed tile with connected joints near the trees.

Our Farm.

GENERAL ADVICE UPON PLANTING AND CULTURE OF ORCHARDS.

A SHELTERED valley is not a desirable location for an orchard, neither is a lofty, bleak, exposed position. Neither extreme is advisable, nor should the orchard be unsheltered. Local shelter is very beneficial and must not be confounded with the evils attendant upon a bad selection of site. The nature of the soil and climate and needs of the trees must determine the treatment to be given them. If the soil is rich, climate conducive to growth, and the trees vigorous, much less cultivation and care is required than if any or all of these conditions are unfavorable or lacking. Much cultivation under the first-named conditions would result in an enormous growth of wood, which tends to prevent formation of fruit; while lack of care and cultivation on poor soils, in rigorous climates, or with unthrifty stock, would so far reduce the vitality of the trees as to prevent both wood growth and fruiting, and must result in the speedy death of the orchard. The grower must discover the needs of his trees and treat them accordingly. He can accomplish much in regulating the growth and fruitfulness of his orchard by judicious pruning. The tree growth above and below ground are mutually dependent and in equilibrium. Any change in their mutual relation produces a corresponding change in the growth of the tree. The roots have no inherent power of growth and are dependent upon the foliage for the preparation of the plant food gathered by them. Any diminution of the foliage during the period of active growth must, then, reduce the amount of available food, and consequently the growth of the roots. Where the growth is so rapid as to be incompatible with fruit production, summer pruning, by checking the growth, may induce fruitfulness. Winter pruning, by reducing the number of growing branches and buds, gives the roots the preponderance, and those buds remaining shoot forth with increased vigor. To sum it up in an axiom: Summer pruning weakens growth; winter pruning strengthens it; hence, strong growths should be pruned in summer, and weak ones in winter.

WM. SAUNDERS. United States Department of Agriculture.

EXTRACTS FROM CORRESPONDENCE.

FROM OREGON.—In November last one of my neighbors gathered four hundred boxes of strawberries, each box containing one pound, and he sold them for twenty-five cents per box. This was a second crop. Up to the present time we have had no ice, and but two light frosts. The thermometer has not been below freezing point, and only that low twice, on two mornings for a short time. W. P. Aumsville, Oreg.

FROM MISSOURI.—Clark county lies in the north-east corner of the state. It is mostly prairie land, except along the streams. The soil is of a rich, black loam. This county has never known a failure of crops. Crops this year were very good, corn making from 50 to 80 bushels to the acre, oats from 40 to 65, and wheat 15 to 35. Peaches and small fruits do well. The apple crop was very light. Land is selling from \$30 to \$50 an acre. Stock raising is carried on to considerable extent, especially horses and mules. We have three railroads through the county. With the Mississippi river on the east we have first-class facilities for shipping our produce. The county-seat is Kahoka, a thriving town of about 2,000 people. It has pickle, canning, vinegar and broom factories, and is lighted by electricity. Besides this town, we have many other smaller shipping points that do considerable business. H. P. M. Kahoka, Mo.

FROM SOUTHERN OREGON.—We are having a very fine winter. We had a snow-storm early in December, but the fine weather since has melted it, even from the high buttes. On the mountains there is snow, of course. Farmers are well along with their work. Stock is in good condition. There is plenty of feed in sight. Market for cattle, hogs and grain is fair. Good wheat is worth 75 cents per bushel; hay, \$8 per ton; hogs, gross, \$4. Fruit and vegetables are slow, owing to the large crops raised. Farmers are paying their debts. Money is close, at 8 to 10 per cent, on real estate security. On the whole, the situation is encouraging. Immigration is weak; therefore, there is little doing in real estate. We want one thousand families to come here, take our remaining foot-hill lands, or buy such lands at low figures, and go to raising prunes. The demand for Oregon prunes has never been met, and probably never will be to such an

extent as to make them an unprofitable crop. From \$500 to \$1,000 ready money, backed by brains and energy, will start any one to independence in the prune business. A prune country is a perfect country as to climate. Plenty of prune land can be had at from \$10 to \$20 per acre, fifteen to twenty miles from a railroad station. This is amply near for this business, though too long a haul for those who wish to engage in raising fruits to sell green. It would take a large number of poultry raisers to glut our winter egg market. Spikenard, Oreg. S. M.

FROM MISSISSIPPI.—Probably some of your readers would like to know something of this section of the country. We are "away down in Dixie." Centreville is a small town on the L. N. O. & T. railroad, one hundred and thirty-five miles north of New Orleans, near the south-east corner of Wilkinson county and about eight miles from the Louisiana line. There are three churches in the town, Baptist, Methodist and Presbyterian, and a school-building in which is kept a public school for four months in the year, the balance of the term being a private, or pay term. The surrounding country is a good, average country as to fertility, cotton and corn being the principal crops raised. The average crop of cotton per acre, without fertilizing, is about half a bale, or 225 pounds of lint cotton, though with proper culture and fertilizing, it is a very common thing to make 500 pounds and over. Corn does well, and so do rust-proof oats, which, if planted in the fall or early winter, rarely, if ever, fail, and are ready to be harvested by the last of May or the first of June. Sweet and Irish potatoes grow to perfection here. Apples, peaches, pears, plums and most fruits do well. The climate is mild, the thermometer rarely going above 98°, and standing at that but a short time in summer, and never going but a few degrees below freezing in winter; it is very rare indeed for it to go as low as 20° above zero. The water is good free-stone, both wells and springs. The health is good. This is not a swamp, but is a hilly or rolling country, and covered with a variety of natural growth, such as red and white oak, poplar, ash, beech, magnolia, pine, etc. It is finely adapted to raising stock of all kinds, being well watered and having mild winters, Crab-grass and Lespedeza grow spontaneously and to perfection, and make the finest of hay. Our people are a cotton-raising people, and have become so habituated to raising all cotton and buying everything else, that they can scarcely change the system. Whenever a different plan, that of raising all necessities at home and making cotton a surplus crop, is adopted, the country will blossom like the rose. Louisiana or Creole sugar-cane does well here, and any family can raise enough to make sirup for family use, which is ground and made by little mills in each neighborhood. This is the best sirup made, being the pure juice of the cane. Now is the time to buy land here at a bargain. The low price of the cotton crop, in connection with the great expense of making it, on account of the price of corn, etc., has dissatisfied our farmers to a great extent, and many are ready to sell their places. Good, improved farming lands can be had here now at from \$5 to \$10 per acre. Centreville, Miss. H. C. C.

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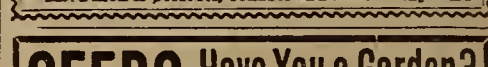
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Conducted by P. H. Jacobs, Hammonton, New Jersey.

A CHEAP POULTRY-HOUSE HEATER.

THE design of a cheap poultry-house heater, by Miss Hattie Seely, Hammonton, New Jersey, is not only novel, but it is a contrivance that costs so little, and can be so quickly and easily arranged, as to command itself at a glance. An ordinary lamp having a tin chimney, with a piece of mica in front of the chimney (so as to show the flame), is surrounded by an ordinary stove-pipe (the larger the pipe the better), or a sheet-iron or tin pipe may be made for the purpose, a board being arranged at the bottom of the pipe, by tacking the pipe to the board, for the lamp to rest on. Or, if preferred, two cross strips may be placed at the bottom in place of the board, as it will allow more air to come in. Air-holes are cut all around the pipe, so as to permit of a free circulation of air. A sliding door, or one to raise up and down, may be arranged for placing the lamp in the pipe, or for taking it out for filling; or the bottom strips may be arranged for that purpose. No solder is used—all the parts should be riveted. At the top is a cross-piece, also made of iron or tin, the arrows indicating the direction of the heat. The heater may be hung up by wire (which is attached to the hook shown on top) from the roof, but, within three feet of the floor, to prevent interference or contact by the fowls. If preferred, the heater may rest on the floor, but should then be protected by a wire cage to protect against the hens. Any kind of lamp, or small coal-oil stove, may be used, but the chimney should be of tin, riveted (not soldered). It is best to have the whole heater made by a tinner, of tin or sheet-iron, and about ten inches in diameter and twenty inches high, the cross-piece being also twenty inches long, but stove-pipe may be used over a small lamp. In place of the cross-piece, a tin plate may rest on wire pegs, raised three inches over the top of the pipe, to allow of free draught. By this arrangement, the heat is distributed in both directions from the center of the poultry-house. It is only necessary to keep out frost, hence 40 or 50 degrees above zero is warm enough, and the house will also be kept dry. There will be no injury from foul air or carbonic acid gas, as plenty of air will always find its way in. This should be used only on cold nights.

WHITE HOLLAND TURKEYS.

We have been crowded with letters asking where to procure White Holland turkeys, and had some enterprising breeder studied his interest by inserting even a small advertisement, he would have reaped a harvest. It is not our place to inform readers where to buy, as it is impossible for us to know who may or may not have stock, but it is the breeder's duty to let the readers know he has stock for sale. Those who do not do so only deprive themselves of business that they could easily secure.

LICE FOR ALL STOCK.

There are special kinds of lice that prey on animals and birds, each seeking its favorite feeding-grounds, even man being no exception. The hens are not the only sufferers, therefore, for the duck, goose, turkey and guinea each are afflicted with lice that do not prey on the hen at all. This is a matter not infrequently overlooked, but which deserves consideration.

A GENEROUS PROPOSITION.

Wells, Richardson & Co., the enterprising manufacturers of Burlington, Vt., write us under date of Jan. 10, as follows:

EDITOR FARM AND FIRESIDE:—We are very anxious to have the gold medal for the best butter at the Chicago World's Fair go to some United States butter-maker. At the Paris Exposition Moulton Bros., of Randolph, Vt., received the gold medal, and the color used in their butter was our Improved Butter Color. We will give enough of this color for sixty pounds of butter to any of your readers who will send us six cents in stamps. We will also send our valuable Dairyman's Account Book. The best materials are necessary for making the best butter. Very truly yours,
WELLS, RICHARDSON & CO.

EARLY DUCKS FOR MARKET.

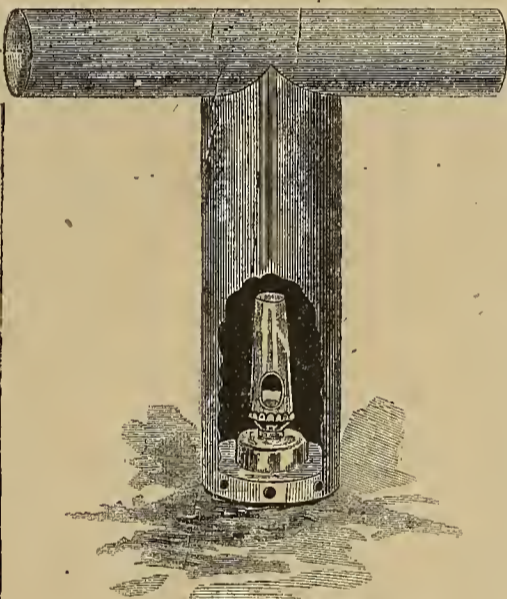
Ducklings should be hatched as early as possible in order to secure the high prices. They do not bring the best prices but for a short time in the year, usually in May, and those who desire a profit should not lose a day in hatching them out. If one depends on hens or ducks to hatch them, but little reliance can be placed on such, for the hens and ducks, will not sit until they so desire. Those who make the highest profits from ducks hatch them with incubators, several hundred at a time, and raise them in brooders. By using the Pekin variety, which require no ponds and which can be made to weigh five pounds each in ten weeks, the matter of feeding and managing is reduced to the lowest expense. The ducks that lay the eggs for producing the early ducklings, should begin in January, or not later than February. As soon as they begin to lay they should be liberally fed on a variety of food, meat being an important item, with also a supply of cabbage, scalded cut clover and ground oats. The food should be soft and they should have an abundance of water to drink.

WARM WATER.

Give the hens a drink of warm water early in the morning, on cold days, and it will invigorate them. Poultry should never be compelled to drink ice-water, as the cold water must be warmed by the body. It saves food and promotes health to keep the bodies always warm.

LAMENESS OF DUCKS.

When ducks become lame from no apparent cause, it is usually due to their sleeping quarters being damp. Ducks are easily affected in the feet and legs by dampness and cold. They will remain in the water for hours, but they are then exercising. When they return to their quarters they require a dry place. The



A CHEAP POULTRY-HOUSE HEATER.

most successful persons with ducks provide board floors, which are littered deep with cut straw or hay, which is regularly removed as soon as it becomes in the least degree damp or filthy. By carefully attending to the ducks in this respect, there will be fewer cases of lameness among them.

CHICKS AND BOWEL DISEASE.

Many little chicks die of cold on the bowels, which is caused by their being chilled, and again it is caused by the chicks becoming wet when drinking. To avoid this, the water should be given in a manner to permit them to reach the water with their beaks only. To allow little chicks to trample in saucers of water is as suicidal as though they were placed in a cold rain shower. The water for chicks and ducklings should always be tepid in winter, especially for ducklings, as very cold water causes them to have "cramps," while with chicks it chills them on cold days to such an extent that they never recover.

INQUIRIES ANSWERED.

Hens Inquiring.—H. G., Georgetown, Mich., writes: "My hens gradually droop and die. They have good range. What is the cause?"
REPLY:—We cannot state the cause unless you give detailed symptoms.

Meat and Bone Scraps.—R. J. P. L., Benton, Ark., writes: "1. Will the cooked meat left by butchers, after extracting the tallow, be good for fowls? 2. How much should be fed each fowl? 3. Is it equal to raw meat?"
REPLY:—1. It is excellent? 2. One ounce. 3. Yes.

Seaweed as Litter.—T. A. N. writes: "1. Is seaweed suitable as litter for the hens? 2. Is it advisable to feed corn more than once a

How To Make Money WITH A FEW HENS

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day? 3. How often should poultry be fed daily?"

REPLY:—1. It will answer if first dried. 2. Once a day is sufficient. 3. Twice a day.

Turkeys Laying Small Eggs.—E. L. R., New Berlin, Ill., writes: "What is the cause of some turkey hens laying small eggs? They seem to be fully matured. I have always been very careful in selecting gobblers."

REPLY:—It may be due to their being somewhat fat, or not fully matured. The eggs will be of larger size later in the season.

Miscellaneous.—Mrs. A. J. B., Bentou, Wash., writes: "1. Should turkeys or chickens be mated that are related? 2. Will milk be a substitute for meat? 3. Will guinea fowls frighten away hawks? 4. How long can eggs be kept for sitting purposes?"

REPLY:—1. Always procure males from elsewhere, and never use males and females from the same flock. 2. No; meat is more concentrated. 3. They will not. 4. If kept in a cool place, and turned three times a week, they may be kept for a month.

Brown Leghorns.—Mrs. M. A. W., Farley, Iowa, writes: "Please describe color of the Brown Leghorn."

REPLY:—The male has reddish-bay head, the single comb having five points, white ear-lobes, yellow beak, brilliant red hackle (black stripe down each feather), dark red hack, black breast, wings black, edged with brown, black tail and yellow legs, which are free of feathers. Female has comb falling over, golden neck (with black stripe down each feather), the general plumage being brown, pencilled generally with a lighter brown.

Ducks and Turkeys.—Mrs. M. E. C., Hampton, Neb., writes: "1. How can the Pekin and Aylesbury ducks be distinguished? 2. Are not flesh-colored legs a disqualification in white Plymouth Rocks? 3. Should the light-colored bars on the tail of a Bronze turkey be light or coppery? 4. Should any 'brassy' tint show in their wings (on the flight quills)? 5. Would dark-colored legs disqualify them?"

REPLY:—1. The Pekin has orange-color bill and legs, while the bill and legs of the Aylesbury are flesh colored. The plumage is about the same—white. 2. The disqualification for legs relate only to feathers on legs of Plymouth Rocks. 3. Should be light gray. 4. Color is black or dark brown, pencilled across with white or gray, but "brassy" near the back. 5. No; but legs of chicks are darker than those of adult turkeys.

CORRESPONDENCE.

UTILIZING THE PARASITES.—I once saw a hen in the glare of the sun rubbing herself violently in the dust, and then, quite evidently, picking up the parasites, she hammered the ground with her head in true woodpecker fashion. J. F. M. West Fork, Ark.

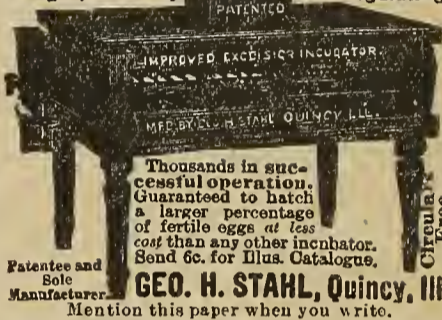
FEEDING FOR EGGS.—Hens cannot produce eggs unless their feed contains the elements of which the egg is composed. The kind of feed that is offered to hens must be determined by the object to be attained in feeding them. Hens intended for the market should be fed that kind of grain which is known to contain a large percentage of the fatty or oily substances, but hens kept as layers should be fed on that kind of grain which contains a larger share of the albuminoids or egg-producing elements. In addition to the essential quality of albumen required in the organism of the fowl, the laying hen requires an extra amount for ovation—the white of the hen's eggs being about twelve per cent of albumen—and this must be furnished in her food. By referring to a chemical analysis of the different cereals, it will be seen that corn contains the greatest amount of fatty substances, while wheat contains a larger amount of albumen than any other cereal. To fatten hens, therefore, feed corn. To produce eggs, feed wheat. Meat once a day in winter will prove beneficial to laying hens. Chickens should be fed plenty of limestone gravel. Some say pure water is essential to laying hens. I prefer milk, as that fluid serves not only to moisten their food, but also contributes albumen, which goes to the formation of the egg. L. M. Jackson, Ohio.

Monitor Incubator. Bristol, Conn.

Milk PRESERVATIVE.
Milkmen, Creamerymen and Dairy-men can keep Milk and Cream fresh a week without using ice. Healthful, tasteless, odorless and inexpensive. SAMPLE, enough to make test, mailed for ten cents. The Preservative Mfg Co., 10 Cedar St., New York.

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Our Fireside.

ABOVE THE SPIRE.

Tell me why the swallows fly
Up into the cloudy sky?
Why they hover round the spire,
Wheeling lower, wheeling higher;
And again their course repeating,
Now advancing, now retreating,
Till they, in a circling flight,
Soar forever out of sight!
Mother, make me wings to fly,
Like the swallows in the sky:
Dancing, glancing, up on high,
Round the old church spire.

Summer swallows always go
When the bitter north winds blow,
And the heavy clouds are pouring,
Overflowing rivers roaring,
Racing down their pebbly courses,
Like a troop of foaming horses,
Onward to the open sea,
Madly struggling to be free!
Child, hereafter you shall fly,
Like the swallows in the sky:
Unknown lauds there are on high,
Far above the spire!

AUNT JACK'S SECRET.

BY MARY A. DENISON,

Author of "That Husband of Mine," "If She Will, She Will," Etc.

CHAPTER VII.

NEST WRITES IN HER JOURNAL.

"The heart by day and night such, such to thee
I give in these poor lines as lavishly."

I THINK Jack must have been inspired when she gave me that hint about the journal last week. I never tried it before; I never thought I should like it or take the time for using it. One's thoughts are generally so stupid! And what has there been here to chronicle, except about cows and horses, sheep and pigs, Mrs. Spruce's new dishes—generally failures? By the way, I wonder if cooking isn't a fine art, and if one couldn't find an artist to do it? Yes, money will buy everything.

Well, this is my journal, and if ever I get sick of it or uegligent, I'm going to tear it up. No eyes shall see it but my own. Of necessity, I begin with two wonderful facts, my aunt's prophesy, and the speed with which it came to pass.

I don't think I care to be much in the company of Mr. Margerie, the younger. He is quite too handsome and quite too attractive. But alas, he is poor. I write that word with a capital because the way I feel about it it deserves it. I don't want him near to me; why, I can't tell, for sometimes his eyes haunt me. Why it is I don't know, that after having walked with him—Jack and aunt always go, too—I come home and am seized with a fit of crying. "Little fool," I say to myself, and that I am. I don't know, either, why I should think of him the last thing before I go to sleep and the first when I wake up. *I want to hate him!* I would give the world if I could hate him!

But on no account, Miss Nest, on no account are you ever to think of loving him. There, what is writ is writ.

—For the first time to-day I have seen Mr. Margerie, senior, the great city banker. He is very tall, very grave, very pale. Let me see, is he anything else? Yes, he is old. There is just a fringe of hair around his head, and yet that is the only sign of age. His features are good, he has a sweet smile, and if I had not seen Harry—I should call him Mr. Margerie, junior—he would have looked very well to me. Without any adequate reason whatever, I treated him with great coolness, but he looked at me—ah, how he looked at me!

—I find papa thinks much of the banker. Naturally, for he is nearer his own age. Something tells me if I am ever going to do anything to better my father's prospects, to help Jack to the things she needs, I must do it now. No one has said a word, not even Aunt Mary, who only watches me anxiously.

Stop! I said no one had said a word. Shall I put it down here? Will it haunt me in other days?

"You are like a beautiful flower," the first compliment.

The second speech, in a garden walk: "If only I had my uncle's wealth."

The third—how can I write it: "Great heaven! I love you to madness!"

And I wrested myself away. I answered with coldness in one breath, anger and shame and delight mingled in another; but I did right. I think I did right, for it is destiny. Well, I shall never hear such words again, not

from his lips, for his uncle has sent him to the city to look after some particular business, and he only bade me good-by with the rest.

I would not see him alone. Indeed, perhaps I dared not. Something frightens me when I think of him, and I draw my breath hard. I wonder if in years to come I shall ever look over this journal and cry as—well, as I cry sometimes, and won't tell myself what I am crying for. No, I'll burn it first.

—It is destiny. Mr. Margerie, the great banker, has spoken to my father. He says he loves me. A man of his age loves for the first time in all his long life. It is a compliment, and I can see that it dazzles even papa. The man is so enormously rich.

"Of course you cannot like him," says papa. "I told him so. 'It is out of the question,' I said. 'My child is very young. She has never even, I think I may say, thought of a lover.'"

I felt my face burn as my father said this. The vision of that other rose before me like paradise guarded by the flaming sword; but I was firm; the way was barred. I had decided from the first, and God help me, I had made up my mind that I had decided for my life, such as it may be.

"Papa," I said, "he is a very nice old gentleman. I like him very much. Will you think it strange if I am willing he should think of me?" And then I said to myself again, "It is destiny! It is destiny!"

Aunt Mary was nearly sick. I believe she almost cursed the day, in her heart, that she had given me that message, the, to her, terrible fatality that made her a prophet. I would not even consult her. I would not speak to Jack; she was too young. But I was kinder than ever to Mr. Margerie. Now he is gone

he stops the children, sometimes, and scatters money as if it were sand. I love to see him, and I know he is generous to the core of his heart.

—I have learned to call him by his first name, which is Phillip, and it befits him, for he is so stately. I think he loves me a great deal. He says I am adorable, and as quiet as he is, his face changes at sight of me, and his eyes glow like coals of fire.

—To-day we have been from store to store, choosing things. I said I would have my rooms done in gold and white, and I am to have an entire new set of an antique pattern made for me. Then we reveled in carpets, laces, upholstery. The money flies from hand to hand.

Can it be possible that this is I, driving in a great, grand carriage, the rich stuffs brought to me for my inspection—the rich stuffs that make me nearly frantic to choose from? There have been times when horrible thoughts have come to me. If papa should die, for instance, what is there for us? Papa has no money, or very little. Aunt Mary has a pension, but it only suffices to keep her. What could we do, Jack and I? To be sure, Jack could stay here and be happy; she could milk the cows and make butter with old Mrs. Spruce, care for chickens, and perhaps sell enough farm produce to keep herself alive. Such a life would not do for me. I should die like one without hope and in prison. I cannot work, to beg I am ashamed, and so I think I have done right to provide not only for my own future, but that of my father and to care for Jack.

—A letter from him. How beautifully he writes. He wishes me every happiness. His

hers for my bridal fiery, and she is doing some beautiful things.

—As the time draws nearer, I do not dare to be idle or by myself.

Such a gift came to-day that I am wild and riotous for joy in my very heart, but I dare not drop my dignity. Think of adorable dresses from Paris—gowns, cloaks, coats, furs—fabrics such as I never even dared hope to possess. Everything is costly and delightful; everything fits me. Aunt Mary declares that I have the most accommodating figure that she ever saw. I am in ecstasies over everything. Shall I ever wear these lovely things out?

Another day, and diamonds in some of the most exquisite designs—bracelets, necklaces, brooches, rings. Aunt Mary says that my head will be turned, for she can hardly bear the sight of such splendors. I could have leaped and danced for joy as I tried the shining things on, one after the other, but I only looked and smiled and held my hands hard.

What it is to be rich!

Everything seems changed. The house was always commonplace; now it is unbearable. Dear papa! I shall never love him less, but he is not fit for this dull country. Jack is a sweet girl, but I wish she had more ambition. How can she be happy in the midst of all that makes my misery?

"Jack," I said, one day, "I shall take you to live with me."

"Indeed, I wouldn't leave papa and Aunt Mary," she said.

"But papa must also go, and Aunt Mary. The house is large enough for all; and then, Mr. Margerie is quite willing."

"You couldn't drag papa away," said Jack. "I think it would kill him to be cooped up,

even in a big house, in the city. And I, oh, I love this dear old place. You are the lily and lady of the family; it seems right for you to be placed on a pedestal and worshiped; but I am only a field flower, and should wither in ever so rich a vase. You need luxury, and I can live without it. Without exactly wanting to be poor, I don't care to be rich."

What is the use of talking to a girl like that, with no ambition? But her time will come, and I can wait. She shall be as rich and free as I am. She, too, shall marry wealth. When once I am there, on my pedestal, as Jack calls it, we shall see if I cannot carve a future for her as bright as my own. It would be delightful if Mr. Margerie, junior, should fall in love with Jack—oh, the hateful thought! I could strangle myself for thinking it! I must not allow such things to trouble me. If I am to shine in society, if I am to be a leader in the world of fashion—and I will be—the first power I must cultivate will be that of self-control. What would crush a commonplace character must not touch me. I must be my own and sternest judge. Whatever passes around me must not ruffle my temper in the least. To be a lady, one must be as impassive as marble, though seeing and feeling all things.

A telegram has just come. Something terrible has happened.

CHAPTER VIII.

NEST WRITES.

"I met thee, dear, and loved thee—yet we part,
Thou on thine unknown way, and I on mine."

—It is quiet here now, like old times. Everything looks gray and gruesome. Tabby's tail is angry at the flies, and I am angry at the news, wild, half mad.

Well, all is over, now, between us. I have that consciousness, but it is not soothing. The wild west wind is blowing the

leaves about. That horrid rose-vine keeps tapping at the window. Clouds, in rags and patches and shreds, go sailing along the wet and dreary atmosphere.

I hate the sight of the hills in a mist. I hate them anyway. I never could go into ecstasies over dumb, inanimate nature, as Jack does. She will stand and watch a thunder shower with big, bright eyes, voicing her delight at every horrid flash, while I bury myself in pillows and pray the good God not to let it strike me. Every day I feel the difference

who would have troubled me with sad looks and followings, I make up the prettiest bouquets to put at his uncle's plate.

My father regards me with glances of astonishment, but he says nothing. Already I walk on air. Lovely bunches of rare flowers come every day by the city express, and such boxes of bonbons; books, magazines, the choicest literature. I begin to see what I shall be. I revel already in the prospect of riches and fame, for I feel unbounded capacities within me. I shall yet be a leader of fashion, a patroness of the fine arts.

Mr. Margerie's home is a palace, so I am told, located in the most beautiful part of the great city, and fine as it is, he is going to refurbish to suit my taste. We shall go to the city together, papa, Mr. Margerie and I, to choose the furniture. I am wild with delight. I am to have carte blanche, and surround myself with lovely things.

—Mr. Margerie is still with us. How kind and unselfish he is, and how strange it seems to see a man spend money like a prince.

"Is it twenty dollars? I happen to have a gold piece of that value," he will say. "Is it fifty or a hundred and fifty, or five hundred?" Out comes his cheque book. When we drive,



For Throat Troubles

croup,
whooping cough, and
loss of voice,
the best
remedy is

Ayer's Cherry Pectoral

Prepared by Dr. J. C. Ayer & Co., Lowell, Mass.

between us. Curious, but all the cows, cats, dogs, horses, hens and chickens on the place seem to know Jack and love her. I want nothing to do with them.

I am, very unhappy, and can only keep myself from shrieking out at times by writing in this journal, which has become like a dear friend. How can I pen the words that—well, the telegram told it last night.

Mr. Margerie's nephew is dead! And worse than that, he died by his own hand. In one of the rooms of that beautiful house he shot himself. They will not tell me in what one; but I have a presentiment that makes me turo cold; that is, the thought of a haunted house; that is, haunted by the ghosts of unpleasant memories.

Mr. Margerie is heart-broken. His nephew is the only child of an only sister, who died years ago, and he has followed his career from a lad. He is in the city now, superintending the funeral.

Dead! Murdered by his own hand! And now, when all these wedding tokens surround me, everything must be held in suspension.

It seems so awful, so gloomy. Sometimes the thought occurs to me that I am in some way responsible for his death. Can it be possible that he loved me so—no, no, I will not, I dare not think that! God knows I am sorry, so sorry; but I cannot rave or cry. I wish I could, for this dull feeling at my heart is almost unbearable.

"And he was so handsome," says Jack in her sympathetic voice. "What do you suppose made him do it? He looked sweet and tender-hearted; he didn't look as if he could do that."

"Undoubtedly," says papa, "something worried him, and his brain gave way. Life is so dear to the saddest and the poorest that I think no sane man would willingly die. But it is a great sorrow to Mr. Margerie, and occurring just at this time, seems doubly sad."

—I put away my finery, which always before has been such a source of happiness, and went to Aunt Mary's room last night. Jack was reading to papa, some papers with reference to an article he is going to write for the new magazine, I fancy, and Aunt Mary had been suffering with her head all day, and had not come down stairs.

I found her lying on the lounge in her room, to all appearance fast asleep. I called her by name; but she never answered, though she moved a little uneasily. Presently she spoke:

"You have come, my darling," she said, "come to hear from my lips the sad story of my death."

I stood stunned or like one entranced. Did the dead talk? For the moment it seemed to me that Aunt Mary was a living corpse, and I grew chill to my finger tips. Strange that for the moment I utterly forgot her singular gift, or that I had ever heard her talk in her sleep.

"I loved you from the moment I saw you. In that first intense gaze my whole soul went out in adoration, and I was helpless to call it back. Nor would I if I could, for I lived a lifetime in a moment. I was helpless, baited by your beauty. I was hopeful, for you were young, and so was I. My soul was on fire, but the fire was quenched so cruelly that it went in on heart and brain, and I could neither rest nor weep. Hell seemed to follow so close on heaven that I think I lost my reason at last. My uncle's home is also mine. I pictured you there, night and day, always there—"

"Stop! I begin to realize what I have done. Where am I, and why is it so utterly dark? Only one small ray of light falls on you. What have I done? It was an act of madness. Lo, I behold you as you are. Can it have happened that for a being so shallow I have forfeited all the joys of life? Oh, God forgive me!"

Aunt Mary sat up now, writhing as one in agony, her hands clasped over her eyes. I stood chilled and rooted to the spot. Then I sprang to the door, flew down the stairs, and ran into the sitting-room, which looked like heaven, with father and Jack seated on the Temple steps, radiant with goodness.

"What is the matter, my child?" papa asked, rising slowly.

"Oh, she trembles all over, and see how white she is!" cries Jack, putting her arms about me.

"Oh, Jack; oh, papa; keep me with you always! always!" I cried, the sobs and tears coming fast. "I don't want to go out into the dark."

"She went up to her room, papa, and she must have been dreaming," said Jack, making me sit down, "for she don't seem herself."

"I never shall be myself again, never, never!" I sobbed. "Pray for me, Jack; you are the one who prays, for I am so unhappy!"

"I think I understand," papa said, in a solemn voice. "She has been laboring under a delusion. My child shall not be sacrificed. I will see to that. Your father, my darling, will guard you and save you," and the next moment I was crying in his arms. "We will have no more of this trumpery sent out. The matter can be conducted with honor. Mr. Margerie is a gentleman."

Trumpery—he called my wedding splendors trumpery. I spoke then, tremblingly:

"I am very nervous, papa; perhaps I have been dreaming. Besides, I felt lonesome, for I went to Aunt Mary's room, and there—and there—and there—" My voice became hysterical. Jack was frightened, and ran to get me some medicine, but I controlled myself.

"How silly I must seem," I said, after a moment or two, releasing myself from papa's arms. "Just because Aunt Mary is sick a little and I am nervous, and nobody is with

us, and he is dead—" and then I went off again.

Presently I found myself in bed, and Aunt Mary, very anxious, hovering about me. Jack sat on the edge of the bed, and my head was bandaged and felt cold and wet.

They would not let me talk, but I slept little all that night. Jack lay beside me with her clothes on, ready to rise at any moment, if I should need her. Then I thought it all over, and brought philosophy to my aid, and what little I had of religion.

"The good God will surely forgive him," I thought, "for in a moment of delirium he took his life. He will also forgive me, for I did not dream of the harm I was doing; neither did I encourage him to love me." Before morning I was my old calm self again. Jack bent over me at dawn.

"Have you slept?" she asked.

"No, but I am feeling better," I said, "and now I am going to sleep. Where is Aunt Mary?"

"In her own room. She says that she has an indistinct remembrance that you went to her room last night; did you?"

"Only for a moment, Jack," I made answer. "And did she go into that hideous state? Did you hear anything?" Jack asked, fear in her eyes.

"Don't talk now, dear. I am all right now," I made answer. Then Jack kissed me, looked at me a moment pityingly, drew down the curtains and was gone.

In the quiet of my room I arraigned myself, soul, body and mind, before myself, and came to the conclusion that all things had happened for the best. I began, with renewed satisfaction, to think of my prospects, even of Mr. Margerie. I slept for hours, then dressed myself with great care and went down stairs in my brightest mood. Everybody seemed happier to see me restored to myself again; everybody but Aunt Mary, who had, perhaps, an inkling of the truth, but dared say nothing. In a few days our friend came back. It was I who proposed that the wedding be delayed, to which he assented. So he went back to town and to business; but every other day found him at our door with his noble grays, and we all had a share in the drives to and fro through the country.

—The time is drawing near. Papa seems very restless and uneasy, and turns very much towards Jack for his consolation. I suppose he feels that as he shall so soon lose me, he might as well get weaned in time. Dear old father. He will miss me, but then I shall feel so sure of his future and Jack's.

My wedding "fixin's," as Mrs. Spruce calls them and no doubt describes them to our adjoining neighbors, are all ready, and I am getting gradually accustomed to the idea of leaving the farm-house, which, hate it as I may, has been in every respect sweet home to me.

Jack keeps up her spirits nobly, though we little dream now how much we shall miss each other. My house in town is perfect. There is a new cook waiting for me, and servants who have been with Mr. Margerie since he was a young man, having previously been in his mother's family.

I took the fancy to be married by moonlight in the small Episcopal chapel some two miles out of town, Mr. Margerie being an Episcopalian. I am to have only one bridesmaid, Jack, and papa will give me away. Jack looks like a fairy in her pretty robes of white silk and lace. I already fancy her at my parties, her fresh young face winning everybody in the room.

—The eventful time came. It was a lovely day, just cool enough to make the air crisp and June-like, although it was in autumn. As things recede, it is said they become valuable. The place here grows prettier as I am getting ready to leave it. It seems to me that I never saw the hills slope so softly, the river run so blue, the distant valleys so beautiful in outline. I look at papa with a longing I cannot conceal, to stay under his wing. To go with a stranger, to leave all that has here-

tofore made my life of value; but I will not give way to feelings of this kind.

Jack, Mrs. Spruce and Aunt Mary array me in an exquisite bridal dress. I am beautiful—there is no denying that I am—and queenly. I feel it in every movement of my frame. I revel in the prospect of the sensation I shall make in the great world. People will have their say, I know that. There will be a great deal of talk about January and June, a great deal of sentiment wasted. I shall not hear it, though I shall know it. I must make my life pay me in other things. Pay me it shall—large, wide interest.

I thought only twice of him while Aunt Mary was busy about me, and Mrs. Spruce held the big pincushion, with all sorts of fancy pins and catches and little chains glittering over its huge surface. Only twice, and then, in a way, forgot. I hope I am not going to be haunted by his memory. Oh, no, I will take good care of that. I overheard Mrs. Spruce whispering to another gossip that there is a streak of insanity in the family, but papa says no.

It was moonlight as we left the carriage, papa, Mr. Margerie, Jack and I. The place was full of people, and the moonbeams came in at all the windows, so that the church was filled with a tender, tremulous light. Everything could be distinctly seen, for here and there, concealed by shades, were small flames of candles, to enable the clergyman to read the service, and all the faces about me were visible.

I walked through an arch of moonlight, for the church was so situated on the side of a hill that at that hour the whole interior was flooded by the soft, silvery sheen. Everybody exclaimed, under their breath, of course, but I could hear it, and it made my heart beat faster and faster. Mr. Margerie walked by my side, a black shadow, but a very handsome one. The ceremony went on. Papa's voice faltered a little as he gave me away. My bridegroom spoke softly, but distinctly, and I left the church for home.

There was a supper, to which a few of papa's friends among the better families here and five or six distant relatives on both sides were invited, and at which Mrs. Spruce acted as mistress of domestic ceremonies, and was only prevented by Aunt Mary's tact from upsetting everything she touched.

Aunt Mary and Jack hovered about me as they carefully changed the lovely bridal dress for a traveling outfit, and I left them all, if not in tears, certainly with sorrowful faces, as they stood in the old rose-covered porch.

Then I turned to Mr. Margerie for comfort. He seemed all at once to fill papa's place; he talked to and soothed me with promises of home-going, and of having the dear ones at my house as often as they could come, so by the time I reached my own door, I was quite myself again.

Ah, the dazzling lights in that beautiful new home. From suite to suite I moved, quite delighted and in love with all I saw. On the threshold of a little ante-chamber I paused for one swift moment, and a chill came over me. The room led into my own private boudoir, and was but dimly lighted.

"I'll leave you to go in there alone, and Mrs. Bowers will send your maid," my husband said.

I never shivered so in all my life as I did in crossing that small space. I wonder why; yet I dare not ask. My maid came in while I stood trembling. She is a French woman, very bright and dark, and quick in her movements. If I do not change my dressing-room, I shall keep her with me all I can. I like her very much, and she likes me and looks up to

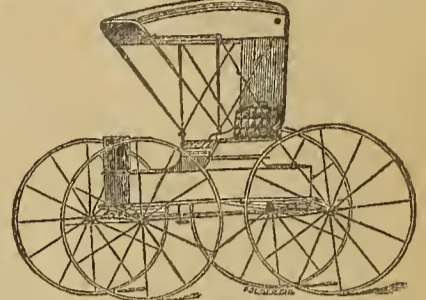
me with a deference which proves that she does not consider me a green little country girl. So much for manner.

I have been prying about to see if there is any other entrance to my boudoir, and have found one that leads into the hall. Without asking any questions, I shall use it, and leave the pretty little ante-chamber to itself. A mighty fear of that place has fallen upon me, and I dare not whisper, even to myself, why.

They say one's first dreams in a house in which one first sleeps, are ominous. I dread to go to sleep. Who knows what or whom I shall see? These things must not, shall not, overpower me. I will not be unhappy over idle fancies, and I will forget!

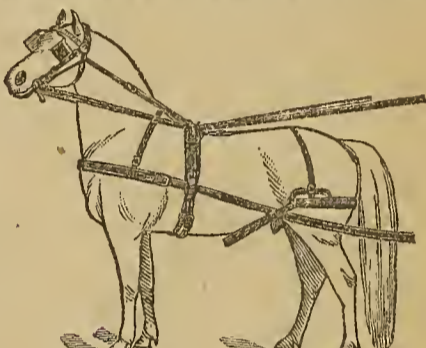
[To be continued.]

AN EXPLANATION. For the benefit of our subscribers who have read and heard so much about the Celebrated "Murray" \$5.95 Harnesses and \$55.95 Buggies, we show here cuts of both. These cuts are small and they cannot do justice to these elegant goods. But our subscribers can, by



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JOEL HORNER & SONS, Delair, Camden Co., N.J.

Our Household.

A CALENDAR.

Calendars! Not one was ever
Half so sweet as Marjorie
Fraught with quaint designs so clever,
To reveal the month to me.
He who runs may read the reason;
'Tis, perchance, the maiden's power,
Bits to serve of every season
In the compass of an hour.

I can tell 'tis January
When I meet her frosty glance,
Warning lovers to be wary,
Though her chubby smiles entrance.
And I know 'tis February
When, with manner milder grown
(For the moods of maidens vary),
Low she speaks in melting tone.
Then she sets a tempest brewing:
Signals 'neath the pretty arch
Of her brow the storms undoung,
While her foot stamps forward, March!
Next, a sudden gleam of sunshine,
Followed by a burst of tears;
Then I see a ray of sunshine
Through her April hopes and fears.

Soon it rippled forth in laughter;
But so quiet and demure
Grows she, that, a moment after,
'Tis the May time, I am sure.
Now I see her, sweet and tender,
Sunny as the breath of noon;
In her cheeks bloom tints that lend her
Roses to bespeak the June.

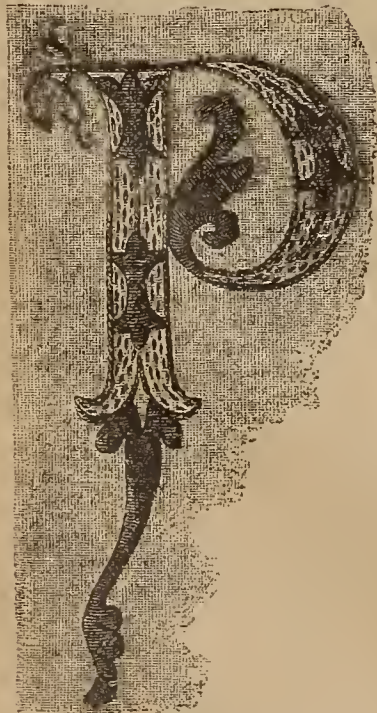
And I venture to caress her.
"Love, I love you so!" I sigh;
And she smiles as I address her;
"Love, I love you!" 'Tis July.
Calm, warm skies are bright above her,
Placid as the summer seas;
Quick my heart is to discover
Ne'er were August days like these.

But alas! By Fate's devising,
Soon September frosts bold sway;
And a sudden gust uprising,
On its wings she flies away.
Under skies all brown and sober,
Fain I would a hunting go
For the maid who makes October
Sport of me with "Yes" and "No."

But she enters; and the embers
Of my anger burn to gray;
Sad-eyed, misty, with November's
Plaintive weariness of way.
And forgiving her, I hold her
Of all maids again most dear,
While my heart, with joy grown bolder,
Claims December's gift of cheer.
—M. T. Rouse, in *New York Sun*.

LADIES' AND CHILDREN'S CLOTHES.

AFTER Christmas it is often necessary to do something with the children's clothes, to make them last till spring. The long school term before is very hard on everything, as there is often much rainy weather. Sometimes two dresses can be combined into one, making the skirt of one with the inside front of the waist like it, and having a very different material even, for the jacket. To do this, make the skirt and sew it on a lining waist without sleeves, trimming only the front, and then have the jacket to put on over it all. A boy's kilt costume may be managed much the same way.
Another very pretty style is the short-



INITIAL LETTER FOR MARKING BED AND TABLE LINEN—SATIN STITCH.

sleeved one, with revers in the neck. This can then be worn with guimpes, and they can be freshened when soiled. A little child always looks the sweetest in

something white about the face, and this the guimpe always supplies. Two dresses with pretty guimpes are all a little child needs.

For older girls, aprons are very nice to hide the ravages school makes upon clothes. Many little girls wear them made of black alpaca, using any popular style. The trimming can be doubled China silk. It comes already made up for neck ruching at twenty cents a yard, or tucked and trimmed with briar-stitching, as in our illustration.

A very neat way to lengthen a dress is to remove the facing, cut the skirt up in slits of four inches, and about that much apart. Line the pieces with soft silk; then attach a new facing to make it the required length, and trim it with silk ruffles to correspond, or bias folds. If the dress is of a bright color, the trimmings can be of black. This trimming can be repeated in the bretelles and jacket fronts.

LADIES' DRESSES.

The two illustrations we give for ladies are patterns easy of combination, and make very neat and simple home toilets. The first is very effective in black, trimmed with loops of scarlet velvet, cream-white vest, and revers of gold lace, or white Irish guipure. A well-worn dress can be brightened up this way to do good service for evening wear.

The second style can be made of two dresses, using one for the plaiting and the other for the main part of the dress, with bows of black velvet to set it off. The simple sweep of the skirt is much more stylish than any overtrimmed dress could be.

BED-LINEN INITIAL.

Many housekeepers would like to have the family initial on all the household linen, and it does make it look more careful and painstaking to make it so. The letter we give is easily worked in outline, satin and knot stitch. It can be either of silk or linen, as preferred. **CHRISTIE IRVING.**

HOME TOPICS.

MUTTON CURRY.—Few people like cold mutton, but when served in the following way, it is an appetizing dish for lunch or tea: Cut cold, roast or boiled mutton into dice; put the bones over the fire with a little water and let them simmer for an hour. Chop and fry one small onion in butter until it is a light brown; put in the meat and stir it about for a minute or two; add a teaspoonful of flour and a quarter of a teaspoonful of curry powder, and stir all well together; then add the broth made from the bones, about a teacupful of it, and half a teacupful of strained, stewed tomatoes. Let it simmer for about ten minutes; then pour it into the center of a border of nicely steamed rice and serve at once.

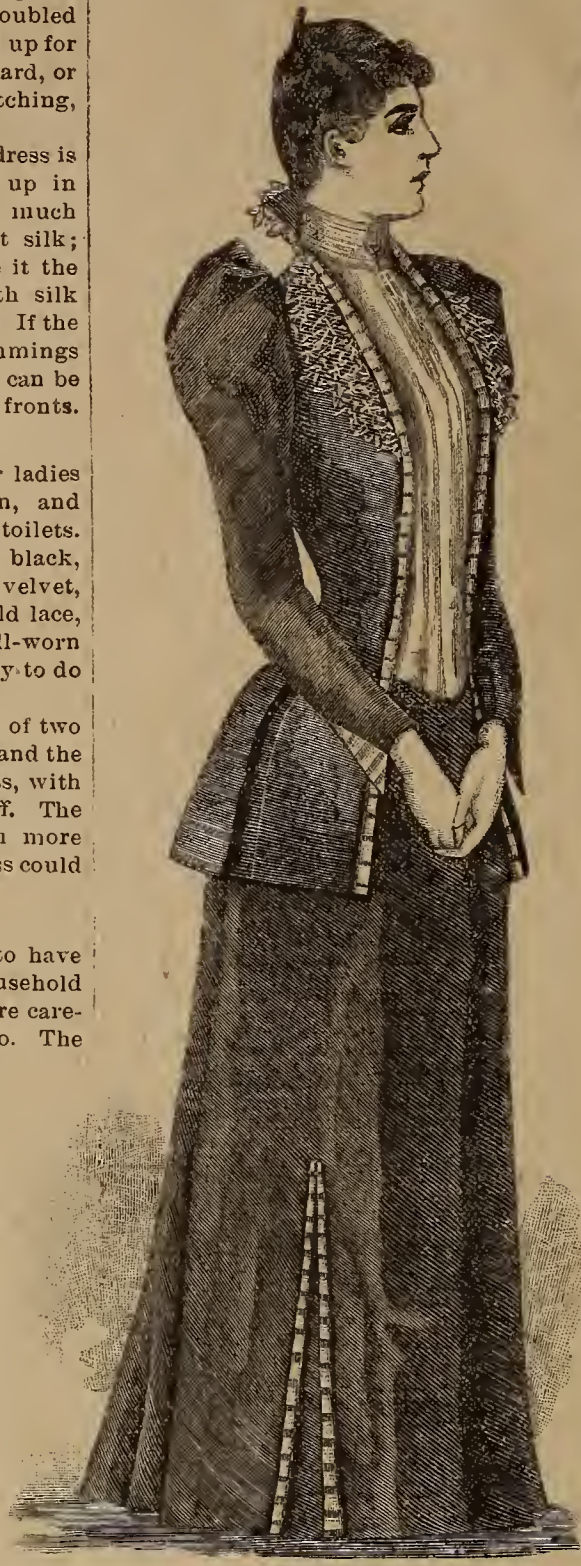
MUTTON CHOPS.—Prepare some nice, little ribchops by trimming off the outside fat and scraping the meat from about an inch or so of the end of the bone; wash them and wipe dry, grease the bars of the gridiron, and broil the chops over hot coals. When they are done, lay them on a hot dish, season with pepper and salt and a little butter. Lay a slice of lemon on each chop just before they are sent to the table.

GOSSIP.—It is a common opinion that gossip flourishes more in the country and in small villages than in cities; but that remains to be proven. At least, one who has listened to the small talk on the piazza at a summer resort, will be willing to admit that the residents of cities are able to gossip when away from home, whatever they may do at other times.

There is no doubt that, in the country at least, the friendly interest which one neighbor takes in the affairs of another often degenerates into gossip. Some one has said that an excellent way to stop gossip is to stop it. Let it entirely alone. Cast it out of the mind. Never make or listen to passing reports or comments on the personal affairs of others.

I remember well a dear, elderly friend, in whose home I used often to be, when a young girl, and her manner of treating gossip, when it chanced to be brought to her, I have never forgotten. A bright, witty woman herself, and a brilliant conversationalist, if any one attempted to bring into her presence the trivial dis-

cussion of other people's affairs, she became at once the dullest of the dull. She knew nothing about it and had nothing to say. The guilty person soon saw her mistake and never attempted the same again. One person may do much, in this way, to check gossip in a neighbor-



HOUSE DRESS.

hood. Such an example is of untold benefit to the young.

The art of conversation should be cultivated as an important part of one's education. Read good books, that the mind may have food for thought, and practice talking about what you read; keep posted on the current events of interest and importance; accustom yourself to think on the questions which are stirring the minds of men the world over, and draw your own conclusions.

The good talker is not merely an echo of others' opinions; neither is he always thrusting his own opinions on one; but a happy combination of the two, with good listening powers and a ready command of language, will do much to make one a good conversationalist.

Teachers can do much in forming good habits in this respect by interesting pupils in the topics of the times and encouraging their discussion. They will not have so much time then to talk about what "he" said or did, or what "she" told "him," or where "she" went with "him," and what "she" wore, etc., etc.

Some one says: "The best way to eradicate a vice is to implant a virtue." The best way to cure gossip is to fill the mind so full of something better that there is no room for it. **MAIDA McL.**

TWO KINDS OF FLOWER PAINTING.

The two kinds are naturalistic and conventional. With the first you are well acquainted, the bunch of flowers, the vase or basket filled with blossoms and the clusters lying on a table, are familiar pictures. When you hear the word "conventionalized," you are at a loss to know what is meant.

The blossoms painted in what is called "naturalistic treatment" are just as they

grow; on the contrary, the semi-conventional treatment shows careful arrangement.

If you wish to paint flowers in their clusters as nature has placed them, you cannot be too careful in their execution. Every vein and contour must be observed and imitated. Of all the thousand flower painters, only a few have the love and patience to represent them as they deserve. If, however, a person wishes merely a decorative panel, something to fill in a vacant place on the wall, only the general shape and color of the plant need be observed. So long as grace is the rule of the arrangement, some deviations of shading and form are allowed.

The frames on these decorative panels may be wooden, and if left in their natural color, but well smoothed and finished, will please. The corners are not mitered, but are joined with a vertical or horizontal line.

If America had a national flower, we would all be making conventionalized panels of it. The Egyptians had their lotus, the Greeks their honeysuckle and the Romans their Acanthus. Shall we not adopt the goldenrod? Its graceful fronds bend very much like the Acanthus. Its color, too, is precisely suited to decorative purposes.

With conventionalized painting, we may combine mottoes. These may be painted in flat colors on the frames or carved in flat or incised carving. To find a good, unhackneyed motto is the work of a busy brain. If you have been in the habit of keeping a note-book, and have jotted down your favorite passages in your reading, you will have a stock on hand. Take a few from my collection:

"Any person, who by hand or pen makes homes more tasteful and attractive, is a public benefactor."—*Sarah K. Bolton.*

"To see clearly is poetry, prophecy and religion, all in one."—*Ruskin.*

"The world is a mirror in which everyone sees the reflection of his own face."—*Thackeray.*

"Truth hath a quiet breast."—*Shakespeare.*

"The essence of knowledge is having it, to apply it, not having it to confess your ignorance."—*Confucius.*

"The day of one's death should be called the birthday into a better world."—*Seneca.*

One of the prettiest panels to paint in this conventional manner is a branch of apples. Let the panel be long and narrow, and hung in a horizontal position. Have the background a dull gold, and paint both apples and leaves in varying shades of green. Frame it in old oak wood, polished to show the grain, and put a border of brass-headed nails around the frame, either on the outside or near the picture, according as your taste dictates. This will look well hung over an upright piano or a high mantel, a bookcase, or even over a door.

Miss Louise Alcott's sister, Amy, the one of "little women" who was artistic, had great taste and skill with these decorative pictures and mottoes. To this day some of her pretty work remains in the old homestead. **KATE KAUFFMAN.**

HOW TO REMOVE STAINS FROM CLOTH.

Lime and alkalis may be removed from white goods by washing with strong soap and hot water; from colored woollens, silks or cottons by moistening with a well-diluted solution of citric acid.

Oil, varnish and resin spots will readily yield to an application of rectified oil of turpentine, or alcohol of very delicate colors; benzine or ether will be less likely to injure. Blood stains should be steeped in lukewarm water, then covered with wet starch and let stand several days. Acids, wine or fruit may be extracted by first being moistened with ammonia, then washed in chlorine water. Tar, wheel-grease, paint and melted resin, when difficult to wash out of white or colored clothes, may be softened by rubbing with soap and oil of turpentine, then washing in warm water. Scorched spots may be removed from cotton or linen by rubbing well with chlorine water.

ELIZA R. PARKER.

HOW ABOUT THE PRUDENCE of allowing a Cough to run on, rasping the Pulmonary and Bronchial organs, when that approved and speedy remedy, Dr. D. Jayne's Expectorant, can be obtained from any Apothecary.

TWO HYPOCRITES.

I.
She sat in her cozy chamber,
With the curtains all drawn tight,
Curled up in a great big rocker,
Fair and sweet in the soft lamp-light.
A bonbon-box on the table,
With choicest of sweets was filled,
Which she daintily nibbled while writing
The words that her lover thrilled
"Oh, I long for you now, my darling!
Without you my life seems drear,
There is never a bit of comfort
For me unless you are near."

II.

And her lover read the letter,
As he sat in his bachelor's den,
With his feet cocked up on the mantel
In the usual way of men,
With a box of cigars at his elbow,
And a pipe and a glass near by,
And the smoke-clouds wreathed above him
As he echoed her lonely cry:
"Oh, I long for you now, my darling!
Without you my life seems drear,
There is never a bit of comfort
For me unless you are near!"

NEW YEAR RESOLVES.

With the coming of the new year, thousands of new resolves are being made. Many a note-book has several pages of what I will do with this new, glad year that is opening before us. There is the firstly, secondly, thirdly, fourthly, etc. I should think you would need a note-book to keep track of them all. By and by the twentieth, perhaps, is decided to be of no good value after all, and might as well be broken; and that is the way it will be, step by step, back to the secondly and firstly in a few months, with nine cases out of ten.

My friends, do not make so many; a few, well kept, are better than a legion, broken. Do not think to gain the summit of the mountain at one leap, or by covering a dozen pages of note-paper with "tracks."

If one has bad habits, why is it necessary to wait for the first of January? Commence to-day, this very hour, to eradicate that which ought not to be. If it seems more binding to wait and make a new start with the new year, perhaps that will be best; but do not make too many, else they will be broken, one by one, and character and conscience pay the penalty in a weakened will power, and loss of respect for self and faith in keeping promises to others as well as themselves.

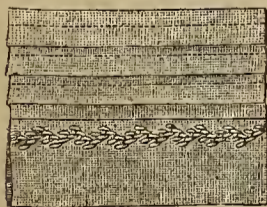
The damage to one's strength of character, by carelessness in keeping new year promises is incalculable. Be true to yourself and you will be to others. Do not lightly make promises to yourself that you are not sure you can keep.

The one resolve, to say no to every sin that tempts one from the paths of rectitude and honor, is all that is necessary to be kept that we may be useful and respected citizens. Let our foot-prints on the sands of time make a record on the great note-book that shall ever mark our course as onward and upward. Never a black line for broken promises to ourselves or others.

Each new year takes us nearer home. Each new year should make us more pure, wise and worthy to enter that blessed abode where all is love, peace and purity. GYPSY.

LITTLE SISTERS.

Did you ever realize, you great, big brothers, how nice your little sisters are? You think they are very noisy, very troublesome, with their "ever-



BRIAR-STITCHING FOR APRON.

lasting tagging after a fellow," to use the words of one of the big brothers. So they are, but still, if anything is wanted, how easy it is to say: "Sis, get me this or that," and see how quickly she will run to do your bidding, no difference how busy she may be at her playing; when he calls her for anything, her play stops and she is off at once to do his bidding. How they prize every kind word they get, for they are not very plenty. Not that you mean to be unkind, but you are merely thoughtless, and always in a rush to be off somewhere. A caress is talked about for months afterwards.

Oh, the adoring, worshipful love of a little sister! To her, her big brother is a perfect hero; and she freely gives him her choicest keepsakes, or cards, or anything

in her possession, if he will only accept of them. He may search far and near, but no such love will he find elsewhere; but one so blind to his faults, so charitable, so truly forgiving as she.

He is her hero, her idol, and, generally speaking, regards all this affection as most young men do these things, as only their natural dues, and that they are only getting what is justly their rights, without giving much in return. Oh, beware, lest the spirit of selfishness springs up in your breast, and you cause the little sisters many a heart-ache, when it lies in your power to make the little lives happy indeed, and which, like all our efforts at giving others pleasure, will bring its sure reward. A. M. M.

RECIPES FOR KEEPING AND PREPARING CRANBERRIES FOR TABLE USE.

In cooking cranberries, use very little water.

KEEPING CRANBERRIES.—Select round, high-colored berries, and store them in crates or shallow bins, or spread them



RECEPTION TOILETTE WITH ADDED BASQUES.

upon attic floors, not more than ten inches in depth, in situations where the direct rays of the sun cannot affect them. A dry, well-ventilated room or closet should be used; damp cellars are objectionable. The well-ripened fruit may also be kept in jars or tight barrels filled with water, the water to be changed at least once a month. For long sea voyages, this last method is the one to be preferred.

CRANBERRY SAUCE.—Remove all defective berries, and wash the rest through several waters. To every pound of fruit add a pound of sugar. Put them into a preserving-kettle over a fire. Stew slowly. To prevent the berries from sticking to the kettle, stir them frequently with a silver spoon. When done, turn them into a deep dish and set them aside to cool, after which they may be used for pies, tarts or sauce. When for sauce, mash them fine through a colander and put them into small molds suitable for the table, having first rinsed the molds in cold water, to prevent the berries from sticking.

CRANBERRY JELLY.—To a quart of water add four quarts of fruit, and when the berries become very soft by stewing, strain the juice through a bag and put a pound of fine white sugar to every pint of the liquid. Pour the juice into a porcelain-lined kettle, and boil and skim it until the jelly is produced. Test this by occasionally dropping a spoonful of the hot liquid into cold water. When it sinks to the bottom without mixing with the water, it must be taken from the fire and poured, while warm, into glasses. Twenty-four hours later paste brandied paper tightly over the glasses.

PRESERVED CRANBERRIES.—Select firm,

cherry-colored berries; very dark ones have a dingy look after boiling. Dissolve the sugar in a little water in a porcelain-lined kettle—one pound of sugar for every quart of fruit. Drop in the berries while the liquid is cold, and heat up gradually. Do not cover the bottom of the kettle with cranberries deeper than two inches. Boil gently about fifteen minutes; if boiled too long the fruit will go to pieces. Seal up in jars.

SWEET-PICKLED CRANBERRIES.—Prepare the large berries by punching a few holes in each with a large needle; this will allow the pickle to enter the fruit. Use one pound of sugar and one half pint of vinegar to two quarts of cranberries. Dissolve the sugar in the vinegar; then put the berries into the pickle, cooking the fruit from ten to twelve minutes. If the berries are boiled too long they will not remain firm. Remove the berries from the liquid, and continue boiling the pickle until it thickens; then pour it over the cranberries in the jar, adding spices to your taste.

HOW TO KEEP THE BUGS FROM BEANS.

Of late years bugs are apt to get into the beans after they are ripened and shelled. I have found by experiment that if the beans are spread thinly on a dripper or in pansoon after being shelled, and put in a well-heated oven for about ten minutes, they can be put in paper sacks and be secure from the mischievous weevil. The beans must be stirred very often while exposed to the heat. Sometimes it is necessary to heat them the second time, in the course of a month or so. One can tell by looking at them occasionally.

There should be no moisture about the beans when put in the oven. Have them dry and stir often and they will not be injured for planting if the right heat is observed, and it will effectually do away with the bugs which have become such a nuisance. GYPSY.

DEVILED CRABS.

Take a quantity of cooked crabs and a dozen mushrooms, chop up fine together, season with salt and pepper, half of an onion, fried, a little mustard and chopped parsley. Cook about fifteen minutes, then add three well-beaten eggs when cool; then have ready your crab shells, well cleaned and oiled, fill the shells with the above mixture and sprinkle with bread crumbs; then smooth on top and pour over them a little clarified butter, place them on a baking-pan and bake brown. Serve decorated with parsley. C. I.

CHESTNUT STUFFING.

Boil the chestnuts for fifteen minutes in salted water; then with a sharp knife remove the shells, mash part of them and leave the rest whole. Mix with half a quantity of bread crumbs, add a little sweet marjoram, a tablespoonful of tomato catsup, a quarter of a teaspoonful of white pepper, a stalk of celery, chopped very fine, and one slice of onion. Then use to stuff your turkey. C. I.

CHINESE COOKERY.

The Chinese are a nation of cooks. There is scarcely an individual in their vast community who is not more or less competent to cook himself a respectable dinner.

Chinese tradition points to a date some thousands of years before the Christian era, at which an inspired ruler of old first taught mankind the application of fire to food. But, without wishing to be irreverent, we think it desirable to confine our investigations to periods of greater historical certainty.

The peasant sits down to dinner cooked by the hand of his wife or daughter-in-law. In large establishments the cooks are invariably men. Half a dozen coolies will squat around a bucket of steaming rice and from four to six small, savory dishes of stewed cabbage, onions, scraps of fat pork, cheap fish, etc. They fill their bowls a discretion from the bucket. They help themselves discreetly with their chopsticks from the various relishes provided.

On ordinary occasions even a wealthy Chinaman will sit down to such simple fare, served indeed on a table instead of on the ground, but in almost equally simple style. It is only when a banquet is substituted for the usual meal that eat-

ing is treated seriously as a fine art, in a manner worthy its importance to the human race. Then the guests will assemble between 2 and 4 P. M., and will remain steadily at the table until any hour from 10 P. M. to midnight. Pipes are lighted between the courses, and a whiff or two of light tobacco smoke is inhaled into the lungs, while within easy reach of the table, if the festivity is at all on a grand scale, the deafening noise of a theatrical performance continues almost without intermission.

TREATMENT OF COLDS.

A few practical hints in relation to "colds" are offered by the *Healthy Home*. The sufferer should rest in the first place. He should remain at home two or three days, and a little longer if possible. Give the muscular and nervous system complete rest. The simple home remedies, such as hot lemonade, hot teas and other drinks, will be sufficient in most cases. All persons should protect their bodies carefully. Do not be brave in any form of carelessness. A "cold" may come from a wet foot, an exposed chest, a bared head or a sudden cooling of any portion of the body's surface. Keep out of a sudden draught. Do not follow the anti-overcoat philosophers. Sleep in a well-ventilated room. Do not bundle your neck. A sponge bath keeps the pores open, and, within limits, is always a good thing. Eat wholesome food, keep good hours, remembering always that one of the best things to break up a cold is plenty of sleep. Eat moderately. Do not eat at all for a few meals unless appetite comes. The old recommendation to "stuff a cold" is folly. See that the bowels, the skin and the kidneys properly perform their functions. The worst cold which ever afflicted the writer, one which hung on most of a winter and caused the gravest alarm, was cured by sawing wood. The exercise could only be continued for half an hour at first, but it produced perspiration, improved the digestion, and resulted in throwing off the cold in less than two weeks. But we give this rather as a suggestion, with the reason for it, than as a prescription.

TO WASH BLACK LACE.

Laces are so much worn at present that a reliable method of washing black lace is likely to be of service. Directions for washing white lace are so often given that one is not likely to fail in that. Put your lace to soak in water enough to cover it, to which you have added two teaspoonfuls of borax to every half pint of water and the same quantity of spirits of wine. Rinse the lace through this several times, and rinse again in clear water. Soft water is preferable. Meantime boil a black kid glove—a glace kid, and not a suede—in a pint of water until it is reduced one half. Rinse the lace through this, and squeeze it as dry as possible. This will give it just the slight stiffness desirable. Take a hard board, with a cloth tacked smoothly over it; spread the lace on this, stretching the pattern out nicely, spread a second cloth over, then another board, and weights. Leave it in this press for two days. If carefully renovated by this process, even rusty black lace looks fresh and new.

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Our Household.

VINEGAR.

WHAT is there more important among the household necessities than the jug of vinegar? Without it, our pickles, salads, catsups and chow-chows would be tasteless compounds; and did you know it would rob tough meat and chickens of all their errors? "Shoulder steak" can be rendered equal in tenderness to the choice cuts by its timely aid.

In boiling meat, add one tablespoonful of strong vinegar—or two, if only of medium strength—to half a kettleful of water, and put in the meat. The taste of the vinegar will all boil away, and no one will be the wiser for its being used, only they may be surprised at the tenderness of the meat. Very large pieces of meat should be cut into and more vinegar used. One tablespoonful is usually enough for four or five pounds of meat, unless it is very tough. The steak I spread on a board ready for pounding and scatter drops of vinegar over the surface, using about one teaspoonful to two pounds of steak. Now, pound it thoroughly, as usual, and fry in a hot spider. Broiling is always the best way to cook steak, but when one has quite a large family, and only one pair of hands to prepare the food, the frying-pan must necessarily take the place of the broiler, for one can then prepare other dishes while the meat is cooking. The taste of the vinegar will not be detected in the steak, any more than in the boiled meat, if it is thoroughly cooked. There has been so few apples for the last three years I fear many of our farmer friends will be found with empty vinegar-barrels. Did you ever use clover blossoms? They make very nice tasting vinegar, even better than pure cider.

Put one large bowl of molasses in a crock and pour over it nine bowlfuls of boiling rain-water. Let stand until milk-warm, then put in two quarts of clover blossoms and two cupfuls of baker's yeast. Let this stand two weeks and then strain the liquor from the clover blossoms. This recipe may be doubled or tripled at pleasure.

If you have any canned fruit sour, strain the juice into the vinegar-jug. The rinsings from molasses-jugs or sugar-tubs, or molasses that has soured beyond the point of scalding over, may all be strained and added to the supply of vinegar. If more sour cider could be added to the vinegar-jug every time some of the vinegar was taken out, it would keep it more lively, sparkling and pleasant tasting; not becoming so dead and dark colored as it gets by long standing. I hope some one will try the clover blossom vinegar; you can sometimes find blossoms as late as in November, when there has not been too heavy frosts.

CURING PORK.

Those who, living in the country, desire to cure their own meat, will find the following plan, given in the columns of the *Country Gentleman*, to their taste: The barrel in which the pork is to be pickled must be perfectly clean. If a barrel is used for this purpose a second time, it must be cleansed perfectly, for if a suspicion of taint remains the meat will spoil. A barrel which has held any kind of liquor will not keep pork, but a molasses-barrel does nicely.

Cover the bottom of the barrel with salt. Put in a layer of pork, turning the rinds toward the sides of the barrel, and packing the pieces as closely as possible. Fill all spaces and cover the meat with salt. Continue to pack in this way until the cask is nearly full, using an extra allowance of salt for the top. Fit a clean board to the top of the meat, and keep it in place with two or three clean stones. Now fill the barrel with saturated brine, and be assured that your side pork is well packed. It is wise to watch the brine, however, if the weather is warm, and if it looks in the least red or moldy, pour it off, scald and skim it, and when cold, drain it into the barrel. If there is not enough brine to cover the meat, put as much salt into a pail of water as it will dissolve and drain it into the barrel.

HAMS AND BACON.—Pack the meat in a sweet, clean cask, and cover with brine

made as follows: Take half as much water as will cover the meat and put in all the salt it will dissolve; add the other half of the water required, with two quarts of molasses and a quarter of a pound of saltpeter for each hundred pounds of meat. In six weeks the meat will be ready for smoking. It should be hung in the smoke-house for a day or two before the smoking begins, to dry off. In warm weather a dark smoke-house is necessary, to guard against flies. As soon as the meat is sufficiently smoked, which is largely a matter of taste, each piece should be enveloped in a strong paper bag, fastened securely, so no insect can get through where it is tied, and hung in a dry place.

HOW TO MAKE A SO-CALLED DIVIDED SKIRT.

Make your skirt of light, crisp silk, some pretty color—scarlet, if you like, or bright blue. Let it come half way between knee and ankle. Do you know how to make the skirt? Just a pair of scant bloomers, either ballooning or holding by elastic about the leg. On each leg sew a ruffle half way above the knee, a full ruffle, or better still, a knife plaiting that falls to where the bloomers end. If you want to be very particular, you can put another ruffle under this just about the knee of each leg and falling to the edge of the bloomers. Then sew a skirt this same length and of the same material, to the band of the bloomers. No matter what happens, no flash of white can suggest exposure. The white articles of wear are safe under the bloomers. No matter how high a reach the step up is, the ruffles on the lifted leg fall in a mass about the leg and down to the other leg, looking as if one's skirt clung kindly. The whole thing goes on at once, and does not soil any sooner than would the usual dark petticoat. You can lift your dress with impunity, and not be afraid of lifting the skirt at the same time.—*Cincinnati Enquirer*.

ANSWERS TO FLORAL QUERIES.

BY GEO. W. PARK.

ABOUT GERANIUMS.—"In September I potted some geraniums for winter blooming. They grew well for a time, then the leaves turned yellow and dropped off and new leaves took their place. In a few weeks these leaves also dropped. The foliage looks weakly and pale. The plants were potted in leaf-mold and garden soil mixed with sand."

Jasper county, Ill. MATTIE LONG.

ANSWER:—If the plants were not allowed to become frosted or chilled before or after potting, they ought to thrive in the soil used. See that the drainage is good, water only when the soil becomes dry, and then apply thoroughly, using tepid water; avoid extremes of temperature and give all the sun possible.

HARDY CLIMBING ROSE.—"What climbing rose is best and hardiest to cultivate?"

Ohio. M. LEON.

ANSWER:—Baltimore Belle and Prairie Queen are both good, hardy climbing roses. They only bloom once a year, however. Chestnut Hybrid is a climbing rose of the hybrid-perpetual class, but produces its flowers twice in the season—once in summer and again in autumn. One of the best climbing roses now in cultivation is the climbing Hermosa. It is the exact counterpart of the old Hermosa rose, except that it is of climbing habit. All these roses are of shades of red. If a white, ever-blooming, climbing rose is wanted, the Mary Washington, a noisette rose, may be planted. The tops of all these roses, except the first two, are safely wintered by bending to the ground in December and covering with evergreen boughs.

CHRYSANTHEMUMS AND VIOLETS AT THE SOUTH.—"I have tried for two seasons to cultivate chrysanthemums (of the finer varieties) and the Swanley white violet from plants that came from northern nurseries, but without success. After the hot weather would set in they would die off. Could you explain the cause?"

New Orleans, La. P. PETER.

ANSWER.—In the summer chrysanthemums should be plunged in a bed of tan-bark in a partial shade, and kept well watered, occasionally using a liquid fertilizer to stimulate growth. They will not endure drouth. Violets like as cool a place as can be given them, and shade and moisture. If these were purchased in the autumn and bedded out, they might do better for those who live in the southern states.

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Our Sunday Afternoon.

EXPECTANT.

Sit by my window and listen, While the mists of the morning go by, To catch the first sound of His coming, To meet the bright glance of his eye. And day after day, as the noontide Is marked on the sill of the door, While the tired men rest in the shadows, And the little ones play on the floor, I list for the sound of his chariot, I wait for the light of his smile, For the coming in glory of Him Who tarrieth "the little while." I sit on the doorstep at evening, A maiden is singing below, I hear the sweet laughter of children, And the rivulet's musical flow. The night birds are trilling the chorus Of all the glad songs of the day, And mingled with these are the voices Of villagers far away. But still, in the beautiful gloaming My eyes are gazing afar, To catch the first glimpse of the rising Of Bethlehem's magical star. So I sit by my window and listen While the mists of the morning go by, To catch the first sound of His coming, To meet the bright glance of his eye. And still in the beautiful gloaming My eyes are gazing afar, To note the first glimpse of the rising Of Bethlehem's magical star.

HER PERSONAL CHOICE.

Now that I have emerged from the kitchen and taken my rightful place in the family," was a sentence in a friend's letter that fastened the attention. No description of the writer of that sentence is necessary. The sentence proves that she was first of all a well-trained, intelligent woman, capable of meeting an emergency, and yet using every care to avoid emergencies. The sentence seems worthy of being called a gospel to housekeepers.

So many women fail utterly to understand what their rightful place in the home is! Many women—even intelligent women—seem to think their rightful place in the home is that of a sort of upper servant, who has a certain authority delegated to her because of her abilities in certain directions. Every hour of their day is filled with some work or care that has to do only with the material things in the home. Yet these same women will quote with fervor, "Is not the life more than meat, and the body than raiment?" Has not the home a life to be nourished? Has not the house a body more important than the raiment? And is it not possible to make the meat and raiment of so much consequence that the life and body of the home suffer for lack of spiritual sustenance?

How many mothers are unconscious martyrs! They sink their own personality so out of sight that the family—those who love them most—forget it. If any one remains at home it is the mother. If any one goes without proper clothes it is the mother. And these women, when too late, find that what they gave willingly is taken without leave and as a matter of course. They have preached a gospel of selfishness. Every mother should be the most important person in the home, and it is the mother who is able to command this without demanding it that retains until death the respectful and reverent love of her husband and children. Emergencies may make it necessary for her to descend to the kitchen, and if she is what she should be, she will know how to meet the emergencies there as tactfully and graciously as she does those of the parlor. The nursery or sewing-room may demand all her attention in emergencies, and a well-equipped mother will know how to meet them. But if the family life is what it should be, the mother's rightful place will be in the center of the family life; she will not be merely the head of departments. —Christian Union.

THE RIGHT TO PRIVACY.

Two decisions have recently been rendered by important tribunals which rebuke the tendency to interfere with the right of the citizen to be let alone. The supreme court of Mississippi has decided, in the case of a black man whose cabin was entered by a party of men who came to "arrest" him, without warrant of law, for an alleged offense, and who shot and killed two of these invaders of his house,

that a man has a right to defend himself under such circumstances.

The court, in setting this man free, declared its belief that the home should have every possible safeguard thrown around it.

The other decision mentioned is in a case of a very unusual character. A certain society proposed to erect a statue of a deceased and very philanthropic lady. The members of this lady's immediate family objected, on the ground that notoriety in any form was wholly distasteful to her, and that, inasmuch as she was a private citizen, the erection of a statue of her was an unauthorized invasion of privacy.

The supreme court of New York took this view of the case, and declared that the wish of her family, representing her own known desire, should be observed, and that no public representation of her should be permitted.

It is scarcely possible to take up a newspaper without finding in it invasions of the sacred right to privacy, offenses which these decisions could not reach.

Not only the private affairs of persons holding public relations are pried into and falsely published forth, but those of persons who have no public functions whatever.

This tendency is a most deplorable one, and unless it is checked it will bring about a deterioration of public sentiment, and cause deserving persons to shun public relations of every sort.

REGULARITY OF HABIT.

One of the most difficult of all minor habits to acquire, says an able writer, is that of regularity. It ranks with that of order. The natural inclination of most persons is to defer until the last possible moment, or put it off to another time, where, this can possibly be done. Yet habits of regularity contribute largely to the ease and comfort of life. A person can multiply his efficiency by it. We know persons who have a multitude of duties, and who perform a vast deal of work daily, who set apart certain hours for given duties, and are there at the moment and attend rightly to what is in hand. This done, and other engagements are met, each in order, and a vast deal accomplished, not by strained exertion, but by regularity.

The mind can be so trained to this that at certain hours of the day it will turn to a particular line of duty, and at other hours to other and different labors. The very diversity is restful when attended to in regular order. But let these run together, and the duties mix, and what before was easy is now annoying and oppressive, and the exact difference between many is at this point. There are those who confuse and rush, and attempt to do several things at once, and accomplish little, while another will quietly proceed from one duty to another, and easily accomplish a vast amount of work. The difference is not in the capacity of the two, but in the regular methods of the one as compared with the irregular and confused habits of the other. —Scientific American.

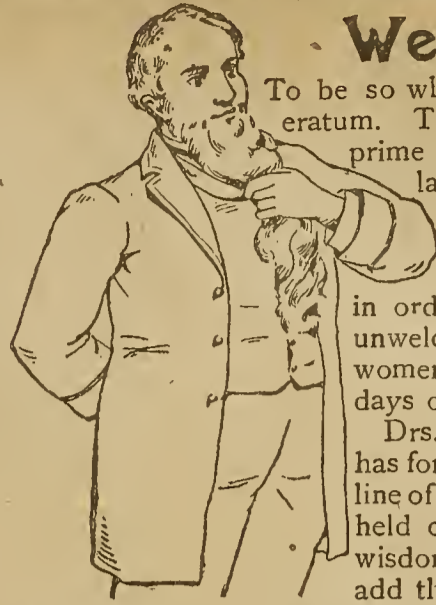
VALUE OF LEISURE MOMENTS.

Wide Awake gives the following story, which is all the better for being true: Two men stood at the same table in a large factory in Philadelphia, at the same trade. Having an hour for their nooning every day, each undertook to use it in accomplishing a definite purpose; each persevered for about the same number of months, and each won success at last.

One of these two mechanics used his daily leisure hour in working out the invention of a machine for sawing a block of wood into almost any desired shape. When his invention was complete he sold the patent for a fortune, changed his workman's apron for a broadcloth suit, and moved out of a tenement house into a brown-stone mansion.

The other man—what did he do? Well, he spent an hour each day during the most of a year in the very difficult undertaking of teaching a little dog to stand on its hind feet and dance a jig. At last accounts he was working ten hours a day at the same trade and at his old wages, and finding fault with the fate that made his fellow-workman rich while leaving him poor.

Leisure moments may bring golden grain to the mind as well as the purse, if one harvests wheat instead of chaff.



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drug will do this. The fountain of youth, if found at all, is everywhere about us. The air we breathe—kind nature's kindly breath—when enriched with more oxygen, and magnetized, ministers marvelously to the peculiar needs of waning physical powers—arrests the progress of decay—gives strength and comfort to the period of old age.

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Queries.

READ THIS NOTICE.

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

Fertilizer Queries.—D. W. P., Plimpton, Ohio, asks: "Is it safe to mix ashes and night soil, or should each be applied separately? Can too much night soil be used for melons? Do dry forest leaves contain as much potash as straw, weight for weight?"

REPLY BY JOSEPH:—If coal ashes, they might be safely mixed with any kind of manurial substances, night soil and hen manure included. If wood ashes, I would prefer to apply them separately. If the night soil is as well composted as it should be, and made inodorous by early additions of dry muck or soil, or sifted coal ashes, you will not, very likely, put on enough to hurt melons. Use it just as freely as you please, incorporating it very thoroughly with the soil, and the melons will do all right. As to potash in dry forest leaves and dry straw, weight for weight, there is probably but a slight difference.

Drainage.—M. F. C., Martinsville, N. J., writes: "I have a piece of land lying next to my neighbor's that slopes right down to the line. My land is just a little too wet. My neighbor never ditches any, and I have no outlet. How would it do to dig a large cesspool, say eight feet deep, and stone up like an old-fashioned well, but drawing in the walls so it will be small at the top, and cover over with flat stone and ditch to it? There are no regular defined springs on my land, only little oozes in a wet time. The soil is clay and gravelly loam."

REPLY:—If your land is underlaid with gravel, you may drain it easily by the vertical system of drainage. In the wet spots bore holes down to the gravel with a post hole auger, the handle of which has been lengthened. Set tile on end up to within fourteen inches of the surface and cover with a flat stone. Or if you have a gravelly bank near the wet spots, you can lay a horizontal tile drain into it.

Tomatoes in House Ailing.—Mrs. W. B. H., Fishkill Village, N. Y., writes: "In October we discovered a number of small, stocky tomato-plants (Dwarf Champion) in the garden that had sprung up from self-sown seed. We took them up, planted in boxes and set in the house in an even temperature of about 70 degrees, Fahrenheit. They started up splendidly, but soon the lower leaves began to dry, curl around the edges, and we had to pick them off. What can be the matter with the plants?"

REPLY BY JOSEPH:—Perhaps the boxes or pots containing your plants have no drainage, and the soil being overwatered, has become sour. Perhaps you water quite frequently, yet not enough at any one time to reach the roots of your plants. Examine the earth about the roots, and see whether it is sour mud or dust, and then apply the proper remedy. It may be advisable, anyway, to take up the plants entirely and repot them. You will most likely find the cause of the trouble while doing this.

Leached Wood Ashes.—T. F. K., Shiloh (no state given), writes: "There is an old ash bed about two miles from here. Probably 20,000 bushels of leached ashes have accumulated since 1844, and are lying in one big heap. Will it pay me to haul them and apply to my land as a fertilizer? How many bushels should I apply per acre, and at what time of the year? I can draw forty bushels to the load, and make about four trips a day."

REPLY BY JOSEPH:—Man alive! You would not let such a wealth of plant food lie unused right in your own immediate vicinity! The ashes probably contain more than one per cent each of phosphoric acid and potash, and consequently are worth at the rate usually paid for plant foods, \$3 or more per ton. You can easily draw four tons or more (\$12 or \$15 worth) a day. By all means put your teams at it whenever they can be spared from other work, and draw early and late, spring, summer, autumn and winter, and put the stuff all over your land; the more the better. What a splendid chance you have.

Wintering Vegetables—Lice on Cabbage.—E. N. K., Phoenix, Arizona, writes: "How can I keep sweet potatoes, squashes and onions over winter?—What is the best remedy for green lice on cabbage? Has manure any value after it has for some time been exposed to the sun and air, but not to rain? Is black, rich manure too strong for plants?"

REPLY BY JOSEPH:—Sweet potatoes and squashes should be kept in a dry and rather evenly warm place. Try storing in dry sand. Onions must be kept dry, cool, well ventilated, or else frozen. For green lice on cabbage, try sprinkling or spraying with kerosene emulsion or strong tobacco tea. A stream of cold water, or of a strong solution of potash salts upon the infested plants will also clear them. So will the application of hot soap-suds (say 150 degrees, Fahrenheit). A manure heap exposed to sun and air only, not to rain or snow, will not lose much in value, unless allowed to dry out by fermenting, and thus become "fire fanged." On the whole, you need not be afraid of hurting average garden crops by too much manure, so long as this is well mixed with the soil.

Painting Whitewashed Walls.—H. P., Laconia, Ind. Where it is desired to paint a plastered wall, the first thing to do is to prepare the wall for the paint. If it has been whitewashed, and the coating is loose or inclined to scale, scrape it thoroughly with a flat, steel instrument like a saw-blade, a plane-bit or case-knife, being careful not to cut or furrow the plastering. Go over with sand-paper and brush off thoroughly. If the wall is cracked, fill with plaster of Paris wet with water and vinegar. The acid will prevent the plaster setting too quickly. Smooth down nicely, and the spot will not show, providing the wall is solid each side of the crack and the work is properly done. Do not use putty to fill cracks in plastered walls. For first coat, use about two pounds of white lead to each quart of oil; for second coat, five pounds pure lead to each quart of oil, well ground. Use such pigments as required to produce the tint desired; begin with the tint in first coat. A gill of drier should be added to each gallon of paint if raw oil is used. The paint may be enlivened by the use of dammar varnish in the last coat. Gloss for a wall, to my taste, is not as nice as a flat color.

Growing Early Cabbages and Cauliflowers.—H. J. B., Crotton, N. Y., writes: "What is the best fertilizer for early cabbages, to use in connection with stable manure? My

earliest cabbages and cauliflowers are frequently nearly all destroyed by the little white grub, or maggot, which eats off the roots. What can we do for it?"

REPLY BY JOSEPH:—Try nitrate of soda, sown broadcast just before the time of setting the plants, at the rate of 250 pounds per acre. Any of the high-grade vegetable or potato manures are also likely to give you good results, and you can use them quite liberally—from 800 pounds per acre upwards. For the maggot, try rows of radishes here and there in the cabbage patch, sowing at intervals of a week or so, in order to give the cabbage-fly (parent of the maggot) just such food as she knows her offspring will like best. This, in a measure, has seemed to me to prevent the cabbages, etc., from being attacked. For a further precaution and remedy you may make some strong lime-water (using freshly-burnt lime) or a saturated solution of muriate of potash or kainit, and pour enough of the liquid around the stem that after soaking in it will be pretty sure to reach the maggot working at the root.

Cucumbers and Onions for Pickles.—"Farmer's Wife," Cedar Rapids, Iowa, writes: "Should cucumbers, for pickles, be planted on new or old ground? Which is the best variety? How are the pickles salted at the factories? What soil and variety is best for growing pickling onions?"

REPLY BY JOSEPH:—If you have a rich, new piece of ground, an old pasture, meadow or cattle-yard, or rich woodland cleared from stumps, timbers, etc., you need not look much further for a good patch on which to plant cucumbers. The character of the soil, whether sandy or clay loam, is of less importance than richness and a continuous state of moisture. Prepare the land well—so it will be mellow and clean. Long Green and White Spine, also Boston Pickling and other sub-varieties of the old standards are as good as any. Pick the patch over very frequently, so the pickles will not get too large, those ranging between three and six inches in length being most sought after. The smaller ones bring as much money as the larger sizes. The salting process at the factories is extremely simple. The pickles are merely placed in brine and kept covered with it. For pickling onions, use the Extra Early Bartlett (first early and very small) and New Queen for main crop. Select clean, sandy soil, clear sand often being best, and sow in rows ten or twelve inches apart, using thirty or more pounds per acre. Ordinarily, the bulbs of Silverskin, which have grown too large for sets, are used for pickling purposes.

Celery and Onion Queries.—R. R., Bangor, N. Y., asks: "What kind of celery do you like best for early, White Plume or Golden Self-blanching? Which will keep best? Will hen manure do in place of nitrate of soda for raising celery plants? If so, how much should I use? Is there any objection to mixing hen manure, phosphate and ashes, if to be used the same day? Is it advisable to use hen manure in the drill for raising onions? Would it be safer to mix plaster with the hen manure?"

REPLY BY JOSEPH:—White Plume is my favorite for early, as it is certainly the most reliable and most satisfactory of that class. It is not such a bad keeper, either; at least, I have used it until far into the winter. Hen manure will do first-rate where nitrate of soda cannot be had, and it is excellent in any case, and for any garden crop. If well pulverized and thoroughly mixed with the soil, you cannot easily apply too much. I often put the whole proceeds from 100 fowls upon one eighth of an acre of land, and get excellent results. There is no objection to mixing ashes, phosphates and hen manure, if the mixture is to be applied without much delay. Why put such fertilizer in the drill for onions, however? I always apply these materials broadcast and work them well into the surface soil by means of harrow and rake. This is much the easiest and best mode of application. The onion plants will know how to find and appropriate this plant food. The free use of plaster or other absorbents in the poultry-houses is always a good thing, but I can see no necessity for mixing plaster with the manure just before application. Moist soil itself is as good an absorbent and fixer of ammonia as we need.

VETERINARY.

Conducted by Dr. H. J. Detmers, Professor of Veterinary Surgery in Ohio State University.

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

Ringbone.—H. R., Grove City, Pa. Your mare has ringbone. For treatment, I have to refer you to FARM AND FIRESIDE of November 15th, 1891.

Garget.—C. E. D., Lafayette, Ind., asks: "Can you prescribe a remedy for garget?" ANSWER:—Yes. Frequent and thorough milking constitutes the best remedy.

Wants a Remedy for Kidney Worm.—W. H., Queen City, Tex. If you will tell me what you mean by kidney worm, whether you mean rhabditis, paralysis, or something else; or if you will give a good description of the symptoms, I may be able to advise you what to do and what not to do.

About Millet.—J. B. B., Hollins, Va., writes: "The statement has been made by western farmers that German millet is injurious to horses. Will you kindly state if there are any facts in support of this statement?"

ANSWER:—Millet, especially if nearly or fully ripe, contains a comparatively large amount of cellulose, indigestible to horses; hence, it is apt to cause indigestion, or digestive disorders in general, especially if fed in large quantities.

Poll-evil.—W. H. R., Newton, Illinois. The treatment of a poll-evil will require a surgical operation. If your veterinarian is incompetent or don't know how to treat a case like yours, employ one who is competent. It seems, though, that your veterinarian is not to blame, and that it is you who has lost his patience. The treatment of a poll-evil is usually a tedious one, and often requires months until a cure is effected. It is of no use to give any further directions or a description of the treatment necessary, because the latter, if left to anybody but a competent veterinarian, is nearly always ineffective, due to mistakes, negligence, etc.

Unsatisfactory Reply.—C. C. H., Latham, Kan., complains that he received an unsatisfactory reply to an inquiry. If C. C. H. or anybody else desires satisfactory replies to his inquiries, he must be exact in his statements, and give a complete and intelligent description of the symptoms, because in answering

inquiries I have nothing upon which I can base my diagnosis but the statements in the inquiries. I am neither a prophet nor a clairvoyant, and don't know hidden things. Some people expect too much, and seem to think the members of the editorial staff of a paper are endowed with supernatural powers. Such is not the case.

Swine-plague.—D. G. H., Bnda, Tex. Your hogs, it seems, die of swine-plague, or so-called hog-cholera. The best you can do is to separate all the hogs yet healthy from the sick ones, and take them (the former) to another, uninfected, place, and have them there fed and taken care of by somebody who does not come in contact with the diseased ones. I cannot give you any remedy for those already diseased. It may somewhat benefit those not yet very sick if they also are removed to an uninfected place, but, of course, not to the same where the healthy ones are taken.

An Enlarged Joint.—J. E. R., Fredric, Iowa, writes: "I have a two-year-old gelding that got his ankle-joint strained about a month ago, and was very lame for two or three weeks. Then the lameness gradually passed away, but there is an enlargement on each side and immediately above the joint. Can it be reduced? If so, please give treatment."

ANSWER:—The best way to effect a reduction is by judicious bandaging, with woolen flannel bandages. Commence bandaging at the hoof, and renew bandage twice a day. This treatment, in order to be effective, must be continued several weeks and the bandage, every time, must be put on smooth and nice.

Coughing Sheep—A Barren Mare.—J. G., Hardin, Ill., writes: "I wish to know about my sheep. I lost one. She had a cough for some time and she wouldn't eat anything, and at last she died. I want to know about my mare. We never could get her with foal."

ANSWER:—Your sheep probably are wormy; suffer from lung-worms—*Strangylus filaria*. There is no remedy. To prevent an infection next year, you will have to confine your sheep to high and dry ground, and keep them away from all wet places, pools and ditches of stagnant water, etc., for there it is where they pick up the worm brood.—Concerning your barren mare, you say you don't know the cause. Neither do I, because since you give no particulars whatever, I have nothing upon which I can base an opinion.

Defective Cream.—G. H. D., South Orlington, Mo., writes: "Will you tell me what is the matter with my cow? Her cream cannot be churned into butter. I have been feeding her on cotton-seed meal and bran, one third cotton-seed meal, besides hay. The last six churnings I could not bring butter."

ANSWER:—You fail to state the condition of the cream, whether it is roapy, foamy, etc., when churned, so I cannot give you any definite advice. There are two possibilities: 1. The trouble may be in the premises and vessels in which the milk or cream is kept. 2. The trouble may be with the food of the cow. In the first case, a thorough disinfection of the premises and the milking utensils and milk vessels would be necessary. In the second case, I would advise to stop the feeding of the cotton-seed (oil-cake) meal.

Incontinence of Urine.—S. B., Cumming, Iowa, writes: "I have a mare colt six months old that can't hold her water. She was two months old when I first noticed it. I have weaned her. She is no better. She is lively and in good flesh. The water comes away worse when she is laying down and when she jumps."

ANSWER:—The prospect of a cure in your case is a poor one; still, it depends somewhat upon where the defect is. In some cases improvement becomes visible when the animal grows older and stronger, while in others it does not. It depends upon where the trouble is, or whether the incontinence is caused by weakness of the sphincter of the bladder, or by an abnormal formation of certain portions of the urinary organs, defective innervation, etc.

Complains About His Cows.—J. H. H., Thorn Hill, Pa., writes: "I have two cows; one had a calf in April, which was her first calf, and the other had a calf in September; but neither of them has shown signs of coming in heat. Wish you to state what can be done to bring them to want the bull. They are in normal condition—seem to be all right every other way."

ANSWER:—What you complain of is not always due to the same cause, but sometimes to one, and sometimes to another. In fact, it may be produced by quite a number of causes. Hence, as long as I do not know what cause or causes are acting—and your inquiry gives no information whatever—I cannot advise you what to do. In a good many cases it is due to the quality and peculiarities of the food, want of exercise, etc.

Cutaneous Eruption.—C. H. B., Plattekill, N. Y., writes: "We have a team of four-year-old colts. Last March each one broke out on one side with small lumps. One colt had it on the fore shoulder and the other on hip. The lumps were about as large as a grain of corn. After a week the lumps would discharge a little gummy substance, and the hair got glued together and come off. Now they are all over them, but not so many nor as thick as they were at first."

ANSWER:—First, a thorough wash with soap and warm water, then a wash with a two-percent solution of carbolic acid, and afterwards cleanliness and thorough grooming every day, will probably effect a cure. Good, wholesome food, easy of digestion, is also very essential. Wheat middlings and ground rye are not proper food for horses; at any rate, if fed at all, should be fed only in very small quantities. Condition powders are worse than superfluous.

Skin Disease.—W. G. U., Adamsville, Pa., writes: "My horses have some kind of a skin disease. They rub their necks and shoulders till they make sore places, and the hair will come off in spots. The hair comes off their ears. They had the same disease last winter, and my colts and brood mare that were turned out on pasture got well, but my work horses never got altogether over it."

ANSWER:—If you want me to make a diagnosis in your case, you must give the particulars. Itching and bald and sore spots are common to a number of skin diseases, and that is all your description amounts to. Probably your veterinarian is right, and you will do best to follow his advice. One application seldom effects a cure. Therefore, it did not in your case, it is no proof whatever that your veterinarian is mistaken in his diagnosis. Lice and mange also cause itching and sores and bald spots.

Worms in Pig.—J. C. S., Cambridge, Minn., writes: "I have a pig, eight weeks old, that has worms. They are three or four inches long and look like angleworms. His back is humped up, and the hind legs are weak."

ANSWER:—The worms, very likely, belong to the species known as Echinorhynchus glgas. The prevention consists in keeping the young pigs, in the spring of the year, away from places where they can get the larvae of the May-bug (*Melolontha vulgaris*), because these larvae harbor the embryos of the worm.

Hence, it would be best to keep young pigs under roof in a clean sty. As to a treatment for expelling the worms out of the intestines of the pigs, mucilaginous and oily food—for instance, slop of linseed-oil cake—is to be recommended. Besides that, for a few days in succession, hulled castor beans, 1½ to 2 drachm doses, may be given with each meal. Echinorhynchus gigas fastens itself with its head in the mucous membrane of the intestine, and is therefore not easily expelled.

How to Wean a Colt.—W. H. D., East Bethany, N. Y., writes: "I have a mare with colt, and when the colt was four months old I took it away from the mare overnight. In the morning her bag was full and hard. I milked as much as a quart and a half of milk and still the bag was hard, and I thought there was more milk. Being afraid it would hurt the mare to wean the colt then, I let it run with her, and by night her bag was all right. Now, three months after, I tried again. It acted the same, except I got only about a quart of milk. The mare is with foal again, I think. I feed three quarts of oats three times a day, with hay and straw. The mare is in fair order, but not fat."

ANSWER:—Colts should be weaned gradually, and not at once. If, then, the mare is troubled with her milk, she should be put to work, and instead of being fed with oats, she should receive food that is less milk-producing—corn, for instance. To wean a colt suddenly is injurious to both mare and colt.

Subject to Colic.—T. L., Fergus Falls, Minn., writes: "I have a nine-year-old horse that is subject to colic. He is a very fast eater. I have to feed him on ground grain. Can anything be done to get his digestive organs in good condition, so he will not be liable to take the colic?"

ANSWER:—If your horse is subject to colic it is probably due to an existing aneurism in the anterior mesenteric artery, and you may expect that an attack at some time will be the final and fatal one. There is no remedy. You may, however, prevent a good many attacks by regular feeding. If your horse, also, is a greedy eater (a glutton), you may prevent him from bolting down his food by mixing cut straw with his grain, but surely not by feeding ground food. The latter, if frequently or always fed, also will weaken his digestive powers, and thus cause the attacks to become worse and more frequent. Water your horse, if possible, from a deep well, and not with water from ditches or ponds.

Rhachitis.—J. W. B., New Vernon, Pa., writes: "I want some information in regard to a yearling colt. She was very poor when she came into my possession last February, and did not grow much until July; then grew very fast. About this time her forward knees commenced bowing out, not forward but edgewise, or the right one bows to the right, the left one to the left. What is the cause and what is the remedy?"

ANSWER:—Your colt, it seems, suffers from rhachitis, brought on by insufficient and un-nutritious food, and especially by food very deficient in phosphates and in lime salts. The remedy, if a remedy is yet possible, and the animal not yet a confirmed cripple, consists in feeding good clover hay, and in giving some condiments and tonics (bitter roots and herbs) in small doses, and frequent pinches of salt with the food. Intratracheal injections of phosphorus in olive-oil (three fortieths to three twentieths of a grain of the former to three drachms of the latter per dose) have been recommended by German authorities. But such intratracheal injections can be applied only by a skillful veterinarian. The weak joints may be somewhat supported by judicious bandaging.

Sick Hogs.—W. S. S., DeWitt, Iowa, writes: "What is the matter with my pigs, and what shall I do for them? I have forty, six months old, that will average 150 pounds. They have had a cough for a month, and breathe with a wheezy and jerky motion. They are always ready for their feed, but do not care for exercise. Three have died, and two I killed and examined. No. 1 did not cough much, but breathed with difficulty. The throat was clear and all right, as far as I could see. About half the lungs was of a whitish color, and filled with water. The liver was rough and spotted white. No. 2 coughed more, and at times was so stiff he could hardly walk. There was no water in the lungs, but they were filled with hard, white lumps the size of a hickorynut, containing a dry, greenish matter. The liver seemed all right."

ANSWER:—Your pigs either have lung-worms (*Strangylus paradoxus*) in large numbers, or suffer from a rather mild attack of swine-plague. In either case not much can be done beyond good care and good hygienic treatment in general. If it is lung-worms—an examination of the terminal bronchial tubes at the next opportunity for a post-mortem examination will decide the question—the new generation of pigs that come next spring, should be kept away from all low, wet and swampy places and stagnant pools of water, especially such as have been frequented by your pigs this year.

Vertigo.—I. W., Clarkson, Ohio, writes: "I have a colt a year and a half old, which had an attack of vertigo last summer. I consulted a veterinary surgeon, who told me to stop feeding it and turn it out on pasture. There has never been any return of the attacks since, but it seems stupid and lifeless—more like an old, worn-out horse than a young colt. It is growing fast. It is now as large as a two-year-old, and in pretty good flesh. It seems to have an abnormal appetite; it eats all the refuse which the cattle will not touch. I feed it no grain; nothing but timothy hay, as the doctor advised me last summer not to feed grain. I would like to feed grain, but am afraid of bringing on vertigo again. Please advise me what to do, and whether you think there is any danger of a renewal of the old attacks."

ANSWER:—It seems to me your veterinarian did not give you very good advice, or perhaps you misunderstood him. Vertigo, as a rule, has other causes. Your veterinarian, probably, cautioned you against overfeeding with grain, and if he did, he was right. But to withdraw all grain, and to compel a young and growing animal to subsist on comparatively in-nutritious food, necessarily would lead to bad consequences. My advice is to feed grain, but since the animal is at present not used to it, you will have to begin with small quantities, which must be gradually increased, so that in about a month or two a full ration suitable to an animal of the age and size of your colt may be reached.

MEANDER, 1311.

Hon. I. V. Baker, Jr., Vice Pres't Nat'l Breeders Ass'n and owner of Meander, sire of Paulico, 2,162, writes: "Quinn's Ointment I have used with great success nearly 20 years. I consider it has no equal." For Curbs, Splints, Spavins, Windpuffs and all bunnies, use this reliable remedy. Trial box 25 cents, silver or stamps. Regular size \$1.50 delivered. Address W. B. Eddy & Co., Whitehall, N. Y.

SAVE YOUR HORSE and save your money. One bottle of Wilson's Spavin Cure removes permanently bone spavin, splint or curb. No lameness. Guaranteed. Horses examined and taken for treatment. No charge, should we fail to cure. Send for circular. Naylor & Robbins, 107 Duane St., N. Y.

Winners of the Grand Prizes.

For the week ending December 26th, the prizes were awarded as follows:
 Henry H. Hayes, of West Hartford, Vermont, secured the Gold Watch for the largest number of subscribers for Farm and Fireside received from any one person during the week.
 A Stoller, Jr., of Johustown, N. Y., received the Set of Dishes for the second largest club.
 During Holiday week, ending January 2d, only small clubs were received, the First Grand Prize, a Singer Sewing Machine, going to Amos Baker, Perryton, Ohio, for only 13 subscribers.
 The Second Grand Prize was divided between R. B. Woten, Hutchinson, Kansas, and C. C. Petteys, Custar, Ohio, who each sent only 9 subscribers.
 Grand Prizes are offered every week to those who send the largest number of subscribers during the week. Anyone can act as agent and enter the contests for the Grand Prizes, which are sometimes secured for only very small clubs. See our offers on another page.

Our Miscellany.

The figure nine, that has appeared in the calendar once in a decade, with 1889 came to stay for more than a century—till 1999, inclusive.

The Notre Dame cathedral, Montreal, has the largest bell in America. It weighs 24,780 pounds, is eight feet seven inches in diameter and six feet high.

The invention of gunpowder is generally ascribed to Bertholdus or Michael Schwartz, a Cordelier monk, of Goslar, south of Brunswick, in Germany, about 1320. But many writers maintain that it was known much earlier in various parts of the world. Some say that the Chinese and Hindoos possessed it centuries before.

If oil has been spilled on the carpet, cover the spot with wheat flour or whiting. After twenty-four hours sweep it off with a stiff broom, and if it has not absorbed all the oil, cover the spot again with fresh whiting. Two applications are usually enough; but if the carpet has been saturated with oil, the whiting will have to be used several times.

RALPH WALDO EMERSON once said: "The men in cities who are the centers of energy, the driving-wheels of trade, politics or practical arts, and the women of beauty and genius, are the children or grandchildren of farmers, and are spending the energies which their fathers' hardy, silent life accumulated in frosty furrows, in poverty, necessity and darkness."

EXPERIMENTS recently conducted in the School of Physiology, in Paris, France, have demonstrated beyond peradventure that the kernel of the oat contains three medicinal principles, the first of which acts to calm, soothe and tone up the brain and nerves; the second yielding phosphorus to weakened and hungry nerve tissues, and the third residing in the husk of the oat, or oatmeal, to act as a laxative and anti-congestive on the stomach, liver and bowels.

A WONDERFUL mystery has always been connected with the propagation of eels, nor is it yet solved. To distinguish the sex of an eel is only possible by means of a microscope. All that is known is that eels are hatched or born in salt water. The shores, bays and inlets swarm with young wigglers, and they are found in great abundance in places like Niagara river, being unable to wriggle up the falls. Unlike the shad and salmon, which go up fresh-water streams to spawn, they go down to the salt water to produce their young.

SURGERY has made rapid advances during the last fifteen years, and now the surgeon does not hesitate to open the skull to remove abscesses, tumors and even blood clots from the brain, also to give the brain more room, curing epilepsy and idiotic children. The surgeon opens the abdominal cavity to remove tumors, a diseased kidney, gall stones, etc. Surgeons even puncture the heart in cases of dropsy, extract water from the pleura and wash out abscesses in the lungs. This has all come about by an accurate knowledge of anatomy and pathological conditions and diagnosis of the same.

HOW OLD IS THE POTATO?

The potato was introduced into Europe from the western hemisphere. History has it that Christopher Columbus was the first European who ever tasted a potato. It is doubtful if he ever enjoyed eating our favorite tuber. At all events, the vegetable that he ate at Cuba, in 1492, and brought home to Genoa, was a sweet potato. The first potato grown east of the Atlantic ocean was planted by Claudius, in the botanical gardens of Vienna, in 1538. As is well known, Sir Walter Raleigh found the potato in Virginia, and took specimens back to England. The original home of the popular tuber is Chili. It was brought north by the Spaniards.

For many years the potato in England was looked upon as being poisonous and unwholesome. This, perhaps, is not to be wondered at, as it was commonly eaten raw, the method of cooking it not being known. Gradually its usefulness as a palatable vegetable became known. A committee of the royal society urged, in 1652, that all the fellows who possessed

land should "plant potatoes and persuade their friends to do the same, in order to alleviate the distress that would accompany a scarcity of food." In 1738 the first field of potatoes was planted in the low lands of Scotland.
 As soon as the people of Ireland knew how to cook the potato it quickly became the one leading vegetable of the land. Its cheapness of cultivation, large yields and nutritive qualities made it become immensely popular, and as it was the chief article of food, it ere long obtained its present common name—Irish potato. It is not only of value as a food plant. The Irish were the first to discover that whiskey could be made from it. Starch is made from it for the laundry and for the manufacture of farina. The dried pulp from which the starch has been extracted is used for making boxes. From the stem and leaves a narcotic is extracted. In some places cakes and puddings are made from the potato flour.

THE INDIAN HUNTER'S GAIT.

The Indian hunter has a distinctive gait. His toes, either straight before him or pointing inward, cover the center of gravity. His hips sway slightly to the stepping side, and his rear foot is not exactly lifted, but rather peeled off the ground just high enough to clear the surface, and settled in its new place before the weight comes to it. He does not swing his shoulders nor walk with a spring, nor plant his foot with a shock, as the white man does. If the Indian were turned to stone while in the act of stepping, the statue would probably stand balanced on one foot.

This gait gives the limbs great control over his movements. He is always poised. If a stick cracks under him, it is because of his weight, and not by reason of the impact. He goes silently and with great economy of force. The muscles have less strain on them, and do not tire so soon. Sometimes it seems as if they never tired. He threads through woods and swamps and down timber with no noise except the rustling of the grass and leaves disturbed by his passage.

His steady balance enables him to put his moving foot down as gently as you would lay an egg on the table. You could not hear the sound of a footfall if you listened a week. The gait is not elastic nor springy nor haudsome, and it even makes the man seem bow-legged. Put the same person in leather boots on a floor, and you would truly say that he stumped along. But in moccasins, on a hunt, he does not walk; he glides.—*Forest and Stream.*

CIDER DUMPLINGS.

For a family of five, take about one pint of sifted flour, add one teaspoonful of baking-powder and a pinch of salt. Work this in lightly, then add a lump of lard the size of a walnut of good proportions, and work in well. Moisten with sweet milk, work smooth, and leave rather moist. Work into a long loaf (with little handling), cut into five equal parts, roll each, and in the center lay a peeled and cored apple, left whole. Press the pastry around it. Have a pan half full of sweetened cider boiling on the stove. As you make each dumpling, drop it into the cider. When the last one is in, set in the oven and gently bake, basting all the while with cider. Serve with cider or cold cream or sauce, as preferred.

Recent Publications.

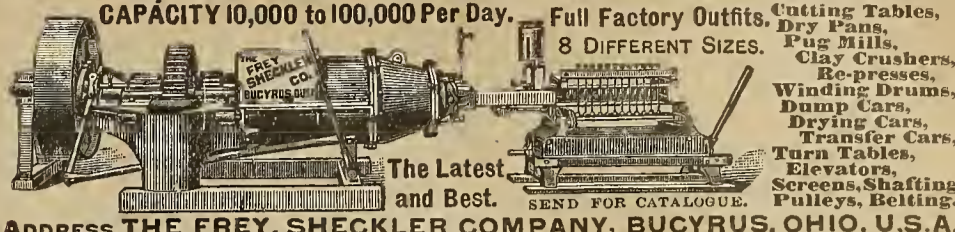
CATALOGUES.

- G. H. Grimm Manufacturing Co., Rutland, Vt., makers of the Champion Evaporator for maple, sorgum and fruit jellies.
- Northern Grown Seeds, Plants and Bulbs. L. L. May & Co., St. Paul, Minn.
- Kansas Seed House. F. Barteldes & Co., Lawrence, Kan.
- Illustrated Garden Guide for 1892. R. H. Shumway, Rockford, Ill.

EXPERIMENT STATION BULLETINS.

- Sent free, on application, to residents of the state in which the station is located. Address Agricultural Experiment Station.
- ALABAMA.—(Canebrake Station, Uniontown) Bulletin No. 12, October, 1891. Grapes, strawberries and raspberries.
- ARIZONA.—(Tucson) Bulletin No. 3, October, 1891. Irrigation in Arizona. Bulletin No. 4, November, 1891. Waters and water analysis.
- MISSISSIPPI.—(Agricultural College) Bulletin No. 16, September, 1891. Glanders.
- NORTH CAROLINA.—(Raleigh) Bulletin No. 80, October 1, 1891. Silos and ensilage. Bulletin No. 80, C, October 20, 1891. The digestibility of cotton seed and other feeding stuffs.
- ONTARIO.—(Agricultural College, Guelph) Bulletin No. 70, December 1, 1891. Feeding grade steers of different breeds.
- OREGON.—(Corvallis) Bulletin No. 14. Injurious insects.
- RHODE ISLAND.—(Kingston) Bulletin No. 12, August, 1891. Analyses of commercial fertilizers.
- TENNESSEE.—(Knoxville) Bulletin No. 4, Vol. IV, October, 1891. Some fungous diseases of the grape.
- WYOMING.—(Laramie) Bulletin No. 3, November, 1891. The sugar beet in Wyoming.
- U. S. DEPARTMENT OF AGRICULTURE.—(Washington, D. C.) Report on the use of Indian corn in Europe, and on the possibilities of its extension. Experiment Station Record, Vol. III, No. 4. Insect life, Vol. IV, Nos. 3 and 4.

BRICK, TILE and TERRA COTTA MACHINERY



THE OWEN ELECTRIC BELT AND APPLIANCES



RELIEVE SUFFERING INSTANTLY

And Positively CURE Acute, Chronic and Nervous Diseases without the use of Drugs or Medicines.

THREE FRIENDS AGREE

As to the Merits of THE OWEN ELECTRIC BELT.

ARBORVILLE, NEB., Dec. 26, 1891.
 THE OWEN ELECTRIC BELT CO., CHICAGO, Gentlemen:—I did not buy one of your belts for myself, but I bought three for different friends. From each and all of these I have a good report. Not one is dissatisfied, but they believe with me that the electric treatment is far preferable to drugs. They are all ready to call your company benefactors of the race.
 Yours truly,
 S. ENSIGN.

A HELPLESS SUFFERER WITH RHEUMATISM

Gives the Result of Six Days' Treatment with THE OWEN ELECTRIC BELT.

MADISON LAKE, Dec. 9, 1891.
 DR. A. OWEN, CHICAGO, ILL., Dear Sir:—I desire to let you know, for the benefit of others, the experience we had with your Electric Belt.
 My wife had Rheumatism, with severe pains in the back, for the last three years, which, since last June, had become so severe that she was not able to turn in bed alone. In fact, she was perfectly helpless. We tried many forms of relief, but without doing any good. I at last concluded to try your Ladies' Electric Belt, which I sent for, and it came promptly by express. We then applied it according to directions, and with the following result: First day, put on belt with five cells, and after wearing it six hours felt no effect. Second day same as first. Third day increased power to eight cells; felt effects only mild. Fourth day increased to full power; felt effects instantly; after wearing two hours began to burn and blister. Fifth day reduced to eight cells, continued to burn and blister. Sixth day reduced to six cells with good result, and have worn belt every day since up to date, and can gladly state that the benefits received are astonishing. Pain in back almost gone, Rheumatism greatly relieved, and I think another week will see her entirely free from pain. You will not be surprised to hear that we felt a little doubtful about its usefulness after the first two days' trial, but made up our minds to give it a fair trial. I am pleased to write this account to you, hoping it will come under the notice of those afflicted, and receive my hearty thanks for your prompt and honorable dealings.
 I remain yours truly,
 W. L. RAPPLEY,
 Madison Lake P. O., Blue Earth Co., Minn.
 P. S.—Please use this as you think best. I shall write again in the course of two weeks.

A FORESTER RECOMMENDS

The Owen Electric Belt for LA GRIPPE.

PORT HURON, Mich., Dec. 12, 1891.
 THE OWEN ELECTRIC BELT CO., CHICAGO, Dear Sirs:—About six months ago I bought one of your belts and must say it has been a great comfort to me. I was sick with La Grippe for seven weeks, and it settled in my back and hips. I am a forester. I saw your belt advertised and I at once sent and got a No. 2 Belt, and in three days I was able to go to my work. I would not like to be without it, as I still wear it once in a while when I feel bad, for I am troubled with spinal affection. I would heartily recommend the Owen Electric Belt to all.
 Yours truly,
 JAMES PETTENGILL.

Persons making inquiries from writers of testimonials are requested to inclose self-addressed, stamped envelope to insure a prompt reply.

OUR ILLUSTRATED CATALOGUE,

Containing full information regarding the cure of Acute, Chronic and Nervous Diseases, sworn testimonials and portraits of people who have been cured, list of diseases, etc., in English, Swedish, German and Norwegian; or treatise on Rupture cured with Electric Truss will be mailed to any address upon receipt of 6 cents postage.

THE OWEN ELECTRIC BELT AND APPLIANCE CO.,

MAIN OFFICE AND ONLY FACTORY:

191 & 193 STATE STREET, CHICAGO, ILLINOIS.

New York Office, 826 Broadway.

The Largest Electric Belt Establishment in the World.

On or before March 1, 1892, the main offices and factory will occupy three floors, 100x145 feet, in the Owen Electric Belt Building, cor. State and Adams streets. When writing, please mention this paper.

Smiles.

SO DIFFERENT.

She said "good-night," she said it o'er, As maids oft have to do; She said it twenty times or more, And still she wasn't through.

'Tis strange how different people are; Her father, big and gruff; Exclaimed it once—'twas heard afar, And that proved quite enough.

—Washington Star.

THE BABY WAS "IN IT."

Over the way, in a great stone flat, A dear little baby had come, they said, With a wee, quaint face and big brown eyes, Like a dusty ball the round little head;

And Ada kissed the rosy-red lips, And patted the dear little haud, so pink— A wondering look in her own bright eyes: What does the wise little maiden think?

"This is a flat," then she slowly says: "I wonder where the landlord has been? No children allowed—the sign is here; Dear little baby, how did you get in?"

—Callie Bonnie Marble, in the Housewife.

HOW HE WON THE SCHOOL TEACHER.

YES," said the young man, as he threw himself at the feet of the pretty school teacher. "I love you and would go to the world's end for you." "You could not go to the world's end for me, George. The world, or earth, as it is called, is round, like a ball, and slightly flattened at the poles. One of the first lessons in elementary geography is devoted to the shape of the globe. You must have studied it when you were a boy?"

"Of course I did, but"— "And it is no longer a theory. Circumstances have established the fact." "I know; but what I meant was that I would do anything to please you. Ah, Angelina, if you but knew the aching void!"

"There is no such a thing as a void, George. Nature abhors a vacuum. But, admitting that there could be such a thing, how could the void you speak of be a void if there was an ache in it?"

"I meant to say that my life will be lonely without you; that you are my daily thought and nightly dream. I would go anywhere to be with you. If you were in darkest Africa or at the north pole I would fly to you. I—"

"Fly! It will be another century before man can fly. Even when the laws of gravitation are successfully overcome there still remains, says a late scientific authority, the difficulty of maintaining a balance."

"Well, at all events," exclaimed the youth, "I've a pretty fair balance in the bank, and I want you to be my wife. There!" "Well, George, since you put it in that light I—"

HE HAD TO SPEAK.

"Laura," said George, with an eager, restless yearning in his gaze, "may I ask a favor of you, dear?"

They had sat in the darkened parlor for hours, in the eloquent communion of soul with soul that needs no articulate sound to give it language.

But something impelled George to speak. The longing that surged up from his very heart must find expression in words. Therefore he had spoken.

"What is it, George?" she whispered. "It may involve some sacrifice, darling. But believe me, Laura, it is for the best!" "What is it, George?" she repeated, in a voice that trembled as with a vague foreboding of coming disaster.

"You will believe me, dearest," he said, with an agitation becoming every moment more uncontrollable, "when I say that I am driven to ask it by circumstances over which I have no control, that I have pondered long over it and am not acting from hasty impulse?" "Yes! yes!" the beautiful young girl exclaimed, with quivering lips. "What is it you ask, George? What is it?"

"Darling," he said, and the wild, imploring look in his face thrilled her to the inmost depths of her being. "I wish you would sit on the other knee awhile. This one is getting horribly tired!"

DISPOSED TO MAKE A RAISE.

"Mr. Enjoor," said the church trustee to the pastor, "we are going to raise your salary the first of the year."

"Indeed," said the minister. "Yes. The congregation feels pretty poor this winter, but if we can't raise it all we will at least raise some of it."

And then he wondered why the minister didn't seem overjoyed.

RECREATION FAILED TO BENEFIT HER.

A lady stopped another in a crowded store on Saturday to dilate on her wretched health. "The doctor told me I must go out every day and take exercise and air. I went to three funerals; the people were dead strangers to me, but the cemeteries were out of town, and I thought the ride might stimulate my liver. But I don't know as I'm a bit improved."

SHE KEPT SOME BOARDERS.

He rang the bell at the door of a Cass avenue boarding-house, and a woman appeared. She must have known everything in her business by instinct.

"Do you keep boarders here?" he inquired, hesitatingly.

"Sometimes we do and sometimes we don't," she replied, after making a survey of him.

"How is that? I don't understand," he ventured.

"Them that pays we keep, and them that don't we houce," she said, and waited long enough to see him go away.—Detroit Free Press.

NOT WRITER'S CRAMP.

Doctor—"From the condition of your hand and arm, I should say you are suffering from writer's cramp—too much exercise of one set of muscles."

Young business man—"But I never write. I employ a typewriter."

Doctor—"Um—engaged to her?"

Young business man—"Y-e-s."

Doctor—"Do you—er—dictating with your other arm."—New York Weekly.

WHY THE BOYS LAUGHED.

"Billy Gogenheimer, you are too stupid to sit with the rest of the boys. Come up here and sit alongside of me," was the remark of a Harlem teacher.

One of the boys in the distant corner whispered to another boy and they laughed, whereupon the teacher called:

"Don't you imagine I can't hear what you say? My ears are long enough to reach clear across this room."

Then the boys did laugh.

THE ODDS AGAINST HIM.

"I don't feel right about going in there," said Chilson Feevor, in front of a physician's house.

"Pshaw! He's one of the best doctors in the city," replied Coffin Coles.

"I know; but look at his sign—'9 to 1.'"

"Well?"

"Well I don't care to take any such chances as that."—Puck.

PLANS FOR THE FUTURE.

"Now that poor Bronson has lost all his money, I presume his marriage will be postponed."

"Oh, no. He will marry Miss Talkaway, and after the honeymoon he'll sell the presents. They are likely to put him on his feet again."—Harper's Bazar.

A SENSIBLE RELUCTANCE.

DeGarry—"I'm afraid you are only trying to be cynical when you say that all girls are mercenary."

Merritt—"I don't think so. The only present I ever made a girl that she didn't want to keep was a diary."

A FAMILY COMPLAINT.

Energetic man—"Tom, you're the laziest man I have ever seen. You are always leaning on a gate!"

Lazy man—"I don't think I'm lazy. I left my brother at home; he said he was too tired to lean on a gate!"

MAKING A LONG STORY SHORT.

Husband—"What a splendid dinner you have to-night."

Wife (complacently)—"Yes, dear, I thought it would please you."

Husband—"What kind of a dress are you thinking of getting?"—Life.

ONE IN A MILLION.

Triyvvet—"Bloomberg is the most remarkable man I ever knew."

Dicer—"Why do you say that?"

Triyvvet—"I had a very heavy cold the other day, and I asked him what would cure it. He said he was blest if he knew."

HE WANTED TO KNOW IT ALL.

Husband—"You say you expected to pay fifteen dollars for the shawl and got it for twelve, and thereby saved three dollars?"

Wife—"Yes, dear, that's it."

Husband—"Then what did you buy with the three dollars?"—Cloak Review.

ANIMAL MAGNETISM.

Judge Fowler—"Speak up, now! How did you come by those chickens?"

Rastus Henshaw—"Dad's jes' de trouble; couldn't get by dem nohow, sah."

HER PLACE SUPPLIED.

Tomdick—"I suppose you were very lonely the month your wife spent at her mother's."

Hojack—"Oh, no. She left the parrot at home."

BEWARE OF OINTMENTS FOR CATARRH THAT CONTAIN MERCURY.

as mercury will surely destroy the sense of smell and completely derange the whole system when entering it through the mucous surfaces. Such articles should never be used except on prescriptions from reputable physicians, as the damage they will do is ten fold to the good you can possibly derive from them. Hall's Catarrh Cure, manufactured by F. J. Cheney & Co., Toledo, O., contains no mercury, and is taken internally, and acts directly upon the blood and mucous surfaces of the system. In buying Hall's Catarrh Cure be sure you get the genuine. It is taken internally, and made in Toledo, Ohio, by F. J. Cheney & Co. Sold by Druggists, price 75c. per bottle.

EXPENSIVE AFTER ALL.

It makes little or no difference how low the price of a thing may be, if one has no money with which to buy it. Many a "ue'er-do-weel," searching for a land where he may live in luxury for almost nothing, has discovered that there is sure to be some obstacle to his success in every country to which he goes.

"I can tell you," said a recently returned traveler, who was clad much after the fashion of Mr. Richard Swiveller, "I tell you, Argentina's the place to go! Everything is dirt cheap there! Why, you can get a splendid, fat turkey for twenty cents!"

"Whew!" said one of the interested bystanders. "If I'd been in your place, I should have stayed there."

"Would you, now?" remarked the traveler, eyeing his friend meditatively. "Well, then, since you'd have stayed, probably you can tell me how I was to get the twenty cents in Argentina?"

ONE WAY TO SPELL POTATO.

Considering the state of the crops and the anxiety expressed by our English cousins about our spelling, the following exercise may be appropriate. Who invented it is unknown to me, but it sounds like Dr. Wayland, of Philadelphia, a fonetik parson:

"What does this spell—Ghoughphththeigh-tleeau? Well, according to the following rule, it spells potato. Gh stands for p, as in the last letters of hiccough; ough for o, as in dough; phth for t, as in phthisis; eigh stands for a, as in neighbor; tte stands for t, as in gazette, and eau stands for o, as in beau. Thus you have p-o-t-a-t-o.

A POOR RULE, ETC.

Agitator—"I tell you this eight-hour work-day is going to do a lot of good to the mass of employed people. By the way, Sarah, is supper ready?"

Agitator's wife—"No; my eight hours was up at half-past five to-day."



THOS. ROBERTS, SPRINGFIELD, OHIO. Mention this paper when you answer this.

DONALD KENNEDY Of Roxbury, Mass., Says:

Strange cases cured by my Medical Discovery come to me every day. Here is one of Paralysis—Blindness—and the Grip. Now how does my Medical Discovery cure all these? I don't know, unless it takes hold of the Hidden Poison that makes all Humor.

VIRGINIA CITY, NEVADA, Sept. 9th, 1891. Donald Kennedy—Dear Sir: I will state my case to you: About nine years ago I was paralyzed in my left side, and the best doctors gave me no relief for two years, and I was advised to try your Discovery, which did its duty, and in a few months I was restored to health. About four years ago I became blind in my left eye by a spotted cataract. Last March I was taken with La Grippe, and was confined to my bed for three months. At the end of that time, as in the start, then it struck me that your Discovery was the thing for me; so I got a bottle, and before it was half gone I was able to go to my work in the mines. Now in regard to my eyes, as I lost my left eye, and about six months ago my right eye became affected with black spots over the sight as did the left eye—perhaps some twenty of them—but since I have been using your Discovery they all left my right eye but one; and, thank God, the bright light of heaven is once more making its appearance in my left eye. I am wonderfully astonished at it, and thank God and your Medical Discovery. Yours truly, HANK WHITE.

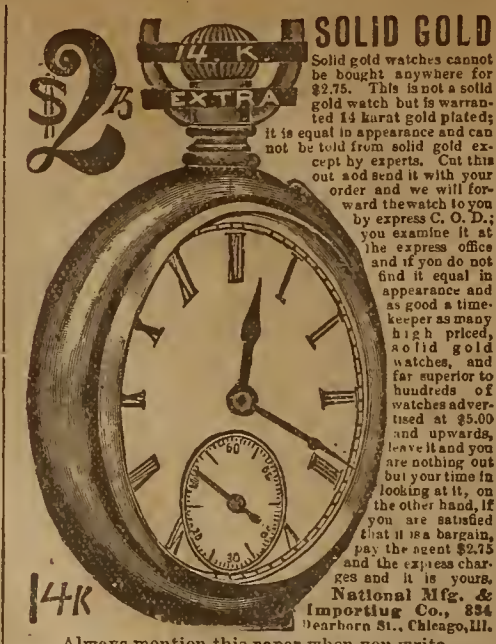
WINTER PRICES ON BICYCLES. Don't wait till spring; buy now & save money. Easy payments. All makes new & 2d hd. Cash free. House, Hazard & Co. 52 E. St. Peoria, Ill.

OUR GREAT DOLLAR OFFER. \$3.00 FOR ONLY ONE.

ALL of the following articles will be mailed, postpaid, to any person sending only \$1. At the usual retail prices they would cost \$3.00.

- 1. HOW TO MAKE 200 KINDS OF SOAPS. A new book, just from the press, giving recipes for making 200 kinds of laundry, toilet and other soaps. Handsomely printed. Worth many dollars to those who make their own soaps, or who want to make money by manufacturing, but we will say... 25c
2. A FOUNTAIN-PEN. Combining penholder, pen and ink, always ready for use. The best made for the money... 25c
3. 140 NEEDLES. A handsome needle-case, 2 1/2 by 9 1/2 inches in size, when open containing 125 best, large-eyed needles, assorted sizes. Also darners, chenille, tapestry, rug and other needles. Retail price in stores, not less than... 50c
4. THE MODERN COOK BOOK. The best and most popular cook book published. 320 pages, handsomely illustrated. Over 1,200 recipes, selected from 20,000 that were received from practical housewives living in all parts of the United States. Worth every cent of one dollar, but we will say... 50c
5. 145 SONGS. Words and music with each. The latest and best "hits," including "Comrades," etc... 20c
6. ONE HALF DOZEN LEAD-PENCILS. With rubber tips, the kind that usually retail for 5 cents each... 30c
7. FARM AND FIRESIDE ONE YEAR... 50c
8. THE LADIES HOME COMPANION ONE YEAR... 50c

Total value... \$3.00. postpaid to any address. Order by Premium No. 465, and send all letters to Address FARM AND FIRESIDE, Philadelphia, Pa., or Springfield, Ohio.



Always mention this paper when you write.

CREAM TESTER.

Mailed free as a premium to any one sending two yearly subscribers to this paper.

Premium No. 470. Shows the Value of your Cow for Cream, as accurately as a Fairbanks Scale will show her Weight.



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

Always mention this paper when answering advertisements, as advertisers often have different articles advertised in several papers.

The value of a cow as a milker depends upon the percentage of cream in her milk. You cannot judge from her appearance whether her milk will be rich in cream or not. The only Sure Way is to use a tester and determine for yourself whether she is worth more to you for beef or a milker. The difference to you between a good and a poor cow is the difference between Profit and Loss. By using this simple but valuable invention, and testing the milk of each cow separately, you can tell at once which one you are keeping at a profit and which at a loss. Keep your Good cows but Sell your Poor Ones. This tester tells you which to keep and which to sell. Directions for using with each tester. Given as a premium for 2 yearly subscribers. Price, including one year's subscription, 65 cts. We offer it for sale for 25 cents. Postage paid by us in each case.

Selections.

THE COURTESIES OF LIFE.

Civility is a very desirable trait of character, and sensible people should make a point of keeping it on hand; civility is one of the Christian graces; it is obligatory upon a lady or gentleman, and it is excellent stock in trade for those who wish to get on in the world. We mean civility, not servility. To cringe and fawn and flatter is despicable. Ostentatious politeness, with a profusion of bows and fine speeches, may be burdensome; but a kind word of greeting, a polite attention, a little act of courtesy is quite another thing.

There are people who have a great deal of that pride which gives one the assurance of being "just as good as anybody else, if not a little better," fancy that to care nothing for what others feel, to take the best, and be the foremost by dint of pushing, and never on any account to allow another precedence, is to assert themselves properly. This is a great mistake; such conduct, instead of being an evidence of true independence of character, is a mark of ignorance and vulgarity.

In England and in some parts of continental Europe, vulgar people are rude to those beneath them and servile to those above them. In this free country, where there is no titular rank, the ignorant and ill-mannered are sometimes rude to richer or more fashionable people in order to show their independence.

This is less ignoble than the European fashion, but it is more detrimental to those who are guilty of it. In business it is very poor policy indeed. Many American tradesmen and mechanics, many milliners and dressmakers have failed because of the rudeness which they supposed would maintain their dignity, and which costomers, who themselves would never be uncivil, were unable to endure. Polite attention to a customer's wishes, the little "thank you" on receipt of an order, marked constant observance of the golden rule, has made the fortune of many a man and many a woman. One millionaire in the dry goods business ascribes his prosperity, in a large degree, to the fact that he never permitted an impertinent "independent" clerk to remain behind his counter.

It is an old adage that "manners make the man." They certainly have a good deal to do with the making of a successful man.—New York Ledger.

DISCOVERIES IN EGYPT.

Some very remarkable and interesting discoveries have recently been made in Egypt, which match the discovery of a treatise by Aristotle in Greece, and may, indeed, prove the commencement of the unearthing of vast archaeological treasures. This "find" includes a fragment of Plato's "Phædo," a part of the last act of a tragic poem by Euripides, which has long been sought for, but never found, a manuscript containing thirty-five hexameter verses of the Iliad, differing materially from the earliest manuscript hitherto known, and many other fragments and legal documents, dating usually in the third century before Christ, and throwing much new light on the social condition of Egypt at that time. One of the most remarkable features of this discovery is that the explorer who brought them to light found that a number of mummy-cases were made, not of wood or papier mache, but of sheets of manuscript pasted one over the other until the proper degree of thickness was obtained. He succeeded in separating these sheets of manuscript and so cleansing them as to make them legible. If any considerable number of these manuscripts should be found, what a wealth of long buried treasures will be brought to light, and what startling discoveries may be made concerning the history of the past!

CONSUMPTION CURED.

An old physician, retired from practice, had placed in his hands by an East India missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh, Asthma and all Throat and Lung Affections, also a positive and radical cure for Nervous Debility and all Nervous Complaints, having tested its wonderful curative powers in thousands of cases, and desiring to relieve human suffering, I will send free of charge to all who wish it, this recipe in German, French or English, with full directions for preparing and using. Sent by mail, by addressing, with stamp, naming this paper, W. A. NOYES 220 Powers Block, Rochester, N. Y.

10 CENTS (silver) pays for your address in the "Agents' Directory" for one year. Thousands of firms want addresses of persons to whom they can mail papers, magazines, pictures, cards, &c. FREE as sample, and our patrons receive hundreds of mail. Try it you will be WELL PLEASED with the small investment. Address T. D. CAMPBELL, D. 511, Hoytston, Indiana.

Catarrh Cured. ONE CENT!

If you suffer from Catarrh, Hay Fever or Asthma in any of their various forms, it is your duty to yourself and family to obtain the means of a certain cure before it is too late. This you can easily do at an expense of one cent for a postal card, by sending your name and address to Prof. J. A. Lawrence, New York, who will send you FREE, by return mail, a copy of the original recipe for preparing the best and surest remedy ever discovered for the cure of Catarrh in all its various stages. Over one million cases of this dreadful, disgusting, and often times fatal disease have been cured permanently during the past five years by the use of this medicine. Write to-day for this FREE recipe. Its timely use may save you from the death toll of Consumption. DO NOT DELAY longer, if you desire a speedy and permanent cure. Address Prof. J. A. LAWRENCE, 84 Warren Street, New York.

CARDS! New Sample Book 2c. U. S. CARD CO. Cadiz, O.

25 Silk Fringe Envelope etc. Cards with NAME ON ALL ONLY 25 CENTS, AND 50 PAGES SAMPLE BOOK FREE. CAPITAL CARD CO., COLUMBUS, OHIO.

500 SCRAP PICTURES AUTO, VERSES & DIDDLES 10 STYLES OF CARDS 2c. & PRESENT PARADE & CO., MONTWASHE, CONN.

YOUR NAME ON 50 Silk Fringe, Envelope, Cold Seal, Fancy Shape and Assorted Cards (all new). 1 Album, 20 Samples of New Cards, Genes, Tricks, etc., all for only 10 cents. CROWN CARD CO., CADIZ, OHIO.

32 Page book of agent's sample cards. Just out. Name on all. Sent 2 cents for postage. Haverhill Pub. Co., Haverhill, Ohio.

LOVELY 2c. SAMPLE CASE OF NEW CARDS. GENTS' OUTFIT & 1892 CALENDAR. TUTTLE CO., NORTH HAVEN, CONN.

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NEW CARDS Send 2c. stamp for the LARGEST SAMPLE BOOK of Assorted hidden name silk fringe, envelope and calling cards ever offered. EUCHEE CARD CO., Leesville, Ohio.

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CARDS Send 2c. Stamp for Sample Book of all the FINEST and Latest Styles of Cards. We sell GENUINE CARDS, NOT TRASH. UNION CARD CO., COLUMBUS, O.

20 Hidden Name, New Emh. Basket, Plush Fringe Cards, 1 complete Fountain Pen — 25 Games & Aqts. Outfit 10c. Typewriter and Photo Cameras free to Agts. Clinton Broe. Clintonville, Ct.

RUBBER STAMPS. Best made. Immense Catalogue Free to agents. The G. A. HARPER MFG. Co., Cleveland, O.

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ON 30 DAYS' TRIAL. THIS NEW ELASTIC TRUSS Has a Pad different from all others, is cup shape, with Self-adjusting Ball in center, adapts itself to all positions of the body, while the ball in the cup presses back the intestines just as a person does with the finger. With light pressure the Hernia is held securely day and night, and a radical cure certain. It is easy, cheap and cheap. Sent by mail. Circulars free. EGGLESTON TRUSS CO., Chicago, Ill.

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WIVES Should know how child bearing can be effected without PAIN or DANGER and cure their ills. Send for sealed information. A wonderful discovery. DR. J. H. DYE, Buffalo, N. Y.

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See opposite page.

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Premium No. 421.

A stamping outfit complete, with a variety of beautiful and artistic designs suitable for using on those tasty articles of adornment that should beautify every home and give so much pleasure in the making. The outfit contains 40 correctly drawn designs, with two complete alphabets that will be especially appreciated, they being both capital and small letters, box of stamping powder, pad and sheet of instructions. We name here only a few of the designs, to show the great variety of subjects they cover:

Spray of Wild Roses, Bunch of Plums, Cup and Saucer, Owl on Branch, Butterfly, Decorated Fan, Bird Flying, Horse-shoe, Spider Web, Braid Designs, Edgings, etc., etc. The paper used is a good, strong bond paper that will not tear easily and will last a long time. Equal in every respect to many high-priced outfits.

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Always Ready for Use. Complete. Useful. Convenient.

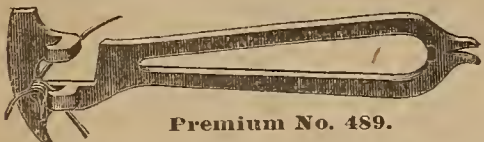
Because of its great convenience, everybody should carry a Fountain-Pen, and the only excuse for not doing so has heretofore been the cost of a good one. Now there is no excuse, as the excellent pen we offer is placed within the reach of everybody. This perfect Fountain-Pen is a triumph of ingenuity, combining the good features of old styles with new improvements.

With this pen in your pocket you are always prepared with pen and ink, at all times and places, and yet it is but little larger than a lead-pencil, and just as convenient for carrying in the pocket. The holder contains a supply of ink that will last the average writer several weeks, and may be refilled with ink in a moment.

During the next 30 days this Fountain-Pen will be mailed Free to any one paying 50 cents for one year's subscription to this paper. If you are already a subscriber you can have your subscription advanced one year by accepting this offer.

Given as a premium to any one sending 1 new yearly subscriber to this paper, and the new subscriber is also entitled to a choice of one of the January presents. See "Who is a new subscriber?" at foot of this page. We offer it for sale for only 25 cents. Postage paid by us in each case.

WIRE SPLICER AND STAPLE PULLER.



Premium No. 489.

No man who has Wire Fences can afford to be without it. It is used for splicing wire, and the handle is in shape to use for pulling tacks, and half a dozen that would cost separately \$1.00 or \$2.00.

During the next 30 days it will be mailed Free to any one paying 50 cents for one year's subscription to this paper. If you are already a subscriber you can have your subscription advanced one year by accepting this offer.

Given as a premium for 1 new yearly subscriber to this paper, and the new subscriber is also entitled to a choice of one of the presents. See "Who is a new subscriber?" below. We offer it for sale for 25 cents. Postage paid by us in each case.

Premium No. 833.

A RELIABLE DICTIONARY

CONTAINS 320 PAGES

With Over 30,000 Words

Correctly Defined and Pronounced.

To which is added a list of Foreign Words, Phrases and Quotations from Ancient and Modern Languages, Abbreviations used in Writing and Printing, Weights and Measures &c., &c.

It is a comprehensive lexicon of the English language, based on the labors of Webster and other eminent American and English authorities.

It is a Dictionary that will enable even the least educated persons to write and speak so as to be at once understood. Only the highest authorities have been followed and the best books and speakers consulted. It contains many new words and terms that have been brought into use by the progress made in the arts and sciences. The correct pronunciation is simply and truly given by the phonetic style of spelling. Many illustrations are included.

The Book is also an Authority on Weights and Measures, as follows:

Weights of various substances—As a cubic foot of clay, cork, marble, copper, tin, etc. The Metric system of Measures of Length, Surface, Capacity and Weights—with their equivalent in denominations or terms in common use.

Measures of weight—Avoirdupois, troy and apothecaries. Surface or square measure. Measures of length. Solid or cubic measure. Measures of capacity—Dry and liquid. Weight of a bushel—Of grains and vegetables. Weight of a gallon—Of various liquids.

During the next 30 days this Dictionary will be mailed Free to any one paying 50 cents for one year's subscription to this paper. If you are already a subscriber you can have your subscription advanced one year by accepting this offer.

Given as a premium for 1 new yearly subscriber, and the new subscriber is also entitled to a choice of one of the January presents. See "Who is a new subscriber?" at foot of this page. We offer it for sale for 25 cents. Postage paid by us in each case.



THE Widder Doodles' Courtship.

By "JOSIAH ALLEN'S WIFE."
Premium No. 726.

To simply mention the author's name is equal to saying that there is no end of good, clean, sparkling fun in the book, not a page of which can be called dull or uninteresting. No other writer bits off the every-day occurrences of life in the keen, witty and laughable style of "Josiah Allen's Wife."

The book is a collection of fifteen sketches, all written in the most inimitable style of the author, on a variety of subjects, and everyone of them full of good points.



This cut, illustrating one of the sketches, "The Surprise Party," shows the laughable side of a surprise on both sides.

There is many a hearty laugh in store for you in reading this collection, and our offer is such that everyone can get it and "laugh and grow fat."

During the next 30 days it will be mailed free to any one paying 50 cents for one year's subscription to this paper. If you are already a subscriber you can have your subscription advanced one year by accepting this offer.

Given as a premium to any one sending 1 new yearly subscriber to this paper, and the new subscriber is also entitled to a choice of one of the January presents. See "Who is a new subscriber?" at foot of this page.

We offer it for sale for only 25 cents. Postage paid by us in each case.

LITTLE GEM Penny Bank

Premium No. 110. A most useful article in every family. Boys and girls, by having one of these banks, will learn valuable lessons of economy and thrift, illustrating the old maxim that a dollar saved is as good as two earned. They hold 50 pennies, and cannot be opened until 5¢ have been deposited. The amount deposited is always visible. The accompanying illustration shows the style of the bank.

During the next 30 days this bank will be mailed Free to any one paying 50 cents for one year's subscription to this paper. If you are already a subscriber you can have your subscription advanced one year by accepting this offer.

Given as a premium for 1 new yearly subscriber, and the new subscriber is also entitled to a choice of one of the January presents. See "Who is a new subscriber?" at foot of this page.

We offer it for sale for 15 cents. Postage paid by us in each case.

LITTLE GEM DIME BANK.

This is of the same style as the Penny Bank, hand-somely nicked, and the exact size of this cut, and holds 50 dimes (\$5.00). It is offered on the same terms as the Penny Bank.

COIN PURSE.

Premium No. 138. It has no superior for the price, and it is recommended as the best receptacle made for carrying coin. It is made of soft leather, with two pockets. The catch is the best made, and is known as the three-ball frame, nicked and polished. With this catch you can open one pocket at a time or both at once.

During the next 30 days it will be mailed FREE to any one paying 50 cents for one year's subscription to this paper. If you are already a subscriber you can have your subscription advanced one year by accepting this offer.

Given as a premium for 1 new yearly subscriber, and the new subscriber is also entitled to a choice of one of the January presents. See "Who is a new subscriber?" at foot of this page.

We offer it for sale for 20 cents. Postage paid by us in each case.

The Modern Cook Book.

Premium No. 803.



It contains 320 pages, over 1,200 recipes, and hundreds of illustrations. The recipes are the choicest selections from 20,000 that were received from practical housewives living in all parts of the United States, to which were added the newest, best and most practical recipes of this progressive age, all of it set in new and large type, and the whole book handsomely illustrated. It has a beautiful illuminated cover and is an elegant and admirably arranged volume of recipes for practical, every-day use.

Among the excellent features of this richly illustrated Cook Book are the following: Practical Suggestions to Young Housekeepers, Necessary Kitchen Utensils, Suggestions and Recipes for Soups, Fish, Poultry, Game, Meats, Salads, Sauces, Catsups and Relishes, Breakfast and Tea Dishes, Vegetables, Bread, Biscuit, Pies, Puddings, Cakes, Custards, Desserts, Cookies, Fritters, etc. Also for Preserves, Candies and Beverages; Cookery for the Sick, Bills of Fare for Family Dinners, Holiday Dinners, etc. A Table of Weights and Measures; Chapters on the Various Departments of Household Management and Work.

During the next 30 days it will be mailed free to any one paying 50 cents for one year's subscription to this paper. If you are already a subscriber you can have your subscription advanced one year by accepting this offer.

Given as a premium for 1 new yearly subscriber, and the subscriber will be entitled to a choice of any of the January presents. See "Who is a new subscriber?" at foot of this page. Postage paid by us in each case.

We have not room to give an extended description of the following, but during 30 days from date of this paper any one of the following Premium Numbers will be mailed free to any one paying 50 cents for one year's subscription to this paper. If you are already a subscriber you can have your subscription advanced one year by accepting this offer.

Or, any one given as a premium to any person sending one new yearly subscriber to this paper, and the new subscriber is also entitled to a choice of one of the January presents. See "Who is a new subscriber?" at foot of this page. Postage paid by us in each case.

One Dozen Lead-Pencils. Premium No. 671. Perfection lead-pencils, with rubber tips. The kind that sell in stores for 5 cents each.

140 Best Needles. Premium No. 722. Contains 5 papers, with 25 best, large-eyed needles in each paper, assorted sizes. Also a collection of darners, chenille, tapestry, rug, carpet and other needles.

The Hagers-Town Almanack, for 1892. Premium No. 524. The old reliable, genuine Hagers-Town Almanack, published by John Gruher, which rules in many thousands of homes.

"Christ Before Pilate." Premium No. 100. A reproduction, in the original colors, of Munkacsy's famous painting, said to have sold for \$120,000.00. Many thousands of our subscribers place a value of more than ten dollars on this picture. Size, 21 by 28 inches.

"Christ on Calvary." Premium No. 210. The great companion picture to "Christ Before Pilate." Said to have sold for \$125,000.00. Size, 21 by 28 inches.

218 Pieces of Vocal and Instrumental Music. Premium No. 587. Printed from large sheet music plates, on heavy paper, worth over \$50.00 in sheet music form. A collection of English, Irish, Scotch and American Songs and Ballads, including Ethiopian and College, Sentimental and Comic, Sacred and Operatic, all with music complete, for voice and piano (or organ), arranged by Charles D. Blake. Also, Contra Dances, Reels, Jigs and Hornpipes; English, French, German, Polish and Spanish Dances; Galops, Polkas, Schottisches and Waltzes, Marches, Quicksteps and Gavottes, etc., with calls and figures. Arranged for Piano, Organ, Viola, or Violin and Piano.

Silver Plated Butter-knife and Sugar-shell. Premium No. 325 includes both articles. They are made in an elegant, neat and stylish pattern by a leading manufacturer. Are first nicked and then plated with silver. With reasonable care they will last for years.


Who is a NEW Subscriber? The above offers are made to increase our subscription list, therefore a change from one member of a family to another is not securing a new subscriber. A new subscriber must be a person who is not now on our subscription list, and one whom you have sought out and solicited to take the paper. Sending your own subscription, or the name of your wife, husband or any other member of your own family, is not sending a new subscriber in the sense we intend it, and will not entitle you to a premium. You may count your own name, or the renewal of any former subscriber, towards a premium when three or more names besides your own are sent, as this shows you have actually done some work, and been out among the people telling them of the merits of our paper.

For anything on this page, order by the Premium Numbers and address all letters to FARM AND FIRESIDE, Philadelphia, Pa., or Springfield, Ohio.

VALUABLE PREMIUMS TO SUBSCRIBERS AND AGENTS.

Agents or Club Raisers may offer to each "new" or "old" subscriber any ONE of the articles described on opposite page, with this paper one year for 50 cents. Agents may count all such subscriptions toward any of the valuable premiums offered in this paper or in our Premium List. If preferred, agents will be allowed a liberal cash commission on subscriptions instead of premiums.


Agents may offer to subscribers any premium described in this paper, or in our Premium List, at the "PRICE INCLUDING ONE YEAR'S SUBSCRIPTION" and receive a cash commission on the whole amount. Write for confidential terms to agents. No other journal gives subscribers so much for the money, consequently it is easier to get up large clubs for this popular paper than any other.

A  **SOLID SILVER BANGLE PIN**

Given as a premium to any one sending 4 yearly subscribers to this paper, and each subscriber is entitled to one of the presents on opposite page.


Premium No. 491.


These pins are made of **solid silver**, and the beautiful design elegantly hand engraved. The pin, as well as the bangle, is of **solid silver** and will wear for a lifetime, which no plated pin will do. They are very handsome and stylish, and just the thing for pinning lace or collar at the throat, and will be sure to please every one.


B 

Either style given as a premium for 4 yearly subscribers, and each subscriber will be entitled to a choice of any one of the presents on opposite page. Price of either style, including one year's subscription, 80 cents. We offer one for sale for 50 cents. Postage paid by us in each case. In ordering say whether you want design A or B.

These goods are Sterling Silver Plate, full size and of a later and handsomer pattern than shown in this cut. Their beautiful finish will aid greatly in giving a rich and tasty appearance to any table. Their good value has been appreciated by many of our readers in the past, and we make this offer that many more may avail themselves of the opportunity of securing such elegant goods in connection with this paper.

 **6 Teaspoons.**

 **1 Sugar Shell.**

 **1 Butter Knife.**

The **PEERLESS ATLAS FOR 1892.**

Sent free as a premium to any one sending 3 yearly subscribers to this paper, and each subscriber will be entitled to one of the presents offered on opposite page.

Or, the Atlas, together with this paper one year, will be mailed to any address for only \$1.

It Gives the Population, by the Census of 1890,

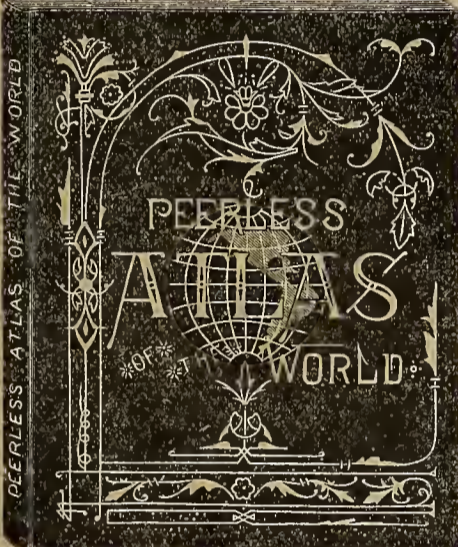
Of each State and Territory, of all counties of the United States, and of American Cities with over 8,000 inhabitants.

The Peerless Atlas meets the wants of the people more completely than any similar publication ever published. For the price, it stands "Peerless" in every sense of the word. The edition for 1892 contains new maps of southern states never before published, while accurate and timely information, statistical and otherwise, is brought down to the latest date. As an atlas and general reference book it is broad and comprehensive, valuable alike to the merchant, the farmer, the professional man, in fact, everybody. It is equal to any \$10.00 Atlas. To keep pace with the progress of the age, to understand comprehensively and intelligently the current happenings daily telegraphed from all parts of the earth, you must have at hand the latest edition of the "Peerless Atlas of the World."

LARGE AND MAGNIFICENT ILLUSTRATIONS embellish nearly every page of the descriptive matter, and faithfully depict scenes in almost every part of the world. They are intensely interesting and constitute an art collection which will be viewed with pleasure and admiration for years to come. Among these are included illustrations of 10 of the principal buildings to be erected for the World's Fair, at Chicago, in 1893.

The Peerless Atlas has as Large and Fine Maps as are found in \$5.00 and \$10.00 Atlases.

Size, Open, 14 by 22 Inches; Closed, 14 by 11 Inches.



Premium No. 399 includes

SIX STERLING PLATE TEASPOONS,
ONE STERLING PLATE SUGAR SHELL,
ONE STERLING PLATE BUTTER KNIFE, } **ALL FOR ONLY \$1.**

AND THIS PAPER ONE YEAR,

The complete set of 8 pieces is given as a premium for only 4 yearly subscribers, and each subscriber is entitled to a choice of one of the presents offered on opposite page.

Premium No. 400, including the set of 6 Teaspoons only, is given as a premium for 3 yearly subscribers, and each subscriber is entitled to one of the presents on opposite page.

Price of the 6 Teaspoons, including one year's subscription to this paper, 75 cents. We offer the 6 Teaspoons for sale for 50 cents. Postage paid by us in each case.

IMPROVED CYCLONE CORN-SHELLER. **Premium No. 611.**

The Cyclone Sheller has been greatly improved and is now the most perfect and effective sheller ever placed on the market. The manufacturers have succeeded in overcoming the frequent clogging and choking which is the constant objection to all other machines. Every part is strong enough to stand all strains likely to be required of it, and with proper usage it is warranted for five years. This improved machine is one of our most useful premiums, especially to our farmer friends. It is a little marvel in the simplicity of its construction, while in operation it is, as its name implies, a perfect cyclone in the rapidity with which it strips a "spike of maize" of its corn, dropping the corn into the box or basket, and throwing the "spike," or cob, off at the back. The sheller is small, but it "gets there" ahead of many a larger machine. Its shelling capacity is one bushel of ears inside of 4 minutes. By a new contrivance, the corn is all dropped into the box or basket arranged for it, the grains not being scattered about the machine, as with other shellers. We are enabled to offer the sheller, together with a year's subscription to this journal, at a very low price, considering its value and improvements. Must be sent by express, receiver to pay charges, which will be light. Name your express office, if different from your post-office.

This Improved Sheller given as a premium for 20 yearly subscribers, and each subscriber will be entitled to one of the January presents on opposite page.

Price, including one year's subscription, \$3.



Waterproof Aprons.

Given as a premium to any one sending 3 yearly subscribers to this paper, and each subscriber will be entitled to a choice of any of the presents on opposite page.

Premium No. 293.

A delight to every lady who owns one. It will protect the dress perfectly from any moisture when worn about the kitchen or during baby's bath. It is not made of the heavy enameled oil-cloth, but of light weight goods like the best gossamers, with cloth face of neat, pretty designs, the waterproof quality being on the back of the cloth and not visible while the apron is worn. It is large size, with bib; has strings, and also tapes on the bib to be used in fastening up the bib instead of pinning through the goods. Light in weight, handsome in appearance and useful in every household.

Given as a premium for 3 yearly subscribers, and each subscriber will be entitled to a choice of any one of the presents on opposite page.

Price, including one year's subscription, 85 cents. We offer it for sale for 60 cents. Postage paid by us in each case.



A \$4.00 Book And this Paper **Only 70 Cents**
 One Year for

YOUMAN'S DICTIONARY OF EVERY-DAY WANTS

Contains 20,000 Receipts. 530 Large Pages.
 The publisher's regular price is \$4.00. **Prem. No. 720.**

It is one of the most remarkable books of the day, containing, as it does, a reference to every conceivable subject under the sun. In itself it is a complete and practical library, so arranged as to be invaluable in the household, on the farm, in the counting-room or work-shop. It contains 20,000 tried and approved receipts. All trades, professions and occupations are represented, and valuable receipts are given for each, large sums being paid for some of the trade secrets, now published for the first time, and which will make fortunes for the wise. The following names some of the different occupations to which this book is invaluable: Miners, Opticians, Whitewashers, Soapmakers, Trappers, Tinsmiths, Cabinet Makers, Lumber Dealers, Engineers, Flour Dealers, Glass Workers, Hair Dressers, Hatters, Ink Makers, Housekeepers, Bankers, Barbers, Inspectors, Bookbinders, Printers, Gilders, Coopers, Copper-smiths, Machinists, Carriers, Doctors, Egg Dealers, Electrotypers, Engravers, Furriers, Glaziers, Grocers, Hotel Keepers, Iron Workers, Authors, Paper Hangers, Dentists, Plasterers, Scourers, Tailors, Taxidermists, Bee-keepers, Nurses, Perfumers, Roofers, Stereotypers, Tanners, Varnishers, Cooks, Clerks, Book-keepers, Farmers, Stock-raisers, Gardeners, Florists, Railroaders, Builders, Dairy-men, Druggists, Carpenters, Carvers, Jewelers.

LARGE FORTUNES have been made in the manufacture and sale of some of the receipts given. As stated above, the publisher's regular price for this remarkable book is \$4.00, but in order to largely increase our circulation we now offer it for only 70 cents, including this journal one year.

Or, the book will be given as a premium to any one sending two yearly subscribers to this paper, and each subscriber will be entitled to any one of the presents on opposite page.

In either case the book and papers are sent by mail, all postage paid by us.

GRAND PRIZES TO AGENTS FOR THIS PAPER.

Besides the Free Gifts to subscribers, and the Valuable Premiums or Good Pay offered to our Agents, we also give grand prizes each week to Agents sending the largest clubs during the week. The clubs may include both new and old subscribers. These prizes are given in addition to the premiums or commission allowed for each club. Grand Prizes are often secured by Agents sending only small clubs. The contests are open to everybody. Try it. You may win one of the Grand Prizes.

For the Week Ending Saturday, January 23, 1892.

FIRST GRAND PRIZE.

The Agent or Club Raiser sending the largest number of yearly subscribers for this paper, during the week ending January 23, 1892, will be given a

GENTS' GOLD WATCH,

Genuine **ELGIN** Movement,

In the celebrated Montauk Gold Filled Case. Handsomely engraved. With the case is sent a guarantee signed by the manufacturers, "Joseph Falys & Co.," that it will wear fifteen years. This watch usually sells in the stores for \$25.00 to \$30.00. If preferred, a ladies' gold watch, of equal value, will be sent the prize winner.

SECOND GRAND PRIZE.

The Agent or Club Raiser sending the second largest number of yearly subscribers for this paper, during the week ending January 23, 1892, will receive a copy of the latest edition of

WEBSTER'S INTERNATIONAL DICTIONARY,

with patent index. This is not a cheap reprint of Webster's Unabridged, but the very latest International, selling in stores for \$11.00.

The names of the winners of the above prizes will be announced in our issue of February 15th. Our next issue, February 1st, will contain a list of prizes to be awarded

For the Week Ending Saturday, January 30, 1892.

FIRST GRAND PRIZE.

The Agent or Club Raiser sending the largest number of yearly subscribers for this paper, during the week ending January 30, 1892, will be given a

Singer Sewing Machine.

It is a high-arm, four-drawer machine, with complete set of attachments. We have sold thousands of them for \$17.00 each, though they sell in stores for more than double that amount.

SECOND GRAND PRIZE.

The Agent or Club Raiser sending the second largest number of yearly subscribers for this paper, during the week ending January 30, 1892, will be given a

DECORATED CHINA DINNER AND TEA SET

Containing 78 pieces, of genuine Porcelain China, usually selling in the stores for \$18.00 to \$25.00.

NAMES OF PRIZE WINNERS

For the Week Ending Dec. 26, 1891.

The First Grand Prize, a Gold Watch, was awarded to Henry H. Hayes, of West Hartford, Vermont, who sent the largest number of subscribers received from one agent.

The Second Grand Prize, a Handsome Set of Dishes, 78 pieces, was awarded to A. Stoller, Jr., of Johnstown, N. Y., for the second largest club.

For the Week Ending Jan. 2, 1892.

During the holidays, our subscribers did not send large clubs, and the First Grand Prize for the week, a Singer Sewing Machine, was awarded to Amos Baker, Perryton, Ohio, who sent only 13 subscribers.

The Second Grand Prize was divided between R. B. Woten, Hutchinson, Kansas, and C. C. Petteys, Custar, Ohio, who each sent 9 subscribers.

The fact that the above valuable articles were secured with very small clubs should encourage many more to send clubs. Try it. You may secure a Grand Prize.

Any one may get up Clubs for this Paper and compete for the Grand Prizes.

Even if you do not secure one of the Grand Prizes, you are sure of valuable premiums for your trouble, as the above Grand Prizes are given in addition to the premiums offered to those who get up clubs. See opposite page.

For any article on this page order by the premium numbers and address letters to **FARM AND FIRESIDE, Philadelphia, Pa., or Springfield, Ohio.**

FARMERS Saw and Grist Mill, 4 H.P. and larger. Catalogue free. DeLOACH MILL CO., Atlanta, Ga.

10 to 50% guaranteed to every user of NEWTON'S IMPROVED COW TIE. Send red stamp for circular explaining the above guarantee. E. C. NEWTON, Batavia, Ill.

CHAMPION WASHING MACHINE.

Best in the World. Entirely new principle. Will wash 1,000 pieces per day. No steaming the ceiling, or stopping the floor. Will sell at wholesale price where we have no agent. Add.

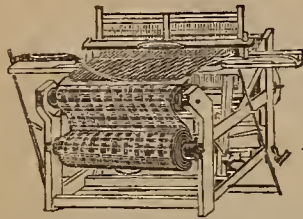
THE CHAMPION SHELF MFG. CO., SPRINGFIELD, OHIO.



THOUSANDS IN USE.

THE DELAWARE COUNTY CREAMERY.

EVERY farmer who writes us this month will get an offer so low that it will astonish who receive it. Don't lose this chance. Address, Delaware County Creamery Co. Benton Harbor, Mich.



FOR THE BEST FLY-SHUTTLE RAG CARPET LOOM

weaving 100 yards per day, address C. N. NEWCOMB Davenport, Iowa.

BEFORE YOU BUY A NEW HARNESS

send a 2c. stamp with your address for 72-page illustrated Catalogue of 65 different styles of hand-made PURE OAK LEATHER HARNESS. Single Sets, 87 any Double Sets, \$14 up. Every harness Warranted and Shipped subject to approval. It costs only a 2-cent stamp to know what we can do for you. TRY IT. King & Co., Wholesale Mfrs., No. 5 Church St., Owego, N. Y.



STEEL LINED CONTINUOUS HAY PRESS. \$150 AND \$185. PAID FOR WHEN FOUND SATISFACTORY. WE ALLOW ALL OR PART FREIGHT. Address PROGRESS MFG. CO., MERIDIAN, MISS.

KNABE PIANOS.

UNEQUALLED IN Tone, Touch, Workmanship and Durability. BALTIMORE, 22 and 24 East Baltimore Street. New York, 148 5th Av. Washington, 817 Market Space. Mention this paper when you write.

WELL DRILLING MACHINERY, MANUFACTURED BY WILLIAMS BROTHERS, ITHACA, N. Y., Successors to the Empire Well Auger Co., Mounted and on Sills, for deep or shallow wells, with steam or horse power. Send for Catalogue. ADDRESS Williams Brothers ITHACA, N. Y. Please mention this paper when you write.

Be Happy While You Live, for You Will Be A Long Time Dead To Be Happy Buy a DANDY STEEL MILL

AND A Dandy Steel Tower. With graphite boxes the Dandy Wind Mill Requires No Oil for Years, therefore No More Climbing Towers No More Tilting Towers to break down and injure you or your cattle. Needs no attention and is warranted to last longer than other mills that are oiled, and Will Be Sent to Good Parties on 30 Days Test Trial. If not satisfactory freight will be paid both ways. The Dandy Steel Tower is a Four Corner Tower, the corners being made out of heavy angle steel. The girts and braces are very strong and substantial, and of the very best steel made. It is the most graceful, strong and durable tower on the market, and can be erected in one-half the time of a wooden tower. We will not allow ourselves to be undersold. Challenge Wind Mill & Feed Mill Co., Batavia, Kane Co., Ill. Mention this paper when you write.

The Greatest Possible Quantity, Of the Best Possible Quality, For the Least Possible Money.

Is the plan the DAISY Implements are made upon. Our line now embraces Garden Plows, Wheel Hoes, Garden Seed Drills, Hand Carts, Strawberry Vine Trimmers, Grass Edgers, Lawn Mowers, Horse Hoes and Spraying Pumps. In addition to complete descriptions of these tools our catalogue contains an extended illustrated treatise upon spraying that is valuable, 68 pages in all, sent free upon request if the FARM AND FIRESIDE is mentioned. Address THE DAISY IMPLEMENT CO., PLEASANT LAKE, IND. Mention where you saw this advertisement.

DOUBLE BREACH-LOADER \$7.99. RIFLES \$2.00. PISTOLS 75c. GUNS. WATCHES, BICYCLES. All kinds cheaper than elsewhere. Before you buy, send stamp for catalogue to THE POWELL & CLEMENT CO. 166 Main St., Cincinnati, O.



OUT OF SIGHT! What? \$5.00 FOR \$1.00

Read this. It interests you. 1 pat. Springsteen Bit \$1.50 1 sup. 16x24 picture SUNOL 2.50 1 year's subscription 1.00 Send \$1 and 2c. stamps for postage to \$5.00 AMERICAN HORSE MONTHLY CO., (Write for sample copy free.) DETROIT, MICH. Mention this paper when you write.

Champion Evaporator.

For MAPLE, SORGHUM, CIDER, AND FRUIT JELLIES. Corrugated pan over firebox, doubling boiling capacity. Small interchangeable syrup pans (connected by siphons) easily handled for cleaning and storing, and a Perfect Automatic Regulator. The Champion is as great an improvement over the Cook Pan as the latter was over the old iron kettle, hung on a fencelard. The C. H. CRIMM MFG. CO. Hudson, Ohio and Rutland, Vt. Catalogues Free. Mention this paper.

THOMPSON'S GRASS SEEDER

Sows CLOVER TIMOTHY, RED TOP and all kinds of GRASS SEEDS. Sows any quantity, evenly, accurately, in wet, dry and windy weather. 80 to 40 acres per day. Weight 40 lbs. O.E. Thompson & Sons. Send for Circulars. No. 12 River Street, YPSILANTI, MICH.

Burr-Stone Grinding Mills

We offer you the best mill on the market at such a low figure it will pay you to write to us. They are the best constructed, least complicated and fastest grinding mills yet produced. SATISFACTION GUARANTEED. Send 2c. stamp for our 48-page Illustrated Catalogue. LEONARD D. HARRISON, Box A, NEW HAVEN, CONN.



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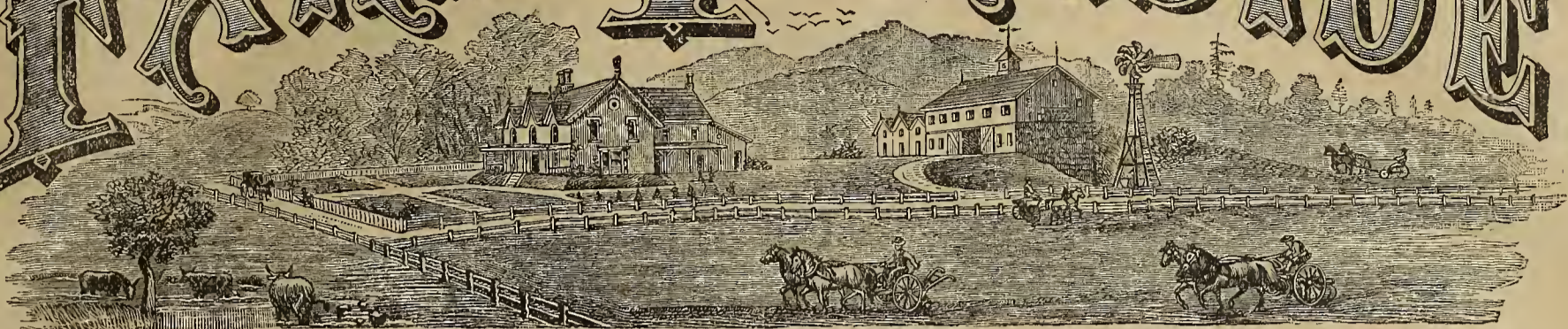
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FARM AND FIRESIDE



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Current Comment.

FROM the third annual report on the
"Statistics of Railways in the
United States," we take the follow-
ing:

The railway mileage in the United
States on June 30, 1890, was 163,597.05.

The number of railway corporations on
June 30, 1890, was 1,797. Forty corpora-
tions operate 47.51 per cent of the total
mileage. Seventy-five companies receive
a gross income of \$846,888,000, or eighty per
cent of the total amount paid by the people
of the United States for railway service.

There are 8,384 passenger and 16,140
freight locomotives—ten freight and five
passenger locomotives for each 100 miles
of operative line.

The total number of cars is 1,164,188, of
which 26,511 are in the passenger service.
The number of cars per 100 miles of line is
744. The number of tons of freight carried
one mile per freight engine is 4,721,627,
and the number of passengers carried
one mile per passenger-engine is 1,413,142.
Figures of this sort measure the economy
of transportation by rail.

The total number of men employed on
the railways of the United States is 749,301.
The average number of men employed
per 100 miles of line on all roads is 479.

The 156,404.06 miles of line, which is
made the basis of statistics in this report,
is represented by railway capital to the
amount of \$9,437,353,372, which is equiv-
alent to \$60,340 per mile of line. Assum-
ing that the remaining mileage is capital-
ized at the same rate, the total capital-
ization of the railway property in the
United States would be \$9,871,378,389. The
capitalization of railway property is
largely in excess of its market value.

The number of passengers carried dur-
ing the year was 492,430,865. The average
journey was 24.06 miles per passenger.
The average number of passengers carried
in a train was 41.

The number of tons of freight carried
during the year covered by the report
was 636,541,617.

The revenue per passenger per mile of
line for all the railways in the United
States was 2.167 cents; the average cost
of carrying one passenger one mile was
1.917 cents. The revenue for carrying
one ton of freight one mile was .941 cents;
the cost of carrying a ton of freight one
mile was .604 cent. The revenue from a pas-
senger-train run one mile on all the rail-
ways, was \$1.08041; the cost of running a
passenger-train one mile was \$.80984. The
revenue from a freight train running one
mile was \$1.65434; the average cost of the
same was \$1.05711. These figures show
the margin from which railways must

secure their profits in the business of
transporting passengers and freight.

The total number of persons reported
by railways as killed during the year was
6,334, and the number injured was 29,025.
Of the total number killed, 2,451 were
employees, 286 passengers, and 3,597
"other persons." In this latter number
are included the large number of suicides.

Of the total number injured, 22,394 were
employees, 2,425 passengers, besides 4,206
unclassified. A passenger riding con-
tinuously at the rate of thirty miles an
hour might expect immunity from death
by railway accident for one hundred and
fifty-eight years; but an engineer, brake-
man or conductor, under the same condi-
tions, is liable to a fatal accident at the ex-
piration of thirty-five years. The most
common accident to which railway employ-
ees are liable results from coupling
and uncoupling cars. The most fatal
accidents, however, result from falling
from trains or engines.

IN his inaugural address, Gov. McKin-
ley recommends, in the interest of
agriculture, reasonable appropriations
to the experiment station and the state
board of agriculture, and legislation that
will result in an improvement of the pub-
lic highways. What the governor recom-
mends to the legislature in regard to
congressional redistricting is so eminently
just and fair that it must meet the approval
of all patriotic citizens regardless of party.
He says:

You will be required under the new census
to redistrict the state for representatives in
Congress. This will afford you an opportunity
to arrange the districts with fairness to all.
Make the districts so fair in their relations
to the political divisions of our people that
they will stand until a new census shall be
taken. Make them so impartial that no future
legislature will dare disturb them until a
new census and a new congressional appoint-
ment will make a change imperative. Ex-
treme partisanship in their arrangement
should be avoided. There is a sense of fair
play among the people which is prompt to
condemn a flagrant misuse of party advan-
tage at the expense of popular suffrage. Partisanship is
not to be discouraged, but encouraged in
all things where principle is at stake; but
a partisanship which would take from the
people their just representation, as in the
case of the congressional redistricting by
the last legislature, is an abuse of power
which the people are swift to rebuke. You
must have observed from the returns of the
late election that the party which carried
the state by a plurality of more than twenty-
one thousand, and which received a plurality
in fifty-one counties of the eighty-eight
in Ohio, carried but seven congressional
districts of the twenty-one—the minority
party thus controlling two thirds of the
congressional districts, and the majority
party only one third. It will be your duty
to re-enfranchise the citizens of Ohio who
were disfranchised by the last legislative
"gerrymander," and to restore to the people
their rightful voice in the national house
of representatives. Free suffrage is of little
service to the citizen if its force can be
defeated by legislative machinations in the
form of a "gerrymander." The districts
should be made so as to give the party
majority in the state a majority of repre-
sentatives, and so arranged that if the
party majority shall change, the representa-
tive majority shall also change.

Nothing better than the foregoing has
ever been said on "gerrymandering." The
present legislature has before it redistrict-
ing bills that rival in the art of "gerry-
mandering" the one passed by the pre-
ceding legislature. But it is to be
hoped that the wise advice of Governor
McKinley will be followed. It is not a

good excuse for the party in power to
disfranchise any number of the voters in
the state simply because another party has
done so in the past. Fairness should win
in the end.

IF the growth and development of the
railways of the United States could
only be paralleled for a few years by
the growth and development of the pub-
lic road system, the people of the country
would be greatly benefited. Farmers
must build and maintain the public high-
ways. The burden of expense falls almost
entirely on them. Before the much-
needed improvements of our highways
can be made, it must be clearly demon-
strated to the farmers that it will be
money in their pockets to expend money
and labor on public roads. When they
realize that money and labor invested in
getting good roads will not only pay good
interest on their investment, but also pay
back the principal in time, then will they
listen attentively to the gospel of good
roads that is being so zealously preached
to them. Members of the legislature are
ready to give us improved road legisla-
tion just as soon as their constituents will
approve. But some counties are so back-
ward on the road-improvement question
that their representatives would commit
political suicide by taking any progressive
action in road legislation. The work of
reform must be largely done at home
among the farmers who bear the expense
of road construction and maintenance.

A POPULAR subject of discussion now
among farmers is free rural mail delivery.
In the successful experiments in this line
made by the post-office department, the
increased expenses were met by the rev-
enues from increased postal business. The
experiments indicate that the free deliv-
ery system could be gradually extended
without causing any annual deficit in the
department. It does not appear from the
report that where the experiments were
made the carriers had to travel over the
average public roads of the country. It
might have made an entirely different
showing, if the carriers had been obliged
to travel over the average roads in bad
weather. The question of free rural mail
delivery is closely connected with the
question of road improvement. And it
is quite safe to say, even in the event of
the extension of the free delivery system,
that there are very many portions of the
country, not thinly settled either, that will
never see free rural mail delivery, unless
they make a vast improvement in their
public roads.

FORTY years of wheat culture in
Ohio" is the title of a bulletin re-
cently issued from the Ohio Agri-
cultural Experiment Station. The subject
is concisely and comprehensively treated.
Tables and maps present the wheat sta-
tistics in a most striking and instructive
form. The total yield and average yield
per acre for each year during the forty
years ending 1889 are given; the years of
crop failures and the causes of the failures
are mentioned; the effects of the use of
commercial fertilizers on wheat are
shown; the relation between wheat cul-
ture and geology is considered, and in
conclusion, the great possibilities of wheat
culture in the state are clearly pointed
out.

THE final estimates of the Department
of Agriculture on the 1891 wheat
crop make it much larger than the
earlier estimates. The general average
yield is now placed at 15.3 bushels per
acre instead of 15, and the area has been
increased over 700,000 acres.

The report gives the following figures
on the cereal crops of 1891:

| | |
|----------------|------------------------|
| Corn..... | 2,060,154,000 bushels. |
| Wheat..... | 611,780,000 " |
| Oats..... | 738,394,000 " |
| Barley..... | 75,000,000 " |
| Rye..... | 33,000,000 " |
| Buckwheat..... | 12,000,000 " |

IT having been decided to attack the
tariff law, section by section, instead
of endeavoring to have it all repealed
at once, the chairman of the ways and
means committee prepared a bill repealing
all the duties on wool. The "compensa-
tory" duties on woolen goods are also to
be taken off, but the ad valorem duties on
woolen goods are left untouched, and thus
they will be left as highly protected as
they ever were. The product of the farmer
is to be put on the free list. The product
of the wool manufacturer is to be left
fully protected. That may not be consist-
ent with the free trade theory, but it will
suit the clamorers for free "raw material."

In political economy, raw material is
that upon which no labor has been ex-
pended. In politics, that definition does
not hold good. Wool is raw material to
the wool manufacturers. But the wool
grower is unable to look at his product as
something to which no labor has been at-
tached.

The cry for free raw material simply
amounts to this, that the labor of the
wool manufacturers must receive consid-
eration, but the labor of the wool pro-
ducer must receive no consideration.

THE free-wool bill is the work of poli-
ticians, and not of wool growers or
manufacturers. The national associa-
tion of wool manufacturers, in a mem-
orial to Congress, protest strongly against
any change, at the present time, in the
tariff on wool and woolen goods. The
memorial sets forth that the greatest need
of the industry is a period of entire rest
from tariff legislation. Probably the
manufacturers see that free raw wool is
only the entering wedge of a destructive
attack on the whole system of protection,
and that after free wool, free woolens must
inevitably follow.

THE administration has formally no-
tified Austro-Hungary, Spain, for
the Phillipine Islands, and the
countries of Central and South America
which have not already concluded reci-
procity treaties with the United States,
that a proclamation will be issued March
15, reimposing revenue duties on the
sugar, coffee, etc., imported from them,
unless they make satisfactory reciprocal
trade treaties before that time. This will
be a test of the retaliation part of the
tariff law.

Although putting sugar and coffee on
the free list lowered the price the full
amount of the revenue duty, reimposing
it on that imported from a few countries
will not have the effect of raising the price
again, because the greater proportion of
that imported will still continue to come
in free. The exporting countries must
lower their selling prices or stay out of
our market. It is not probable that many
of them will wish to stay out.

FARM AND FIRESIDE.

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Our Farm.

BEAUTIFUL THEORIES AND STERN LESSONS OF REALITY.

BY T. GREINER.

WALL have our pet theories. Often we put up a lofty structure, when all at once stern reality sends an unexpected blast, and down tumbles into a shapeless heap what we had put up with so much pains and ingenuity. This sometimes means a rude awakening from beautiful dreams of safety.

One of the pet theories which we have been advocating with great persistency is that the free use of fruits and vegetables makes us happy and healthy, and prevents physicians and druggists' bills. I have not only been preaching this, but lived up to it in practice. No family in the land could have been more bountifully provided with the best of fruits and vegetables the whole year around than mine. Everything that garden and orchard affords was placed within their reach. During winter and early spring, when domestic fruits were scarce, I have bought pineapples by the barrel or dozen, and bananas by the bunch. Of the latter fruit, especially, my children are given almost continuously all they want. In short, we use fruits and vegetables more freely and greasy things more sparingly than 99 out of 100 families in the land; consequently, we ought to be comparatively exempt from sickness.

This was a beautiful dream. Then came the awakening. Within a year's time I have had three cases of typhoid fever in my family. The first two cases (my boys) had very light attacks, so-called "toy cases," and they got along easily and nicely. Here again I congratulated myself that even such treacherous diseases as this one would get less hold upon fruit and vegetable eaters than upon meat eaters. But again came the awakening. My eldest daughter, so young, so fair, so good, beloved by all who knew her, the pride of her parents and friends, was stricken by the same terrible disease. Pneumonia set in as complication, and in spite of the best medical attendance, the most skillful nursing and her parents' unceasing, loving, watchful care, day and night, week in and out, death gained the victory after our more than five weeks' hard fight. On January 1st we buried our daughter near the old home, where she was born nineteen years ago.

The idea of moving away from our present location suggested itself to us;

yet can we expect to run away from sickness and death? Here it is typhoid fever that we have to fear; elsewhere it may be diphtheria or scarlet fever or pneumonia, or any of the hundred and one diseases that threaten the lives of our beloved ones and our own. Our greatest concern now is to discover the cause or causes of these typhoid fever attacks. We live in a rented house, and the privy has one of those old-fashioned nuisances and death pits—a deep vault—where the filth has been allowed to accumulate in a layer many feet in depth. Could anything from here have leaked into the well? We have thought this hardly worth while considering, since the subsoil is stiff clay and will let no water pass through. Besides, I have been using coal ashes as an absorbent, and great quantities of copperas and chloride of lime and blue-stone and carbolic acid as disinfectants. Nobody in the town has used such materials more freely than we have. Copperas has been scattered all over the premises, especially in the immediate vicinity of the house, wherever we thought slops might at any time have been emptied. Now the vault has been emptied, thoroughly disinfected and filled up with coal ashes. A wheelbarrow with iron box will be placed under the seats, so that the accumulations can be removed once a week. With the free use of earth and coal ashes we will have no offensive sight or odor. This does away with one nuisance.

The next object of inquiry is the well. I never drink clear, cold water from the well. I am afraid of it. I would drink from a clear, crystal mountain spring, where the water first bubbles out of the ground, but these old wells, especially if open on top, and affording chauce for toads, moles, rats or mice to get in, I am afraid of. The typhoid fever germs develop in the stomach or intestines; they cannot get there in cooked food. The supposition is that they get into us in the water we drink. It may be so, and it may not; but I believe it is the truth. Thus I have been requesting the members of my family to abstain from drinking fresh well water, but they all claimed they could not get along without it. Now, I think they will take my advice.

But what can any one drink? I seldom drink anything between meals. I get all the liquids that my system needs in soups, coffee, etc. Sometimes I drink hot water fresh from the steaming tea-kettle. No live germs in this, and it is one of my favorite remedies when a little out of sorts. A cupful of hot water, taken before each meal for a few months or a year, or longer, will cure many ills, especially of the stomach, such as dyspepsia and the like. Sometimes I take hot lemonade, usually without sugar. In early spring and summer, when the system is feverish and requires more liquid than at any other time, I sometimes drink cold lemonade, but I put a teaspoonful of best brandy in each glassful for the purpose of killing germs that may be in the water. This recipe may not do for everybody, but it does for me. It seems to be a special medicine for a special case. Drinking much cold water in the hot season never did agree with me. Medicated as mentioned, I can take it with impunity. Still, I do not take very much of it, and this only during a very brief period in each year. But what to do with my well I am at a loss to know. The water runs in so fast it will be hard to pump it out, thus giving us a chance to clean the well. This will be tried, however, and then I will attempt to make everything snug and tight, laying the platform in cement. This, of course, is doing work for other people. The house is not mine. It is not likely it ever will be mine, or that I will occupy it for any number of years. It will cost some money to fix all these things, but what is money compared with the health and lives of our dear ones? If there is the remotest chance of averting danger by fixing up the old house, the old well, etc., I will not hesitate to do it on account of the expense.

From what I have already said, however, my friends should not infer that I have become skeptic in regard to the usefulness of a vegetable and fruit diet. I have not. I am just as enthusiastic and recommend it just as earnestly as ever. Aside from these fever cases, we have been usually blessed with good health and most excellent appetites, and I am sure much

of this is due to our natural style of living. But even an exclusive fruit and vegetable diet would not give us exemption from sickness and death.

ON THE BEHAVIOR OF ANTISEPTICS TOWARD SALIVARY DIGESTION.

BY H. A. WEBER,

Professor of Agricultural Chemistry, Ohio State University, Columbus, Ohio.

Among the various causes which injuriously affect public health, perhaps none has received less supervision in this country than the practice of food adulteration. A systematic examination of the food commodities as found upon the market reveals a condition of affairs which is simply appalling to a person who is interested in public welfare. The investigations on this subject show conclusively that nearly all classes of manufactured or prepared articles of food are liable to be found adulterated. In many cases, it is true, the adulteration is merely fraudulent and not injurious to health; but on the other hand, a mass of evidence has accumulated to show that for the sake of gain or advantage over a competitor, the sophisticator of human food will not shrink from employing such means as endanger the health or even the life of the consumer.

One class of food adulterations which has been universally employed of late, without restriction, embraces the use of antiseptics for preserving perishable articles of food. This subject is of especial interest at the present time, because the practice of employing various antiseptics as food preservatives is not confined to the manufacturer and dealer, but has found its way into private households all over the land, and because the baneful effects of this practice are not fully appreciated or understood by the public.

In general, only such antiseptics can be employed which are devoid of any appreciable taste and odor, and which are not immediately fatal in their action upon the consumer. Among these substances may be mentioned salicylic acid, boracic acid, borax, calcium sulphite and saccharine. That saccharine will doubtless come into general use in food and drink, may readily be inferred from its extreme sweetness and antiseptic properties.

The market is full of preparations which contain boracic acid or salicylic, or both, and which are sold as "lard bleachers, sausage and meat preservatives, fruit, cider and wine preservatives," etc. A few of these articles which the writer has examined may be mentioned here for the sake of illustration:

1. A lard bleacher, called Snow White, containing 10.86 per cent of boracic acid and 47.12 per cent borax.
2. A salt, colored pink with cochineal, called B. Savaline, and used as a sausage and meat preservative, containing 16.26 per cent boracic acid.
3. A sample of antiferment for keeping cider sweet, consisting of 21.6 per cent boracic acid, 78.4 per cent salicylic acid.
4. Three preservative salts for meat, containing respectively 31.91, 43.05 and 53.22 boracic acid.
5. A preparation claimed to be harmless, for meats and other foods, containing 25 per cent boracic acid, 45 per cent saltpeter and 30 per cent salt.

After H. Leffman and W. Beam (Analyst Vol. 13, page 103) had shown that certain antiseptics completely arrested the conversion of starch into grape sugar, by diastase and pancreatic extract, the writer naturally inferred that a similar effect would be produced by these substances on the diastatic action of saliva. At my suggestion, Mr. C. P. Fox, one of my students, took up the matter as a subject for his graduating thesis. The result of his careful and painstaking work is embodied in a series of twenty-four tables, which are interesting in a scientific point of view, but which would be out of place here. The method employed was as follows:

One gram of starch was mixed with 10 C. C. of water, boiled five minutes, 5 C. C. more of water added, cooled to 40° C., 5 C. C. saliva of the same temperature added, violently shaken, and the mixture kept at the temperature of 40° C. for the required time, when the action of the saliva was suddenly stopped by heating the mixture to the boiling point. The mixture was then neutralized, diluted to 100 C. C., and the sugar determined by Fehling's solution.

At each step parallel tests were made with one gram of pure starch and with one gram of starch containing the indicated amount of preservative, using equal amounts of the same saliva in each case. The preservatives employed were salicylic acid, boric acid, calcium sulphite and saccharine.

In each step the starch was subjected to the action of the saliva for different lengths of time; namely, 1, 5, 15, 30 and 60 minutes.

By the tests it was shown that when the preservatives were present in the proportion of 1 part to 210 parts of the food mixture, the diastatic action of the saliva was completely arrested, in each case, for the periods of one minute and five minutes. For other periods of time the calcium sulphite was without effect; borax retarded the action to the end, while in the case of salicylic acid and saccharine, not a trace of sugar was formed, even in the one hour period.

Where the amount of the preservatives employed equaled 1 part to 420 parts of the food mixture, not a trace of sugar was formed, even in the one hour period, in the case of salicylic acid and saccharine. Borax completely arrested the diastatic action for one minute, and retarded the action for the remaining periods up to the hour period. In this proportion calcium sulphite was without effect.

Where the proportion of the preservative was 1 to 840 parts of the food mixture, salicylic acid almost stopped the action of saliva for the periods of one and five minutes, and appreciably retarded it for the remaining periods. Borax had a very depressing effect for the one, five and fifteen minute periods, with less marked results in the thirty and sixty minute periods. Calcium sulphite and saccharine were without effect.

Where the proportion was 1 of preservative to 1,050 of food mixture, borax alone showed a depressing effect.

The smallest proportion of the preservatives with which tests were made was 1 part in 2,100 parts of the food mixture. Here again the borax still showed a depressing action, while the other three were without effect.

FEEDING HENS FOR EGGS.

One of the FARM AND FIRESIDE readers desires me to give some further information as to the way I manage my hens for the production of eggs, being incited thereto by some remarks I made in a recent number of this paper, in which I stated that I fed hens on an exclusive diet of corn and they had done well. This inquirer wishes to know what breed I keep, how many hens to one cock, how much corn to a dozen hens, what I use to keep lice down, size of hen-house, position of perches and "any other information that can be used with poultry." I will try to answer all of our friend's requests except the last, for, as the FARM AND FIRESIDE could not allow me one whole issue, including space taken up for advertisements, that would be out of the question.

BREED.

Plymouth Rock and American Dominique. I prefer Plymouth Rocks if not too big; as bred now for exhibition, I don't care to handle them; they are too clumsy, eat too much and do not lay eggs in proportion to their size. The Dominiques, on the other hand, are rather too small. A cross between the two makes a good size, but if confined to one of these breeds I should take the Plymouth Rocks. In regard to the number of hens to a cock, I prefer from ten to twelve of the Plymouth Rocks, but suppose the lighter and more active breeds, such as Leghorn, could be penned at the rate of from fifteen to twenty to one cock.

TO KILL LICE.

I use a dip sold for dipping sheep to kill ticks, but kerosene or crude petroleum, sprayed over the house once in every week or two, will answer the purpose equally well.

SIZE OF POULTRY-HOUSE.

Mine ranges from 6x10 to 14x30, but one of them being built for a hen-house; the others (I have six) were farm buildings, put up for various purposes. A house 6x10 will accommodate eight hens and a cock, perhaps more, but I find that the fewer the hens in one house, the greater the average of eggs. I don't see why some persons insist upon crowding all the

poultry into one house. One of my neighbors complained that he was getting no eggs. On inquiry, I learned that he had ninety head crowded into one house, and that not a very large one. Rest assured that crowding will not pay; if you cannot enlarge your house, sell some of the hens rather than crowd them.

POSITION OF PERCHES.

One of the greatest improvements introduced into the hen-house is to place the perches on a level and not more than two feet above the floor. The old-fashioned plan was to have the perches rise one above the other till the highest was close to the ceiling; the result was that every hen and cock insisted upon roosting upon the top perch, and there was a constant squabbling from roosting time till dark, the weaker ones gradually getting knocked off the perch. And that was not all, for in the morning the fowls flew down from the top perch (they will walk up a ladder, but don't care to walk down), and injured themselves by striking against the floor, or maybe against the side of the house. Put the perches on a level and about two feet from the floor, and provide sufficient length of perch to accommodate each fowl so that there will be no crowding.

THE FEED.

It is generally regarded as a fact that hens fed on corn alone will not lay well, that they will get too fat, and, moreover, the chemical composition of corn is such that it cannot supply the material required for the production of eggs. It has been proven that the cow will put more fat in her milk than her food contains, as fat; that the hog will store up more fat in his body than his food contains, as fat; showing that both of these animals manufacture fat out of materials not fat when taken into the body. Now, isn't it just as reasonable to suppose that the hen can, from corn, which does not contain (according to analysis) the proper material for the making of eggs, make egg material out of it and profitably produce eggs? I think so. I don't mean to argue from this that corn alone is the best feed for hens, for I don't believe that it is, but I know that hens fed on corn alone will pay as egg producers.

HOW TO FEED.

Our friend inquires how much corn to a dozen hens. I believe that the best way to feed corn, when it is to be the exclusive grain food, is to feed it in self-feeding boxes; then the hens will not overeat, and they will probably not eat so much as they would if fed two or three times a day. That is the way I feed corn when the hens get little or no other grain.

A LITTLE OF THE "OTHER INFORMATION."

Our inquirer's desires may be found in what follows: All of my houses are lined with straw; this makes the warmest wall in winter and the coolest in summer of anything I have tried. It is cheap and easily put up by tacking laths across the studding and stuffing straw behind the laths. Skimmed milk fed to hens will pay a bigger profit than if fed to pigs, or to calves after they get old enough to eat hay and meal. Hens must have lime; pounded oyster shells answer the purpose exactly, and also furnish the grit required by the gizzard. I have never fed any poultry-powders or condiments; others who have say they are good. In very cold weather my hens are not allowed out of doors, sometimes for months at a time. Green feed in winter may be a necessity; so far I have doubts, but give them hay or cut fodder; clover hay is the best by far. My hens never have free range; I can't afford to lose the eggs that will be laid all over the farm, nor to have the hens cultivate the flowers and vegetables. There is no "best" breed for all. Select the breed you think will suit you, and stick to it until you find that it doesn't. The chances are that if it does not suit, it is your fault, not the breeds'. My hens pay a profit of from \$1 to \$1.90 per head per year over cost of feed. This is almost entirely from the sale of eggs at market price. Hens will pay a greater profit than any other farm stock, taking amount invested into consideration. Hens do not require any great amount of attention, but they must be regularly attended to. Pullets for winter layers, according to my experience.

A. L. CROSBY.

SHEEP AT THE COLUMBIAN WORLD'S FAIR.

The attention of sheep and wool men of the United States is being directed to the exhibit at the Columbian world's fair, that may benefit their industry. They feel that it is time the right man was secured as superintendent of the sheep show. There are so many qualifications needed in such a man that only a few will be referred to in this connection.

1. He should be a practical sheepman himself, a good judge of sheep, with some accurate information and appreciation of the various systems of sheep husbandry throughout the world.
2. He must be above prejudices for or against any breeds of sheep or any line of sheep-raising.
3. He can do nothing without the confidence and cheerful co-operation of sheepmen nationally, and without opposition internationally.
4. It is imperative that the man selected to plan and carry out a useful sheep exhibit at this world's fair should have broad views of the world's sheep industry. The many systems of breeding, feeding and management of flocks are to be brought under review, and the superintendent must be responsible for the possible good to the exhibitors and their several countries.
5. To do this effectively, a man must be found who is above littleness, with a sense of honor and fairness that shall secure general confidence.
6. A man must be chosen who understands men as well as sheep.

There are such sources of information to be utilized, such stores of practical facts to be brought out that are to be illustrated in specimens of flocks and flock products, such unwritten systems of management that no time should be lost in placing a good, competent man in charge of the work. It will require no little time and a vast amount of labor to arrange and systematize the immense displays that may be brought together. Then, not the least of the duties of superintendent will be the securing of competent juries for the placing of premiums.

The sheep and wool displays of the different states, the many registered associations, the nations that are to bring their exhibits, however intelligently bought, are to be generously and carefully appointed and accommodated. It may be confidently expected that there will be the sharpest and most intense rivalries between nations. It will indeed be the battle of the breeds. It will be to the credit of the superintendent if, fortunately, no bitter jealousies shall be engendered. The results must leave no unkindly feelings; all must tend to a most friendly, brotherly understanding of all differences and rivalries.

R. M. BELL.

THE EDUCATED FARMER.

The object of a general education is to develop and to train the mind without regard to the subsequent employment of it. It is true that the man who intends to practice law or medicine may take studies or follow courses of reading while in college that may contribute to the final result, but generally the process of education is simply to prepare the mind to cope with whatever may be presented to it in the course of life.

A young man just out of college returned to the farm, and a neighbor exclaimed, "What's the need of a man's going to college to learn to raise potatoes?" He might as well ask what's the need of a man's going to college to learn to amputate a limb, or to make an argument in court. As already stated, education is merely preparatory. It supplies a mental factor that enables the possessor to work to greater advantage, whether he serve as lawyer, physician or farmer.

But to return to potato raising. The progressive farmer does not merely drop a potato in the earth, keep down the weeds, and dig the increase in the fall. That would be raising potatoes as the Indians raised corn. The question is, how can the potato be treated to bring the largest returns? And it is no fool question; it has taxed the minds of some of the best thinkers in this country, and the thinking of these men has resulted in more general good than all the "meetings" of the fudge-fudge school of philosophy.

Now, it is reasonable to suppose that the man who has been trained to rely on mental as well as on physical force may

evolve something out of potato raising that may accrue to his own and to others' advantage. The educated mind, whether educated in college or elsewhere, is progressive and is not content with present attainments, but is ever reaching out for better results in whatever course interested or directed. A knowledge of Latin or Greek may not help potato culture directly, but the discipline of mind necessary to learn these languages may lead to an improvement of the crop.

Many persons appear to think that farming may be undertaken and carried out successfully by any man who has a little physical strength left; that he may fall back on agriculture when everything else fails, and be an easy prop to support. Nothing can be further from the truth. It is mind, or the exercise of it, that leads to success in agriculture, and it is not too much to say that the more cultivated the mind—the mind that has been subjected to the best training and discipline—is the one that will accomplish the most on a farm.

There is another reason why the farmer should be educated, or another way that an education may be a great help to a farmer. Most farmers lead monotonous lives—comparatively lonely. The farmer has less diversion than any other laborer on the face of the earth. Even if near cities or large towns, his duties keep him at home. But if he has an education, he has something to draw upon in all lonely hours, a fund of information always at his disposal. And this fund not only cheers him and helps him on to-day, but is also building him up, making him broader and more useful in the days to come.

In many parts of the country in agricultural communities, there may be few school privileges. The district school, open only a part of the year, is all that is provided in some places. Here the educated father or mother may supply some of the educational facilities lacking, and in any case supplement public instruction with home instruction. This suggests an important topic. If children could be educated on the farm, if their interest in agriculture might grow with their interest in books, what a crop of educated farmers we might have. But children are sent to the city for their education, and this often, if not generally, spoils them for a farmer's life. They delight to return to the farm in the holidays, but having a taste of the city are eager to get back to it. Education in any department of life is a factor that pays for the getting, and the more there is on the farm, the better for the farm, the farmer, the farmer's family and the farmer's community. GEORGE APPLETON.

WARM WATER FOR STOCK.

A farmer near here makes use of a simple and practical method of warming the water for his stock—thirty or forty head in all.

He has a tank that holds about three barrels. This is set at an elevation which allows the flow of water from a spring to fill it about two thirds full. Underneath the tank, which has a sheet-iron bottom, is placed a small kerosene stove, over which and extending above the top of the water is a funnel-shaped tube, which serves as a ventilator for the lamp and assists in heating the water. When sufficiently warm, the water is pumped into a large tub near the cattle-stalls through a pipe connected with the bottom of the tank. It is then distributed to the stock in pails. Any surplus water left in the tub is drawn off through a waste-pipe to prevent freezing. The stock is watered twice a day, and one quart of kerosene is used to heat the water.

The watering of stock with warm water is becoming more general every year, it having been proved, beyond a doubt, that ice-cold water has a tendency to lessen the flow of milk in cows, and it is reasonable to suppose that any stock will be better off and require less food if given water at a blood heat. Much of the food that stock eat in the winter is required as fuel to keep the animal warm. Some people claim that warm drink in winter will increase the flow of milk twenty-five per cent.

A. L. NAY.

New Hampshire.

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Our Farm.

NOTES ON ONION GROWING.

BY JOSEPH.

On the desk before me are just ten letters, containing inquiries about onion growing, and all recently received from readers of the FARM AND FIRESIDE. I infer that this must be an important and popular subject; hence, have concluded to reply to these inquiries in this general way. This my friends should fully understand. The new method, explained in earlier issues of FARM AND FIRESIDE, and more fully in my little work, "The New Onion Culture," is now working a revolution in onion growing in the United States. It has become a factor with which not only our domestic growers, but also those in Bermuda, the West Indies, Spain, etc., will have to reckon. I have been putting just as good onions as the imported Spanish are, on the market the past season, and obtained satisfactory prices, and I think we can, to some extent, drive the imported article out of our markets. I am fully convinced that my method enables, especially the southern grower, to make the production of "Bermuda" and "Spanish" onions very profitable, and all of us together to keep the markets of the United States well supplied with a most superior product almost the entire year, so that there will be no gap to be filled by the foreign onions. As the returns and the reports come in, one after another, and the possibilities of the new method become more fully apparent, I cannot help to grow more and more enthusiastic on the subject.

will do for this purpose. It will require about one and a half pounds of good, plump seed to grow plants enough for an acre. Sow the seed in hotbeds, either broadcast or in rows rather closely together, using about one and a half ounces of seed to an ordinary sash. Keep free from weeds, and when the plants are of about pencil thickness, transplant in open ground, which should be made very rich and be well prepared, having rows about twelve inches apart and plants about three inches apart in the rows.

This work of setting out the plants is quite a job, but it saves at least one weeding and several pounds of high-priced seed per acre, and in the end proves very profitable. Early planting is essential, and so are good plants. If mistakes are made in either direction, the result may be a lot of scallions rather than perfect bulbs, especially in case of the yellow sorts. When good plants are once set out, you have the plantation well started, and will have but little trouble to keep it in good order, provided you use the wheel-hoes, or Gregory's finger-weeder, industriously and frequently. I like the Planet Jr. tools, and any smart boy can use them with good effect and little effort. Of course, when weeds start, these must be removed, which can usually be done the easiest and quickest way by means of a narrow hoe.

One of our friends asks what effect it would have on the plants if the tops were cut off half way down before setting them out. This is just the treatment I give to plants that are a little spindling, and even of stronger plants I often twist off a little of the top; but with really good plants it will hardly be necessary. In fact, onions transplant very easily, and good plants will set out rarely die, even in very dry weather. This is really one of the greatest advantages of good plants. For best results we must have a full stand, and when such plants are used, we will seldom find a gap in the row. The chief point hereafter is to get the crop properly ripened and cured. With this end in view, the onions should be pulled as soon as the



The results obtained by the new method and at the same time my way of marketing the first grade of the product, are shown in the accompanying engraving, destined for use in second edition of "The new Onion Culture," and made directly from a photograph of one of my crates of onions, as I shipped them to the Buffalo market. These crates hold a plump three fourths of a bushel, and sold at one dollar each. This price is very satisfactory to me, and makes onion growing pay exceedingly well, especially when we remember that by the new method we can easily grow one thousand bushels and upwards per acre.

To satisfy my many inquirers, I will briefly touch the main points of my favorite method again. First, in regard to varieties. The Prizetaker and Spanish King are especially suited for this method, and either of them can be marketed to advantage as "Spanish onion," in crates. I greatly prefer the first-named. For a white variety, I think there is none equal to White Victoria. This, grown in same way, can be marketed somewhat earlier than Dauvers Yellow grown in the old way, and being extremely handsome and of fine white color, will be sure to sell for a good price. Of course, other varieties, like Yellow Dutch and similar ones, may also be grown in the new way, and marketed in August or September, when dry bulbs are usually scarce and sell at good prices.

Seed should be sown as early as hotbeds can well be started, say in February or early March, and as the ground at that time is usually frozen, we should make provisions for having the necessary soil at hand, by storing a good quantity in the fall in a place where it will be safe from freezing up solid. Any good loam

tops begin to waste away. It is always safer to harvest them too early than too late. In the former case, you may sacrifice a small period of growth, and consequently of weight of crop; but you will be sure to give the crop a better chance to cure and become well capped over. Gather them when perfectly dry, and store on a barn floor or loft, or on slatted shelves, leaving them spread out rather thinly to finish curing; then handle them over to remove the tops; sort and sell.

Several inquirers talk about planting three or four acres, and ask about the best methods of manuring the land. To them I say, don't. To plant on such a large scale, without a great deal of experience in growing and handling onions, to back up the undertaking is to invite sure failure. Plant on a reasonably small scale for a beginning. People who have never grown onions to any extent should never undertake to grow more than one fourth at most for a start, and one eighth of an acre would be safer.

POTATO SEED.—While I am not doing much in potatoes just now, for want of proper facilities, I wish to continue raising seedlings, and so do many of my friends. I believe it is a good thing to do. We may not succeed in getting a variety that is better than any other heretofore produced, and yet we may. Nobody can tell until the trial is made. The difficulty with us is to get the true seed from seed balls. Undoubtedly there are readers of the FARM AND FIRESIDE who have some to spare. I am anxious to get some, and willing to pay for a quantity. Will my kind friends let me know about it, if they have any. Address T. Greiner, La Salle, New York.

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COVERING PEACH-TREES TO PROTECT THE FRUIT BUDS FROM INJURY DURING WINTER.

Four trees, three years old, were selected for this trial. Alternate trees were left unprotected. No severe weather had occurred up to the date this experiment began, and the fruit buds were uninjured.

The trees selected were treated as follows: The main branches were shortened about one third their length, drawn together closely and fastened with strong twine. The earth was removed from the roots on the side opposite to that the tree was to be inclined. Each tree was then drawn carefully over until it lay prostrate on the ground, where it was securely fastened with twine tied to stakes driven into the ground. Sufficient earth was thrown over the exposed roots to protect them from the weather. The whole tree was then covered with straw to the depth of about one inch, which was kept in place with twine. Two of the trees were so covered that they could be opened.

A self-regulating maximum and minimum thermometer was placed inside with each tree. One of these trees was supplied with an arrangement for ventilation, and was opened regularly in the morning and closed at night. The other tree was opened once a day, and then only long enough to read the thermometers. The two remaining trees were not opened from the time they were covered until they were uncovered in the spring.

The trees, when uncovered in the spring, showed the buds on the trees not opened to be a little in advance of those on the tree regularly opened; but when compared with the buds on trees not protected, the unprotected buds were more advanced than any of those covered.

The effect of covering trees, as shown by this experiment, is:

1st. Trees covered during cold weather are subject to less variation of temperature than when unprotected. This is more marked when the change is sudden and of short duration.

2d. In cold weather the trees are warmer and in warm weather are colder than the outside atmosphere, and for the reason that the difference between the fruit buds being killed or uninjured is often a question of but a few degrees of temperature, the subject of covering the trees to protect the fruit buds is an important one and worthy of careful study.

3d. No perceptible injury was done to the trees or crop in laying the trees down. They blossomed as full and set their fruit as well as trees not treated. They also held and ripened their fruit and made as healthy a growth as the other trees.

The cost of labor required to cover a peach-tree of average size should not exceed ten or fifteen cents; to this must be added the cost of material used for covering.

If two or three inches of covering, instead of about an inch, had been used, the variation of the inside temperature would probably have been less.—Missouri Experiment Station Bulletin No. 16.

PEAR OR FIRE BLIGHT.

(Micrococcus Amylovorus Bur.)

This disease is produced by living germs, and finds an entrance to the tree through the growing tips of the branches, the flowers, and through cracks or openings in the bark.

The disease can be readily cultivated in the laboratory, and after being grown there several generations, can be taken back to the tree and produce the disease. This has been done repeatedly in experiments carried on here after five or more generations of growth in the laboratory; but all attempts to produce the blight by covering the leaves with the living germs of the disease resulted in failure, although it was easily done by the other methods.

No effectual remedy for the disease has yet been found. The copper mixtures recommended for the germ diseases of most of our cultivated fruits do not seem to prevent the pear-blight; for with trials of sterilized cultures of potatoes inoculated with the blight, dipped in strong copper solutions, the disease seemed to spread over the surface more rapidly than over the surface of the same cultures not dipped in the solutions. Cutting away the diseased parts and burning them is the most effectual way known to check the spread of the disease.

In the orchard of the experiment station the soil is a clayey loam, and the surface slopes slightly to the south-west. The prevailing winds during May, June and July for 1890, in this section, were from the south, south-west and west. The rows in the orchard run from west to east. The first fourteen rows, beginning at the south-west corner, are each composed of a single variety. The remaining six rows contain two or more varieties.

The first tree to show the disease was the ninth tree in row No. 1, in 1889. From this the disease spread, in 1890, across the eastern portion of the whole orchard, in the direction of the prevailing winds,

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across the several varieties contained in the different rows. The western half was much less affected by the disease.

In the spring of 1891, forty-six blighted trees were dug up and their places filled with new ones. Nineteen were also planted on the south end of the orchard. October 1, 1891, the condition of the orchard was as follows: Of the nineteen trees planted in the south end of the orchard, only one tree shows the blight. Out of the forty-six trees planted to take the place of the blighted trees, nine remain healthy, nine are killed by the blight, and twenty-eight are blighted from the top down, from one tenth to nine tenths of their entire length. Healthy shoots were found below where the blight had reached on each of these twenty-eight trees. Out of the 152 original trees remaining in the orchard, 119 have been killed by blight, 22 are diseased, and 11 still remain healthy. From the base of 111 blighted trees out of the 119 practically killed by the disease, healthy suckers are growing. The blight affected every variety planted in the orchard in nearly the same degree, although the Tyson was the least injured.

From the preceding, it appears that the germs causing the pear-blight were carried by the wind, and that the reason why the newly-set trees at the south-east end of the orchard were so little affected by the disease was that the germs were blown away from the trees and not across them; for the same varieties, planted where the wind carried the germs, were in most cases diseased. It also appears from the fact that healthy shoots or suckers were growing from the base of 111 trees out of 119 practically dead from the blight, that the blight does not attack the tree from the base upward, but that it begins from above and works downward. A dwarf pear orchard containing nearly the same varieties, shows the blight fully as bad as the standard orchard does. This, in a measure, proves that there is little difference in the blighting of dwarf and standard trees.—Missouri Experiment Station Bulletin No. 16.

INQUIRIES ANSWERED

BY SAMUEL B. GREEN.

Apple Seedlings.—C. L. G., Graham, Texas, writes: "At what time and in what manner shall I plant apple seeds to obtain the best results?"

REPLY:—Plant as recommended for N. C., Mansfield, Ohio, in this issue. Select, if possible, land free from cut-worms, which sometimes seriously injure apple-seedling beds.

Top-grafting the Peach—Orchard Cultivation—Wind-break.—A. S. K., Hamilton, Ind., writes: "Can the peach be top-grafted with profit?—Which mode of culture would be best for a young orchard—to mulch around the trees heavily with barn-yard manure and keep up good cultivation between rows and close to mulch, or not to mulch and cultivate close to trees?—What variety of evergreen is best to set for a wind-break for orchards?"

REPLY:—I think the operation in your state is too uncertain, and it would be safer to bud them in August on the branches.—Should prefer clean cultivation and frequent stirring of the land near the trees. The mulch would be all right if you would remove it in August, so as to give the wood a chance to ripen; but if left on through the autumn it is very liable to encourage late growth. I like to raise some crop that does not necessitate the stirring of the ground in fall, such as corn, early potatoes, squash, beans, peas, etc.—A Norway spruce hedge is very good for a wind-break. I prefer to allow free and full circulation of air through the orchard, but I do not want the fruit blown from the trees. I like wind-breaks, but not very close ones for orchards.

Rust on Plum—Bubach—Best Strawberries.—T. B., Field Creek, Tex. Rust on plum-trees is caused by a fungous growing on the tissues of the leaves. The rust are the spores by which it propagates itself. It injures the trees very much in some localities. Trees that are closely shut in are more liable to injury than those having free circulation of air. Some varieties are more liable to it than others. Spraying the foliage with Bordeaux mixture at intervals of about three weeks throughout the season until the growth is all made, is recommended as a preventive.—Bubach, or California insect-powder. It can be bought through any druggist or dealer in chemicals. It is very apt to be adulterated, and many growers use hot water to destroy the worms, which readily succumb to water warmed to a temperature of about 130°. A little practice will indicate the proper temperature that will destroy the worms without injuring the cabbage.—The kinds that will do well in one locality are often worthless in another place. You would probably be successful if you set out two rows Crescent or Warfield to one row of Mibel's Early.

Sprouts and Seedlings.—N. C., Mansfield, Ohio, writes: "1. I have a number of pear seedlings, which I have set out where I wish them to stand. I wish to graft them to pears, apples and plums. Can it be done? 2. I have a thicket of plum sprouts which I wish to set out and graft this spring. Can they be grafted this spring after setting them out? 3. I have a few old apple-trees which I wish to cut off at the ground and grow sprouts from the root. 4. Give me full instructions about raising seedling apple-trees. What shall I do to encourage a sprout to grow from the root of an old apple-tree?"

REPLY:—1. They may be readily grafted with pears. They could be grafted with apples, but the union would be a weak one, and they would soon die. Plums cannot be grafted on pears or apples. 2. No; it would not avail much to graft the sprouts the same spring they were transplanted. It would be better for you to plant them out next spring and graft a year afterwards, or else bud them in August. 3. A sprout from an old apple stump is not worth much, and it would be far cheaper for you to buy a tree than to attempt to get a rooted sprout. But all trees sprout most when pruned in the winter. If you want roots on the sprouts, they should be banked up with earth. 4. Seedling apple-trees are raised from seed sown early in the spring, in rich, well-prepared land, in drills three feet apart and covered not over one inch. Such seed will produce plants large enough to graft by autumn, when they may be taken up, stored in the cellar and root-grafted during the winter. The seed should be carried over winter buried in sand or other material to prevent it drying out.

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EXTRACTS FROM CORRESPONDENCE.

FROM OREGON.—Lane county has a mild climate. It rains about half of the time in the winter. It is a good fruit, grain and stock country. Prune culture is just starting here. The ground is muddy in the winter, and seldom freezes. Land is from \$10 to \$100 an acre; some homesteads open yet.

Cottage Grove, Oregon. M. A. R.

FROM NEBRASKA.—Farmers are awaiting spring to boom their acreage in crops, as prices have been stimulating, compared with what they have been for some years. The prospect for a crop is already good. So far, this may not be understood by those who do not understand the climate. We have had snow on the ground for the last two weeks, thawing some each day. Hay and feed of every description are plenty and cheap. We can afford to feed seven months, or even nine months, with our cheap feed. The boom with farmers will be on. Should prices of their products remain good, there will no doubt be boom of land buyers in this part before a another year.

Sweetwater, Neb. H. A. B.

FROM MISSOURI.—Taney county is on the southern boundary of the state, the fourth county from the south-west corner. The surface of the county is mostly hilly and unfit for general cultivation; but there are some patches of land that lie well and produce fair crops of corn, wheat and other grains. The soil is in many places mixed with small, broken pieces of flint rock; also larger stones of different kinds. These latter may be gathered up and baled off the land. This county contains many good locations for growing the apple, peach, pear, etc. The climate is specially suited to the peach, as it seldom, if ever, gets cold enough to kill the buds. Many of the tender varieties of fruits will succeed here. Some of the hillsides have the wild prairie grass growing upon them. The hills are mostly covered with oak-trees. The north slopes usually have the best growth of trees upon them. The forests furnish building and fencing material.

Swan, Mo. M. J.

FROM ILLINOIS.—I am interested in reading the letters that appear in each number from the different parts of the United States; but it does appear a little funny that most of the persons who write live in the best place on God's earth. I am glad that so many of us are satisfied with the country we live in. I am well pleased with Wayne county, Illinois. I like it for its mild winters and healthfulness; I think it is good a country for fruit raising as any other place, California not excepted. Thousands of acres are now in bearing apple-trees, and thousands more are being planted. I fear the apple business will be overdone; but the apple merchants come in from Chicago, Cincinnati and many of the large cities, and buy up our apples at good prices. They tell us to go in, plant all our ground in apple orchards; that such quality of fruit will always command a good price. I see in the papers that a party from Pittsburgh, Pa., is about negotiating for 2,000 acres of land in Wayne or Clay counties, all to be put in apple orchards.

Mt. Erie, Ill. J. W. S.

FROM ARKANSAS.—When we were living in Ohio, and were subscribers to your paper, our first thoughts were to look for letters from Arkansas. Now that we have been here some time, we can candidly say that this is the country of cheap homes, where those with shallow purses may obtain good farms, which will insure a comfortable living with less labor than in the North. Almost everything pertaining to comfort can be grown here. Corn and cotton are the principal crops. Apples, peaches, melons and all small fruits are almost a sure crop. This is also the home of the peanut and sweet potato. The latter cannot be excelled in any other state in the Union. The war is over, and is seldom mentioned, and then only in a friendly way. For the benefit of those desiring to come here I will state that town property rates about as it does in the North. Farming land from \$4 to \$20 per acre, depending altogether on the locality. As Arkansas has the name of being a very unhealthy country, I must say I think it quite the contrary, for in the past year there has been very little sickness here of any kind.

Beebe, Ark. T. M. H.

FROM MISSOURI.—Thinking a few lines from south-west Missouri would be of interest to your many readers, I give a condensed description of our county. Webster county is situated on top of the Ozarks, and presents a surface diversified with valleys, hills and flats, or table-lands. The entire surface naturally supports a heavy growth of timber of the oak species. The valleys are very fertile, and are all occupied by prosperous farmers and stockmen. The flats are not naturally so fertile as the valleys, but produce well, and can be improved easily by the use of clover, which grows well here. The surface here is not subject to washing full of ditches, as are most hill countries; hence, fertilizers which are applied to the surface are beneficial for four or five years. The valleys and flats are well adapted



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to the growing of all the cereals which are grown in this latitude, and as a hay-producing country, this county ranks first. The entire country abounds with natural springs, which afford an abundance of pure water for stock and man. The county has a population of over 15,000, who are engaged in farming, stock, poultry and fruit raising, the last named fast taking the lead. Our hills and flats are all well adapted to the growing of apples, peaches, pears, plums, cherries, etc., in the production of which we can compete with any country in the world. Stockmen, merchants, capitalists, and everybody else are planting large quantities of fruit-trees. The enormous profits in fruit growing in this part of the country is attracting attention throughout the country. Good fruitland can be purchased for \$10 per acre; also some good farming land can be purchased at that price. I have been here six years, and during all that time the farmer who toiled in summer had plenty to supply his wants in winter. Our principal immigration is from Kansas, Nebraska and the Territory. J. B. C. Seymour, Mo.



"Call a spade a spade," said someone. Evidently D. S. Morgan & Co., of Brockport, N. Y., believed in calling things by their right names when they designated the implement manufactured by them for cultivating the soil, the "Spading Harrow." This word spading, which was first applied by D. S. Morgan & Co., means a great deal, used in connection with the word harrow. You may exhaust Webster and Worcester and it still be true that "The half has never been told." The spades dig up as well as pulverize the ground; but we will not attempt a description of the work done by this tool; a trial of it is necessary to convince you of the wonders it will accomplish in the soil. Are you a Dealer? Would you like to control in your section a novelty in the implement line? Then add to your stock of agricultural implements The Morgan Spading Harrow. Are you a Farmer? Would you convert your farm into a garden? Then invest in the Morgan Spading-Harrow.

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Advertisement for 'The Dingee & Conard Co.' featuring 'The NEW GUIDE for 1892'. The ad includes the text: 'Thousands of people will purchase Flowers this year. If possible they would naturally prefer to visit the largest stock and make selections. This would take them to The Dingee & Conard Co., of West Grove, Pa., the largest rose growers in America. But were such a trip possible, the visitors would simply be perplexed by profusion. Each and all of these people can however, at the cost of a postal, have the stock of this great establishment set before them in a convenient and understandable way by means of their book, The NEW GUIDE for 1892. As its name implies, this book is a Guide; it illustrates and describes upwards of 2,000 Roses, Bulbs, Hardy Plants and Seeds, giving without exaggeration, the information which every purchaser needs. It also gives such plain directions as to care as will enable their customers to repeat The Dingee & Conard Co's success with flowers. No valuable Flower Novelty is omitted from this work, which also contains many tempting Premium offers. As long as flowers are worth selecting, money worth saving, and disappointment worth avoiding, this Guide will be of great value to every purchaser and lover of flowers. It is offered FREE to everyone. The asking is the only price. Heed The Dingee & Conard Co. Profit Rose Growers and Seedsmen, West Grove, Pa.'

Our Farm.

THE POULTRY YARD.

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

DOUBLE POULTRY-HOUSE.

THIS is styled a "double" poultry-house because it is divided, and has windows on two sides. It is well lighted, warm and convenient. It is 18x25 feet, five feet to the eaves, and eleven feet to the gable, sided with matched lumber, and has only one door, but has six windows—two at each end and one on each side. It may be lined inside, if preferred, with boards or paper.

The ground plan (Fig. 2) shows the arrangement. The passageway is at A. For an explanation of the several parts, B B are the poultry rooms, D D D the roosting platforms, C C C the feed-bins, F the door and E E, etc., the windows.

The passageway, A, may be a board floor, and the poultry rooms be floored with earth. The small room to the right may be used for sitting hens, or for any other purpose. The division between the passageway and rooms should be of open lattice or wire, to admit the light from the front. The division between

the poultry rooms should be boarded two feet above the roost, and then latticework or wire used. The feed-bins are simply to hold the food, the birds being fed in troughs, or otherwise, in the poultry rooms. This house is somewhat large, has many windows and will cost about \$100.

HATCHING EARLY PULLETS.

It will soon be time to hatch out the pullets for next year, and some advice on this matter to the inexperienced may not be out of place. It is a rule to hatch the pullets early. This, however, depends on the kind of pullets. If they hatch out too early they will moult in the late fall, which is not desired, for it is then that they should be producing eggs. The pullets of some breeds should not be hatched before May. The object should be to allow a pullet ample time to grow and mature just about the period when the winter commences, and the month of November is usually fixed upon as the proper one. That is, pullets should begin to lay not sooner than November, and should not defer the beginning of laying until after November. If the fowls

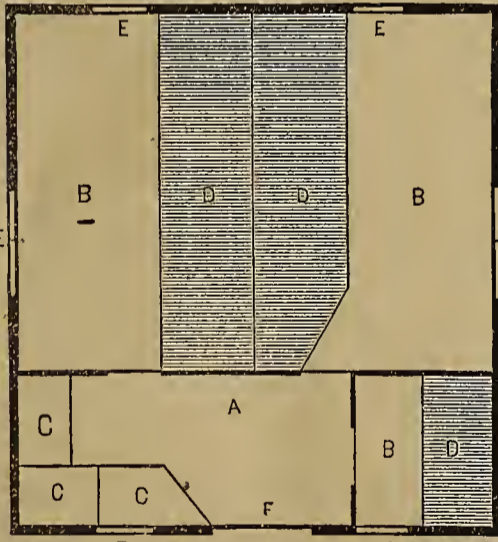


FIG. 2.—GROUND PLAN FOR DOUBLE POULTRY-HOUSE.

are Brahmas, Coehins, Plymouth Rocks, or Langshans, the pullets may be hatched in March, and not later than the middle of April. February is too soon, as such pullets may moult in the fall if forced in growth. Pullets of the Leghorn and other small breeds mature in six months, and should be hatched not later than May 15th, and not sooner than April, as they will surely moult and become non-producers if hatched out as early as the large pullets.

EGGS FOR HATCHING.

The following rules should be followed in selecting eggs for hatching purposes:

1. Have the eggs of normal size and uniform, avoiding large or small eggs, and also eggs that are not smooth and free from excrecences.
2. Aim to secure eggs from certain hens that are mated with a male of your selection.
3. Collect the eggs several times a day, during very cold weather, in order to avoid having them become chilled.
4. Wash the eggs and free them from dirt before placing them in the nest.
5. Give the hen only ten eggs in winter.
6. Make the nest warm and have it in a warm, quiet and secluded place.

7. Keep food, water and a dust bath where the hen can have free access thereto without annoyance.

BETTER PRICES.

The immense "rush" of surplus poultry to market is about over, and prices will soon become higher. Fowls are usually scarce after the middle of January, and the demand for small broilers sets in on the approach of February. The ducks will begin to lay now, and their eggs command a good price. The only poultry that fails to pay at this season are the roosters, which are seldom salable.

ARRANGEMENTS OF THE HOUSE.

Bear in mind that the space most desired by the hens is on the poultry-house floor. It is the room for scratching purposes that is most valuable. The roosting space is not as important as the clear space on the floor. Make all roosts and nests next to the walls, and entirely out of the way. Aim to secure the greatest space at the least cost. The nearer a house approaches the square form, the more room will be secured.

MATING TURKEYS.

Use a fully-matured yearling gobbler with two-year-old hens, or a two-year-old

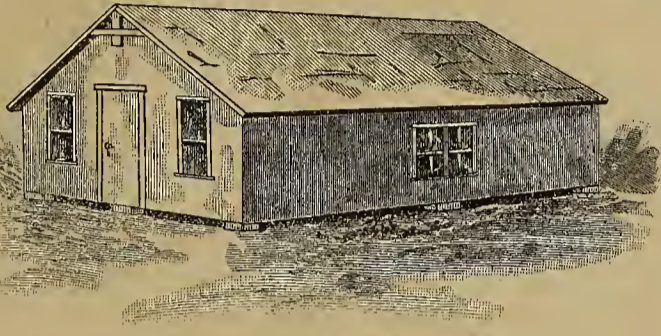


FIG. 1.—DOUBLE POULTRY-HOUSE.

gobbler with young hens. Do not mate an extra large male with small hens. If you procure a large gobbler, you should also have large hens. A medium-sized male should be preferred. Under no circumstances should the male be related to the females, for turkeys will succumb to inbreeding sooner than any other class of poultry. One male with a dozen or more females is sufficient, as a single union fertilizes all the eggs that the hen may lay before she becomes broody and goes on the nest.

HENS CARRYING DUCKLINGS.

Ducklings are so easily raised by hens, and require so little care, compared with chicks, that it will pay to have hens to sit on ducks' eggs and bring off the young. Of the large eggs of the Pekin, eight will be sufficient for a large hen. It is not necessary to turn the hen and ducklings out, or allow them to go near the water. On the contrary, they should be kept warm and dry. Young ducklings should not be given very cold water to drink, as it cramps them, and under no circumstances must they become wet. Feed them liberally and often, and give the hen and ducklings plenty of litter upon which to sleep at night. As they grow very rapidly they soon become too large for a hen to hover them, and for that reason they should be looked after at night, and fastened up in a warm, snug box.

PREVENTING LAYING.

It is not difficult to cause a flock to cease laying, if they are fed on certain foods that will not benefit them in any manner. Recently, on a farm where a large number of hens are kept, and which were producing eggs regularly, the production suddenly ceased. It was quite awhile before a solution of the problem was found. It appears that during "hog-killing time" the hens were regaled with many choice pieces of fat meat; and with quite a large amount of waste that was supposed to be suitable for the hens; they were given at times all they would eat, the result being that the hens were over-supplied with carbonaceous food, became fat, and egg-production ceased. Lean meat is excellent as a substance for producing eggs, but fat meat should never be fed to laying hens.

INQUIRIES ANSWERED.

Hatching in Incubator.—J. F. T., Gratwick, N. Y., writes: "Can geese and turkeys be hatched in an incubator, as well as chickens?"
REPLY:—They can, and at the same temperature.

Sifted Ashes and Feeding.—J. R. G., Brownsville, Texas, writes: "1. To what use can sifted coal ashes be applied? 2. To what use can hen feathers be applied? 3. I have twelve hens and two males, and I feed two pints of bran, mixed with warm water, with a pint of corn thrown where they can scratch for it. I also feed the latter at noon and night. They have no place to forage. Can you suggest any change?"
REPLY:—1. Use them in the dust-boxes. 2. They are of but little value, and may go in the manure heap. 3. Feed nothing at noon, and reduce all the grain one half, or your hens will become too fat. Allow a proportion of meat and bone in place of the corn.

HAVE YOU CATARRH.

There is one remedy you can try without danger of humbug. Send to H. G. Colman, Chemist, Kalamazoo, Mich., for trial package of his Cure. Postage 4 cents. Test and judge for yourself. Mention this paper.

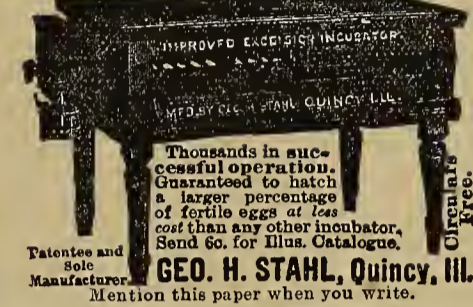
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FARM-POULTRY
a 20 page practical poultry magazine sent six months for only 25c.
Or for 15c. and ten names of persons keeping a few hens. Sample free. Mention this paper I. S. JOHNSON & CO., 22 Custom House St., Boston, Mass.

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Lowest-priced First-class Hatcher made. Simple, Perfect, Self-Regulating.



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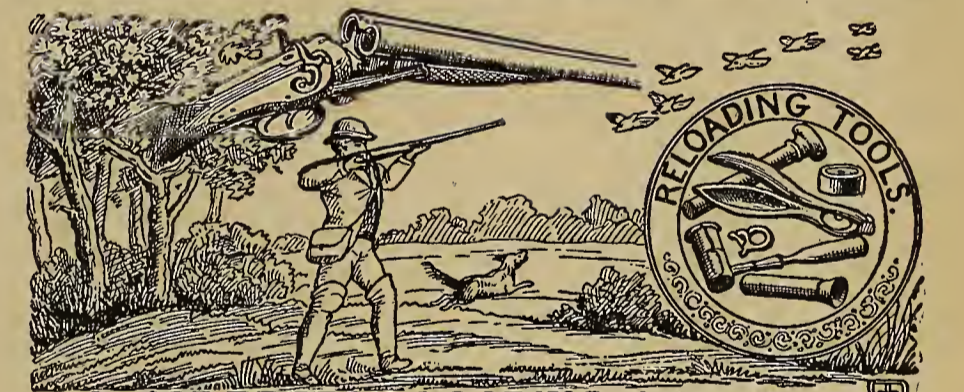
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send a 2c. stamp with your address for 72-page Illustrated Catalogue of 65 different styles of hand-made PURE OAK LEATHER HARNESS. Single Sets, \$7 up; Double Sets, \$16 up. Every harness Warranted and Shipped subject to approval. It costs only a 2-cent stamp to know what we can do for you. TRY IT. King & Co., Wholesale Mfrs. No. 5 Church St., Owego, N. Y.

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A \$25 BREECH-LOADING SHOTGUN FOR ONLY \$13.75.

THE PONTIAC DOUBLE BARRELED BREECH-LOADING SHOTGUN is one of the most Wonderful Bargains ever offered in FIRE-ARMS. The price at which we offer this fine gun, is but a trifle above the cost of importation, and only a LIMITED NUMBER of them will be sold at this SPECIAL PRICE in order to introduce this handsome and effective fire arm to the Sporting Public. The PONTIAC has laminated steel barrels, strong and easy action, straight or choke bore, 10 or 12 gauge, mounting and working parts are case hardened and blued. Elegant hand-made walnut stock, checked pistol grip and fore-end, length of barrels 28 to 36 inches, weight 7 1/2 to 9 lbs., uses brass or paper shells, and is provided with a self-acting shell ejector. For accuracy, power, beauty of workmanship, close and strong shooting qualities, as well as the rapid manner in which it can be loaded and fired, the PONTIAC cannot be excelled. The European Manufacturers for whom we are Agents, have instructed us to offer a limited number of these first-class guns for about one-half the retail price, in order that they may quickly become as favorably known here as in Europe; so in order to introduce one of these guns in every town and village at an early date, we make the following offer to any one sending us only \$13.75 in cash and the following certificate.

CERTIFICATE. Upon receipt of this CERTIFICATE and \$13.75 cash, bank draft, or Canada, one of our CELEBRATED PONTIAC double barreled breech-loading shotguns as described above, providing this CERTIFICATE is mailed us within 15 days on or before April 30th, 1892. **PONTIAC ARMS CO.**

Persons wishing to purchase the PONTIAC, are earnestly requested if in Chicago to visit our store, but in no case will we sell one of these guns for less than \$25.00 unless the above CERTIFICATE is brought or sent to us, as we only wish to sell one gun at this price in any town or village. We take this method to protect ourselves from dealers ordering several and working parts are SPECIALLY PRICED. OUR PROFIT MUST COME FROM FUTURE SALES, and our confidence in the genuine merits of this gun is so great that we believe when one is introduced in a neighborhood, it will sell a dozen more at the regular price, as we feel each purchaser of the PONTIAC at the above reduced price, will be so highly pleased, that he will assist us all he can in making sales. ORDER NOW even if you have no use for the gun at the present time, as you may never be able to procure another such bargain, and as a matter of speculation it will be worth your attention, as you can readily sell the PONTIAC for \$25.00 to \$40.00. For \$1.25 extra, we will send with the PONTIAC, one of our new Sportsman's Cartridges, 50 metallic base, center fire, reloadable shells and a complete set of reloading tools. WE GUARANTEE THE PONTIAC to be exactly as represented, and will return the money if found otherwise. If you do not already know us by reputation, and have friends living in Chicago, ask them to call and see us and report to you as to our reliability, or we refer you to any Express Company or reliable business house in Chicago. Address **PONTIAC ARMS CO., Pontiac Building, CHICAGO, ILL.**



Our Fireside.

WAITING.

BY WALTER M. HAZELTINE.

Waiting for the snow

To go,

And the spring to come again,
With its showers of singing rain;
For flowers to bud along the way,
The tribute of fair, blushing May;
For tiny birds to nest and sing,
For love, time comes with joyous spring;
Waiting ever, contented never.

Waiting for the summer hours,

And the flowers

To bloom along the sunny way,
And sweeter make the new-mown hay;
For the fields of waving grain and
Goldenrod to bloom again;
For fragrance swept with every breeze,
And bird songs sweet 'mid leafy trees;
Waiting ever, contented never.

Waiting for the plaintive cry

And last good-by

Of the wild goose on its way
Southward from the ice-bound bay;
For the leaves to ripen red,
And falling, make a gorgeous bed,
Whereon the mellow fruits may fall
Like kisses at the young wife's call;
Waiting ever, contented never.

Waiting for the frozen way,

And for the play

Of the snow's soft, tinkling sound
As it whitens all the ground.
All the bare, brown fields and way;
For the jingling bells and sleigh;
For the paling cheek to glow;
All the time loving, loved we go,
Waiting ever, contented never.

—Waverly.

AUNT JACK'S SECRET.

BY MARY A. DENISON,

Author of "That Husband of Mine," "If She Will,
She Will," Etc.

CHAPTER IX.

"The crackling embers on the hearth are
dead."

WELL, little one,
we must be all in
all to each other
now," Mr. Denerby
said the next
morning, as the
three sat down
to the table in
the gray light of
a rainy morning.

Jack, to whom he spoke, had much
ado to hold back the tears. She had
slept very little that first night of
loneliness, and her usually bright
cheeks were pale, while the tears,
resolutely held back at the time of
parting, had come in such copious
showers afterward that her eyes were
dim.

"Oh, papa, how we shall miss our
beautiful, gloriously beautiful Nest!" she
said, with quivering lips.

"Yes, dear; but let us be thankful that she
goes with such glowing hopes to a future that
I am sure she always craved, even when she
said nothing. I could not hope to keep her in
a humdrum place like this."

"Oh, papa, you call it humdrum here?"
cried Jack, with glowing cheeks.

"Not to you and me, my darling; but to her
a thing of custom and habit only. We love
the country; she loves the life to which she
has gone, or will love it, for she has long
craved it. I never felt that Nest was quite
happy here. Now that she has gone, I am
glad it is with the guardianship of such a man
as I know Margerie to be. But we shall miss
the dear girl for all that."

"I dread to think how much," said Aunt
Mary, as she poured out the coffee.

After breakfast Jack went up-stairs, as was
her wont, to put her room in order. It was all
hers, now; no one near to share in the living
or the care. To be sure, Nest had seldom come
to her help in the work that was to be done,
but she had always been there with her beau-
tiful face and beguiling ways. Jack surveyed
the pretty bed mournfully, for it looked as if
one small body had barely ruffled its snowy
surface. She shook the pillows and turned
the light mattress over, carried the clothes
into the sunshine at the windows, and then
sat down to think.

Presently her eyes rested on the pluk and
white pincushion that Nest had made only a
few seasons before. There was something
there that she had not seen on the previous
night—a little packet hanging loosely over at
the side. She thought perhaps Nest had for-
gotten something, and mechanically she took
it up in her hand. To her surprise, she saw
that on the outside was an address, and it ran
thus:

"To my best and sweetest of all sisters."

Opening it, a piece of solid gold fell out into
Jack's open palm. It was a twenty-dollar
gold piece, new from the mint.

"Sweetest and best," ran the writing, "I
couldn't leave without saying to you how
much I love you and appreciate all your kind-
ness to me for lo, these many years. I shall
think of you every day, best of sisters, and
long for you more than I can express. If only

you and papa and Aunt Mary could have
come with me, my happiness would have been
complete.

"Still, you know how welcome you will
always be. There is a little room here which
I have christened Jack's room. It is done in
pink and white and gold. I had you in my
mind when I chose the furniture, and nobody
else shall sleep in that room. It is for your
special use when you come to the city. Think
of all I shall have to show you—the musical
receptions, the art galleries, and we two riding
everywhere, with a sleek coachman and two
fat horses, and nothing to think of except to
look pretty and be comfortable.

"I shall not be quite happy until you are all
here. Can't you cultivate a little misery, so
as to lead papa to think you miss me so cruelly
that he must come to the city? No, I am
sure you will be true to yourself; and you love
the country, not, perhaps I should say, better
than I, but so much that I am not a needed
factor to your happiness.

"But sometime, dearest and best, I shall
have you, I am sure, you and Aunt Mary and
papa. I shall live on the happiness this
thought affords me.

feel ever so much cozier here, and as if I were
worth something to somebody. I don't think
I'd like to have a maid to dress me and fix my
hair, and then sit and do nothing but dawdle
around and look at pictures, and get tired
looking at them. I rather think the good
Lord made me for humble things, and to work
for others."

"And how does the sister like it?" Mrs.
Spruce asked.

"Oh, she enjoys it; it all seems fitting for
her. She can take her breakfast in bed, while
her maid looks up all her things, and then
bathes and dresses her. She was made for
that place, as I for this, I suppose; and since
there must be queens and princes and em-
perors in social life, why it's well they are
fitted for it. But oh, I do love this dear,
precious home!"

She spoke the truth. While she had father
and Aunt Mary and the lovely delights of the
pretty rural home, she was happier in her
way than was Nest in hers.

But the months and the years went by, and
it happened that when Jack was only seven-
teen, and as unerring and simple in her tastes
as she had been at fourteen, papa Denerby

butler, whom I have mentioned but once or
twice before, and that without particulariza-
tion. Ostrand De Lyle was an ideal servant,
both in appearance and efficiency. His bright,
laughing eyes and curling hair, the manners
inherited from his father's French ancestry,
the inborn wit that came to him from his
mother's Celtic forefathers, made him so fine
and harmonious in both features and char-
acter, that everybody noticed and spoke of
Margerie's handsome butler, and even the
fine ladies condescended to notice him.

The first time that Jack saw him she was
not yet sixteen. Never dreaming of his posi-
tion as a menial, she often spoke to him, and
in fact, held long and sprightly conversations
with him. Full of sympathy, she listened to
his pathetic stories of his mother's country,
and learned to hate its enemies. Before she
knew it, her sympathy had drifted into love.

He had loved her from the first sight he had
obtained of her winsome face. Fortunately,
the lad, now only twenty, had been educated
as far as his father's limited means would
allow. Always correct, always graceful,
and possessing that bonny beauty which re-
sides in expression, in dimples, in honest-
heartedness and independence, with just the
slightest and most musical inaccuracy of
speech, that makes a touch of the brogue de-
lightful. But for his position he would have
been a favorite with the ladies. His latent
ambition had not yet been aroused.

His father had held a humble position in
the bank, and the lad had been a sort of all-
round boy, who made himself almost indis-
pensable to the banker; so that when the elder
De Lyle died, Mr. Margerie had been
in his family, and
the position of but-
always attending
and taking char-
responsibility.

So it was not a vulgar
whom our lovely, im-
gentle heroine
fell in love. But with all his virtues and at-
tractions, in the eyes of his new mistress he
was but a menial, and she had scarcely ever
deigned to notice him.

In her two years' experience of the gay
world, Mrs. Margerie had developed into a
proud, almost cynical woman. Her friends
adored her, where they were not jealous of
her power, and the social world, with the ex-
ception of Mrs. General McNab, accepted her
as the leader of fashion and society.

For Jack, she was strangely solicitous, for
the gentle girl was also a success. Her arch
loveliness made friends, admirers and adorers
on all sides. Nest kept her sister's wardrobe
up to the mark of French perfection and ex-
travagance. The more Jack demurred, the
more money she devoted to her dresses, until
the girl accepted the situation quietly, for the
sake of peace, and consented to shine in what
seemed to her borrowed plumage.

Meantime, Jack had fathomed the goodness
and gentleness of Ostrand De Lyle. Nowhere
in all the fashionable circles in which she held
sway did she find so true and loyal a gentle-
man. She could not help herself, nor did she
care to try. When she found that he was re-
garded only in the light of a servant, it is true
that a horror came over her, not because of
her pride, but because of her sister. Nest's
haughty nature had thrived by what it fed on,
adulation, power, wealth. She had set her
heart on a grand match for her sister, and was
determined to accomplish it.

Meantime, Ostrand, applying through
the means of a friend for a situation of
some responsibility, was preparing to leave
the home where he had been both respect-
ed and trusted by the banker. The busi-
ness would give him an income sufficient
for his humble needs, and Jack was will-
ing to share its responsibilities with him.

It was just at this time that a little girl
was born to the Margeries, and was at once set
upon a pedestal to be worshiped. Nurses were
engaged. The child's outfit was the *chef de
'uvre* of a great Parisian house, and cost, I
dare not say how many thousands of dollars.

Special apartments were furnished for her in
the most extravagant style, and Mrs. Margerie
became a fashionable mamma. The christen-
ing was a thing of splendor, and the papers
were full of it. Would Nest, now that she
knew the joy and pride of motherhood, enter
into her sister's feelings and wishes with the
love and gentleness that she had so far ex-
ercised? Jack thought it not only possible,
but probable. If not, why, she was free to act
herself. Her father was not alive to advise
her; she had no one but Nest and Nest's
husband.

One morning she came upon Nest with the
baby in her arms. The little creature shone
resplendent, with diamonds in the looping-
piques that caught up her sleeves, and in the
chain that just showed under the pretty, double
chin. Nest was already forming plans for her
when she should be eighteen.

"The plans of mice and men oft go a-glee,"
sang Jack, snapping her fingers at the little
fairy.

"Mine won't," said Nest, decision in her
voice and manner. "They never do. After I
get you married off—"

"To whom?" laughed Jack.

"Oh, to some of our millionaire's sons," said
Nest. "You really have treated young Sydney
shamefully. Even Mr. Margerie thinks that
would be a very suitable match for you."

"I wouldn't have him if he were hung in
gold," said Jack.



"I am wanting to cry awfully, as I write this
letter and say the things which I shan't get a
chance to speak. Wait till your turn comes,
as come it will, and in some fine cathedral
you will be married, perhaps by a bishop, for
I foresee all manner of splendid things in
store for you. That's partly what makes my
happiness, thinking what I will do and what
fate has in store for you. Papa would say fate
is the wrong word; but oh, dear, I think there
is such a thing; it seems so, even in my short
life!"

Jack could not imagine the heavy sigh
with which that sentence was finished. She
read the letter all through, with tear-dimmed
eyes. Something told her, in every line, that
the writer was not as happy as her surround-
ings would lead one to infer, and she deter-
mined that she would show it only to Aunt
Mary, who would know just how to comfort
and sympathize with her.

The days passed on; at first slowly; then,
with all her accustomed duties, Jack regained
her normal condition, and found pleasure in
the out and indoor work of the farm.

"Well, it does seem as if you were glad to get
back to the old place," Mrs. Spruce said one
day, when Jack had been spending a short
time with her sister. The occasion was a
grand national parade, and she had enjoyed
it thoroughly.

"I am, Mrs. Spruce," Jack made answer. "I

died, and the dear old homestead was master-
less.

It was a terrible blow to Jack. Her whole
being succumbed to the sorrow and desolation
that ensued. Aunt Mary was powerless to
help her, and Mrs. Spruce, never at her best a
success as a consolator or counselor, moved about
her duties colorless and tearful.

Nest was on the ground through all the
terrible trial. She did not come in time to see
her father alive, for the shock of paralysis was
followed quickly by death, and he passed
away, never having regained consciousness.

At first Jack desired to remain on the farm,
but Aunt Mary's failing health, and the lack
of the sweet offices toward her father, which
had made life to them both such a blessing,
preyed upon her spirits. Aunt Mary finally
decided to go to a noted health retreat, and
Mrs. Spruce was not a fitting companion for a
bright young girl, capable though she was.
Nest never for a moment anticipated that
Jack would stay at the Haven, and when she
found her undecided, brought all her forces to
bear upon the sorrowful young girl, until at
last Jack tearfully consented, and left the old
home to solitude and the Spruces, only stipu-
lating that her own room should always be
kept in readiness for her occupancy whenever
she came to the farm, which, let me say in
passing, was not often. Nest saw to that.

And about here comes in the story of the

"Well, there are two or three others on the anxious seat," said Nest.

"They can stay there, then," said Jack. Something peculiar in her sister's manner led Nest to look up.

"Why, Jack, aren't you ever going to marry?" she asked.

"Not if I can't have the mau I love," said Jack.

"Aha! then you do love somebody," her sister exclaimed, nearly letting the baby fall in her excitement.

"Well, and suppose I do?" Jack's cheeks were red as roses, and her eyes fell under the close scrutiny of her sister.

"Jack, I'd give anything to know. Tell me, won't you?" her sister asked, in a pleading voice. "I hope he's rich and handsome."

"Handsome enough to suit me, but not rich," said Jack.

"Oh, then, you can't have him, decidedly you can't, Jack," Nest broke in, earnestly. "It would be shameful for you to marry a poor man when you have had so many fine offers."

"Nevertheless, I think I shall do it," said Jack, unflinchingly.

"Who is it, Jack?" asked Nest in her most imperious manner. "Do I know him?"

"You see him every day," said Jack, "at the table."

Nest sank back in her chair, like one ready to faint. The nurse took the baby, and left the room.

"It can't be—" She tried to say more, but the words refused to come. "Oh, Jack," she burst out, in a tremor of fear, "you can't mean—no, no, not him!"

"But I do," said Jack, calmly.

"Oh, I see now. Yes, yes, I see the whole wretched business. Do you want to kill me? Jack, it is a hideous dream. You never could stoop to disgrace us so."

"It is all settled, Nest," said Jack, calmer now that the storm had fallen.

"Jack, are you in earnest, are you so graceless, so mad? Oh, it will kill me!" and Nest began to walk the floor, wringing her hands in an agony of passion.

"It need not hurt you, Nest. I can go away," said Jack.

"Oh, you are shameless!" and Nest's voice rang on the air like a shriek. "After all I have done for you, after all I have hoped and planned, you will marry my husband's servant—a menial, a waiter, a common Irishman. It is more than I can bear. The disgrace of it will be terrible, the talk, the sneers, the newspapers, the—"

"There will be nothing of the kind," said Jack, quietly, though her heart was torn with anguish. "I am going to the farm—that is quite natural. I shall be married privately, and then we leave for the West. Dear Nest, as it is all settled—"

But Nest turned fiercely upon her, and her voice was hoarse and broken, her manner unnatural.

"You can go; you are no sister of mine. From this time forth I disown you. If you marry that man, I will never speak to or set eyes on you again. Never, never! for I shall hate you."

"But Nest, dearest sister—"

"You are no sister of mine if you marry that man. I will never own you by thought, word or deed. I will bury the recollection of you in a grave so deep that there will never, never be a resurrection, never forgiveness, though you should seek it on your knees."

Nest carried the picture of a despairing face, pleading, pitiful eyes, and hands clasped, dumbly imploring for mercy, to her death, for she never saw her sister again.

CHAPTER X.

"But darker now grows life's unhappy day."

Jack went back to the old farm-house with a heavy heart. Yet not for one moment did she waver in her determination. She took with her none of the imported finery in which she felt she had been playing a mask's part, only her own simple wardrobe. The farm had been well worked and profitable, and Spruce, the farmer, honestly counted up her gains, which amounted to more than enough to enable her to buy a modest trousseau, and the village dressmaker helped her make it up. It was very natural that she should come back to the Haven, so there was no scandal. That a handsome young man was paying his addresses to her, the community soon became aware. Not till long after the marriage did the real facts leak out, and then she was in the far West, happy in her own little home.

The clergyman resident in the town came to the farm-house one memorable evening and performed the marriage ceremony. Only two of the neighbor's families were present, and Jack had no bridesmaids. It was by no means a stylish wedding. The bride wore a simple, white dress, without ornaments of any kind, save some beautiful, white roses, that grew in profusion in the farm-house garden. Mrs. Spruce made the wedding-cake and another famous cake, which Mr. Denerby had liked, lined and covered, if I may so say, with clotted cream. Then the bride went quietly away with her husband.

"She hasn't married riches," Mrs. Spruce said, confidentially to red-nosed Miss Sally Green, who was reporter-general for the whole town.

"But why wasn't her sister here, and why didn't she give her her wedding?" was the response. "You may depend upon it, Miss Jack has married beneath her, and before long you and me will hear news."

Meantime, Jack was journeying quietly and happily towards her western home. When she came into possession, she found it one of the humblest sort, yet picturesque and with a beauty born of thought and care. It was built of logs, and divided inside into five rooms, all large and comfortable. Climbing roses and vines of every description crept over its rough sides. The place had been occupied by a professional gardener, and he had tried to make it a rose farm. It was beautifully situated on sloping ground, and fields to the right and left had been cleared and fenced.

As she walked through the pleasant rooms, each one brightened by the promise of cheerful wood fires when the cold should come, Jack's fertile fancy made of the whole a paradise. She had brought with her useful as well as ornamental things, her own and her mother's furniture, and she pictured to her young husband a bower of loveliness when once they should set up the familiar household goods, and had made the bare walls bright with chintz hangings. Her home training stood her in good stead now. She had treasured up many a choice recipe of good Mrs. Spruce, and she had not watched her way of doing things in vain.

It took but a short time to transform the little nest into a thing of beauty. Jack kept it neat and tasteful, and it was a pleasure to see her at work, whether at kneading bread, with the simple, cotton sleeves rolled over the white arms, or under the little, vine-covered shed, doing her own washing, while the line outside swayed back and forth with its freight of snowy linen.

It was just as delightful to see the pretty table set with the utmost nicety for her young husband when he came home weary from his

day's labor, and they sat down together, laughing and chatting like two children, yet observant of all the uicer amenities of life.

Once he brought home a paper, and she read it before he did, read it with scarlet cheeks, for it spoke slightly of the man she loved. It was an account of "How She Married Her Sister's Butler," and like all descriptions of the kind, it was profuse in slurs and ambiguous hints, florid in description, and almost abusive. Her brain was on fire as she read, but she bravely suppressed her feelings, saying only to herself, "Poor Nest." She read the paper aloud, such parts as would interest her husband, and then destroyed it.

Nest, happily, had never seen the paper, but the event fraught with so much bitterness to her, threw her on a bed of sickness, and on her recovery, her husband took her abroad at once, remaining three years, so that when they did return all memory of the scandal was effaced.

The years went on, and the little one born to wealth and honor grew from childhood into girlhood, worshiped and petted and spoiled. Beautiful as a dream, with a nature that adulation and riches could not wholly corrupt, her mother's ambition for her was unbounded. Visions of coronets, even of crowns, visited her sleeping and waking hours.

The child was trained as only the children of such worldly mothers can be trained. In nothing was she thorough, though she played and sang well, read in French and German, so her mother boasted, was the torment of governesses and teachers, flirted before she was sixteen and wore ravishing dresses that were the admiration and envy of all her acquaintances. At fifteen she was unwisely allowed to go into society. At sixteen her mother died, and her father fell mortally ill on her eighteenth birthday.

While lying on what was to be his death-bed, a wave of financial ruin rolled over the land. The great banker's name, fame, fortune were involved, and after his death not a vestige of his vast fortune fell to the share of the child of his love. She was as poor as poverty itself, and when the truth was revealed to her, a frightful scene ensued.

It was difficult for the pampered child of luxury to understand that houses and lands, money and fine dresses, worshiping inferiors and disinterested friends were all gone together, swept as by a whirlwind from the surroundings of her life. To what could she turn, to whom?

Lovers she had, but they did not come forward now; only one, a poor man, who had dared to lift his eyes to the banker's darling. But even in her distress she spurned the thought of lowering her life to his level. Possessing more than the mother's pride, she fought at first with the desperation that assailed her. Somebody would surely come to her rescue, something would happen by which she could be saved from the humiliation of poverty.

During his illness her father had said but little to her, but once he had called her to his bedside.

"My dear," he said, "your mother had a very sweet little sister. Possibly you have never heard of her."

"Why, no, papa. I never knew I had an aunt," was the response.

"But you have, Flossy, dear, and something leads me to speak of her. She lived here with your mother when you were a little babe, and loved you dearly. But she married a man your mother considered beneath her in station, and since then we have never seen her."

"And was my mother very angry with her?" Flossy asked.

"Very, my love, so angry that she never met her or spoke to her again."

"And were you angry also, papa?" the girl queried.

"Not as angry as your mother was, my child, because I knew the man to be capable and of good blood. I even remonstrated with your mamma, but she was inexorable. Since her marriage I have several times heard from your Aunt Jack. She lives on the outskirts of a great western city, and is very happy, and in a certain way, prosperous. If ever you should be in want of a friend, Flossy, a real friend, a true friend, promise me that you will try and find your Aunt Jack. Her letters and her husband's letters are in my great secretary in the study down-stairs, and here is the key to the drawer in which I have kept them. Your mother never knew that they were in my possession; but I never could feel as your mother did towards poor little Jack."

"But, papa, I shall never need to be indebted to her," said Flossy, haughtily, her mother's nature uppermost for the minute.

"My darling, I hope not; but remember this: Nothing is surer than that riches take to themselves wings and fly away," he made answer.

"There were ugly rumors in the air before this sickness came, and although my business may not be implicated, yet who can tell? Forewarned, forearmed, I want you to promise me that if any serious trouble should ever threaten you, my darling, you will go to her."

"Yes, papa, I promise," said the girl, with a kiss, "and now make haste and get well, for you are all I have to love and live for."

"And will you get those letters I spoke about at once, and place them where you can use them readily? At all events, read them, my dear, for they will do you good."

"I will get them at once, father," said Flossy, and that was the last conversation she ever had with her father. In the dead waste and middle of the night, a messenger came who never waits to be summoned.

CHAPTER XI.

"And learn in grief what these can never tell, A note too deep for earthly voice to swell."

For two or three months Flossy went the rounds of the houses of some of her mother's friends who were willing to keep her till she could get something to do. The girl had already come to feel the bitterness of dependence, and an absolute terror at her own helplessness. What was required of her she did not possess with any thoroughness. She was too young for a governess, too superficially educated for a teacher. Wherever she turned, new difficulties presented themselves. The people with whom she was stopping took no pains to conceal from her that she was a burden to them, and yet would not allow her to cancel her indebtedness by any offers of work. She was in the way, and she felt it bitterly.

She had been out to answer an advertisement one day, and was returning, when a sudden shower came up. Having no means of shelter, she stood for a time under an awning. It was rapidly growing dark, and the sadness of her situation overwhelmed her.

"If I could only die! If God would only take me to my father and mother!" she cried pitifully, under her breath, as a terrible roll of thunder seemed to shake the heavens and the earth.

"Miss Margerie," said a voice, "you here, and unprotected? The storm is going to be a terrible one."

"Mr. Owens! Oh, I am so distressed, so

frightened!" said Flossy, surprised into sudden warmth.

"This is my home next door," he said. "I live with my aunt, who will be proud to have you take shelter under her roof. See how it pours; you cannot stay here."

"I shall be very glad to go in," said Flossy, almost humbly, and followed him into the house.

Seating Flossy in the parlor, he went to look for his aunt, but in a moment came back.

"I think my aunt is not at home, Miss Margerie," he said. "Will you stay till the worst of the storm is over, or shall I send for a carriage?"

"Oh, no, no," she said quickly, "no carriage, I will stay a little while."

"Shall I go, then, and see your friends? They might be distressed about you," he said.

"My friends! distressed about me! Mr. Owens, who in the wide world is there who cares for me?" she cried, her voice changing almost to a wail.

"If—if only you will let me care," he said swiftly, hoarsely, "if only you will. I am a poor man, but God only knows how I love you. Let me care for you."

"Mr. Owens," she managed to say, her tears struggling for the mastery, "I cannot, will not burden you with my miserable troubles. I thank you for your offer. You are the only one who has shown any real interest."

"Don't talk of burdens," he said. "If you knew how I worship you, and have for two years, though I despaired of gaining the heart or hand of one moving so far above me. Miss Margerie, Flossy, no one will ever love you as I do."

Almost she was persuaded. She had looked down upon him from her pedestal, with something of scorn, that he, a poor young lawyer, a man who had, as she knew, through friends, worked like a menial to obtain his education, and had only been taken up by her father to help him on in his studies, and who had obtained a situation for him in a prosperous legal firm. In the first shock of her bereavement, when as yet she scarcely tasted the bitterness of the cup held to her lips, she had refused him, though he came when all others failed her. But could she in honor take advantage of his generous offer? She did not love him; but she respected him greatly, and her gratitude for his devotedness, might it not almost take the place of love?

"Let me think," she said, softly, blinded by tears, yet trying to look steadily at the handsome young face before her. "I have one opportunity left to save myself. If that fails me—"

At that moment Mrs. Owens came in, and Flossy hastily concealed her tears as the young man introduced her, explaining why she was there, and the good woman took her to her heart at once, for she had heard her history.

Later that night, when Flossy went to the place she called home, her very heart yearned for the solace of a woman like the gentle lady she had just left, almost for the love that had promised her protection.

"It would be wicked, just as he is starting out in the world, to burden him with a wife who does not love him. And besides, I could not live that way, in poverty."

She sat alone in the room that had been assigned her "till she could support herself," and looked over the letters that lay in her lap. There were but two or three among them from her Aunt Jack, the others pertained to business, and were written by her Aunt Jack's husband. One of the sentences in her aunt's letter ran as follows:

"I suppose it is needless to send any words of greeting to sister Nest. Do you suppose if I told her I was gray-haired and stoop-shouldered she would relent? Sometimes I think my hair ought to be as white as the driven snow, I have mourned so much over the loss of her love."

"She must have been older, much older than mamma," said Flossy to herself; "she must be an old lady. I wonder, as she loved my mother so much, if she would give me a home? How kind I would be to her, how hard I would work. Yes, for the first time in my life, I want to work, to do something thoroughly, to be of some use. It all comes to me what a butterfly I have been. And how they all thronged and swarmed about me when I was a rich man's daughter. Now I pass unnoticed, yet I am just the same. Oh, for a home and one, just one heart to love me for myself. I'll write to Aunt Jack. Maybe she will let me come to her, and I'll tell her I won't be idle. I'm done with the old life, God help me. It has been a bitter lesson, and I have been discouraged again and again, but I'll try once more."

She did try once more. Her pitiful letter found its way to Aunt Jack, whose tender heart yearned at once over the lonely child. She sat down at once and penned the following letters:

LETTER NO. 1.

MY DEAREST AND BEST:

I am sitting near the south window in our room at the hotel, with my desk on my knee. It won't be hard to imagine just how I look, with Zack at my feet in his soft, gray beauty, purring his loudest, the canary trilling over my head, and Nick, the parrot, calling outside the window all the papers in the city: "Ere's the 'Erad'; 'Ere's the 'Times,'" and so on.

You don't know how much I miss your happy face. I have been watching the changing clouds, the shining skies, and thinking how many loving hearts are parted in this world, and I believe I had almost come to be melancholy, when a letter came to me, and who do you think from? My sister's child. Only think of it, God has given her to me because I have no children to love.

When Nest died, I was broken-hearted because she sent me no word. But then I thought, "Now I may sometimes see her beautiful child." When poor Margerie died, I hoped he had made full provision for his daughter, though I knew of the failure. I intended to write to her, to go and see her, when lo, before I had put my intentions into practice, here comes a letter.

My dearest husband, if my heart ever felt like breaking, it did at that letter. The child, it seems, is left without a friend or a cent in the world. The poor little thing has tried in every way to get some work. She has failed signally, and finally asks a home of me. Nest's child, what a providence, what a blessing, one that I never expected.

It is rather funny, too, and made me laugh, though the tears were in my eyes. She fancies yours lovingly to be an old woman, and talks about solacing my declining years. Oh, isn't that too good! Do you know what I shall do, love? I shall allow her to think so. You remember Mrs. Mulligan? Well, I shall make her serve me. I have the wig yet, and the dimity handkerchief, and the double-frilled apron and the spectacles. My dear, I'm going to masquerade.

While you are away looking after our great and unexpected fortune, I propose to go back to the dear old home, which I am glad now we did not sell. The good Spruces are both laid at rest, and the house has been shut up for six months. I am going to rent it of my own agent, and take this charming, beautiful creature with me. God has given me Nest's child to train.

She is the loveliest thing. She sent her picture, dear child, and I enclose it to you. We both thought Nest beautiful; what will you say to this?

Well, dearest, she shall know nothing about the money, and I shall have the pleasure of educating her and making her a woman worthy of the name. I am sure from my dear sister as she is now, as she sees now, I should have nothing but gratitude. Flossy shall think I am poor, and I will teach her that work and knowledge of work are not unbecoming to a lady, ay, to the greatest and best. Through me she shall learn to love nature as her mother never did. I will teach her to discern the false from the true, to find

under homespun and calico the fondest, gentlest hearts that beat, to forget that artificial life of the past, its needs and accessories.

Why, dearest, I never thought I should be so happy in your absence; but don't you see that my hands and heart will be full? Oh, I am so glad and thankful. Every little while I say, "God has given me Nest's child, and I shall, through the good God, be the means of saving her." I only wish dear Aunt Mary were alive, with her wonderful gift. Ah, things that look so real pass, and shadows come, and the here is nowhere, in reality, and the world that we don't see, rather than we won't see, that is real, and grand and eternal hell. I won't preach, but will write this dear child, and get ready for the first act of my little play.

I dare say I was born for a stage manager, or something of the kind. I am so glad of this new work. But never mind, you shall see a little of it. The curtain won't come down till you return, like a prince in disguise, to rescue us from all this theatrical poverty and dumb show.

I am so happy at the prospect I don't know how to stop writing. I don't know as I was ever happier in our log house on the prairie, doing washing and cooking for a certain bright-eyed friend of mine, who is going to repay me with a big fortune. Only bring me yourself, and the fortune may go. We are rich enough without it, thanks to my lucky speculation in the oil lands.

This first letter was sealed, directed and sent, when the writer took another sheet of paper, ousted the gray cat which had jumped on her knee, took up her portable desk and began another letter.

LETTER NO. 2.

TO FLOSSY MARGERIE:

Welcome, my child, welcome! I should have found you, perhaps, if you had not written me, and before those wicked things, doubts, blue devils and all, had taken possession of you, tempting you, as they sometimes do the best of people, to do something terrible. I am glad you thought of me, to write to me, for I was the one, my dear, I am your darling mamma's only sister. To whom else should you come?

You say you are willing to share my poverty if I am poor. So you shall, my child, and I will share my best crust with you. Yes, my darling, I will teach you all you ought to know to make you a perfect housekeeper. You shall learn to wash and iron, to make bread and every delightful thing that is in the cook's manual, and above all, we shall love each other and adorn and decorate our home.

You will not need to come out here, my dear child—ah, how I love you already, for Nest's sake—for I am going to rent the old homestead, where your mother and I were born, and where the dear grandfather you never saw and the saintly young grandmother died, not many years ago. It is a perfectly beautiful old place, and you will say so. There, away from the turmoil and trials of the great world, we can be very happy together, you and I. I shall cherish you as my very own, and who knows but I may owe the happiness of my declining years to my only sister's only child?

Your picture delights me, my dear. It is like your mother, only more beautiful. Never mind the lights and even insults you have been forced to endure. You will never know them again, because I shall take you under my own wing, and no one shall hurt you or make you afraid, if I can help it.

I shall make my arrangements to leave here in less than a week, and I shall send the dear old furniture, which I have sacredly kept, to the dear old farm-house again. You and I will arrange it as it used to be, and during my husband's absence will keep house together. This day week, unless I write you to the contrary, I will come after you in a carriage and take you home. A home it shall be to you in every respect, my darling, and so till then, good-by.

I think if Aunt Jack could have seen her sister's child as she read that letter, the face so smiling, and yet so tearful, the sob and the prayer with which she went down on her knees, heaven itself opening to her vision would not have made her happier.

[To be continued.]

20,000 POUNDS OF BUTTER DAILY

Is the capacity of the Franklin County Creamery, at St. Albans, Vt., the largest creamery in the world.

After trying all the butter colors on the market, Mr. T. M. Deal, the manager, adopted Wells, Richardson & Co.'s Improved Butter Color, for the following reasons:

1. It gives the most natural color, not even turning reddish when too much is used.
2. It is superior in strength and brilliancy, being full twice as strong as some other colors tested. This makes it the most economical.
3. It is free from taste and odor, does not hurt the keeping qualities of butter, and will not fade.

A butter-maker who tries this color once, will never use any other color, as a test is sufficient to show its superiority.

Costs only a Cent.

Send us your address on a postal card; by next mail we will send you a BUCK-THORN fence circular full of good points and suggestions about Fence Building; cheap at a dollar to any fence builder. If the BUCK-THORN SOLID STEEL BARB FENCE is not sold in your neighborhood we will ship it to you from the mill, all freight paid.

THE BUCK-THORN FENCE CO., Trenton, N. J.

Barb Wire Nowhere.

Where parties are well acquainted with the BUCK-THORN, I can get one cent a pound more for it than for any other wire, and can just "knock the stuffing" out of barb wire at half a cent more.

O. P. GRIFFITH, Connorsville, Ind.



Torrey Razors
—AND—
Strops
Highest in Quality.

Known the world over as incomparably The Best. Some troubles are difficult to dodge. Shaving troubles can always be avoided by the use of TORREY RAZORS and TORREY STROPS. Every Razor sold under a GUARANTEE TO GIVE SATISFACTION. If the dealer will not supply you, DON'T take any other, but send for Catalogue, telling how to select, sharpen, and keep a Razor in order.

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QUILT PATTERNS! Three beautiful new One doz. 25c. all different, sent by return mail with catalogue of specialties.

MODERN ART COMPANY, New Haven, Conn.

Our Household.

VALENTINE'S DAY.

Oh, Jennie, run! I hear the postman's knock,
And if, my pet, the letter should be mine,
Hide it from mother, darling, in your frock;
It may be some one sends a valentine.

You've got one for me? Good! Now sit right
there;

Perhaps I'll read it—if you'll never tell;
Oh my! From him! How could the fellow
dare!

And poetry! He really does write well.

The saucy man, to send me such a note!
He says: "Dear maid, I love you best of
earth;"

And this: "Upon your charms I ever dote."
I wonder how much love the fellow's worth?

"A thousand kisses!" Really, I must use
Strong measures with my gentleman, I see.
What's this? "A pretty and bewitching
muse;"

And this: "My muse, my dear one, is but
thee."

I won't read one word more! Now, Jennie, go,
That's a good child, and put this in the grate.
Hold on a moment. Don't let mother know;
I'll keep it now, though really I would hate

To have one think I cared for him a bit,
Though he's so complimentary in ink;
I just pretend to love him—he's got wit.
And that's his one good quality, I think.

You think he's not good looking? Jennie,
dear,

He isn't pink-faced, like some girlish boy;
But, say, now, isn't he handsome? It's so
queer

Some girls choose lovers like a pretty toy!

What's that just coming up the steps? Let's
peek!

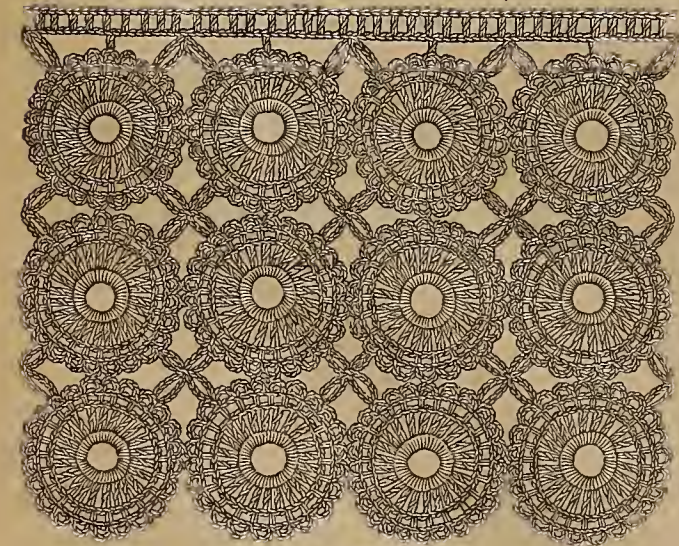
Just draw the blind a little; turn the shutter;
It's he! I wonder if he'll dare to speak!
Run, dear, away; my heart is in a flutter!

—Cenawen Langstroth Betts.

HOME TOPICS.

PARSNIPS.—If some members of
your family do not like parsnips, try cooking them in the
following manner and see if
they will not change their minds: Boil
the parsnips until tender in salted water;
scrape them and slice lengthwise, then
dust the slices with flour and fry in
drippings until a light brown.

MACARONI.—I do not wonder that many
people do not like macaroni if they have
seen it only as the pasty mess I have
sometimes seen served. Macaroni ought
never to be soaked in cold water, as is the
custom of some cooks; but break it into
pieces an inch or two long and throw it
into boiling water, which has been salted
in the proportion of a teaspoonful of salt
to a quart of water. Have as much water
as will boil conveniently in the saucepan,
and keep it boiling rapidly twenty-five or
thirty minutes. Pour it into a colander
to drain, and put half a teacupful of cream
or milk into the saucepan with a tea-
spoonful of butter; wet half a teaspoon-
ful of corn-starch with a little cold milk,
add it to the milk on the stove, let it boil
up, then put in the drained macaroni. If
liked, a tablespoonful of grated cheese
may be added after the macaroni is put
in. Stir it, and as soon as it is all very
hot it is ready to serve. If I wish to bake
the macaroni, I prepare it in the same way,
except using a teacupful of milk instead
of half. Put the drained macaroni in a
buttered pudding-dish and pour the dress-



EDGING FOR THROW.

ing over it; dust the top with cracker
crumbs and bake it fifteen minutes.
Sometimes, instead of the cream dressing,
I use a pint of stewed, strained and
seasoned tomatoes.

GROWING OLD.—The years will glide by
and the birthdays recur with increasing

rapidity, but it takes more than simply
the flight of time to make one old. It is
possible to be young in heart and spirit
always. The secret of keeping the heart
young is, in fact, the long-sought fountain
of perennial youth. Keeping the mind
interested in passing events and open to
all the advancements that are made by
the world, in science, in art, in literature,
is a potent factor in keeping young. If
we let ourselves get into ruts, begin to
think that our way of doing things cannot
be improved upon, that young people can
find no better way, we will soon grow old
and selfish.

We must keep in touch with the world.
Then, instead of children and grand-
children saying, "Oh, father or mother,

make them separate and sew them to-
gether; but this is apt to give them a
ragged appearance. It is very pretty to
use in straight rows as an edging.

OAK-LEAF CROSS-STITCH.—This pattern
was sent in by one of our ladies, and we
appreciate it, as it seems so original. Some
enterprising lady made a great many
aprons for the stores at Christmas time,
of the straight, long pattern, and sold
them for seventy-five cents apiece. Those
who like this work would rather pay for
it than do it themselves. There is a small
pattern check in cross-bar muslin that
would be very pretty worked in some of
the pretty wash silks after these pat-
terns.

BRUSHES.—"Well, I'm glad we went to



THROW.

grandpa or grandma (as the case may be)
are old; they do not care about this," they
will come to us with their plans, sure of
our interest, and anxious for our judg-
ment and advice. If the time has come
when we can lay down the heavy burdens
of life, let us not be content to sit and
doze or dream the days away, but take up
some of the more pleasant pursuits
which were crowded out of our earlier
life.

I know one gentleman who is sixty-five
years old and just commencing the study
of Spanish; and in a class of ladies who are
studying water-color painting is a young
girl of seventeen and her grandma of
seventy. Both are interested in their
work, and criticize and give suggestions
to each other. How much more pleasant
this is than if the grandmother should find
fault because Nellie is spending her time
on such "frivolity," as is sometimes done.

MAIDA McL.

HELPFUL HINTS.

BY CHRISTIE IRVING.

"This sold for \$2.25 at Christmas time;
if you want it now, you may have it for
\$1.25. Better take it while it is fresh, and
lay it away for next Christmas."

So argued one of our merchants, think-
ing it wiser to sell such perishable things
as these were, even at cost, than to keep
them over. Now, it really would be
a very good plan to do this
in many cases, for if it is a
new thing it will last past
another Xmas.

Looking over other peo-
ple's gifts, one often gets
many new ideas for an-
other year. The "throw"
which we illustrate was
lovely. It is made of the
best scrim, at twenty-five
cents a yard, hemstitched
along the sides and at one
end. Then each end is
trimmed differently with
crocheted wheels of ecru
crochet thread, the other
trimmings being yellow
ribbon and yellow silk
tassels.

The illustration of edging
given shows the wheels full size. Make a
chain of four and join it. Into this crochet
twelve double crochet. Around this wheel
make a chain of four and fasten with a sin-
gle crochet between every stitch. A neat
worker can join these wheels as they go
on, with the crochet needle, though some

the circus. Every time I have the dishes
to wash—"

You will wonder what the circus had to
do with that. Well, I'll tell you. After it
was out in the afternoon, a party of us
were going home, and some one seeing a
large tent with the wagons around it, said:

"Another side-show?"

"No; their dining-tent."

"Well, I'm going to see," said I, taking
Lorchen with me. I found the wagons
contained the cooking ranges; four in a
wagon, with a "chef" to superintend them,
looking as nice as possible in his white
cook cap and apron. He said they were
feeding 820 that day, and the things he
was putting in and out of the oven were
very tempting in appearance.

Stepping to the tent opening we saw
them at supper, and the tables were set as
tastily as if for some stylish hotel; and
late as it was, a gentleman at the end was
enjoying some very pleasant, cool-looking
sliced cucumbers. Straying around an-
other way, we watched the dish-washer
doing up the pans and tins. Instead of a
dish-rag he used a brush made of
broom straws, and his pans cleaned up
nicely. So we tried it, and like it, and
now do not dread the pans and plates
so much that have had egg on them and
other things hard to get off.

It must have taken a great deal of
system to have that supper ready for so
many, so as to be ready for the evening
performance. One can learn many labor-
saving ways of work if the eyes see.

FLOWERS VERSUS FANCY WORK.

Fancy work, when neatly done and
made to serve a purpose, is a delight to
the one who fashions it, and to those who
behold it. To put it in the phraseology of
the school-boy's essay, there are two kinds
of fancy work—the useful and the useless.

With the sensible lover of the work,
linen is generally a favorite material, for
the very reason that it can be used and
laundered. So many pretty articles may
be made from it—an endless variety of bags,
covers for dressers, doilies and cushions.
Sofa cushions, especially those for the sit-
ting-room, are much to be preferred when
made from this material. The tired head
can sink down on one of these with a
good, comfortable feeling, knowing that
use isn't going to hurt it one bit. Can
you think of anything more unsuited to
its use than a hand-painted sofa pillow?
They are not rare by any means.

Speaking of hand-painted fancy work,
reminds me of some horrible creations

that I have seen in the shape of table-
covers, banners, splashers and pillow-
shams. Some one's fancy creates a bauner
with a design painted thereon of flowers,
sometimes possible, oftener impossible,
representing some blossoms out of the
latitude of botany and beyond the pale of
natural coloring. This is suspended to a
brass rod and hung on the wall to be re-
garded as "a thing of beauty and a joy
forever." If you will look a little further
through the house whose walls are thus
adorned, you will be very apt to find other
embellishments on the "yellow dog, can-
ton flannel, crinkled paper, green felt,
paper parasol" order. And yet, some of the
best and dearest women in the land make
these articles of dust-gathering trumpery.

My dear sisters, while we do not, of
course, believe in bare walls and the ban-
ishment of pretty ornaments, yet can we
not be as sensible and as practical in this
line as we are in others? So much fancy
work that has gone out of date accumu-
lates, and instead of removing it to make
room for more modern innovations we
crowd all together until the eye is wearied
and longs for a revolution to the extent of
a general clearing out.

Even in the best class of fancy work
there are so many who fail woefully in the
making of it, and the work when com-
pleted suffers sadly when compared to the
pattern from which it was made, and the
design in its maker's mind. There is an
unpleasant feeling that the work is poorly
done, that money has been unwisely ex-
pended and time thrown away.

For what is spent on material for a
any piece of work there could be bought a
window bracket, a pretty flower-pot con-
taining a primrose or some good flowering
bulb, or some choice seeds. Why not
invest your time and money in this way?
Leave the fancy work to those who make
a success of it. You will save your eyes
and at the same time have something
which will bespeak for you a more refined
taste and a better judgment; you will
have something to interest you; you can
learn a little of botany, be drawn closer to
nature and cultivate a love for things which
are among the most beautiful.

An investment in spring bulbs or seeds
would pay you best now. Don't try for
many, for a few good ones will give you
the best satisfaction.

MARY D. SIBLEY.

POULTRY RAISING.

Perhaps no branch of industry women
may engage in is more generally profitable
than poultry raising, and it is fast attain-
ing an important rank among the labor
pursuits of our country. Every rural
neighborhood and small town has its
poultry-yard, and there are several ex-
cellent periodicals devoted to giving in-
formation on the subject, while every
agricultural paper has its poultry depart-
ment, thus instructing everyone in this
avocation which offers rare advantages to
women. It gives fresh air, exercise and
health, especially to those of sedentary
habits, beside furnishing a regular income,
for poultry, properly managed, pays a
larger profit in return for the outlay made
in conducting it than any other business
of a similar nature.

A very limited amount of capital is re-
quired to establish poultry raising in a
small way; but to be successful, everyone
undertaking the business should be pre-
pared to take care of and provide for the
fowls, or failure will be the result of their
efforts.

The first thing necessary is suitable
shelter for them. In selecting a location
for a poultry-house, dampness should be
avoided, as it is a cause of many of the
diseases to which chickens are subject. A
southern exposure is best, and the house
should be so situated that it will be pro-
tected from chilling winds.

In constructing a hen-house, plenty of
room should be provided, and due con-
sideration should be given to warmth,
light and ventilation, without exposure to
currents of air. Connected with the main
house should be a shed where fowls can
scratch. It should be protected as much
as possible from the weather. Poultry-
houses should never be low; all possible
height should be given them. If in a cold
climate, warmth is best secured by double
walls filled in with sawdust. The win-

PATTERNS. \$30 GIVEN AWAY June 1st to
any one for the best designed
EMBROIDERY PATTERNS made from our NEW
and it marks out any pattern. Pad, 50c. postpaid.
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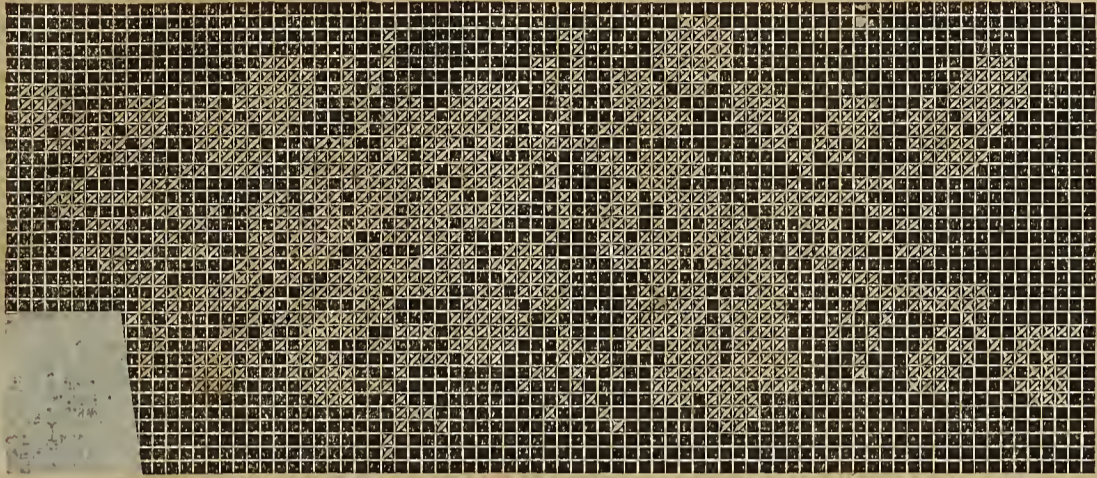
dows should be on the south side of the house, and should have wire netting inside and be protected by shutters outside. There should be openings near the roof for ventilation, and the floor should not be too close. Perches and nests should be arranged in the most convenient manner, and always so they can be easily moved and cleaned. For nests, boxes or half barrels may be used.

After proper houses and yards have been constructed, the next thing to be considered is the best breed of fowls for general purposes, of which we will speak in the next paper. ELIZA R. PARKER.

HARMONY IN FURNISHING.

BY RAY RICHMOND.

Not long since I visited a beautiful home, where wealth and elegance were



OAK-LEAF CROSS-STITCH.

displayed, but in such a way that the eye was offended. In one room, where the woodwork was cherry-stained, the hangings were in pale blues, the furniture in oak and the carpet in reds. In another room the woodwork was an expensive satinwood, while the carpet was a cream with big roses, the furniture cherry and the hangings bright yellow. In one room, with oak wood and furniture, the hangings were red, the carpet blue, and so through the entire residence.

In taking the first-mentioned room, the cherry wood and the red carpet corresponded, while the bright, yellow curtains and portieres in the satinwood room would harmonize, and all the cherry furniture would be appropriate in this red, warm-looking room.

Now, with the satinwood room, a most beautiful, delicate, cool summer room could be made by a little transformation. The wood was pure white; then such furniture as was in white and gold should be placed in this room on the dainty blue carpet found in the oak room, with the pale blue hangings used in the cherry room. One can readily see how lovely such a room would appear.

Then take the oak room and put the cream carpet on its floor, and fill it with oak furniture and blue draperies, and it is artistic.

If one is only satisfied with their position in life, how much pleasure there is in it. Not long ago Miss Shanklin and myself called upon Miss Harworth, whose father is immensely wealthy. She took us into her room—boudoir, she called it. A beautiful, dainty, plush carpet covered the floor, the bedroom set was ivory-white, with gold mountings. Rich lace curtains hung at the windows, a costly rug lay in front of the dresser, on which was scattered all sorts of feminine knick-knacks. At the closet door were silk portieres, and upon the richly-papered walls hung beautiful paintings. The stationary wash-stand stood in a niche in the wall, and was supplied with various necessary articles, all very handsome. The tone of the room was the rich white and gold, with here and there a tint of blue or a hint of pink. An easy couch stood at one side of the room, with three large, soft pillows, covered with fancy, flowered silk in gold and white.

We both enjoyed the loveliness, and Miss Harworth's white silk tea-gown, with gold cord and tassel, was the finishing touch. As we left, I remarked to Miss Shanklin:

"Last year she had everything blue and gold."

"How lovely it must be to command wealth for every whim," she sighed, and as we neared her modest home, she asked, cordially: "Won't you come in?"

I gladly accepted her invitation, and she led me to her bedroom, every article

of which I was familiar with. There was the old carpet, its ragged spots covered by some of grandma's really pretty rugs; the pine bed set, with its unsightly decorations of lurid roses, the scant, scrim window-curtains, the faded paper and scratched paint, and although it was summer, the stove still intruded into the center of the room. Some cheap pictures hung upon the wall, and the few chairs were old-fashioned and rickety.

The contrast between the two rooms was simply distressing, and I think Miss Shanklin noticed it more than ever. I felt I could make something quite pretty out of the room, with its wide window. And she, too, must have thought so, as I found out later on.

When I returned to my own room, I was pretty well satisfied with it. It was a

small room, with an east and a north window and two doors. In furnishing it, I had considered it too small for a carpet, as it was sure to be "stuffy" in summer. I had given the floor a good walnut staining, and in winter spread in front of the bed a white, unlined fur rug, which cost me three dollars, it being long and narrow.

For a bedstead, I had found a fine brass one at second-hand, and for twenty-five dollars. It was not marred, and I gave it a good cleaning, set it in the only large corner of the room, and made it up with a deep lace cover, and shams to match. It is as cool and airy as can be wished for summer. I had not enough room for a dresser and a wash-stand and needs must economize space. I had the good fortune to find an old-fashioned affair of four drawers and a smooth top, about three feet high, of common pine. It struck me it would make an excellent combination bureau and stand, so I purchased it for the small sum of two dollars, took it home and gilded it over the yellow paint. When it dried I gave it another coat, and finished it up with a thin varnish. Across the top I spread a white linen scarf, worked upon the ends with yellow silk. The basin and ewer were of fine white china with a gold band, which I had coaxed away from my grandmother. We had a large, oval mirror, with a deep brass frame, which, having become old-fashioned for the parlor, I appropriated and hung over the stand.

For window-curtains, I had scrim in stripes, shirred upon small, brass rods, which cost me sixty cents apiece, and at my closet door I had hung portieres of lemon-colored canton flannel. The walls were calcimined with a brass molding, from which hung a few frames, one containing my school diploma and another a photograph of our home. Various articles, such as a girl easily makes, ornamented the room, and for chairs, I had gilded a willow rocker and a straight chair.

It was some weeks before I was again in Miss Shanklin's room. Not a word had she breathed to me, and it was a complete surprise, as I entered it. The ragged carpet was gone, and the floor was brightly stained, varnished and oiled, while the grandma rugs were nicely placed about. The room was large, and now was very pretty. A cheap but handsome paper was on the wall, and certain uneven lines told me Miss Shanklin had been the hanger. The woodwork was painted a delicate blue. The large window was artistically draped with creamy madras, hung upon a bamboo fishing-pole, supported by brass brackets. At the closet door hung a portiere similar to mine, with the rod of bamboo.

But the bed set was the greatest surprise. She had painted it all a pure white, and run a band of gilt around each article. The bureau was old-fashioned, but she

had made it handsome. Brass handles took the place of the old knobs on the drawers. She had removed entirely the two little boxes on the top, leaving a smooth surface. The wash-stand was similarly treated, and she had purchased a set of blue and white washing articles. The whole room was in blue, to correspond with the paint. On the bed was a scrim comforter of light blue; all the decorations were the same delicate shade. Her chairs had been firmly glued together and painted white. The cheap pictures had been removed and one or two fine engravings made up for lack of many inferior articles. An old-fashioned hair sofa, placed across one corner, had a couple of handsomely covered pillows. I found out the covers were of cretonne of a deep cream foundation, with blue bachelor's-buttons upon it. Another corner held three small shelves, upon which was a collection of books. The stove was entirely banished. Clematis was wound around one picture-frame, and Florida moss over another.

When I had admired to my heart's content, she said:

"And it did not cost me over ten dollars."

I could hardly believe her, but she assured me it was so, that she had patiently watched and hunted for sales and bargains; that the wall-paper was three cents a roll; that the madras, being a remnant, was half price, and that her stain and paint was really her largest

item. And I can safely say that she enjoys her home-made room fully as much as Miss Harworth did her elegant boudoir.

A LETTER TO ALL.

Sisters of FARM AND FIRESIDE, I want to express my thanks to you all for the many valuable recipes and words of advice I have had in the past eleven years I have been a reader of its columns. I have nearly all the papers extending over that period of time. I find they are piling up pretty well. One of these days I will overhaul them, and then, when I get all recipes arranged, I will have a book of

my own. I want to tell you my way of cooking codfish.

Take a sufficient amount for the size of family, soak over night in a crock or porcelain vessel (never tin); in the morning, when ready to use, rinse and place in a vessel of boiling water. Let remain until tender, lift, drain and place on a platter already heated with hot water. Butter and pepper. For a family of five, I use three hard-boiled eggs, which I have ready; slice them thin over the fish. Make a white gravy of two thirds of a pint of thin, sweet cream thickened with a teaspoonful of corn-starch or flour, pour over and serve hot. If there is the least taste for cod about you, you will have a double relish for it prepared in this way.

I want everybody that is so unfortunate as to get cut on barb wire, or hurt on rusty nail or iron of any kind, to smoke the wound thoroughly over coals on which wool, in any form, is burning; the smoke kills the poison and the wound rarely gets sore. We have tried it to our satisfaction and have never known it to fail.

I want to tell "Joseph" I bought seed of tomato "400" and grew a tomato which measured 19½ inches around. Four, when peeled and cooked, filled a one-half-gallon glass jar. The quality was excellent.

Will some sister have published in FARM AND FIRESIDE a recipe for making Spanish pickles? I saw some at the fair last fall and cannot find any one that can tell me how to make it. It was most delicious. OCCASIONAL.

PILLOW-SHAMS.

Whoever has wasted valuable moments in attempting to keep pillow-shams in their places will appreciate a simple device which holds them in position and gives very little trouble in the adjusting. On the back of the shams, at each of the upper corners, sew a bit of narrow tape diagonally across the corner. When the shams are put over the pillow, pull a little corner of the pillow-case up through this tape loop. Nothing further is necessary, and the shams will stay in their places unless some more than ordinary means disturbs them. This is much more simple and convenient than the various bars, frames and riggings to which many housewives think themselves compelled to resort.

ALWAYS SAFE

If you take AYER'S Sarsaparilla. Don't be induced to purchase any other blood-purifier. Pimples, blotches, boils, carbuncles, debility, sores, rheumatism, headaches, nervousness, loss of appetite, sleeplessness, and pains in the back and side indicate lurking disease, which, if not treated promptly, are liable to result in permanent loss of health. The specific for all cases of blood-impurity is the well-known alterative, AYER'S Sarsaparilla, the Superior Medicine. It expels every trace of poison and acid from the system. No other blood medicine has so successfully won and held the confidence of the public as



Superior Medicine. It expels every trace of poison and acid from the system. No other blood medicine has so successfully won and held the confidence of the public as

AYER'S Sarsaparilla

Prepared by Dr. J. C. Ayer & Co., Lowell, Mass.

Has cured others, will cure you

WINTER DAYS

Are short and the nights long. Colds, coughs, croup, sore throat, bronchitis, pneumonia, and kindred complaints, which often attack suddenly and when least expected, are now to be feared. Prevent a night-call on the doctor by having at hand

Ayer's Cherry Pectoral,

Prepared by Dr. J. C. Ayer & Co., Lowell, Mass.

Our Household.

DRIED APPLE PIES.

I loath, abhor, detest, despise, Abominate dried apple pies. I like good bread, I like good meat, Or anything that's good to eat; But of all poor grub beneath the skies, The poorest is dried apple pies. Give me the tooth-ache or sore eyes, In preference to such kind of pies.

The farmer plucks his knarliest fruit, 'Tis wormy, bitter, hard to hoot; He leaves the hulls to make-us cough, And don't take half the peeling off; Then on a dirty cord they're strung And from some chamber window hung. And there they serve a roost for flies, Until they're ready to make pies. Tread on my corns, or tell me lies, But don't pass me dried apple pies.

CHIT-CHAT.

Not long ago a friend said to me: "You have so many old-fashioned ribbons." The secret of my possession lies in one word—carefulness. In olden times people did not get new head-gear every six months. My mother and aunts removed the trimming from their bonnets when through wearing them, and carefully placed all trimming in a box devoted to that purpose. Need I say that the contents of that box are envied by half my friends?

Had these ribbons been treated carelessly, allowed to lie around several weeks, then poked anywhere out of sight, that box of old ribbons would not be in existence to preach its sermon to me. While I prize highly the contents of my box, and am enabled to employ decorations of rare patterns, yet the lesson I have been taught is far more priceless than a cart-load of ribbons. Some years ago I, too, started a ribbon and silk box. Now if any of the family need something to trim an every-day hat, or decorate a piece of fancy work, out comes my box, and presto! the very thing wanted is often found.

May I say a word on the subject of cleanliness? Be orderly, be tidy, but do not be overclean. How often we see carpet, paint and decorated zinc which have lost their beauty through the exertions of the overclean housekeeper!

Take time to read. Five minutes each day had better be spent in good reading than in giving the stove an extra rub. No sight is much sadder than to see a young girl settle into a household automaton. A girl who before marriage could converse intelligently upon questions of national interest, recently said: "Why, I never get to read, now!" Dear sisters, take time. Remember, we shall have to answer for our care of our mental as well as our moral and physical capacities.

MARY FAIRFAX.

TRY.

For sore throat, inflamed tonsils, quincy and even diphtheria, a gargle made of equal parts of soda and pulverized alum, with a little carbolic acid. Put in a large bottle and add water.

If any one should have occasion to use, as I have had, a poison antidote, it would be well to know that the white of an egg will absorb a metallic poison, giving a little time to procure the proper emetic. I have heard but recently that tobacco tea is an efficient antidote for arsenious poisons.

If an insect crawls into the ear, close the other with a finger, shut the mouth and pinch the nose. The insect will crawl rapidly out.

If the child pushes a bean, kernel of corn or other obstruction into its nose, rub the nostril with Scotch or other snuff to provoke sneezing.

If anything gets into the little one's eye, a mother would not refuse to wipe it out with her tongue when she had learned that it would cause no irritation to do so. S. M. H.

BEWARE OF OINTMENTS FOR CATARRH THAT CONTAIN MERCURY,

as mercury will surely destroy the sense of smell and completely derange the whole system when entering it through the mucous surfaces. Such articles should never be used except on prescriptions from reputable physicians, as the damage they will do is ten fold to the good you can possibly derive from them. Hall's Catarrh Cure, manufactured by F. J. Cheney & Co., Toledo, O., contains no mercury, and is taken internally, and acts directly upon the blood and mucous surfaces of the system. In buying Hall's Catarrh Cure be sure you get the genuine. It is taken internally, and made in Toledo, Ohio, by F. J. Cheney & Co. Sold by Druggists, price 75c. per bottle.

ECONOMY IN HOUSE WORK.

WHEN on one pair of hands, one pair of feet and one brain depends the smooth running of the household machinery, it is not surprising that the motor power is soon consumed and consigned to retirement in the cemetery; or partly consumed, a physical wreck the consequence. Believing that "cleanliness is next to godliness" is not what is wearing out our women, but the effort to realize that proverb is what is doing all the mischief.

One hundred years from now it will make no difference to your present neighbor whether you did your work by a cast-iron system or whether you kept everything in apple-pie order. But, dear mother, it will make a difference to the future generations descending from you.

It is a mother's first duty to take the best care of which she is capable of her health. If she cannot do this and do her work according to her standard, she should care for herself first and let the work be of secondary importance. Her life is given her, not to crush out by over-work, but for usefulness and the training of her children.

For the farmer's wife there is always an excess of work, but by careful management and by the employment of labor-saving inventions, the additional cost of which will be but a few dollars, many a restful hour will be found that would otherwise be an impossibility. If, however, the dollars are not forthcoming with which to purchase the luxurious utensils, it naturally follows that you must do the next best thing—bring constant thought to bear on your work and you will soon find many ways to alleviate the toil attending housekeeping and kitchen work. For example, in the every-day work of preparing vegetables for dinner, it is far less fatiguing to sit than to stand. Have for the purpose a rather high stool.

When preparing a meal it will facilitate dishwashing if water is poured into the cooking utensils immediately after the contents have been removed. If the vessels are very greasy, add a little concentrated lye, pearline or soda.

A home-made dish-drainer is very useful, and one is very easily made from a leaky tin pan of convenient size, by puncturing a number of small holes in the bottom with an awl.

If there is no sewer leading from the kitchen sink, it will save the housewife many steps if the swill-pails are brought inside. They should be nicely painted, and a piece of oil-cloth provided to set them on.

The kitchen and pantry floors, if uncarpeted, should be painted some pretty, light color; yellow or pink are colors that will show soiling least. The dark shades are not advisable. If you cannot conveniently get the paint, two coats of linseed-oil will more than repay you for the small outlay; besides, it will preserve your floors. It seems wrong to wear yourself out scrubbing when oil and paint are so cheap. An article worth many times its cost to the overworked housewife, yet often condemned under the false impression that it is injurious to carpets, is the carpet-sweeper. Many housewives sweep daily with the broom when the use of a carpet-sweeper would render a thorough sweeping necessary but once a week.

Every housewife knows how much hard work is involved in the washing of bed-clothes, but everyone may not know that a deep facing of some dark calico applied to the ends of comforts and quilts makes so much work unnecessary. The facing may be removed and washed and returned to its place. A day or two of good airing will purify the comforts.

A slip of cheese-cloth or muslin over the feather-bed or mattress would save much work, as it is easily removed when soiled.

The watchful, intelligent mother will find many ways to lighten her burden, and where an article seems really necessary to her preservation, it seems little short of cruelty to deprive her of it. Her city sisters, though they may not possess one tenth as much of this world's goods as does she, are not slow to procure the things that will make life more pleasurable and easy. I know from observation that the dread of parting with a few dollars is the cause of many farmers' wives leading lives that are very closely allied to slavery. Dear mothers, this is all wrong. If you can afford it, get what will make life less wearying. Save your health and disposition for something higher. Don't get into the way of letting your work master you and so deprive yourself of life's best blessing—health. ELZA RENAN.

Don't go to school to learn BOOK-KEEPING when you can learn it at home, within 100 hours' study, without the aid of a teacher, from Goodwin's Improved Book-keeping and Business Manual (guaranteed). Price, \$3. 2,823 testimonials received. Worth \$500. Send for Descriptive Pamphlet. (Save this card.) J. H. Goodwin, R179, 1215 Broadway, New York.

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Our Sunday Afternoon.

THE LOVE OF JESUS.

O Christ, thy love is wonderful,
What mind its breadth can measure?
A gem of rich and peerless worth,

The joys of earth, like summer flowers,
May for a season please us,
But autumn comes, and winter's gloom,

THE GLORIOUS RESURRECTION.

CHRIST, we are told, is "the first fruits" of them that sleep.
Since then, millions have fallen asleep with the name of Jesus upon their dying lips.

What a stupendous consummation!
And yet how sweet! Bodies like unto the glorious body of our Lord,
as the three disciples beheld it beaming upon the mount;

Nor they alone, the partners of our blood,
the companions of our earthly pilgrimage,
who have struck their tents and moved on before us to the silent shore;

Enoch, Abraham, David, Isaiah,
Stephen, Peter, Paul, Johu, Luther,
with all the heroic and all the gentle spirits,
are yet to come and go.

THE MARTYDOM OF VICE.

The martyrs to vice far exceed the martyrs to virtue,
both in endurance and numbers.
So blinded are we by our passions that we suffer more to insure perdition than salvation.

PURE AIR AT NIGHT.

During the day the air of living-rooms is pretty certain to be changed more or less by the frequent opening of outside doors.

In the morning, persons who thus deprive themselves of life-giving oxygen,
the great necessity of life, awake unrefreshed and dispirited, languid, pale and weak,

Ventilation of living-rooms is of great importance at all times,
but the supply of an ample amount of fresh air to sleeping-rooms is doubly important during the hours of sleep.

WHERE HAPPINESS IS FOUND.

Happiness is never found by searching,
but finds its own resting-place where it abides.
How much of your time and mine has been wasted in searching for happiness?

The spirit which, in entire forgetfulness of self,
seeks the good of others, is the only means of making happiness our friend and companion.

"A LIVING THIEF."

At one of the Baptist anniversaries in the north,
Dr. Lorimer related the following dialogue,
which penurious Christians would do well to ponder:

Talking with a man who had professed to be converted,
a minister said:
"Have you joined the church?"

CHRIST'S TEMPTATIONS REAL.

Sin is not in the appetites, but in the absence of a controlling will.
There were in Christ all the natural appetites of mind and body.
Relaxation and friendship were dear to him;



SOMETHING TO LIVE FOR

Something well worthy of every effort.
From the Roman Cordelia's time,
to our own, children have been the jewels of the good parents' pride and care.

But without good health one can neither well appreciate or direct the vigorous physical activity which is characteristic of the young,
and yet the dread of delicate or depressed parents.

Too simple, you say? That reply might upset a theory,
but not a fact. A fact cannot be too simple.
The helpfulness of our (notice the "our") COMPOUND OXYGEN is a fact—fixed, proven, clinched!

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FOUND In Galveston, Tex., an old coin worth \$5,000. A Boston Baker sold 149 old coins \$13,389.

Coin Collecting Pays Big If you have any Old Coins or proofs coined before 1878,
save them, as they might be worth a fortune.

Advertisement for pianos and organs. Includes text: 'We Sell DIRECT to FAMILIES PIANOS & ORGANS \$150 to \$1500 \$35 to \$500. Absolutely Perfect!' and an illustration of a piano.

Advertisement for a Singer sewing machine. Includes text: '\$20 HIGH ARM PHILA. SINGER Automatic Bobbin Winder. 15 Days' Trial. Warranted 5 years.'

Advertisement for 'REMNANTS FOR CRAZY PATCHWORK'. Includes text: 'SADIE'S SILKEN SHOWER OF SATIN SAMPLES' and an illustration of a woman with fabric.

Advertisement for a washing machine. Includes text: 'A PRESENT. SEND us your address and we will make you a present of the best Automatic WASHING MACHINE in the World.'

Advertisement for a gold ring. Includes text: 'EVERY PERSON WHO ANSWERS FREE! THIS ADVT CAN OBTAIN A RING FREE!' and an illustration of a ring.

Advertisement for Dr. Thompson's Eye-Water. Includes text: 'If afflicted with sore eyes use Dr. Thompson's Eye-Water' and 'VARICOCELE A simple but certain recipe for self cure'.

Queries.

READ THIS NOTICE.

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

Steamed Bone and Flesh for Manure.—A constant reader, of Westboro, Mo., asks: "What is the value of flesh and bones of hogs that have died of the cholera and had the lard steamed out? How should it be applied to corn?"

REPLY BY JOSEPH:—These steamed carcasses will make a very rich manure. You should try to get them in as fine condition as possible, either by composting and mixing with dry muck or loam, or with barn-yard manure. I would prefer to apply broadcast for corn.

Swamp Land for Celery.—T. E. D., Lafayette, Ind., writes: "I have rented an acre of slough ground, and intend putting a part of it to celery. Soil very loose and covered with decayed vegetable matter, black, and not subject to overflow."

REPLY BY JOSEPH:—A deep, rich muck or peat soil, if well drained, is well suited for celery growing, especially if it could be arranged for irrigation. Use plenty of good compost, and perhaps wood ashes, and you will be able to produce good celery.

Copperdine and Bordeaux Mixture.—G. E. L., Jamesport, N. Y., asks: "Is copperdine as effective for potato-blight as the Bordeaux mixture?"

REPLY BY JOSEPH:—I do not believe it is. The Bordeaux mixture adheres more closely, especially in rainy weather, than the other. Still, the ammoniacal solution of carbonate of copper (sent out by a Baltimore manufacturer, ready for mixing with water and immediate application, under the name "copperdine") is much cheaper and more easily prepared and applied, and we could well afford to make two or three applications of the copperdine in place of one application of the Bordeaux mixture. On the whole, I think we are yet somewhat groping in the dark in this matter. I am not at all sure that the part of the crop we may save from destruction by blight and rot will pay for the expense and labor of making these applications.

Camphor for Pea-weevil—Book on Gardening.—A subscriber writes: "I have been told that camphor in peas will prevent bugs from destroying them. Will not the smell of camphor be observed after cooking the peas?—What book on gardening would you recommend?"

REPLY BY JOSEPH:—Camphor is of rather questionable utility and efficacy for this purpose. If the peas are to be used for cooking, the simplest way of destroying the eggs or larvae already in the peas (and these alone are to be feared, for the bugs do not come from outside after the peas are grown) is by exposing them to a temperature of, say, 150 degrees or more, for a few hours.—I am vain enough to believe that "How to Make the Garden Pay," written by myself, is the most practical modern work on gardening now in existence. If this does not suit, read Henderson's "Gardening for Profit."

Bugs and Melons.—L. O. H., Spring Valley, O., writes: "Some time ago, I think, you stated that you planted some kind of plants between or near melon hills to keep the bugs away. Have you found this a good plan?"

REPLY BY JOSEPH:—Beans, buckwheat, radishes and other things have been tried and recommended for just this purpose. Sometimes this expedient seems to keep the bugs away, but when the latter are plentiful they usually find the melon plants even if the latter are pretty well hidden among other plants destined to baffle the senses of sight and smell of the bugs. Tobacco dust, or a mixture of it with bone-dust, applied to the hills by the shovel (almost covering the young plants), is the safest preventive of bug attacks I have yet come across. Still, I believe if we would plant a field of buckwheat, and then plow out double furrows where we want the bills, and plant our melons and other vines right in this standing field of buckwheat, they will rarely be troubled by bugs.

Keeping Cabbages.—I. A. J., Huntingdon, Tenn., writes: "How can cabbages be kept through the winter until spring? Will late-planted cabbages keep better than early ones? What kinds keep best?"

REPLY BY JOSEPH:—Maturity is always the first step towards decay, and when decay has once begun it is next to impossible to prevent its progress. You cannot hope to keep cabbages over winter that have come to maturity much before cold weather in the fall. In fact, it is much easier to winter over cabbages that have not yet reached their full development than those that have. The variety itself will make little difference. I would prefer not to have them excessively solid. If you can find a cool, damp place for them, where they can be kept near the freezing point, or lightly frozen, you will probably have no difficulty in keeping them over winter. We often put them in a row, or in two rows, and sometimes one on top, close together and heads down, in a well-drained spot outdoors, and then cover them with a ridge of soil, so that only the ends of some of the roots are sticking out. I do not know whether this treatment would be suitable for your locality or not.

VETERINARY.

Conducted by Dr. H. J. Detmers, Professor of Veterinary Surgery in Ohio State University.

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

Worms.—C. M., Lexington, Ind., writes: "I have a horse troubled with worms. What is the best remedy?"

ANSWER:—I have to refer you to the answers given to similar questions in recent numbers of this paper.

Induration in Consequence of Mastitis or Garget.—J. L., Cahto, Cal., writes: "I have a cow that had a calf about eighteen months ago. She was not got up and attended to in time, and lumps formed in her teats. What shall I do for it?"

ANSWER:—You cannot do anything. The "lumps" are permanent.

A Running Sore on the Lip.—Mrs. L. W., Omaha, Mo., writes: "I have a horse which has a running sore on the lip, and I would like to know what to do for him."

ANSWER:—If you will state the nature of the sore—for instance, whether it is a fistule or an ulcer—and describe the exact place, and say whether it is on the outside or in the mouth, etc., I may be able to answer your question, but as it is I am not.

Probably Diseased Molars.—A. D., Manchester, Mich., writes: "I have a short-horned cow that began spitting her cud about one month ago. She does it at night, but not every night—about once a week. Is there any cure for it?"

ANSWER:—Your cow, it seems, has one or more diseased molars. Examine her mouth, and if you find one or more of her molars or grinders cavitous or loose, have them extracted.

Colic.—F. J. W., Galloway, Mich. Your horse, it seems, is subject to attacks of colic, and at some time one attack, probably, will become fatal and be the last. The only thing you can do in regard to prevention is to see to it that the animal is fed and watered very regularly, receives nothing but wholesome food and pure water—the latter preferably from a good, deep well—and is exercised regularly. There is no absolute prevention, because the predisposing causes, which undoubtedly consist in the presence of an aneurism in the anterior mesenteric artery, cannot be removed.

Dry Cough.—J. C. W., Hillsdale, Pa., writes: "One of my horses has a dry cough that bothers him occasionally. He has had it for a year. It came from the 'grip' or distemper. Tell me a cure."

ANSWER:—I have repeatedly stated that coughing, being an attendant of almost every disorder of the respiratory organs, is not a symptom upon which alone a diagnosis can be based. In your case it may be a symptom of so-called heaves, and it also may be a symptom of chronic catarrh or of some other morbid condition. You furnish me nothing that enables me to decide.

Fetid Milk.—D. B., Clara, Tenn., writes: "I have a cow which has gone down in her milk. It has become offensive to smell and taste. She eats heartily and holds up in flesh."

ANSWER:—If the milk has an offensive smell and taste it must be concluded that serious morbid changes—ulcerations, for instance—are existing in the udder. What these morbid changes are I cannot decide, because your inquiry fails to furnish any data. One thing, however, is sure, and that is, the milk is not fit for use. If the offensive smell and taste are only slight, they may be due to improper food given to the cow.

Growing Pigeon-toed.—C. F. O., Locust Grove, O., writes: "My five-year-old mare, which has always traveled straight with her front feet, is gradually growing 'pigeon-toed.' I have called my smith's attention to it, but to my eye it is getting worse rather than better. Can you give me any advice?"

ANSWER:—What you complain of is probably due to defective shoeing. It can have no other cause. If your horseshoer cannot see it, or don't know how to remedy it by his shoeing, change your blacksmith and have the animal shod by one who understands his business. Detailed direction will not be necessary.

Shakes Head and Ears.—C. B., Orvisburg, Miss., writes: "I ask for information regarding my horse. Symptoms: Pain in head and ears. He shakes his head as if flies were in his ears; then he will let his ears flop down. The shaking lasts about ten minutes at a time. He sweats very freely at the lower part of his ears. It sets him almost crazy at times. I have examined his ears and can find nothing to cause such shaking. He eats well and is in good flesh."

ANSWER:—You either overlooked important symptoms or else your examination of the ears and neighboring parts was only a superficial one. In the former case the shaking, etc., may be due to an existing affection of the brain—pressure upon certain parts of that organ—and in the latter case it probably is due to local morbid changes or conditions. Examine and observe more closely, and, if you wish to, report again.

Blind Stagers.—C. M. H., Pulaski, N. Y., writes: "State in your next issue the cause of 'stagers' in a horse, and your best remedy for it. Do you consider it curable in any case, mild or otherwise, especially in the former? Would a straw diet be best?"

ANSWER:—Stagers, or as it is usually called, "blind stagers," in horses is an incurable disease, caused most frequently by an accumulation of serum in the ventricles of the brain. There are a few other possible causes, but all of them act in so far alike, as they all produce pressure upon the brain tissue. It will not be necessary to enumerate all possible causes. As I said, the disease is incurable; still, some temporary improvement is usually effected if the animal is put in a cool place and in a pure atmosphere, and if care is taken that its stomach is never overloaded with too heavy and too much voluminous food difficult of digestion. Horses thus affected should never be used on the road.

Degeneration of the Spermatic Cord.—S. J. McN., Westboro, Mo., writes: "I ask a question in regard to a mule. It will be two years old in the spring. I had him castrated last spring; used no clamps, but tied a piece of fat meat to the cord and paid no more attention to him. On the left side there seems to be a new testicle, which is down only at times. Have felt of it, and it seems firm and about the right size, and on the right side it is as large as the other, but appears soft and spongy."

ANSWER:—What you describe is not a new testicle—our higher-organized animals do not possess such regenerative powers—but simply a degeneration of the spermatic cord, due to an improper performance of the operation. The animal must be operated again, and clamps be put on the yet healthy portion of the spermatic cord above the degeneration. At least, this is the safest way to remove the latter.

Snuffles.—L. W., Almena, Kansas, writes: "What is the cause of some hogs among others having trouble in the nostrils? Sometimes the nose or snout will grow to one side and they will try to rid themselves by blowing out through the nostrils. Their hair will look sleek and all right, but they do not eat so much as others, and do not grow so fast. They will also try to rub on something or dig in the ground in a hurried way, like it caused them itching. Would like to know the remedy, if you can determine the ailment from description I have given."

ANSWER:—What you complain of is usually called snuffles, but whether it is in your case an independent disease due to stractritis, or, as is sometimes the case, a symptom of swine-plague or so-called hog-cholera, does not appear from your description. It probably, though, is the former. In that case, give food rich in phosphates; for instance, to young pigs milk and some bran and oats in the winter and clover in the summer. Avoid ringing.

May be Estrus Larvæ.—G. C. C., Troy Centre, Pa., writes: "Will you please inform me what is the trouble with my sheep? It stood around, did not eat for a week or so, then it got so it could walk only on its knees with its front legs; could use its hind parts all right; was very slimy at the nose; would keep its head on one side or the other nearly all the time. It eats corn and drinks water, but does not touch hay. I have been told it was grub in the head, but do not know. It will be of great benefit to me to know what the trouble is."

ANSWER:—What you have been told may be correct; namely, estrus larvæ, or so-called grubs in the head; that is, in the frontal sinuses, in the nasal cavities, or even in the ethmoid bones. Similar symptoms might also be produced by the presence of a cyst-worm (*Cysturus cerebrotis*) in certain parts of the brain. Only a post-mortem examination will reveal the true cause. It is next to impossible to remove either the grubs or the cyst-worm in the living animal and at the same time keep the latter alive.

Catarrhal Ophthalmia.—M. J. O., Peters, Ill., writes: "I have a two-year-old horse which has had, for the past five months, a weakness of the eyes, marked by a narrow streak of wet hair, extending from the lacrimal duct downward two or three inches. He is constantly in good flesh, but weakens rapidly when driven. This morning I detached from the rectum some six or seven worms, about an inch long and round-pointed at both ends and of the thickness of small fishworms. What can I do to stop the tear-flowing of his eyes? He had a touch of pink-eye about the time this commenced, and the first discharge from the eye was matter."

ANSWER:—Your horse, it seems, suffers from catarrhal ophthalmia, and may be also from a catarrhal affection of the intestinal mucous membranes. You may apply to the mucous membrane of the eyelid, by means of a glass pipette capped with a rubber bulb, two or three times a day, a few drops of an eye-water composed of nitrate of silver, one part, to distilled water, 250 parts. The catarrhal affection of the intestines requires a well-regulated dietical treatment.

Injury to Elbow-joint.—J. T. B., Crawford, Idaho, writes: "I have a valuable horse that some two years ago sustained an injury to the joint of the radius and humerus (probably by kick), which has resulted in an enlargement of that joint, and for the past year he has been growing very lame, particularly in starting out to work. The tendon running from the seat of injury down the leg and over the front of the shin-bone is very prominent and apparently badly contracted, and it is to that that I attribute his lameness, principally. I desire to ask your opinion of the advisability of severing that tendon and endeavoring to elongate same when union takes place."

ANSWER:—The joint between the humerus and radius is the elbow-joint, and no tendon runs down from that joint over the front of the "shin-bone," by which, as I take it, is meant the metacarpus, or shank. If the seat of the injury is in the elbow-joint, the latter, undoubtedly, is also the seat of the lameness, and as the upper joint controls the lower ones, it is very well possible that the extensor tendon in front of the metacarpus appears to be unusually prominent. A cutting of the tendon would not improve the condition, because the cause of the lameness would not be removed by such an operation. The case must be considered incurable.

Erysipelatous Swelling.—C. W. F., Kaintuck, Idaho, writes: "I would be glad to have your opinion concerning a disease among horses of this section. I will try to describe the symptoms of one of my mares, adding, however, that there are horses all over this section affected in a similar manner. My mare has been running on the range all summer, and was in good flesh; she also raised a good colt. About a month ago I found her on the range quite thin and with quite a large swelling under the belly, about midway between the fore and hind legs. The main swelling is about one foot in length and five or six inches wide. From this there is a hard, swollen ridge some two or three inches wide and extending back to the bag, and a little to the right of the middle of the belly. The right side of the bag and right teat were also swelled and quite hard. The bag has now broken in several places around the right teat and is discharging considerable pus. The whole of the swelling is hard and unyielding to the touch and does not seem to be very sensitive."

ANSWER:—What you describe is probably an erysipelatous swelling; if so, you will find in the swelled portion numerous small ulcers, covered, perhaps, with small scabs. The treatment consists in keeping the animals clean, in a clean and dry place, in avoiding wet and dirt and in applying, twice a day, to the swelled parts, by gently rubbing it in, a mixture of liquid subacetate of lead, one part, and olive-oil, three parts. A good dietical treatment, also, is essential, and good grooming is indispensable.

May Be Embolism or an Obliteration of One or More of the Large Branches of the Posterior Aorta.—T. F. A., Teheran, Ill., writes: "Would you tell me what ails my horse? The first I saw that anything was wrong with him was in the spring of 1890. I was plowing, and he began to lift his hind feet higher than usual, like a horse with the string-halt, and the longer he went the worse he got, until he stepped out of his traces. I stopped him, but he stood still and trembled a minute or so.

This was about 4 o'clock P. M., Saturday. After standing a few minutes he seemed to be better, and I led him to the barn and turned him in the yard and did not use him again until Monday, when he appeared all right. I did not see anything more wrong with him until this last October. I was harrowing over rough ground, and was crowding the team to all it was able to do, when he had another spell. This time he appeared to lose control of all his legs, and since that if I drive him at a trot three or four miles he appears to get nervous and lose control of himself."

ANSWER:—It is utterly impossible in such a case to make a definite diagnosis without seeing and examining the horse. It may be embolism or even an obliteration of one or more of the larger branches of the posterior aorta, which furnish blood to the muscles situated posteriorly of the hind leg; or, in other words, to those muscles which have the office of bearing the body forward upon the advanced hind feet, and act antagonistic to those which advance the foot. If this opinion is correct, nothing can be done. It will be best to have the animal examined by a competent veterinarian.

A Malignant Wart.—J. W. H., Bennet, Neb., writes: "I wish to inquire in regard to a disease on front foot of one of our yearling mare colts. The disease on the colt is a growth in the shape of a flat onion about two inches above the hoof on the left front leg, just half way between hoof and joint on outside of leg. It is about the diameter of a silver dollar and about half an inch in thickness. It does not go lame, only that said foot is slightly swelled and seems warmer than the other foot. I have thought sometimes that the growth might be a wart, but all the warts that I have so far seen on animals are covered with a scaly white coat or skin, while this one is raw or sore, with no skin, and does not look unlike proud, raw flesh protruding from an old sore. If you can give me any advice in regard to treatment in this case I will gladly follow your directions and feel thankful for your favor."

ANSWER:—What you describe is what may be called a malignant wart. In the first place, you must keep the animal on a clean and dry floor in the stable and out of the corn stalks, where the morbid growth is constantly irritated. Then, if you will be very careful in handling it, you may get in a good drug store a mixture prepared, composed of pure arsenic acid, two parts; caustic potash, one part; genuine powdered gum acacia, one part, and distilled water, four to six parts. This mixture, which is exceedingly poisonous, is of the consistency of a very thick liniment or a thin salve. It should be put up in a salt-mouthed bottle, and be labeled poison. You then, with a flat wooden stick the shape of a spatulum, take out some and apply it (with the stick) to the raw surface of the wart, but nowhere else, and this done, cover it with a small bunch of absorbent cotton. The latter will stick on. Then you keep the animal in the stable until the whole growth is dry and solid, or still better, until the whole thing has dropped off and the place where it was is healed up. If carefully applied to the whole raw surface, and nowhere else, one application will be sufficient. Please report result.

Grease-heal.—A. N. D., Bellefontaine, O., writes: "I have a mare, four years old, that had the distemper very bad last March. She broke under the jaw once, and it gathered again until her jaws were almost stiff, and it looked like the gathering might contain a gallon of matter. A veterinarian lanced the gathering, and it never ran but a very little bit. It was only a few days after that the gathering began to leave and one of her hind legs began to swell. It broke and ran considerably. The doctor said it was grease-heal. He found it almost impossible to kill it. It was broken from her heel half way to her knee. It left several ugly callouses. He gave me stuff to put on, but it did but little good. After I began stabling her the leg would stock badly during the night, but if I use her during the day it goes down. I bred her. She is a fine, large mare, weighing 1,700 pounds. What can I do to remove those callouses?"

J. M. E., Belknap, Ga., writes: "I have a horse that was taken lame in one hind foot. Came very suddenly, and acted like scratches. Very little swelling. On the ninth day it broke and ran, the skin dropping off, leaving a sore the size of the palm of my hand, which still runs. The horse has been lame two weeks. From the description can you name the disease and tell how to treat it?"

ANSWER:—First, keep the affected animals in a good, clean and well-ventilated stable, and on a clean, dry floor. Do not allow them to run out in the corn stalks or anywhere where the sore places may become irritated, or where there is mud and slush. Secondly, keep the affected feet scrupulously clean, but, if possible, without using water. Thirdly, apply to the sore places, three times a day, a mixture composed of liquid subacetate of lead, one part, and olive-oil, three parts; or, if this should not effect a conspicuous improvement in, say three or four days, dress the sores with iodine and on top of it absorbent cotton, and then protect the thus-dressed parts with a properly-applied bandage. This dressing must be removed at least twice a day. After a healing has been effected and some swelling remains behind, continue the bandaging during the night and exercise the animals during the day. At the same time, every morning and evening, or every time the bandage (which should be woolen flannel and elastic) is applied and removed, the swelled legs should be vigorously rubbed, either with the hand, with a piece of woolen blanket, or with a wisp of hay.

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SOME one shrewdly says that whenever a man is anxious to sell you "a good cow" it is pardonable if you question the quality of the cow. Good cows are always good enough to keep.

THE growth of the Argentine Republic in the past thirty years has been remarkable. According to recent statistics the population of the republic is now 4,000,000, as against 1,350,000 in 1861.

THE story was told at the Whittier celebration that when the poet asked a farmer to whom he had lent a volume of Plato how he liked it, "First rate," said the farmer. "I see he's got some of my ideas."

GEN. LEW WALLACE has received more than \$100,000 in royalties for the sale of "Beu Hur." Fully 470,000 copies of the famous novel have been disposed of at \$1.50 each, of which the author's royalty is 15 per cent.

"OH, ARTHUR, how happy I would be alone with you on a quiet island in the distant ocean!" "Have you any other wish, dearest Ella?" "Oh, yes; do get me a season ticket for the opera."—*Texas Siftings.*

A NEW system of wood paving that is now being tried in Paris makes use of pieces of oak about four inches long, split up similarly to ordinary kindling wood. These sticks are laid loosely on end in fine sand on a bed of gravel from four to four and a half inches thick. A layer of fine sand is spread over them, and they are alternately watered and beaten several times. In about forty-eight hours the water has completely penetrated the wood, causing it to swell into a compact mass, which is capable of supporting the heaviest traffic, according to reports.

RULES FOR LONGEVITY.

Dr. Humphreys, of Great Britain, gives his premises of longevity as follows: First, the prime requisite is a faculty of age inherited in the blood. The body must be wound up and sent into the world with the initial force necessary to carry on the living processes through a long period; that the several organs be so adjusted to one another as to form a well-balanced whole, and that the functions be so harmoniously performed that there will be no cognizance of imperfection or ailment. Second, the body must be well developed, capable of much endurance and of quick and complete restoration from fatigue; the nervous system energetic, and the intellectual powers correspondingly developed. Third, owing to the inherent good qualities of the nutritive processes, degenerate change will be slow to manifest itself if to the foregoing be added ordinary opportunities of living well under sanitary conditions, together with temperance in meat eating and alcoholic beverages.

ENGLISH NURSES AND HOSPITALS.

When all the particulars of the census are out it will probably be found that there are nearly 20,000 women in the United Kingdom who earn their living by nursing. The number seems enormous, yet becomes comprehensible when we consider that the nursing staff of the largest hospital in London numbers 250, and that the nursing staffs of the seven largest hospitals reach a total of 1,000. And there are 123 hospitals in London, besides the numerous institutions which supply private nurses, of which several employ over 100 women.

This large band of trained nurses has sprung into existence since the days of the Crimea, when the labors of Florence Nightingale first roused the enthusiastic admiration of the whole country, and how short a period has brought so great a result is shown by the fact that from her sofa in a quiet house in Mayfair, Miss Nightingale still directs the chief training school for nurses, and is still turned to for advice when committees desire to build homes for their nurses or otherwise improve their schemes. In the loud bids for notoriety now made by many philanthropists, it is well to remember that in the cause of nursing the sick the best and greatest worker is the gentle and retiring invalid to whom Lougellow addressed "The Lady with the Lamp."—*London Daily News.*

HAVE YOU ASTHMA?

Dr. R. Schiffman, St. Paul, Minn., will mail a trial package of Schiffman's Asthma Cure free to any sufferer. He advertises by giving it away. It gives instant relief in worst cases and cures where others fail. Name this paper and send your address for a free trial package.

A VELOCITY as high as two thousand eight hundred and eighty-seven feet per second has been attained by a projectile from a rapid-fire gun. This is at the rate of one thousand nine hundred and sixty-eight miles an hour. It is the highest velocity yet recorded.

WHAT is the problem of modern society? How to use its vast resources. Here is where the office of true ethics comes in. No gift can make rich those who are poor in wisdom. The wealth which should build up society will pull it down if its possession lead to fatal luxury and indulgence. The freedom of intercourse which makes one nation known to another, and puts the culture of the most advanced at the service of the most barbarous, is like a flood which carries everywhere the seeds of good and of evil. The ripening of these depends much upon the accident of the human soil they may happen to find. But careful husbandry will have even more to do with the result.—*Julia Ward Howe.*

A PERPETUAL MOTION MACHINE.

It is generally known among engineers that a novel motor is running at the patent office in Washington, and has been for many years, and to some minds seems to fulfill the conditions of perpetual motion. The inventor made this claim, but it is hardly correct. Perpetual motion is said to exist in a machine that "when once started will continue to run until worn out."

This machine operates by the power given out in the different expansion of metals under varying conditions, and is so small and carefully constructed that if there was absolutely no change in temperature of the room, it would run, when once started, thirty-eight days before stopping. If it was possible to put it in some place for this length of time, as the center of the earth, where the temperature would be constant, it would stop, so does not fulfill the condition of perpetual motion; but that cannot be done where the machine now is, so it has run for a good many years without stopping, and probably will continue to run until it wears out.

COUNTESS TOLSTOI'S NOBLE CHARACTER.

The Countess Sophia Tolstoi is said to be one of the most truly feminine heroes who was ever cast into a shadow by a brilliant light close by.

When the count married, he brought his beautiful bride of half his age to the lonely manor-house which he had just erected on one of his estates, and there she lived for seventeen years. The horrible loneliness of it, especially in winter, with not a neighbor for miles, unless one reckon the village at the park gate, which could not have furnished anything but human beings, and never a congenial companion for her.

Needless to say she never had on a low-bodied gown, never went to the theater or a ball in all her fair young life, and to the loneliness of the country must be added the absolute loneliness during the absence of the count, who had much reading to do in Moscow for the historical portions of his great war drama.

When he got tired of his village school, of his experiments upon the infant peasant mind, of things in general, he could and did go away for rest.

The countess did not.

TEN DOLLARS AND FOR LIFE.

It happened long ago in a Western mining town. There wasn't a preacher in the place, and when an exceedingly raw young man and woman desired to get married, the services of the police judge were called in. He had never had any experience in that branch of his authority, but with true Western enterprise he agreed to tackle the job, and the culprits were brought before him.

"Stand up," he said, as they seated themselves, and they stood up.

"Come forward to the bar of justice," he continued, with a pompous effort, and they came.

"Guilty or not guilty?" he asked, as they stood before him, holding hands.

"Guilty, your honor," responded the groom.

"Is this your first offense?"

"It is, your honor, so help me."

"Well, there's nothing to do but impose a life sentence on both of you, and assess the groom for the costs."

"How much, your honor?" asked the groom, going down into his pockets.

"Ten dollars."

The groom handed it over.

"Case is dismissed," announced the judge, and the innocent young things marched out of the room as radiant as a June morning when the sunlight kisses the roses until they blush again.—*Detroit Free Press.*

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\$500 REWARD.—To assure the public of its merits we agree to forfeit Five Hundred Dollars CASH, for any case of moth-patches, brown spots, liver spots, black-heads, ugly muddy skin, unnatural redness, freckles, tan or any other cutaneous discolorations (excepting birth marks, scars, and those of a cancerous nature) that **Derma-Royale** will not quickly remove and cure. We also agree to forfeit Five Hundred Dollars to any person whose skin can be injured in the slightest possible manner, or for any complexion (no matter how bad condition it may be), that the use of **Derma-Royale** will not clear, whiten, improve and beautify.

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MENTION THIS PAPER

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A new book, just from the press, giving recipes for making 200 kinds of laundry, toilet and other soaps. Worth many dollars to those who make their own soaps, or who want to make money by manufacturing. Contains valuable information for every practical housekeeper. Handsomely printed, in large type, and convenient form.

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Smiles.

"SHE STOOPS TO CONQUER."

Across the fields, one summer day,
Wandered a youth and a maiden gay.
The fields were in green, the maid was in blue,
While the youth was in love, of somber hue.

For this daughter of Eve, as cruel as fair,
Had driven her lover quite to despair.
Of glances, and smiles, and words, she gave
mauy,
But of love or caresses she gave—not any.

Soon to a stile the pair drew nigh,
And a gleam of hope lit the young man's eye.
But no sign did he make, though glad he might
feel;
The maiden went first, and round turned the
wheel—

But only half way, for this suitor bold
Had entered it too, and fast did he hold,
While he said to the maid, "Not a step do you
go
Till you have paid toll for all my woe."

For a space woman's wit and man's muscle
opposed.
They stood by the stile, but far from com-
posed.
In dismay she gazed on her stalwart foe.
Retreat she would not. Pay toll? Ah, no!

So, quick as a flash, she stooped and was gone,
Away from the stile and the youth forlorn.
As for her captor alone on the hill,
For aught I know he may be there still.

—Charlotte Agnes Powell.

The man who could if he would but won't
Bestow on his wife a dime,
Is the man who would if he could but can't
Get married a second time.

THE GANG'S CLOSE CALL.

He is a little man, and when
his wife woke him and excit-
edly whispered to him that
there was a man in the
kitchen, he told her to let
him stay there.

"But he'll get into the dining-room and steal
all the silver," she said in an undertone. "Are
you a coward?"

Well, now, perhaps he was a coward when it
came to tackling a burglar in the dark, but no
man is going to admit that to his wife, so he
jumped out of bed and said, with the best show
of courage possible:

"I'll go in the hall and see if I can hear
him."

He went out into the hall and he heard him.
He didn't expect to, and he didn't want to, but
he did. There was some one in the house, be-
yond all question, and he wasn't particularly
anxious to meet him. He didn't think he had
much of a show with a good, burly burglar,
and he was in a quandary until he remem-
bered the speaking-tube.

There was a mouthpiece in the hall and a
whistle in the kitchen.
He went back into the bedroom and asked:
"Where are my trousers?"

"Perhaps you had better not go down,
George," said his wife, as she hauded them.
"Don't be a coward, Mary," he returned, as
he hastily pulled them on. "I'll teach him."

"Perhaps there's more than one," she sug-
gested, anxiously.
"There are two or three, sure," he said in a
business-like way, as he reached for his coat
to throw over his shoulders, "but I'm good for
them all, Mary. I guess you never saw me
when I got roused before."

"But, George," she cried, throwing her arms
around him as he tried to go out of the room,
"I think they have called for help from friends
outside. I heard three screeching whistles in
the kitchen just after you went out into the
hall the first time."

"Quite likely," he said, as he tore himself
away and hurried out, "but I'll fool them all;
I'm not afraid of them."

He returned a few minutes later, and, as he
pulled off his trousers again, said reproach-
fully:
"Mary, they got warning and got away with
some cold meat. If you hadn't made such a
fuss when I tried to make a quiet sneak on
them, I'd have captured the whole gang, sure."

—Chicago Daily Tribune.

MEAGRE PROFITS.

"The trouble with my work," said a literary
man, "is that it can't be done except when I
feel the inspiration, and this makes the in-
come from it very uncertain. "Some days I
make a good deal, other days very little.
"Yesterday, for instance, I attempted sev-
eral times to produce something; walked the
floor, meditated, examined books and papers
for hints of subjects to write on, and when
night came, my whole day's work represented
the sum of fifteen dollars."

"That's not bad, though," said the literary
man's friend; "what did you write?"

"An order to my coal dealer for three tons
of coal, at five dollars a ton," said the literary
man, with anything but a happy smile.

LAGRIFFE CURE FREE.

Last Season I discovered a sure preventive and
cure for that sneezing, coughing, backacheing Malady,
Epidemic Influenza. Address Old Dr. Brown, Box 2,
Augusta, Maine, and I will send samples free, as I
want to help ward off this dreaded disease from its
millions of victims. This remedy is not a medicine,
can be easily carried in vest pocket and has also cured
thousands of women and children of Catarrh and
Nervousness; don't wait until sick. Send today.

WIT AND WISDOM.

Great men are only ordinary men with their
hair combed.—Aitchison Globe.
He who lives up to his opportunities is usu-
ally too busy to live up to his income.
Politics is a toy with which no rich man can
meddle without being promptly told to put
up.
When a man has run his race in this world
and the end comes he is out of breath.—Pic-
ayune.
The world would be much better than it is
if men would live up to their obituaries.—
Cape Cod Item.

A thief at Michigan Centre, Michigan, not
only stole the organ from the church, but the
pews as well. Fortunately the steeple was
clamped on.

A Maine farmer recently sent a ten-cent
stamp to a man who advertised to send that
amount for the way to run a farm without
being troubled with potato-bugs. The answer
received was as follows: "Plant fruit-trees in-
stead of potatoes."

DEFINITION BY ILLUSTRATION.

They had been sitting in silence for some
time; the clock was slowly dragging its hands
to the point that would mark eleven o'clock.
She had yawned, fidgeted, and so forth several
times, but he did not seem to catch on, as the
semiauricular girls have it. At length she said:
" Do you know any slang phrases, George?"
" Well, yes, I believe so," he said, rather sur-
prised at the question.
" What is 'getting a move on you?'"
George looked at her fixedly for a moment.
Then he said he would give her an imitation
of the slang, and she was alone.—St. Paul Dis-
patch.

AN INTRODUCTION

to the through car service of the Wisconsin Central
Lines and Northern Pacific Railroad is unnecessary.
Its advantages and conveniences have been fully es-
tablished. It is the only route to the Pacific coast
over which both Pullman Vestibuled first-class and
Pullman Tourist Cars are operated from Chicago via
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passes through the most picturesque, interesting and
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range from the rolling prairie and the pine forest level
to the wildest passes of the wildest mountains in the
world.
There is a series of the noblest cities, towns and vil-
lages of every variety and size, from the hamlet or the
tiny farm, upward; the richest mines in the world;
the greenest and most lasting pasturage; the wildest
scenery on the continent; canons as weird as a night-
mare; hills, snows and peaks startling in the mag-
nificence of their beauty, and a perfection of comfort
in traveling that has never been surpassed.
Fast train via the Wisconsin Central Lines for St.
Paul, Minneapolis, Ashland and Duluth leaves Chicago
at 5:00 P. M. daily with Pullman Vestibuled Sleepers
and the Central's famous dining cars attached.

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Inside Skin,
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Driving everything before it that ought
to be out.

You know whether you need it or
not.
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Treatment, a specific for Hysteria, Dizziness, Fits,
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caused by the use of alcohol or tobacco, Wakefulness,
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in insanity, misery, decay, and death. Premature
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RELIEVE SUFFERING INSTANTLY
And Positively CURE Acute, Chronic and
Nervous Diseases without the use of
Drugs or Medicines.

THREE FRIENDS AGREE
As to the Merits of THE OWEN ELECTRIC BELT.
ARBORVILLE, NEB., Dec. 26, 1891.
THE OWEN ELECTRIC BELT CO., CHICAGO, Gentlemen:—I did not buy one of your belts for my-
self, but I bought three for different friends. From each and all of these I have a good report.
Not one is dissatisfied, but they believe with me that the electric treatment is far preferable to
drugs. They are all ready to call your company benefactors of the race.
Yours truly,
S. ENSIGN.

A HELPLESS SUFFERER WITH RHEUMATISM
Gives the Result of Six Days' Treatment with
THE OWEN ELECTRIC BELT.

MADISON LAKE, Dec. 9, 1891.
DR. A. OWEN, CHICAGO, ILL., Dear Sir:—I desire to let you know, for the benefit of others,
the experience we had with your Electric Belt.
My wife had Rheumatism, with severe pains in the back, for the last three years, which,
since last June, had become so severe that she was not able to turn in bed alone. In fact, she
was perfectly helpless. We tried many forms of relief, but without doing any good. I at last
concluded to try your Ladies' Electric Belt, which I sent for, and it came promptly by express.
We then applied it according to directions, and with the following result: First day, put on
belt with five cells, and after wearing it six hours felt no effect. Second day same as first.
Third day increased power to eight cells; felt effects only mild. Fourth day increased to full
power; felt effects instantly; after wearing two hours began to burn and blister. Fifth day re-
duced to eight cells, continued to burn and blister. Sixth day reduced to six cells with good
result, and have worn belt every day since up to date, and can gladly state that
the benefits received are astonishing. Pain in back almost gone, Rheumatism greatly
relieved, and I think another week will see her entirely free from pain. You will
not be surprised to hear that we felt a little doubtful about its usefulness after the first two
days' trial, but made up our minds to give it a fair trial. I am pleased to write this account to
you, hoping it will come under the notice of those afflicted, and receive my hearty thanks for
your prompt and honorable dealings.
I remain yours truly,
W. L. RAPPLEY,
Madison Lake P. O., Blue Earth Co., Minn.
P. S.—Please use this as you think best. I shall write again in the course of two weeks.

A FORESTER RECOMMENDS
The Owen Electric Belt for LA GRIPPE.
PORT HURON, Mich., Dec. 12, 1891.
THE OWEN ELECTRIC BELT CO., CHICAGO, Dear Sirs:—About six months ago I bought
one of your belts and must say it has been a great comfort to me. I was sick with La Grippe
for seven weeks, and it settled in my back and hips. I am a forester. I saw your belt ad-
vertised and I at once sent and got a No. 2 Belt, and in three days I was able to go to my work.
I would not like to be without it, as I still wear it once in awhile when I feel bad, for I am
troubled with spual affection. I would heartily recommend the Owen Electric Belt to all.
Yours truly,
JAMES PETTENGILL.

Persons making inquiries from writers of testimonials are requested to inclose
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OUR ILLUSTRATED CATALOGUE,
Containing full information regarding the cure of Acute, Chronic and Nervous
Diseases, sworn testimonials and portraits of people who have been cured, list
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The Largest Electric Belt Establishment in the World.

On or before March 1, 1892, the main offices and factory will occupy three floors,
100x145 feet, in the Owen Electric Belt Building, cor. State and Adams streets.
When writing, please mention the Farm and Fireside.

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We will Continue during this Month to offer Free Presents to Subscribers, SELECTED FROM ANY OFFERED ON THIS PAGE.

The following offers are good whether the subscription is sent to us direct or through a club raiser, and are to both new subscribers and old subscribers who renew their subscriptions.

During February, any one paying 50 cents for One Year's Subscription to this paper will receive any ONE of the following Free Presents by mail, postage paid.

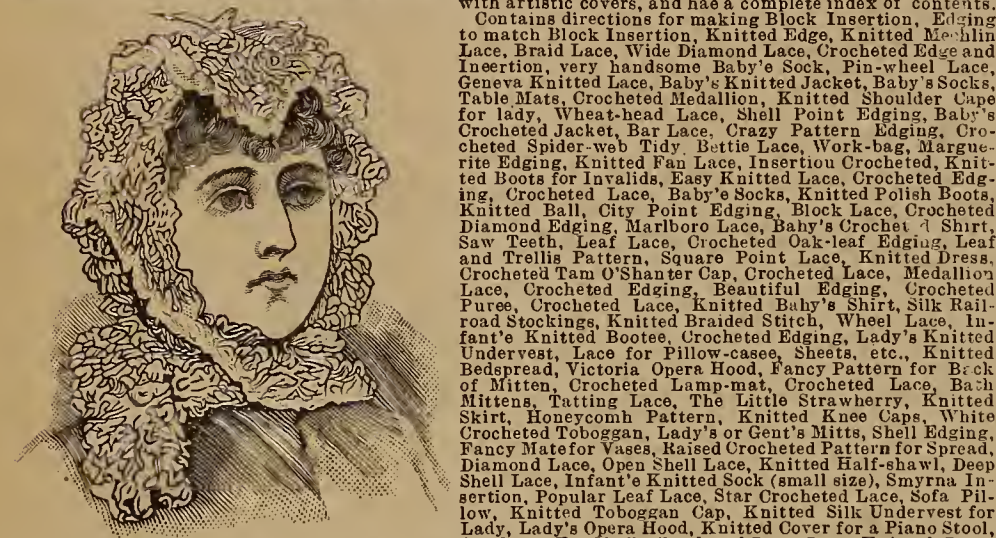
Premium No. 836.

NEEDLES AND HOOKS

AND WHAT IS MADE WITH THEM.

128 Pages and 46 Beautiful Engravings.

A copy of this book should be on every lady's work-table. Every article has been tested, and the directions are reliable. The fact that it is compiled by Mrs. Marcia Watson in itself a guarantee of the correctness and beauty of the designs, a great number of which are entirely original. It is printed on the best of paper, with artistic covers, and has a complete index of contents.



Contains directions for making Block Insertion, Edging to match Block Insertion, Knitted Edge, Knitted Meshin Lace, Braid Lace, Wide Diamond Lace, Crocheted Edge and Insertion, very handsome Baby's Sock, Pin-wheel Lace, Geneva Knitted Lace, Baby's Knitted Jacket, Baby's Socks, Table Mats, Crocheted Medallion, Knitted Shoulder Cape for lady, Wheat-head Lace, Shell Point Edging, Baby's Crocheted Jacket, Bar Lace, Crazy Pattern Edging, Crocheted Spider-web Tidy, Bettie Lace, Work-bag, Marguerite Edging, Knitted Fan Lace, Insertion Crocheted, Knitted Boots for Invalids, Easy Knitted Lace, Crocheted Edging, Crocheted Lace, Baby's Socks, Knitted Polish Boots, Knitted Ball, City Point Edging, Block Lace, Crocheted Diamond Edging, Marlboro Lace, Baby's Crochet A Shirt, Saw Teeth, Leaf Lace, Crocheted Oak-leaf Edging, Leaf and Trellis Pattern, Square Point Lace, Knitted Dress, Crocheted Tam O'Shanter Cap, Crocheted Lace, Medallion Lace, Crocheted Edging, Beautiful Edging, Crocheted Puree, Crocheted Lace, Knitted Baby's Shirt, Silk Railroad Stockings, Knitted Braided Strich, Wheel Lace, Infant's Knitted Bootie, Crocheted Edging, Lady's Knitted Undervest, Lace for Pillow-cases, Sheets, etc., Knitted Bedspread, Victoria Opera Hood, Fancy Pattern for Back of Mittens, Crocheted Lamp-mat, Crocheted Lace, Bach Mittens, Tatting Lace, The Little Strawberry, Knitted Skirt, Honeycomb Pattern, Knitted Knee Caps, White Crocheted Toboggan, Lady's or Gent's Mitts, Shell Edging, Fancy Mate for Vases, Raised Crocheted Pattern for Spread, Diamond Lace, Open Shell Lace, Knitted Half-shawl, Deep Shell Lace, Infant's Knitted Sock (small size), Smyrna Insertion, Popular Leaf Lace, Star Crocheted Lace, Sofa Pillow, Knitted Toboggan Cap, Knitted Silk Undervest for Lady, Lady's Opera Hood, Knitted Cover for a Piano Stool, Crocheted Ear Muffs, Crocheted Lace, Deep Knitted Lace, Normandy Edging, Knitted Boots, Braid and Crochet Edging, Palm-leaf Lace, Oceania Lace, Narrow Edge, Normaly Edging, Crochet Slipper (Afghan Stitch), Princess Lace, Big Wheel Lace, Bed Sock, Mrs. B.'s Edging, Knit Insertion, Baby's Knit Shirt, Knit Square for Quilt, Crocheted Square for Quilt, Card-case, Baby's Sock, Wide Diamond Lace, Daisy Wheel, Lady's Knitted Boot, Torchon Lace, Knitted Slipper (Honeycomb Pattern.)

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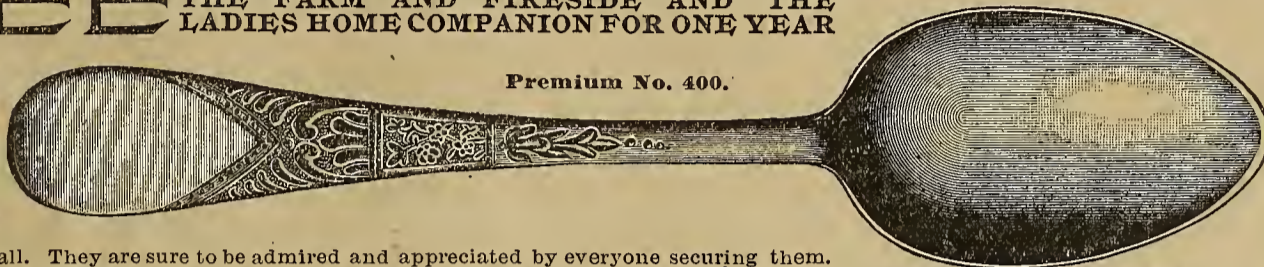
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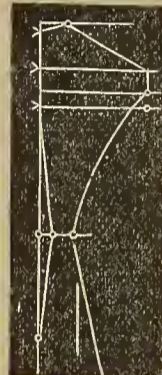
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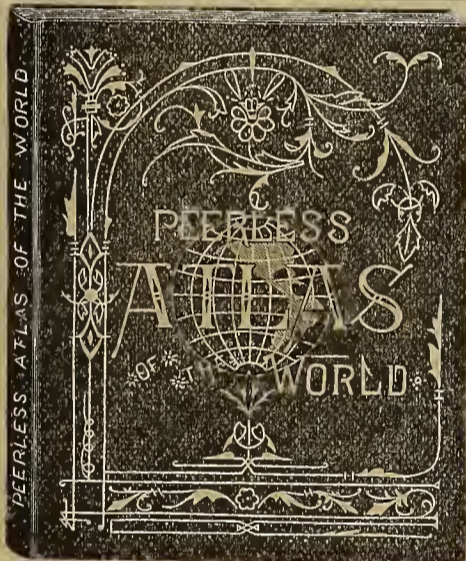
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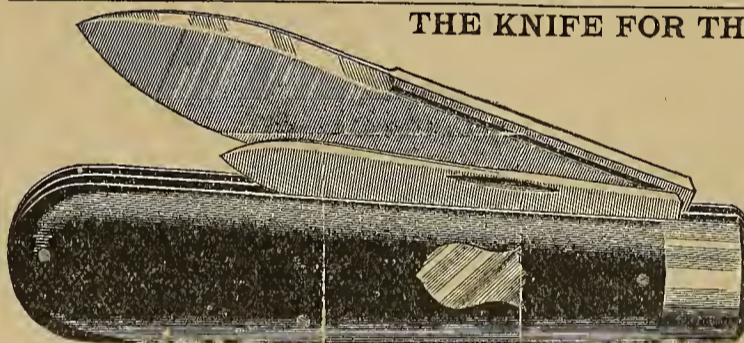
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Grand Prizes are often secured by Agents sending only small clubs. The contests are open to everybody. Try it. You may win one of the Grand Prizes.

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For the Week Ending Saturday, February 6, 1892.

Gentleman's Gold Watch.

A Genuine AMERICAN JEWELLED Movement,

In a gold-filled case, handsomely engraved, and warranted by the manufacturers to wear 15 years, will be given to the Agent or Club Raiser sending the largest number of yearly subscribers for this paper during the week ending February 6, 1892.

This watch is sold in jewelry stores for \$25.00 to \$30.00.

SECOND GRAND PRIZE.

A Set of Single Buggy Harness

Hand-made from pure Oak-tanned Leather, Japanned Trimming and perfectly finished throughout, will be given to the Agent or Club Raiser sending the second largest number of yearly subscribers for this paper during the week ending February 6, 1892.

FIRST GRAND PRIZE

For the Week Ending Saturday, February 13, 1892.

Singer Sewing Machine.

A high-arm, five-drawer machine, with complete set of attachments. We have sold thousands of them for \$17.00 each, though they sell in stores for more than double that amount. It will be given to the Agent or Club Raiser sending the largest number of yearly subscribers for this paper during the week ending February 13, 1892.

Many who have purchased the machines from us pronounce them equal to \$55.00 machines.

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WASHING MACHINE.

A complete American Washer that will make the hard work of "wash day" easier; saving both the strength of the worker and the wear and tear to the clothes. A boon to any family. Will be given to the Agent or Club Raiser sending the second largest number of yearly subscribers for this paper during the week ending February 13, 1892.

Names of Prize Winners

For the Week Ending Jan. 9, 1892.

Mrs. Elva Dinwiddie, of Bellbrook, Ohio, was awarded the First Grand Prize, a Gold Watch, for sending eleven subscribers, which was the largest number received from any one club raiser.

C. T. Jabriskie, of Ridgewood, N. J., was awarded the Second Grand Prize, a set of Buggy Harness, for sending the second largest club, ten subscribers.

For the Week Ending Jan. 16, 1892.

The sum of \$25.00 cash was divided equally between Fannie Ingalls, of Morton Hill, New York, and M. E. Hitchcock, of Bethany, Connecticut, each of them sending ten subscribers during the week.

The prize of \$5.00 cash was sent to Maxwell R. Buell, of Harrison, Ohio, who sent eight subscribers.

The names of the winners of the above prizes will be announced in our issue of March 1st.

Any one may get up Clubs for this Paper and compete for the Grand Prizes.

Even if you do not secure one of the Grand Prizes, you are sure of valuable premiums for your trouble, as the above Grand Prizes are given in addition to the premiums offered to those who get up clubs. See opposite page.

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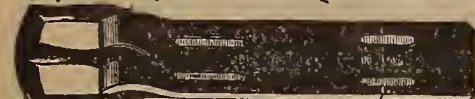
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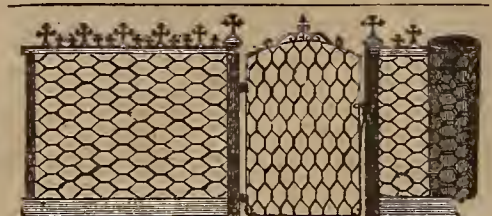
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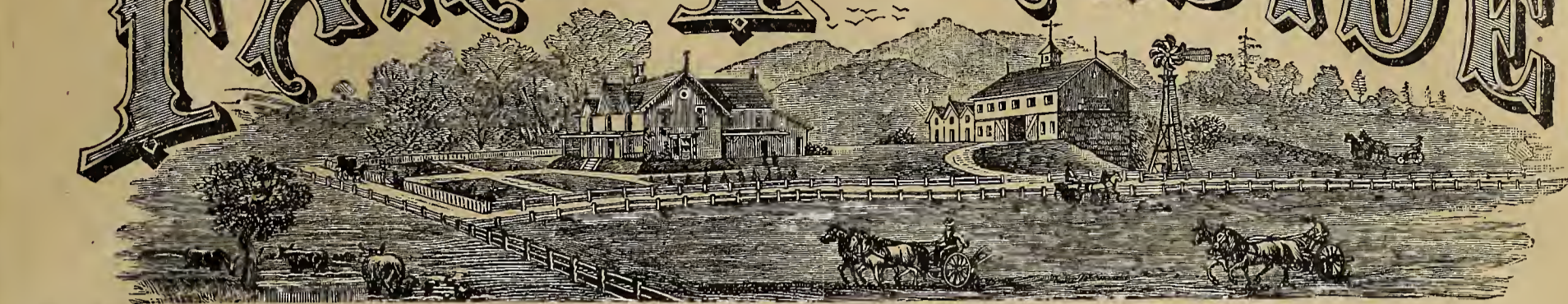
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EASTERN EDITION.

VOL. XV. NO. 10.

PHILADELPHIA, PA., and SPRINGFIELD, OHIO, FEBRUARY 15, 1892.

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Current Comment.

A MASSACHUSETTS subscriber writes: "I noticed an article in one of your late issues discouraging the free delivery of mails to farmers. I was very sorry to see it. The trial of the free delivery extension scheme was made in twenty-six country towns, and the increased postal revenues from those places paid all the extra expenses and \$800 over. So you see that cry about expense is all wrong. If any one is content with his mail once or twice a week, let him have it that way, but the wide-awake farmer wants his mail every day."

Another subscriber says: "I am sorry the FARM AND FIRESIDE is working against the farmers in their efforts to secure the free delivery of the mails in the rural districts. I feel sure you miss the mark by a long shot when you say 'the favor will have to be thrust upon the farmers.' At any rate, it does not apply to my own neighborhood, nor, I think, to my own state (Massachusetts). Within a few weeks I have circulated a petition for free delivery and collection of the mails, and I readily obtained the name of every voter in a radius of more than a mile. In fact, we do not only ask for it, we respectfully demand it as our just right."

The writers of the foregoing have made a mistake in jumping to the conclusion that the FARM AND FIRESIDE is opposed to the rural free mail delivery scheme, simply because a regular and valued contributor presented the other side of the question. We have indorsed the gradual extension of the free mail delivery system and have published a number of brief articles in favor of it. The Grange and other agricultural organizations have indorsed it. One of the foregoing letters contains good testimony as to its popularity in the writer's community, and we have no doubt it is equally popular in many other places where it has been discussed and properly understood.

From other letters received on this subject, both for and against, it is clear that there is considerable misunderstanding about it. We do not understand that the postmaster-general advocated the immediate extension of the free mail delivery system to the whole country at once, or anything like it. And what we favor is the gradual extension of the system to wherever it will pay its own way. First, to the smaller cities, country towns and the more thickly settled rural districts, and then to the farming communities less thickly settled, should it be extended, and just as rapidly as there is a reasonable promise that the increased postal revenues resulting from the in-

creased business due to the improvement of postal facilities will meet the increased expenses. What reasonable objection can there be to that?

We are, however, opposed to the government ever going to the enormous expense of delivering the mails in farming communities and country villages where the streets and roads are not fit to be traveled for about half the time, unless it can be clearly shown that the system can indirectly act as a missionary to enlighten the inhabitants and lead them to mend their ways.

The experiments made under the provisions of an act passed by the last Congress were very satisfactory, and the efforts of the postmaster-general to improve and extend our postal facilities received the hearty endorsement of the rural press. The present Congress should give the subject careful attention and at least provide for continuing the experiments on a much larger scale.

IN his welcoming address to the delegates of the agricultural convention, held in Columbus last month, Governor McKinley said:

"What I have on my mind most at this time, in connection with the interest of agriculture, is good roads throughout Ohio. I know of no single need so pressing and so great as to have our public highways made passable in winter as well as in summer, and there is no doubt in my mind, from the investigation I have given the subject, that the advantage and economy to the agricultural people would far exceed the expense that will be attendant upon such improvements. I want to say to you that in my official capacity it will be my pleasure to co-operate with you in every effort to give to agriculture the fullest recognition. I was very much impressed, last spring, as I rode to the state convention, held in this city, with an interview I had with a farmer who was coming as a delegate to the convention. I said to him: 'What do you farmers want touching legislation in Ohio?' He said: 'The farmers of Ohio want no special legislation for their special and exclusive use; they simply want that legislation touching their interest which will not only do them good, but be for the general good.' It occurs to me that was in the right spirit. The farmers of Ohio and the farmers of this country have been the most patient of any class of our fellow-citizens, and always patriotic. They have been the most conservative; they have been the safest counselors, and they have furnished to us the best sentiment and the best civilization of the state and country. You will have your interest to look after, and must do so, for every other interest is vigilantly guarded by its representatives."

The road question is here forcibly presented. A radical reform in the improvement and maintenance of the common roads would be for the general good. The railway statistics we published two weeks ago showed that there were over 160,000 miles of track in operation, and that there were over nine thousand million dollars invested in the railway business. Where are our common road statistics? Nearly every ton of farm produce must go over a common road before it is loaded on a freight-car. And yet we do not realize the importance of the development of the common roads in connection with

railway development. The growth and development of railroads in this country within the last third of a century have been phenomenal. During the same time the improvement of the common roads has been phenomenally slow. Had there been an equal development and improvement in them, at the same time, it is safe to say that the country would have received more than twice the benefit that it has received from railway development alone, vast as that has been.

Freight transportation has been so cheapened that it costs no more to carry a bushel of wheat three hundred miles than it does for a farmer to haul it five miles over the average road to the station. Let us see if this is anywhere near the truth. It costs a railroad about one half cent to carry a ton of wheat a mile. A farmer living five miles from a railroad station can haul per day two loads of one ton each over the average country road. Of course, he could easily haul twice as much over a first-class road, but we are speaking now of the average common road, with which the majority of farmers are cursed. Estimating the pay for man and team at three dollars per day would give the cost of hauling one ton five miles one dollar and fifty cents, or thirty cents per mile, just sixty times as much as by rail.

ON another page of this issue will be found a very interesting and instructive letter from a firm that has been engaged in the manufacture of American tin plate for nearly a year. As the elections are long since past and the tin plate preparators have gone out of business, and the question is no longer a political but a purely business one, we suppose it is allowable for us to publish some information about an industry that really promises to become one of magnificent proportions in the near future. The firm from which this letter was received is only one of over thirty large concerns in this country that are now either actively engaged in the manufacture of tin plate or have factories nearly completed and ready for business.

For a beginning, a vast amount of capital has been invested in the new industry. The great cotton, woolen, iron and steel industries of this country made no such progress in the first year of their history. And we have no doubt that this new industry will repeat the history of many other successful ones. American inventive genius will revolutionize it completely within five years, and we may see the country that consumes half the tin plate of the world leading in its manufacture.

A BOSTON publisher has written a very forcible letter to a representative in Congress from his state, with the object of impressing upon him the importance, to the large and rapidly increasing number of business men, of a suitable fractional currency that may be sent through the mails without deterioration in value. He says that it is probable Congress could pass no law that would have fewer disadvantages than one that would provide some suitable medium for the transmission of small sums through the mails, while at the same time such a law would be of great benefit, not only to the business men, but to his customers, a great majority of whom live in rural districts and find this method of obtaining their supplies a desirable one.

FARM AND FIRESIDE wishes every publisher and business man whose business requires the remittance of small sums through the mails, would write similar letters to members of Congress urging the necessity of fractional currency.

Few people have any idea of the immense use of postage stamps for this purpose. In the course of a year this office has received over \$35,000 in stamps. It is hardly necessary to speak of the disadvantages of such an unsuitable medium. They are apparent to everyone. Even when they are received in good condition they must be disposed of at a discount of from two to five per cent. Every concern doing business by mail sustains a considerable loss every year from this source. But this loss is trifling compared to the inconvenience suffered by their customers, the senders of small sums. A very large and increasing retail trade is now carried on through the mails, and the ones who live remote from the great business centers would receive the most benefit from a fractional currency suitable for sending through the mails.

THE Senate finance committee has reported the following resolution to provide for an international agreement on a common coinage ratio between gold and silver:

That the policy of the United States to use both gold and silver as full legal tender money and to maintain at all times a parity in the value of its coins of both metals is hereby reaffirmed, and the president is authorized to invite the governments of such countries as he may deem advisable to join the United States in a conference to be held at a time and place to be agreed upon, such conference to be called with a view of securing a permanence in the relative value of gold and silver at a common coinage ratio, to be mutually agreed upon, through international agreement providing for the enlarged monetary use of silver and for giving to that metal equal mintage rights with gold.

The president shall, by and with the advice of the Senate, appoint three commissioners, who shall attend such conference on behalf of the United States and shall report the doings thereof to the president, who shall transmit the same to congress. Said commissioners shall receive the sum of \$5,000 each and their reasonable expenses, to be approved by secretary of state; and the amount necessary to pay such compensation and expenses is hereby appropriated out of any money in the treasury not otherwise appropriated.

This resolution points out clearly how the silver question can be solved. Let the chief commercial nations of the world meet in conference and agree on a common coinage ratio between gold and silver. Bimetallism will then be established on a sound basis, and silver coinage can be as free as air and as unlimited as you please, without endangering the business prosperity of the country in the least.

A RESOLUTION requesting the members of Congress from Ohio to use their best efforts to secure the passage of the bill now before both houses of congress, providing for an amendment to the constitution of the United States so that senators shall be elected by the direct vote of the people and not by legislatures, received a nearly unanimous vote in the lower house of the Ohio assembly.

There is a general demand among the people that this amendment to the constitution be made. The three largest agricultural organizations have repeatedly declared in favor of it. Opposition to it on the part of voters has not shown itself. It is to be hoped that the amendment will be agreed to promptly by the necessary two-thirds of both houses of Congress.

FARM AND FIRESIDE.

ISSUED 1st AND 15th OF EACH MONTH BY
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The Advertisers in this Paper.

We believe that all the advertisements in this paper are from reliable firms or business men, and do not intentionally or knowingly insert advertisements from any but reliable parties; if subscribers find any of them to be otherwise we should be glad to know it. Always mention this paper when answering advertisements, as advertisers often have different things advertised in several papers.

Our Farm.

SOME GOSSIP ABOUT PIGS.

WHEN connected with the Farmers' Institute work in Ohio, several years ago, I chanced to stop at a hotel in Barnesville. It was a very wintry time for that section, the snow being nearly two feet deep and the thermometer below zero. I was assigned to a room at the extreme back of the building, and was kept awake a good share of the night by the incessant fighting and squealing of some hogs in the yard below.

The landlord was a stout German, who paid the most attention to the saloon part of the house, and looked after the comfort of his guests about as little as he did that of his hogs. In the morning, as I entered the combined saloon and office, after a very unsatisfactory breakfast, the Farmers' Institute was being discussed around the stove, and the landlord was expressing himself to the effect that it didn't amount to much. On seeing me he checked himself, and asked what it was for, anyway.

"Oh," said I, "it is to teach the ignorant and thoughtless farmers better methods and encourage the best to do still better. For instance, yesterday there was a paper on feeding stock. The author took the ground that happy, contented animals took less feed, and that cold and fright and discomfort were unprofitable aids to profitable feeding. He would take the ground that it would pay you to feed your hogs better and give them a warm bed in a comfortable pen; then they would not keep your lodgers awake with their quarreling, and the nervous force wasted in squealing after what they lack would be used in making growth."

"Blank those hogs!" spoke up a brisk little drummer; "they kept me awake with their infernal growling and quarreling all night. Landlord, I think you must have fed them some of that ten-cent whisky of yours. If I were you I'd change and give them soothing sirup."

Paying no attention to the drummer's remarks, the landlord said:

"I keep hogs, not for der profits, but shoost to eat der schwill."

At noon, however, I had occasion to go to my room, and hearing a hammering in the yard, I had the satisfaction of seeing a man fixing up the hog-pen by stopping its many cracks with pieces of packing-boxes, which the landlord had evidently ordered for the purpose, and I doubt not both hogs and guests had occasion thereafter to bless that Farmers' Institute, though ignorant of its existence.

Like the German landlord, I began

keeping pigs to consume the swill. We had daily two gallons or more of excellent skin-milk and more or less of table scraps, and it seemed wasteful to throw it away, although it was the practice of several neighbors and sanctioned by the writings of a famous specialist.

Almost daily, on trips to town, I saw persons collecting swill to feed to hogs, while I was putting a much better article in a hole in the ground or on a compost heap. So I suddenly changed the practice of a dozen years and got two pigs. They were put in the pen the last of June at two months old, costing five dollars. They were fed skim-milk, refuse from the table and refuse fruit, with a very little wheat middlings in August and September. After October 1st small corn was fed to them. Toward the last they consumed eleven bushels of ears per day, but the corn, although ripe, was too small for market. They were killed on the last day of December and weighed, including inside lard and hearts and tongues, 330 pounds. As we had been buying our meat at retail for several years, it would not be too much to estimate the value at eight cents per pound. The pigs were loaded into a wagon and taken to a professional butcher near by, who killed and dressed them for fifty cents each.

On the whole, I did very well, considering that the pigs were merely an annex to more important work, and mostly fed and taken care of by a boy thirteen years old, who rather enjoyed the responsibility of looking after them. By the way, this boy was sent after them, selecting them from a lot of sixty, and when they were killed I again sent him to get two more, the pen being empty but one night.

The pen was made by laying two-inch plank on the ground, setting posts beside them and nailing boards close together to the posts. One side was made eight inches higher than the other, and half the pen covered with a board roof. When the first cold storm of November occurred, the cracks were battened and the covered portion divided from the other, leaving a narrow doorway. The size on the ground was twelve feet by forty inches. It was built not far from the barn and near the path by which we went to all our work, so it was only rarely that a special journey was necessary to feed them. The pen and trough was the only outlay necessary to set up in the pig business, and this is to be divided among an indefinite succession of the same kind of tenants.

We did not scrub the pigs with a broom and soap-suds, as some do, but the pen was kept clean, and the meat is the sweetest and best I have ever eaten. The lard, however, was the crowning glory; so white and pure and firm, so different from the article sold by grocers as lard. It goes much farther, too. We rendered some of the fatter portions of the broad sides, and altogether had nearly fifty pounds of lard.

When I commenced I did not expect to tell these little experiences, but started to say something about feeding pigs for the best results. And first on this point, growing pigs should not be fed too highly. A fattening hog should lie still the greatest part of the time, but a growing pig needs exercise and a variety of food of a laxative nature. At present my two pigs eat a gallon pail of swill three times a day. They are ten weeks old, and the swill consists of six quarts of skim-milk daily, with scrapings from the table and the best part of the dish-water. A bundle of oats is given them three times a week, and the pigs seem to enjoy picking the grain from the straw, doing it so conscientiously that scarcely a kernel escapes them. Ten dozen bundles of oats were packed in one end of the corn-crib, described recently in FARM AND FIRESIDE, for this special use. As the pigs require more feed we will increase the swill by the milk of a heifer about to come in, and the addition of boiled small potatoes. There is nothing on which pigs will thrive better than on skim-milk and boiled potatoes. We have two heirlooms in the shape of iron kettles, holding two and one half gallons each. These are filled with small or scabby potatoes, set on the back of the range, and when the potatoes are cooked soft they are mashed and put in the swill. No extra fuel and but little labor is involved in this addition to the pig feed.

When I was a boy it was a common

thing to cook potatoes, buckwheat and pumpkins together for hogs, using a forty-gallon kettle for the purpose. Sometimes sweet apples were added to the mess, and it was always fed warm, cooking being done daily. In those days, dry, girdled timber was plentiful for fuel, and I have known a bunch of a dozen hogs to be fattened almost entirely on such a mess, consuming a forty-gallon kettleful daily. The kettle was extended by a sheet-iron rim twelve inches high. The kettle was filled with potatoes and buckwheat, while the pumpkins, cut in pieces, were piled into the rim and cooked by the steam from below, a tight board cover being over all. When cooked, which generally took about two hours, the mess was shoveled into a box and mixed.

In those days farmers got up in the morning, and the swill would be cooked and ready for use by sunrise, and the pigs would have a warm breakfast as well as dinner. Grain was fed at night. As potatoes were only worth from twelve to twenty cents, buckwheat fifteen to twenty-five cents, pumpkins and wood nothing, and labor eight dollars per month, there was some profit even in making two and one half and three cent pork.

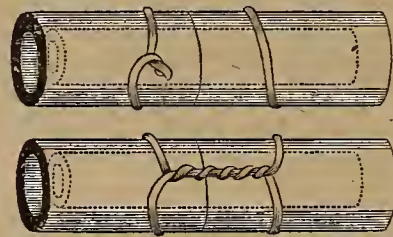
The pigs I have now are not alike, although from the same litter. One is a typical Chester White, long and rangy, and can be kept growing indefinitely. The other is a mongrel in appearance, short and humped together, with a disposition to put on fat at the least provocation. If these characteristics continue, the chunky one will be sold to the butchers in June and the other one allowed to go it alone until he makes a big hog of himself.

Summit county, Ohio. L. B. PIERCE.

A SIMPLE HOSE MENDER.

The accompanying engraving gives views of opposite sides of a section of hose sent us by John McGowan, New Jersey, to illustrate a simple method of mending hose, practiced by him for years.

After trimming evenly the ragged edges of the break in the hose, a short section of



half-inch iron pipe is inserted as shown by dotted lines in the cut. Then a piece of galvanized iron wire is wrapped around the hose as shown at the right in the upper figure, and twisted tightly so as to sink into the rubber. The wire is then twisted for a few inches as shown in the lower figure, again wrapped around the hose and fastened as shown at the left of the upper figure. This mender is not patented, and the materials for making it are inexpensive and easily obtained.—*American Florist*.

STOCK-BREEDERS OF OHIO IN COUNCIL.

The two days preceding the annual agricultural convention, which is held in Columbus about the middle of January, is devoted to a central institute of stock-breeders and farmers. This meeting brings together the most prominent stock-breeders and foremost agriculturists of the state. Papers of general interest were read and discussed during the day sessions, and in the evening the following special associations held separate meetings for the transaction of such business as especially interested each one:

The Ohio Association of Jersey Cattle Breeders, The Short-horn Breeder's Association of Ohio, The Ohio Swine Breeder's Association, The Ohio Wool-grower's Association, The Oxford Down Breeder's Association, The Shropshire Breeder's Association, and the Ohio Spanish Sheep Breeder's Associations. From these various meetings we glean the following notes that can scarcely fail to interest the readers of FARM AND FIRESIDE:

A matter of considerable importance to the Jersey cattlemen of the state was brought to their notice by a letter from J. J. Richardson, chairman of the world's fair committee of the American Jersey Cattle Club. He stated that the Jersey cattlemen of the United States propose to have on exhibition fifty of the finest cows of this breed to be found in the country,

and he desires Ohio, to furnish five of the number. He recommends that the Ohio association select twenty-five, from which number the five to be exhibited will be chosen. The owners are called upon to contribute the use of the cows free, all expense of transportation to be paid for. As soon as the desired number have been contributed, the exposition committee will select the five cows to be forwarded to Chicago. The cows selected will be forwarded in December. The method by which the choice will be made, together with the points to be considered, will be announced at an early day.

The Jersey cattlemen brought up the question of the advantages of annual public sales, and it called out much discussion. A tacit agreement was reached to resume these sales next spring and that they should be held at Columbus. This association has done much to advance the Jersey breed in Ohio, and is composed of men who are equally enthusiastic and enterprising in promoting the interests of their favorite cattle.

The meeting of the Short-horn Breeders was not as large as was expected, but the lack in numbers was made up by the enthusiasm of those present. Since the last meeting of this association, its president, A. W. Train, of Zanesville, has died. A committee to draft resolutions upon his death was appointed, and made an appropriate report, which was placed on the records.

President Goldsborough, of the Oxford Down Record Association, after congratulating the members upon the notable success of the Oxford Downs, said substantially that this breed had not only won the highest honors at the fat stock show at Chicago, but had also, in the same year, won the highest victory at the great stock show at Smithfield, England, showing that in competition with all the world, the Oxford Downs are pronounced the best mutton and wool breed of sheep yet produced. Let us see to it that this high standard of excellence be steadily improved. Correspondents in England state that the demand for Oxfords last year was greater than ever before. This is borne out from my own experience. The demand is equally great among American breeders. The future is certainly bright for our remarkable victories at the fat stock shows. New members from various associations were admitted from Canada, Wisconsin, Michigan, Ohio, Indiana, Illinois, Iowa, Kentucky, Tennessee and Pennsylvania. Twelve hundred dollars was voted in cash prizes to be given at the Columbian exposition, Chicago, 1893.

A paper on "Coach Horses," by James McLaughlin, brought out one of the liveliest discussions of the meeting. By many the coach horse was regarded as a comparatively new importation and an unknown quantity in America. It was generally agreed, however, that the essential requisites for horses of this class was strength and agility, rather than mere size or bulk. Some maintained that the produce of our best general purpose mares, when crossed by a standard breed of this class, would give the best coach horses for this country. Others maintained that certain strains of our fleet-footed and enduring thoroughbreds, when crossed upon the same mares, would produce an equally desirable coach horse.

Perhaps one of the most carefully prepared papers presented to the convention was on "The importance of sheep husbandry to the farmers of Ohio." Among other good things it said the state assessor's returns for April, 1891, show in Ohio 3,797,041 sheep, not including spring lambs. After allowing for sheep sold for mutton, it is safe to say there are 4,000,000 in Ohio, worth \$12,000,000. There are at least seven distinct reasons why sheep husbandry is important.

First of all it is important to preserve and add to the fertility of our lands. In general it may be said that sterility is gradually coming upon the soil of our country, and this can only be averted by increased pasturage, and the best means of all is by a speedy increase of our flocks of sheep to be permanently maintained. Sheep grazing produces a tough sod, and it is estimated that a western sheep pasture, after five years' grazing, will support forty per cent more sheep than it did the first year.

Second, the proper development of the wool industry will be a large addition to

the wealth, annual income and profits of Ohio farmers. The American staple wools are better adapted for the fabrication of satisfactory clothing for the American people than any other wool grown. A proper increase of sheep in Ohio and other states and territories can readily, within four years, supply all the wools of every kind needed for American consumption. It should not be forgotten that a proper increase of sheep in Ohio would bring other pecuniary gain to our farmers. It will make an increased demand for corn and oats. About every branch of agriculture is afflicted with overproduction, except that of supplying wools and mutton. Here there is a vast underproduction. The home market for wool is the only home market for farm products that was never supplied. Why not supply it? Sheep husbandry converts into wealth much that would otherwise be lost. Sheep will utilize and destroy briars and noxious weeds, that would otherwise flourish in luxurious abundance.

Third, sheep husbandry is important because it utilizes some lands which cannot be well used for any other purpose. Steep hillsides, in many parts of our state, cannot be economically cultivated, but all can be used for grazing sheep, and the valleys in the same region can produce the needed hay and corn. Sheep can graze where horses and cattle cannot, and in some localities the water supply will support sheep, but is insufficient for other stock.

Fourth, the increase of sheep husbandry as proposed will add to the value of Ohio farms. If it were possible to restrict the farms of Ohio to the sole production of wheat, the value and selling price of all lands would depreciate to an insignificant sum. By multiplying the uses to which they can be applied, their productive capacity will increase and add to the number of persons wishing to buy them.

Fifth, sheep husbandry is important because of sanitary and cognate financial considerations. Health conditions are affected by food and clothing. Mutton is more digestible than other meats generally in use, assimilating more readily, and therefore more nutritious. English chemists have shown the comparative loss of soluble matter, fat juices and water, in cooking one hundred pounds of beef and mutton, as follows: Beef by boiling loses 26½ per cent; by roasting, 32 per cent. Mutton by boiling loses 21 per cent, and by roasting, 24 per cent. There are sanitary conditions connected with clothing. If wool were as cheap and abundant as cotton, woolen manufactured goods would, in a large measure, supplant the use of cotton. People to a large extent use clothing made of that which they can most readily procure. With wool as abundant in this country as it should be, woolen goods would be much more largely in use. Wool stands at the head of the materials out of which clothing is made.

Sixth, sheep husbandry is important because it gives employment to labor and thus adds to the population and wealth. An addition of four million sheep in Ohio would give employment to men to clear land, build barns and sheds, make fences and care for the sheep. These men would patronize bakers and grocers, aid schools, colleges and churches. All industrial interests are so blended and interwoven that the prosperity of any one great industry aids all others.

Seventh, sheep husbandry is important because it adds to the supply of hides and skins essential to the needs of our people. The complete success of the wool industry requires that American wool-growers shall have the whole American market. If any part be surrendered to foreigners, it is a surrender of American independence, and of so much of our sources of profit and wealth. American wool-growers can, and under proper conditions will, supply all needed wools. The wool industry is important because its mission is for universal good. It has received the sanction of the wisest and best of all ages. It feeds the hungry, clothes the naked, adds fertility to the soil and prepares the way for bounteous harvests.

The Spanish Sheep Breeders' Association held a successful meeting, and the committee on resolutions reported the following, which was adopted:

Resolved, This association heartily in-

dorses the resolutions passed by the Ohio Wool-growers' Association, assembled in the senate chamber January 12, 1892, and we pledge to the Ohio association our heartiest support in all honest and legitimate efforts to protect our interests.

WILLIAM R. LAZENBY.

COMMENTS ON STATION LITERATURE.

BY T. GREINER.

PLANT DISEASES.—The Tennessee Agricultural Experiment Station (Knoxville) has sent out a bulletin (Vol. IV, No. 4, October, 1891) on "Some Fungous Diseases of the Grape." The director of the station is Prof. F. Lamson Scribner, well known as the former chief of the botanical section of the United States Department of Agriculture, who, accompanying Prof. Viola, of France, on a long journey through all the principal grape districts of the United States, made the first studies of the destructive grape diseases in this country, and laid the foundation for our present method of treatment. What he has to say on the subject, therefore, should be considered as coming from the very highest authority. Some time ago a work on the fungous diseases of plants was published by an eastern firm, the author being our friend Scribner. I believe it was simply a compilation of articles on the subject contributed some years ago by Prof. Scribner to the journal of which at the time I was editor. These articles were then, and are still, of great value. Unfortunately (or fortunately, as you will), however, the matter of vegetable pathology is not at a standstill. We are making rapid progress. What yesterday seemed to be orthodox doctrine in the matter of treating fungous diseases may be all upset, modified or replaced by other doctrines to-morrow. Consequently, book-work is too slow to keep pace with our progress. It would be the greatest folly for any grower to buy a book on fungous diseases of plants, no matter by whom written, with the expectation of making a thorough and complete study of the subject, and then stop there, taking the knowledge thus gained as a guide in actual field work. A book of this kind, especially when the matter was written years ago, can only serve as a solid foundation for further study and investigation. We have to rely on periodical literature—the station bulletins, and especially the agricultural weeklies and monthlies—to keep us informed about the latest discoveries in this line. Treatment of plant diseases is all the time being simplified and cheapened, and it would be very imprudent for us to imagine that the directions of even a year ago would be good enough for us to-day, and to refuse to seek and heed the modified directions given by our experts to-day.

I mention this especially for the purpose of urging upon every grower the necessity of keeping up the study of these diseases and their treatment, and I will exemplify this on two instances. All our earlier directions recommend the use of the Bordeaux mixture, a whitewash compound of lime and sulphate of copper, which was troublesome to make, troublesome to apply, and quite expensive. Now we have found that cheaper and more conveniently prepared mixtures or solutions answer just as well. I am reasonably safe in predicting that we will soon have heard the last of the "Bordeaux mixture." I am in favor of throwing it aside entirely, and of ceasing to mention it. It has caused trouble which might and should have been avoided. I refer to the confiscation of whole cargoes of copper-stained grapes by the board of health last fall. The ammoniacal solution of carbonate of copper, a clear, blue liquid, which leaves no stain and involves no danger to those eating fruit from the treated vines, answers just as well and is much cheaper. For next year this solution should be the one most generally used, as most promising; but we cannot say how soon even this will be crowded out by something more simple and efficacious. This same solution, made by dissolving three ounces of carbonate of copper (the "mineral green" of the paint shops) in one quart of liquid ammonia (22° Beaume), and reducing with twenty-five gallons of water, is also the one I would use for the prevention of potato blight and rot.

All I have said here about the necessity of keeping up the study applies with equal force to our methods of spraying

with insecticides. If we were to follow the earlier teachings we might do great damage and suffer loss. A few years ago the "experts" recommended to spray fruit-trees for curculio with London purple or Paris green water, and the proportions were given as one pound of the poison to from one hundred to two hundred gallons of water. If we follow this advice indiscriminately, for all kinds of fruit-trees, we would be apt to do a great deal of damage. The spraying liquid of that strength might scorch and entirely ruin the foliage of plum-trees, and it certainly would that of peach-trees. The proportion of the poison should not exceed one pound to two hundred and fifty gallons for plums, nor one pound to three hundred gallons of water for peaches. London purple also seems to be of uncertain composition. Sometimes it is all right and can be used in considerable strength without injury; at other times it injures the foliage even when applied in great dilution. Under ordinary circumstances it is better to use Paris green rather than London purple.

And still we are gaining in knowledge. Every year gives us new light, and we must watch the bulletins and papers with great care, and be guided by the newest discoveries. What would you think of a physician who, in our times of the discovery of new medicinal substances and improved treatments, refuses to keep pace with this rapid progress and prefers to treat his patients by the methods in vogue in his college days, twenty-five or more years ago?

THE PEPPERMINT-OIL INDUSTRY.

BY JOSEPH (T. GREINER.)

H. C. C., of Montesano, Wash., writes: "Can you give me information about the cultivation of peppermint and the manufacture of oil? Would like to know about soils adapted to it, varieties of the plant, cultivation, price of machinery, the market, etc."

The center of the peppermint industry is Wayne county, N. Y. Almost any farmer in that locality can give all the particulars. The soil should be in fairly good condition and free from weeds. Any good loam will do. The plant is the ordinary peppermint found growing wild in moist places all over the country. The beds are started from root cuttings sown thickly in drills, just far enough apart so they can be cultivated until the plants cover the ground and suppress all weed growth. After the first season the crop is cut like hay, allowed to wilt, put up in cocks and then taken to the still, where big steam-tight vats are filled with the stuff and the steam turned on. After awhile the steam is condensed in a "worm" (a coil of pipe surrounded by cold water), and the mixture of water and peppermint-oil caught in a vessel, where the oil is separated from the water. That is about all there is to it. The oil is a merchantable commodity, and as such, subject to great fluctuations in price. Sometimes the grovers make money and sometimes they do not. On the whole, the business pays as well as any of the ordinary branches of agriculture, but perhaps not better. There is no reason why peppermint could not be grown and the oil manufactured in other places besides Wayne county. For machinery, of course it takes a good steam boiler with the necessary pipes and fixings, and some vats, etc., probably involving an expense of hundreds of dollars. Such an establishment would have a capacity of working up quite a number of acres of peppermint. No especially skilled labor will be required.



Mr. R. J. Brundage, Of Norwalk, Ct.,

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NOTES FROM GARDEN AND FIELD.

BY JOSEPH.

The PEPPERMINT INDUSTRY.—Peppermint is a very common plant found growing wild in moist and swampy places, and often spreading on soil that is quite dry. On the well-drained, muck land and adjoining clay loam I have found it sometimes troublesome as a weed. In a few places, notably Wayne county, N. Y., peppermint is quite extensively cultivated as a field crop, for its oil. This peppermint-oil is a commercial and always salable article, but its production is not always more remunerative than that of ordinary field crops. The demand is probably quite steady, but the supply varies greatly, and consequently there is a wide range in the fluctuations of the price. A pound may bring the grower \$6, and it may bring him less than \$2. On the whole, I believe, the chances for profit are slightly better than in the case of ordinary field crops.

The growers always select land that is reasonably fertile, free from weeds, and dry enough to allow of its being kept thoroughly cultivated until the growth covers the soil. The piece is plowed and prepared as for a garden crop, marked out in furrows (perhaps twenty inches apart—I am not sure on this point), and planted by scattering pieces of peppermint root in these furrows. They are covered and the ground rolled. Cultivation should begin early and be kept up until the growth of the plants forbids it. Weeds should not be tolerated, as they would affect the quality of the oil. The year following you may expect a full crop. The mint is cut with scythe or mower, allowed to wilt, put up in cocks, and then taken to the still, where it is subjected to the action of steam in large vats. The steam, charged with peppermint, is then condensed in a worm, and the oil separated from the resulting water in a very simple manner. There is absolutely no secret nor difficulty connected with this industry. It might be carried on in any part of this country with the same success that it is in Wayne county, N. Y., or in the one or two other places where farmers make a specialty of it.

HOTBEDS AND COLD-FRAMES.—The hotbed season is again approaching. My new onion culture is responsible for a great many such beds and frames that might otherwise not be in existence. Glass is pretty expensive just now; for locations as far north as western New York, I think it is the only safe covering for hotbeds or cold-frames. Southern gardeners, perhaps, might use frames covered with muslin or paper, as a substitute for ordinary sash. I am inclined to think these substitutes will do very well for beds intended for growing onion, cabbage, cauliflower, lettuce, celery and similar plants. Make a light frame to fit the hotbed or cold-frame, and tack sheet muslin over it as tightly as possible. Next, paint this with a mixture of raw linseed-oil and raw egg, applying a second coat after the first one has become dry. Wires or strings may be stretched across the frame to serve as a res for the muslin. If you wish to use paper, procure stout but thin manila wrapping-paper, and paste it firmly on the sash with fresh flour paste. Next, dry it in a warm place, and then wipe the paper with a damp sponge to cause it to stretch evenly. Dry again, and then apply linseed-oil to both sides of the paper, and dry again in a warm place. My southern friends, I think, will find such sash substitutes very serviceable for raising their onion seedlings, and the best of it is, beds thus covered will need next to no attention after the seed is sown.

TROWELS AND DIBBERS.—The average gardener's trowel, as we find it in the seed and hardware stores, seems to be made more for show and sale than for business. Of course you can use these tools to scoop up mellow soil, and for light work in the flower garden, and perhaps more generally in clean, sandy soils. But when you want them for digging or taking up plants in stiffer soil, or to place them into the hands of the average hired man, their time of service will be very short. Of

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course they are not absolutely necessary in a well-equipped garden, but they are often a very convenient thing to have about. I like to have several of them, of different sizes. Just now I have succeeded in getting a trowel that is made for business, and that just suits me. I defy any one to break it, even with rough usage. The blade is only about two inches wide, slightly tapering, not rounded, but bent in an angle of about 120 degrees, like a flattened V. It is made of heavy steel, has a heavy handle and a strong, sharp point. I shall take delight in using such a tool. It is the Cleves patent (from the Whitney-Noyes Seed Co., Binghamton, N. Y.) What I would like to suggest to the manufacturers is to get out a dibber from the same material and in the same manner. All the change needed is to make the blade entirely flat, instead of bending it in an angle.

WIRE FOR TYING UP VEGETABLES.—A good suggestion comes from Rev. C. F. Blakeman, Sandy Hill, N. Y. He writes us that he raises all kinds of vegetables, especially celery, of which, the past season, he set 100,000. He bunches all his vegetables, celery included, with No. 22 wire. "A stone of wire costs less than \$1, and will go further than \$4 worth of string, besides saving a great deal of labor. Cut the wire coil to desired lengths with an old pair of shears, place it around the bunch you wish to tie; give it a couple of twists, and the work is done." Of course, we will be glad to get that description of Mr. Blakeman's large celery houses.

SWEET POTATO SPORTS.—R. Nicholson, of California, writes that three years ago I sent him some Red Jersey sweet potatoes. The first season he found in his crop one tuber that was half red and half yellow, and from the yellow half he raised a clear yellow, similar to the old red variety. Last season he also noticed a change to white color outside, while the flesh remained yellow. He wants an explanation of these changes. There is nothing remarkable about them. They are what we call "sports," and occur in many kinds of fruits and vegetables, etc. Ordinary red potatoes can often be changed to white, or white to red, by planting a specimen of an off color that now and then will make its appearance. If I had a better chance than this climate affords for growing sweet potatoes, I would like to try my friend's yellow sport of the red sweet potatoes.

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ALL expedients for inducing early fruiting are founded upon the well-known law that excessive growth and great prolificness cannot simultaneously exist in the same plant. Some of the most familiar modes of inducing fruit are

BY DWARFING.

In horticultural parlance, trees are said to be dwarfed when grafted or budded on stocks of weaker growth than themselves. Thus, we have the pear on the quince, the cherry on the Mahaleb, the apple on the Paradise stock, the peach on the plum, etc. This is a popular and efficient mode of rendering trees fruitful. Properly speaking, any low tree is dwarfed; the term, when applied to a system, is merely technical.

BY BENDING THE BRANCHES.

This process practically consists in allowing the branches of a young tree to grow undisturbed by the pruning-knife for several years until the plant attains considerable size; the young shoots are then bent down and secured by pegs fastened in the ground. This mode is eminently adapted for standard pear-trees, especially such varieties as Dix, Bartlett, Sheldon and others that make long yearly shoots. These when bent down soon become studded thickly with blossom spurs, and very ornamental and symmetrical trees can be formed by a little attention to the bending and regulating of the shoots; the pendent form soon becomes fixed, and trees so treated are certain to be productive. The proper season to commence tying down is the month of August; the young wood will then be sufficiently matured to bend, and many of the most forward buds will form short fruit spurs, and bloom the following spring. Trees and plants of all kinds can be incited to flower and fruit, no matter how luxuriant their growth, by careful observance of the bending process. Horizontal training is a modification of this system, and is a well-known method of encouraging fruitfulness with most fruits.

BY RINGING THE BRANCHES.

This operation is performed by removing a ring of bark from a branch, so as to arrest circulation. This, however, is done with a view of hastening the ripening process of fruit, and has long been practiced, particularly on the grape-vine. It is, however, of doubtful utility, as the branch beyond the point of operation is destroyed. It has the effect of not only hastening the ripening, but the fruit will be somewhat increased in size. Grapes produced in this manner are easily recognized by their thick skins and the coarse texture of their fruit.

BY PRUNING THE ROOTS.

When a tree has reached a fruit-bearing size, and shows no symptoms of fruit-bearing disposition, but instead throws out vigorous branches, root-pruning is a very efficacious mode of checking growth. In highly cultivated gardens where trees are planted and the roots have access to the rich soil, an immense crop of branches will be produced, and little if any fruit. Root-pruning will check such growths most effectually and render the trees fruitful. The operation is performed by digging out a circular trench at a distance of from three to six feet from the stem, according to the size of the tree, and cutting all the roots that are encountered or can be reached. The soil is again thrown back and the process is completed. If done in August the supply of sap will immediately be lessened, the wood-maturing principle accelerated, and fruit buds formed. The operation has been performed in spring with very little benefit, but if done in the fall cannot fail in producing the desired results. Root-pruning has been successfully applied to young evergreens which, in consequence of growing late in the fall, are liable to have the points of shoots injured by early frost. When growth is stopped by root-pruning, the shoots mature sufficiently to

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the leaves of this grand variety are bordered with creamy white; flowers very large and of exquisite fragrance. Bulbs continue to grow and bloom year after year. It makes a most magnificent plant. It blooms several weeks earlier than the other sorts, which greatly adds to its value. For only 25c. we will send by mail, postpaid, all of the following: 1 bulb of the lovely New Variegated Tuberoses; 1 bulb of the Excelsior Pearl Tuberoses; 1 bulb New Seedling Gadoli; 2 bulbs Oxalis free bloomers; 1 pkt. Fuller's Perfection Pansy seed; 1 pkt. Snow Queen Pansy pure satin white; 1 pkt. Fuller's Perfection Balsam; 1 pkt. Floral Park Giant Phlox; 1 pkt. Lovely Margaret Carnation. These rare bulbs and seeds will all flower this season and we send them for only 25c. Order of once. Catalogue sent free.
J. ROSCOE FULLER & CO., Floral Park, N.Y.

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If so you will want good and reliable seeds. Our annual **SEED BOOK** for 1892 of everything for the Garden, Farm, and Lawn, tells the story simply and truthfully. You can get it for the asking, if you mention this paper. Write now.
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All the new and old varieties, including the Leader and West-Brook—Bubachs, Haviland, Gandy, Eureka, Pearl Parry, Early Michael, etc. \$2 per 1000 and up. Palmetto Asparagus Roots, Rhubarb, Horse Radish, &c. Illustrated catalogue free. B. D. Shedaker, Edgewater Park, N. J.

HIGH-BRED SEED POTATOES. One barrel worth two of Northern seed. All that grow Irish Potatoes should have my catalogue, free, with testimonials.
J. W. HALL, Marion Station, Maryland.

MENTION THIS PAPER WHEN ANSWERING ADVERTISEMENTS.

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about Seeds. We will send you Free our Seed Annual for 1892, which tells THE WHOLE TRUTH. We illustrate and give prices in this Catalogue, which is handsomer than ever. It tells NOTHING BUT THE TRUTH.
Write for it to-day.
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D. M. FERRY & CO., Detroit, Mich.
Mention Farm and Fireside when you write.

GIVEN AWAY!
WABAN
This is the most beautiful new ROSE of the year which we give ENTIRELY FREE to our customers of 1892. If you are interested in FLOWERS send for our CATALOGUE of the grandest novelties and specialties ever offered. IT WILL PAY YOU, write now.
ROBT. SCOTT & SON, Philadelphia, Pa.

WANTED SALESMEN for our Choice Nursery Stock and New Varieties of Seed Potatoes. Salaries or commissions paid. Write for terms. **HOOKER, GROVER & CO. ROCHESTER FRUIT FARM AND NURSERIES, ROCHESTER, N. Y.**

withstand the winter without being injured. A few years of such treatment when the plant is young is found sufficient, as the specimen will attain hardihood with age.

BY LIMITING ROOT GROWTH.

The most satisfactory application of the principle is that of restricting the growth by confining the roots in pots, boxes or other similar conveniences, as is well exemplified by the great crops produced on fruit-trees in pots. Florists are also alive to the fact that flowering plants will blossom most profusely when the pots become well filled with roots.

NITRATE OF SODA FOR SMALL FRUITS.

In considering the subject of manures for the coming season, it will interest many of our readers to note the testimony of Joseph Harris, of Moreton Farm, the well-known writer and author of "Talks on Manures," etc. In his essay upon the use of nitrate of soda for manure, he says: "The strawberry grower knows the value of water. If he will try nitrate of soda on strawberries, he will find it wonderfully efficacious.

"The effect of nitrate of soda on strawberries in the dry climate of the United States is very beneficial. It not only doubles or trebles the yield, but the strawberries are larger and handsomer, and consequently command a much higher price in market.

"No ordinary amount of manure will produce so great an effect, for the reason that the plants grow and form their fruit early in the season. The nitrate of soda furnishes the plants with nitric acid before the nitrogen of the manure can be converted into the essential ingredient of plant food.

"A few years ago we published a statement in regard to the astonishing effect of a large dressing of nitrate of soda on an old strawberry bed. The bed had been neglected and was full of grass and weeds. At that time we had never used nitrate of soda on strawberries and did not know but that it might injure them. The bed we alluded to was so run out and worthless that we did not care whether the nitrate killed the plants or not. We gave the bed two or three heavy dressings, sown broadcast early in the spring and a few weeks later. Instead of killing the plants, the nitrate made them grow so vigorously that with a little assistance from a sharp hoe and by pulling out the large weeds, the strawberries killed out nearly all the grass, and we had a remarkably fine crop of fruit. Since then we have used nitrate of soda and superphosphate on all our strawberry plantations, and find this dressing far more effective and economical than ordinary manure.

"Nitrate of soda is, at least, equally as good for raspberries as for strawberries. On currants, with clean cultivation, we have for several years raised large crops of fine fruit, with a top-dressing of nitrate of soda alone, applied on each side of the rows early in the spring.

"On poorer land, it would be desirable to apply superphosphate and potash in the autumn, and plow or cultivate them in, and the following spring, and in fact every spring, give a dressing of nitrate of soda."

Prof. Massey records some very amazing results from the application of 300 pounds of nitrate of soda per acre, upon an exhausted and foul strawberry bed in its fifth year of bearing.

BURNING OVER STRAWBERRY BEDS.

"Our experience does not favor burning over the strawberry patch at any season. In private gardens, for home use or for market growing, it is most satisfactory to form matted rows, pick two crops and turn the patch under. The two-crop system gives strong, vigorous plants, permits clean culture, and, not least, gives little trouble from insects or rust of leaves. The bugbear with amateurs is the starting of a new plantation. If the ground to be set is plowed in September and again just before closing up for winter, the cut-worms will give little trouble, and if the plants are set with wet roots turned in a bunch downward with a spade, it takes but little time. Beginners set the plants with roots in the natural position, forgetting that the main thing is to make the plant live. Planting the roots with points downward favors an even stand, and the new roots will soon start in natural position."
—Prof. J. L. Budd, Ames, Iowa.

HAVE YOU CATARRH.

There is one remedy you can try without danger of humbug. Send to H. G. Colman, Chemist, Kalamazoo, Mich., for trial package of his Cure. Postage 4 cents. Test and judge for yourself. Mention this paper.

Our Farm.

TIN PLATE MANUFACTURE IN THE UNITED STATES.

GRASSLAND, W. VA., Jan. 16, 1892.

FARM AND FIRESIDE:

I wish to ask you a question in regard to the manufacture of tin plate in the United States since the passage of the McKinley bill. I have a friend who contends there is none made, and I wish to be set right in regard to it. Please give prices of tin plate. Is there any tin ore in the United States? If it is not out of place, please answer in FARM AND FIRESIDE. Truly yours, ALBERT PARKS.

We sent this letter to a reputable firm engaged in the manufacture of tin plate, thinking that their reply would do more than anything else to convince this son of a doubting Thomas.

In addition to the information contained in their interesting letter, which follows, we will briefly add that there are large quantities of the best tin ore in the world in the Temescal mines of southern California and the Harney Peak mines of South Dakota, and also that a recent number of the Metal Worker presents an account of the manufacture of American tin plates to date, giving important particulars concerning over thirty firms now engaged in their manufacture in the United States.

PHILADELPHIA, Jan. 20, 1892.

EDITOR FARM AND FIRESIDE:

DEAR SIR:—We are just in receipt of your favor of the 18th, enclosing a letter written by Albert Parks, Grassland, Harrison county, W. Va., asking if tin plate is manufactured in the United States.

When we heard questions like this asked a year ago we did not think it strange, but now we can hardly see how it is possible for one to ask such a question. We do not believe there is any one who would ask if wheat is grown in the United States, and we hope that within a short time the knowledge of the manufacture of tin plate will become so general that the above question would bring about as much surprise as the one in regard to wheat.

We take pleasure in saying that tin plate is made in the United States, and has been for very nearly a year. We commenced in the early part of last April, and our only regret is that we did not commence long ago. Tin plate is simply sheet-iron or sheet-steel properly prepared and coated with tin, or a mixture of tin and lead. That coated with tin is called bright tin, and that coated with tin and lead is roofing tin; you therefore see it is simply taking the production of our rolling mills and coating it. There is nothing mysterious about it. The work is very simple, but of course a shoemaker could not take it up in a day, and one must have some knowledge.

We have been making as fine a quality of tin plate as we ever saw imported, and when we tell you that our business was established in 1810—eighty-two years ago—you will realize that we should, at least, have a fair knowledge of the different values and grades. And when we further say that we have succeeded in putting on a greater quantity of coating than we have ever seen on any imported plate, we feel that we have improved on the imported, as the quantity and quality of the coating is the true test of value.

We have made tin plate, both bright and roofing, from American steel, American lead, American tin, and by American workmen, who never saw any foreign country. If this is not American tin plate, from A to Z, we should like to know by what name it should be called. It is universal ignorance of what tin plate really is that causes so many ridiculous articles to be written on the subject. Then, again, there has always been an impression that there was a great mystery about the manufacture of tin plate, and one must have almost a life experience before being able to produce the article. Then, again, it appears as if there are not ten men out of a thousand who know what tin plate really is, the impression being that it is block tin rolled into sheets. Now, as we explained above what tin plate is, we take pleasure in saying that the block tin received by us from the Temescal mines in California we have found to be equal to any we have ever seen imported, and although some newspapers have been claiming there is no block tin in the United States, we would say that since we made our purchase we have had several car-loads offered us from the same mines, but we refused to buy, as we would

The Dingee & Conard Co's

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ARE ON THEIR OWN ROOTS,
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Propagated and grown by special methods of our own, they will GROW and BLOOM wherever grass grows and water runs.

We are by far the largest Rose growers in America, annually giving away in Premiums more than most others produce.

Our Special Mail System insures free, safe, and satisfactory delivery everywhere, and makes us as good as next-door neighbors to every lover of flowers. Our

New Guide for 1892

The DINGEE & CONARD COMPANY, WEST GROVE, PA.

will surprise and delight you. It has over 100 pages, magazine size, with handsome illustrations, honest descriptions and helpful hints; giving plain directions how to get and how to keep upwards of 2,000 varieties of

Roses, Bulbs, Hardy Plants and Seeds.

It is sent to any one free for the asking, and places at your disposal—in twenty-five minutes—what it has taken us twenty-five years to acquire.

The DINGEE & CONARD CO. Rose Growers and Seedsmen, West Grove, Pa.

The Most Remarkable of New Vegetables,

BURPEE'S BUSH LIMA.

The ONLY Bush Form of the TRUE Large Lima Bean.

BURPEE'S BUSH LIMA is the most unique novelty of the age, being the first and only true bush form of the popular Large Lima Bean. The bushes grow 18 to 22 inches high, stout, always erect, yet branching so vigorously that each plant develops into a magnificent circular bush, two to three feet in diameter. An immense yielder, each bush bearing from 50 to 200 of the handsome, large pods, well filled with the large beans, identical in size and luscious flavor to the well-known Large Pole Limas. By the introduction of this most valuable novelty the largest and best Lima Beans can now be cheaply raised in quantity without the expense and labor attached to the use of poles. Price per liberal packet, 20 cents; 3 packets for 50 cents; 7 packets for \$1.00; postpaid.

OVER ONE THOUSAND DOLLARS IN CASH given as PRIZES for the best bushes raised this year. A separate prize for every State. For full information, read Burpee's Farm Annual for 1892, The Best and Most Complete Seed Catalogue of the year. A handsome book of 172 pages; tells all about the Best Garden, Farm and Flower SEEDS, including Rare Novelties of surpassing merit, which cannot be had elsewhere. Hundreds of truthful illustrations, and beautiful colored plates painted from nature. Price ten cents per copy, but Free to all who intend to purchase seeds. Please mention this paper.

W. ATLEE BURPEE & CO., Philadelphia, Pa.

Mention this paper when you answer this.

\$500 FOR A TOMATO

Last spring I offered \$500 to any person producing a 3 lb. Mammoth Prize Tomato; T. R. Harris, Abbott, Neb., won it with one weighing 3 lbs. 3/4 oz., and I sent him my check for \$500. It measured over 8 1/2 in. in diameter. 37 tomatoes grew on one stem over 3 feet from the ground. Largest plant on record 18 ft. 6 in. tall. This mammoth strain creates a sensation wherever it goes, and is the largest ever offered. Thousands of my customers have grown them to weigh over 46 ozs. The quality is excellent; after you once test it you will grow no others. If well cared for they will produce 1 bu. to a plant (see cut) of large, smooth, bright red tomatoes, very solid with only a few seeds in each, and entirely free from rot. If started early, fruit ripens from July 4th until frost. This year I offer \$500 cash to any person producing a 3 1/4 lb. tomato. (It can be done.) Full directions how Mr. Harris grew his with each order. Plant some; you may win the prize. All my seed is saved from large specimens.

SURE HEAD CABBAGE

Is all head and sure to head, very uniform in size, firm and fine in texture, excellent in quality and a good keeper. Single heads have weighed over 64 pounds.

EARLY SNOWBALL TURNIP

Is the earliest in the world, easy grown, good size, excellent quality. Will be far ahead of your neighbors.

My Catalogue, is worth 50 cts. to any one who gets it. \$500 offered largest order; \$500 for a pansy blossom; \$500 for a bean plant with 100 pods, and above tomato prize. I will send a packet each of Prize Tomato, Cabbage and Turnip, with my Catalogue of Bargains for only 25 cents. Greatest bargain catalogue ever sent out. Every person sending silver for above collection will receive Free a packet FINEST IMPROVED EXTRA EARLY TREE TOMATO, and a 50c. certificate for seeds your choice from my bargain catalogue Free.

F. B. MILLS, Rose Hill, Onandaga Co. N. Y.

STRAWBERRY PLANTS

by mail, 300 of 4 kinds, early to late, ONLY \$1. By Ex. per 1,000, \$1 and up. Best plants and packing. Price list free. All berry plants. SLAYMAKER & SON, Dover, Del.

POTATOES

Free Distribution of a new EXTRA EARLY variety. Beautiful catalogue of new and standard sorts FREE. E. H. VICK, 531 Park Ave., Rochester, N. Y.

TREES SPRING PLANTING

The largest and most complete Fruit & Ornamental, general stock in the U.S., besides many Novelties. New Illustrated and descriptive priced General Catalogue, containing important information for planters, FREE.

ROSES

GRAPE VINES ELLWANGER & BARRY,

MT. HOPE NURSERIES, ROCHESTER, New York.

Mention Farm and Fireside when answering this adv.

The Greatest Possible Quantity,
Of the Best Possible Quality,
For the Least Possible Money.

Is the plan the DAISY Implements are made upon. Our line now embraces Garden Plows, Wheel Hoes, Garden Seed Drills, Hand Carts, Strawberry Vine Trimmers, Grass Edgers, Lawn Mowers, Horse Hoes and Spraying Pumps. In addition to complete descriptions of these tools our catalogue contains an excellent illustrated treatise upon spraying that is valuable, 68 pages in all, sent free upon request if the FARM AND FIRESIDE is mentioned. Address The Daisy Implement Co., PLEASANT LAKE, IND. Mention where you saw this advertisement.

Shuck Hacklers

A good business can be done in Hackling Shucks for mattresses; there is a good demand for the product at large profits. Price of machine \$200. Manufactured by The Cardwell Machine Co., Richmond, Va. Mention this paper when you write.

he compelled to pay the freight from Chicago to Philadelphia, and the stock, of course, was purchased by the western buyers.

Now, suppose there would not be one ounce of block tin in America, and that the American manufacturer of tin plate must buy his block tin from the same market as the Welsh manufacturer; there is no block tin in Wales, and what little is mined in England is not used in making tin plate. That used in making tin plate comes from the East Indies, Australia, etc., and London is the principal market. We, as American manufacturers, can buy in London at the same price as the Welsh manufacturer, but when we tell you there is NO DUTY on pig tin in America, and that the ocean freight from London to Philadelphia is only thirteen cents per hundred pounds, you will realize the fact that the block tin costs us, laid down in Philadelphia, less than the cost to the Welsh manufacturer, whose railroad freight is more than thirteen cents per hundred pounds.

There has been a great deal said about the manufacture of tin plate. We feel that while politics may have considerable to do with it, there are other causes. In the first place, when we started making and selling the American production we continued to sell at the old price and said nothing about our future action. On July 1st we came out in a notice, a copy of which we enclose, that there would be no advance because we were making it in Philadelphia. As we have heard that some of our competitors had advanced the price from two to three dollars per box, and afterwards were compelled to reduce their price to meet competition, you can appreciate the fact that they would hardly be disposed to endorse our work.

We would say that we are making Taylor's guaranteed roofing plates, Taylor Old Style, the Taylor Roofing and Taylor's Columbia, selling them at the same price ruling before the advance in duty, and we can see no reason for any advance, and as soon as we are in our new factory and have all cost, etc., reduced to a minimum, we expect to be able to lower our prices.

We are running three complete stacks, the capacity of which are 150 boxes a day. Our new factory will have a capacity of twenty-four stacks, or 1,200 boxes a day. Now, if the average value of these boxes would be \$10 each, there would be an output of a value of \$12,000 per day, or \$3,000,000 per annum for 300 days. You see from this that the business can grow to very large proportions. We are satisfied as soon as the industry is established in anything like good working order the extra duty can be taken off, because the goods can be made to sell at a profit to the manufacturer.

It is perfectly ridiculous to think that a nation that can produce almost everything, from a pin to a locomotive, is not able to take the output of its rolling mills and coat it; but as we advised you that we are making tin plate for business purposes, have it in stock and for sale, we simply say we are ready to ship it to any one who has the means to pay for it.

Pardon the length of our letter. If you feel that we can give you any information that will be of interest to you we will gladly do it, as our work is one of business, and we are ready to furnish any information for business purposes.

N. & G. TAYLOR Co.

EXTRACTS FROM CORRESPONDENCE.

FROM TENNESSEE.—Loudon is the smallest county in the state. About one third of her surface is cleared; the balance is in forests of oak, hickory, walnut, poplar, chestnut, etc. Her county-seat is on the Big Tennessee river at the crossing of the E. T. V. & G. railroad, and at the entrance of the far-famed and fertile Sweet Water valley. From Loudon is shipped each year more than 200,000 bushels of grain—wheat, corn, peas and oats. The peas go to the far south to renovate the sugar-cane lands of that section. The grain goes to the cotton country of Georgia, Alabama and South Carolina to feed the people and animals engaged in raising cotton. Our hogs, cattle and dairy products all go the same road. It is all taken to feed those people who raise cotton, and cotton only. Our surplus horses and mules go there, too, to farm those same cotton lands. Thus, you see, we have a market within from one to two hundred miles for all we produce. This nearness to a good market gives us a good price for all our surplus. For an all-year-round climate we have the best on the continent, being free from the extremes of both heat and cold. The mercury rarely goes above 95° in summer, and never to 100°, and it rarely goes to within 15° of zero in winter. Once this winter it was down to 13°, which is the lowest for five years. The surface of our country is hilly, but it is extremely well watered and naturally very fertile. Much of it is run down by bad farming, but red clover and stable manure will soon bring it up to a high state of fertility. Fruits of all sorts flourish here, especially grapes, berries and peaches. We grow successfully all the crops grown in Ohio, wheat, corn and clover being the main crops. I know of one clover-huller that this season alone hulled over 1,600 bushels of clover-seed. Sheep raising could be made a very profitable industry here, and we need more men to go into it. The farms here, as a rule, are too large, and we want more people to cut them up and farm them better. Lands are reasonably cheap yet, but are rapidly advancing in price as more northern people come in and begin to improve them. Many have already come, and there is room for many more. Allow me to commend you for the brave stand you are maintaining for honest money. As has been demonstrated at Indianapolis, the Alliance is not a unit for the ahominable heresies of sub-treasuries and seventy-five-cent silver dollars, and if this is the rock upon which our order is to be wrecked, let it come. Better wreck it than the national government. The Ocala demands, if granted, would wreck the best government on earth. Allow me also to bear testimony to the excellence of your paper, and say it stands the peer of any of its class of journals.

E. L. G.,
Loudon, Tenn.

Our Farm.

THE POULTRY YARD.

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

SOMETHING ABOUT BUYING EGGS.

AS MANY of the readers may desire to procure eggs of pure-bred fowls this spring, a few words on that subject may not be unwelcome. In the first place, before buying, aim to secure a hardy breed, or one that is adapted to your section. The best laying breeds may not be the hardiest; but in those sections where the winters are not very severe, nearly all the breeds are capable of giving good results under careful management.

For improving the common flocks, with a view of increasing egg production, the Leghorns are unexcelled; and for increasing the size of carcass and giving greater hardiness, the Brahma will answer admirably. The old and well-known Plymouth Rocks are considered a hardy breed, and are excellent, both as egg producers and for market. They do not excel in all the desirable qualities, nor does any other breed, but they stand high as an all-purpose fowl, if such a breed is possible. At all events, do not fail to improve your flock with some one of the pure breeds, no matter which of them you select.

Do not have eggs sent you too early in the season. Send in your order and cash early, but let the eggs come after the cold weather passes off, as it is a risk to hatch and raise a brood when the snow is on the ground, and do not crowd the eggs under one hen. A hen should have only ten eggs to cover during early spring, and before the chicks come off have a place for them. Should failure result in hatching the eggs, do not condemn the breeder. He cannot anticipate what is to happen in the future when he sends you the eggs, and the handling of eggs by expressmen, exposure to cold on the journey and other drawbacks may be met with.

Aim to buy from a breeder as near you as possible, so as to save expressage and other expenses, and always be willing to pay a little extra for the best, as it will be to your advantage in the end. If you raise only one good male from the eggs, it will pay you, for the improvement effected in a flock by a single male is much greater than may be supposed, as he can become the sire of more than a thousand chicks in a year, if all the eggs were used for incubating purposes.

EQUALIZING FOODS.

When a variety of food is given, the quantity should not be increased to a greater amount than when grain is given. Those who feed grain make the mistake of not diminishing the grain in proportion to the clover or meat added. For a laying hen that is producing eggs regularly, the estimate of food allowed per day is four ounces, but it does not require any explanation from us to convince those who keep poultry that four ounces of grain is a very different thing from four ounces of cabbage or potatoes, as the one is a concentrated food, while the others consist largely of water. A gill of corn is about three ounces, and by using the gill as a mode of measurement the feeding may be easily regulated. No quantity of grain, whether of wheat or corn, given to a fowl should exceed one gill a day, and this also depends upon the breed to a great extent, and even upon individual hens of the breeds, as some eat more, and require more, than others.

Finely-cut, fresh bone (with adhering meat) is also a concentrated food—more so than grain—hence, in feeding the hens one ounce of bone and meat daily (which is ample), the gill of grain must be reduced to one half, as the bone and meat compensate for the grain. It would be expensive feeding if this equalization of foods was not given attention, and the hens would soon become overfat and worthless.

Allowing four ounces of food per day (three of grain and one of bulky food), and estimating a gill as three ounces, the gill should be reduced in accordance with the quality of the food. If an ounce of bone and meat is given, it should equal one and a half ounces of grain. If finely-cut clover is given, one ounce of the

clover should equal only half an ounce of grain, because the grain is more concentrated than the clover. We do not claim that these proportions are correct, but they enable the poultryman to roughly estimate how to feed. The hen that does not lay should be fed only one half as much as the laying hen, owing to the fact that one is a producer and the other not.

THE PEA-COMB ON FOWLS.

If all the breeds possessed the small pea-comb of the Brahma, more eggs would be laid in winter. It is well known that the larger the comb, the greater the surface exposed to the effects of the frost, and as the Brahma is favored with the pea-comb, it receives the distinction of being an "excellent winter layer," when in reality it is simply better protected from the cold.

What is known as the pea-comb is "a triple comb, resembling three small single combs joined together at the base and rear, lower and narrower at the front and rear than at the center, and distinctly divided, the largest and highest of the three single combs being in the middle." On Brahma hens it is exceedingly small. It is a characteristic that should be attached to all future new breeds.

MINKS AND HAWKS.

There is no way to avoid loss from minks and hawks, except to protect the chicks and fowls in some manner. The mink usually goes into the poultry-house at night, and a pair of them will kill every bird on the roost. The remedy in that case is simple, which is to have no holes large enough for a mink to enter. The poultry-house should be securely closed. The depredations of the hawk may be partially avoided by having loose brush, small coops or other places of refuge for the chicks whenever the hawk puts in an appearance, as the chicks will be warned in time to seek cover, by the cock, and also by the hens.

THE DOMINIQUE.

The Plymouth Rock supplanted the old-time Dominique, but the latter is still a favorite in some sections. It is not large in size, but it is a very hardy breed, and can endure all climates. As egg producers they are not equal to some breeds, but as they are active foragers and mature early, they compensate well for the care given. They have rose combs and yellow legs. Being of medium size, the hens make the best of mothers, not breaking the eggs in the nest or injuring the chicks—a fault which is very noticeable with some of the large breeds.

SHIPPING LIVE FOWLS.

You cannot ship live poultry in very severe weather unless at risk of loss. Fowls are exposed to cold draughts on the journey, the water and food freeze, and they are also exposed to cold after arrival, the consequence being loss of weight. It is better to ship all poultry dressed, by express, and thus avoid expense. The difference in price between live fowls and those that are dressed will pay for the labor of picking and preparing for market.

BUCKWHEAT AND MILLET-SEED.

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Our Fireside.

THE OLD HAY-MOW.

The old hay-mow's the place to play
For boys when it's a rainy day!
I good 'cal rather be up there
Than down in town, or anywhere!

When I play in our stable-loft,
The good old hay's so dry an' soft,
An' feels so fine an' smells so sweet,
I 'most forget to go an' eat.

An' one time, onc't, I did forget
To go 'til dinner was all et.
An' they had short-cake—an'—but he
Hogged up the piece ma saved for me.

Now, I won't let him play no more
In our bay-mow, where I keep store.
An' get hen-eggs to sell—an' shoo
The cackle-un old hen out, too.

An' now, when aunty she was here
A visitin' from Rensselaer,
And bringed my little cousin—he
Can come up there and play with me.

But after awhile, when Bud he bets
'At I can't turn no summersetts,
Let him come up there, if he can,
At half way, like a gentleman!

—James Whitcomb Riley.

AUNT JACK'S SECRET.

BY MARY A. DENISON,

Author of "That Husband of Mine," "If She Will,
She Will," Etc.

CHAPTER XII.

"Nor distant waters can avail to bar
My love from thee."



WHEN Aunt Jack had written letter No. 2, she posted them both, and then, as was her usual practice, took a few turns around the pleasant room to think it all over.

"My sister's child is coming to me! What a wonderful providence,"

she murmured, again and again.

Pausing before a small dressing-ease, she smilingly unlocked one of the drawers and took therefrom several articles of wearing apparel. A wig of snow-white hair, a cap, a pair of large spectacles, a handkerchief of ample dimensions, a frilled apron, such as our grandmothers wore, soon replaced her fashionable garments. At once the transformation was complete. From the sparkling young face, all smiles and dimples, the change was very remarkable, to a staid, demure woman of sixty. It needed no wrinkles to deepen the disguise. A fair woman she was, with the most beautiful signs of a ripe age, and none of its disfigurements.

"My dear Mrs. Mulligan," she said, merrily, curtsying to her image in the loag mirror, "you must be from henceforth my good fairy. I propose to use you as circumstances shall decide. You have a good many dimples, my dear old friend; a bright eye, yet, under the spectacles, nevertheless, you are quite a dear old lady, and it is all I can do to keep from kissing you myself. We shall see what we can do, we two together, to make a sweet and wholesome woman out of this dear girl who is coming to live with us, and who would, but for our help, be a homeless waif, or, I shudder to say, perhaps a wily adventuress, and God only knows what worse. We will save her, Mrs. Mulligan, you and I, and make her a happy and useful member of society. I will do the hard work; you shall be the good fairy, giving Cinderella occasional gleams of happiness and the hope of a brighter future. And now, Mrs. Mulligan, to your new work, and may God prosper you. No shilly-shallying any longer; no resting on your laurels, waiting for the ship to come in. Care killed a cat, but it can't kill you, and I won't be killed by anything."

Jack's working days were over, except as she listed. For more than a year she had lived on the fat of the land, and she was rather tired of it. She and her husband had both been fortunate in speculation, never dreaming at the time they spent a little of the money they had saved for good luck that it would bring them oil-luck, as it had, with a mild plenty of money. Then had come other astounding news. An uncle of her husband's mother, an Irish gentleman, died and left no will. Jack's husband was the next of kin, so, instead of having full and plenty for their rather limited wants, they found themselves, in a way, to be overflowing with riches. The only drawback was the hard fact that Mr. De Lyle was obliged to go over to the old country, and Jack, having a great horror of the ocean, decided to stay at home and write two letters a day to her absent illegitimate lord. What else had she to do? But now this merciful intervention, as she called it, had happened, and at once given her hands, heart and head enough to keep busy upon for years—so she hoped—to come.

All her affairs were put in order then, and Aunt Jack started for the city. She had come back to the old house, had it opened, cleaned and aired, and the furniture put back as nearly as it could be in the order that had been usual in her father's time. Arrangements were made with an old woman, called Ma'm

Angeline, to come at stated times and clean and scrub. Ma'm Angeline was a crooked-nosed old dame, whose black cat always accompanied her and sat by, patiently whisking her long tail, till the work was done, when she expected to be fed as well as her mistress.

It was a charming morning that Aunt Jack, looking a very respectable and handsome old lady, took a cab at the depot and went after her niece. It was a long drive, through crowded city streets, to the handsome residence where Flossy, through the kindness of friends, was still stopping. The girl was all ready and came out alone, feeling for the first time that freedom from the thralldom of body and mind which she had so long experienced.

"Now, my dear, you are going right home with me," said Aunt Jack, kissing her and holding her hands as she sat in the vehicle; "I dare say you are not used to cabs, but—"

"Ob, Aunt Jack! anything, anything to get away to freedom!" exclaimed Flossy, the tears running down her cheeks.

"That's all right," said Aunt Jack, longing to kiss the tears away; "your luggage came out yesterday, dear, and everything is ready for you. I hope you will be happy in your new home."

though some of the work will fall to your share, for I shall keep no help. A woman will scour and clean once a week, and a man on the farm will care for what little stock I have. Here, my dear, is the piano on which your grandmother practiced when she was a girl," and Aunt Jack led the way into the simply-furnished parlor where stood the grand piano, very old and quaint, but which Aunt Jack had caused to be put in good repair.

"Now, my dear, you shall have time to practice and play for your old auntie every day, after the work is done up. For the rest, we two will keep the house in good order, cook the meals, and I am very despot in the way of cooking. You and I are about of a size, and I have two or three absurd-looking calico dresses which will fit you nicely. Now, come and see the room where your mother used to sleep, where everything is almost as she left it, and then we will make the tea."

Flossy stood on the threshold of the pretty room, and a solemn awe came over her. Her mother had been her idol, her second self, and she had bitterly rebelled at the providence that had left her alone. There stood the pretty bed, trimmed with pink ribbons, in which her fair young mother had slept; here were the chairs, the table, the little desk, the

"How could you, dear? I offended against the laws of so-called good society almost before you were born, and your mother, being on the topmost wave, knowing what was likely to follow, to her disparagement, could not forgive me. Everything did follow, perhaps; everything that was ignominious and insulting to her and to me, in a society way. But I have never repented of my choice."

"And did you marry a very poor man?"

"I married your father's butler, my dear," and then Aunt Jack laughed outright at the comical expression of dismay that crossed the girl's features, as she dropped her spoon and sat staring at her aunt.

"Yes, dear; and I have never repented it."

"Oh, aunty! how could you?" Flossy asked after a while.

"Because he was a good and honest man, Flossy; born a gentleman, and clean to his heart's core. How many such have you seen in your short society career?"

Flossy's eyes fell and her color went and came.

"I had plenty of lovers, aunty, when I was rich," she said, softly.

"And how many of them remained true to their idol after the gold they worshiped had gone?"

"Oh, aunty! not one—yes, one; but he was not rich. He would have married me, poor as I am, but I am not sure that I care for him as I ought. Oh, aunty! I'm so glad of the shelter of this pleasant home!" she cried, with sudden enthusiasm.

"Only one remained true," murmured Aunt Jack, "and he was poor! He loved you, then, for yourself. Who was this man?"

Flossy told the story, not sparing herself, nor withholding how she, the petted darling of prosperity, had spurned the offer of a true and noble love.

"That man," said Aunt Jack, "was worthy of the highest woman in the land. Is he in business?"

"He is just going into business," said Flossy, "but it will be years before he makes fame or money. He said so himself. I am not yet fitted to be a poor man's wife," she added, blushing.

All this time they were washing and wiping the delicate china and putting away the silver.

"And could you be a poor man's wife, darling?" asked Aunt Jack.

"I don't know." Flossy stammered a little; the glamour of gold—of all that gold brings—was on her yet, and she was honest to herself.

"And this man—you do not love him?"

Flossy was conscious, for the first time in her life, of an utterly new sensation. She put down the goblet she was wiping and turned to the window. The quick blood rushed to her cheeks, for there stood up before her in the depths of her heart, as if framed and hung there for her inspection, the face of young Owens, and there rang in her ears the words he had spoken: "No one will ever love you as I do!"

The girl almost caught her breath as she lifted another of the goblets, the white water-pearls streaming down its sides as she made reply.

"Aunty, I am very unfortunate in my knowledge of myself. I am afraid I am not worthy of his love," she added in a lower voice.

"Make a note of that, Cuttle-fashion, Mrs. Mulligan," said Aunt Jack to herself. "This young fellow must be seen to. I'll write to De Lyle at once to set him up in business. The child loves him and don't know it."

Flossy had become quite accustomed to her new home, and often ran out to gather wild flowers. Aunt Jack sometimes smiled to herself, noting how much the girl enjoyed these outdoor rambles, reminding her of her own early pleasures after this simple fashion; for Flossy was a miniature of her Aunt Jack, personally and mentally; much more like her, every way, than like her own mother.

One evening Flossy had wandered to the outskirts of the farm, when suddenly she came upon a vision that startled her.

CHAPTER XIII.

"I know at last that love means sacrifice."

IT was young Owens, walking leisurely up the road, and it looked as if he intended to turn in at the gate.

Such a light of joy as irradiated his face, as he met the eyes that smiled into his, would have imparted beauty to the plainest features, but young Owens was not plain.

"You here!" he exclaimed, forgetting etiquette, everything but his utter delight. "I was sent for by a Mrs. De Lyle, who—does she live here?"

"She is my aunt," said Flossy, blushing divinely. "I live here with her," and she moved aside to let him pass. He looked back at her.

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"I am sure, Aunt Jack, it will be my own fault if I am not," said Flossy, in an excited whisper, trying to smile and looking so charming that Aunt Jack could have taken her in her arms, then and there.

Presently they were at the depot, and in due time, driven in a rather shabby carriage, they stopped at the old farm-house gate.

"Oh, how beautiful! Aunt Jack," cried Flossy, as they stood on the broad stone step at the quaint door; "what a lovely place to live in!"

"You really like it then, my dear?" said Aunt Jack, half beside herself with delight, as they entered the familiar rooms and found a table bountifully set for an early tea.

"Like it, Aunt Jack? If you knew what it was to live on the bounty of strangers, who care nothing for you, who will neither let you do for them nor spare your feelings though you are dying of homesickness. But, dear Aunt Jack, I must still be dependent."

"You dependent! My own sister's child; my own darling child now; all I have in the way of paternal responsibility to love and cherish! You must not talk that way, my love. I have adopted you for my very own. All I want is your help and your love. I am going to teach you everything."

"And you shall see how readily I shall learn," said Flossy; "I will be a daughter, indeed, to you, and spare you every unnecessary step. I am willing to do everything. I am willing to work from morning till night." "There will be no need of that, my child,

bureau she had used; and that fair and peaceful scene without—fields of almost living green, the reach of hills, the faint glitter of water, all these her mother's eyes had rested on so many years.

"I like it better than all the splendor, aunty," she said, when she found voice to speak. "Oh! do you think my dear mamma knows how happy I am?"

"I think she does," said Aunt Jack, brokenly. It rather went against her to subject this young and beautiful creature, so like her mother in every look and movement, to the domestic routine she had planned, but she was resolute. Nest's sweet child should not be the spoiled darling of fortune her mother had been.

They sat down to the table after Aunt Jack made the tea. Everything was homelike, and Flossy's eyes feasted on the few pieces of old-fashioned silver and cutglass. On the surface she was inclined to be content with all she saw and the duties that would fall to her share, but the strong undercurrent of habit was yet surging beneath her life, and old impressions had sunk too deep to be ignored or conquered in the matter of taste. It was good for her, therefore, to be with one whose whole trend of existence had been toward the cultivated and the beautiful, and who yet did not ignore the homelier details of work and womanly occupation.

"You are so sweet!" said Flossy, in an impulse of gratitude, as they talked; "I can see mamma's expression in your face. How strange I never have known you!"

"I can show you the way," she said, shyly, and walked by his side. So the aunt met the two coming to the Haven together, and thought she had never seen a prettier sight.

Aunt Jack took the young man into the library and they talked together, while Flossy sat at the old piano, playing chords with burning cheeks, for now there was no doubt about it. She knew that she loved, and the fact brought both pleasure and pain. The next day Aunt Jack wrote a letter to her husband.

"DEAREST:—If you could see your sedate old wife, gray hairs and all, moving about the pleasant old homestead, I wonder what you would say? You never liked me to work hard, you know; but I am not working hard, not very.

"You should see us together, Flossy and me. Vulgarly speaking, we two are a team. We begin Monday morning with the washing, which, you may imagine, is not very hard work, not so hard as it used to be before we had certain appliances that money brings. Indeed, I think Flossy considers it a pleasure. I have initiated her in the secret of bread-making, and she is very proud of it, as also of making that delightful, soft gingerbread that you are so fond of. She is developing into a first-class housekeeper.

"Last week I took her to two concerts in the city. I hired a fine carriage, or rather, Mrs. Mulligan did, and the child has had some rather elegant dresses sent her by Mrs. Mulligan, of course, and she is beginning to wonder who my kind and rich friend can be. For you see, whatever pleasure pertaining to her past life is hers to enjoy, in the present, comes from Mrs. Mulligan, my very devoted and wealthy friend.

"Ah, my dear, I love to watch the formation of her new desires, and see the shackles broken that bound her to the old. She is beginning to see life as it is, and men and women as they are, and the simple pleasures of this rustic living are not disagreeable to her. With more than her mother's beauty, she has my disposition and my taste of shams. The really true, the really beautiful, she is beginning to appreciate at their just value.

"Young Owens I particularly admire. He came here, per advice of your letter, and we two had a quiet little conference. I advanced him the two thousand dollars as you advised, as a loan without interest, and you should have seen his gratitude. He had already taken an office, and I have advised him as to furnishing. He had only a second-hand desk, a table and two chairs. I gave him a letter to a certain upholsterer, who is to furnish the place in the most approved style. That will do for a commencement. My prophetic soul tells me that as I have taken a daughter to my heart, so I shall, before many years pass by, rejoice in a son, for I am sure Flossy likes this young fellow, and I don't blame her. He is almost as handsome as a certain Irishman I am slightly acquainted with. So you see, we shall have our hands full.

"Flossy is to know nothing about your setting up young Owens in business, nor of the house whose foundations are already laid. I bought a corner lot where you advised, and a slightly spot it is. The house will be of red granite, with white facings, or trimmings, as they call it here. The plans are those we made together when we first talked of building, and I shall spare no expense in furnishing the house. Everything shall be of the latest and best.

"I do not think Flossy has an inkling of any of our plans, and the dear child is so thoughtful for me. It is such a pleasure to let her feel that I am aged somewhat, and I allow her to do a hundred little offices which I could do as well myself. Something has seemed to make her very happy of late. I incline to think it is the few visits young Owens has made out here. When he is gone, I observe that her cheeks and eyes are brighter and her beautiful face fairly radiant.

"Mrs. Mulligan has sent her own teacher (music) from the city, and once or twice her own dressmaker. The child is all aheam with gratitude to this unknown friend, and asks me some questions which are rather difficult to answer. I have promised her that sometime I'll take her to the city, and she shall thank Mrs. Mulligan in person for the many favors the old lady has conferred upon her. Won't she be surprised?

"I believe I have told you all the news. The place is looking very beautiful, and I am a thousand or two times glad that we did not sell it. No corn tassel like that we raise here, and there never were such apples, pears and peaches. Altogether, it is a lovely spot, and I am getting more attached to it every day. We shall keep it for our farm, for the vegetables and fruits, and for a pleasant summer retreat."

Some of the neighbors had called upon the new resident.

"Your name," one of them said, holding her card-case daintily in one hand and an embroidered handkerchief in the other, "is very similar to the married name of the young lady who used to live here. I don't know but it is exactly the same."

"Ah," said Mrs. De Lyle, stolidly. Then invitations came pouring in, from the best families.

"I rather think that if they knew how little I care for it, they wouldn't invite me to these gatherings," said Flossy, one day.

"You must not say that, my dear. Youth is

the time for gaities and pleasures of that kind. Sparingly attended, they are good for you."

"I have only plain muslin dresses," was Flossy's response; "but I suppose the simpler the better."

Next day there came a box directed to Flossy. No wonder she clasped her hands in a rapture as the cover came off, for there came to light a beautiful ball-dress of silk and lace, dainty silken hose, a fan of white ostrich feathers, and the "darlingest" little white silk shoes. On the package was laid a card with these words simply written:

"Mrs. Mulligan."

"I don't know what to think of it," said Flossy.

"I do," said Aunt Jack. "That woman is under unutterable obligations to me."

"But I want to thank her," said Flossy.

"Write her a letter, and I will see that she gets it," was the reply.

Another time it was a dress for the opera, or some exquisite trifle in ornament, such as girls love—a diamond stud, a pearl ring, a costly fan. And all this time the work went on. Flossy never shirked, and it was good to see the development of mind, body and soul that the right exercise and judicious study suggested by Aunt Jack brought about. As the time wore on, Mrs. Mulligan's favors increased. Now it was the use of her elegant carriage, with a correspondingly gorgeous footman; again, it was tickets to the theater or concerts, where fashion almost gave its head to go, and Aunt Jack's beautifully sweet face, composed mein and white hair attracted attention, as did, of course, her own unrivaled beauty, and Flossy at last ceased to wonder. It was delightful, she thought, that Aunt Jack had such a friend, some rich, peculiar, unfathomable woman, who was under obligations for some great service, and took this means to show her gratitude.

"Do you think, aunty," Flossy asked one day, "that I am fitted to be a poor man's wife?" She had been stitching on some white stuff for an hour in almost complete silence, and Aunt Jack was watching her out of the corner of her eyes, and wondering what made the child so quiet, and what a lovely picture she made, sewing the long, white seam.

"Why, yes, my dear," her aunt made answer, "providing he is not too poor."

"I suppose one can be too poor," Flossy made reply, taking stitch after stitch very carefully. "But oh, aunty, when I look back and see what I was! I don't think I ever thought of anybody but myself. I remember how terribly angry I was once because my maid was sick, and couldn't dress me, and at last—oh, I am so ashamed!" The girl hid her face in the work she was sewing. "Do you know, because she pulled my hair a little, when I insisted that, sick or not sick, she should do that, I pushed her, and the poor thing was so weak that down she went, and struck her head on something hard, cutting it badly. Oh, dear, I'm afraid I didn't feel a bit sorry, only angry; a little with myself, a good deal with her. Poor thing, she was sick, and had to go to the hospital, where she died. Just think how awfully selfish I was."

"You were trained to it, dear," said Aunt Jack.

"Yes, from my infancy I was waited upon. Miss Flossy was not to be crossed, but have everything she wanted. I wonder I wasn't ruined. When mamma died, I had my way more than ever, for the housekeeper never interfered with me. Oh, Aunt Jack, that was a terrible time. They had absolutely to lock me in a room, I raved so, and after that I was ill for weeks. After I came to my senses I reigned supreme. Everybody and everything was at my beck and call. I felt absolutely like a queen, and remember how I put on airs and how pompous I was to the servants. No wonder they wouldn't stay. And what dresses I would order when I put off my mourning, so absurdly rich and costly. I remember I had one brocade, all made of gold thread, an imported dress that would only have become a woman of forty. But you see, never had I asked anybody's advice. I wore diamonds, too, all mamma's diamonds. What a little peacock I was!"

"And what became of all those splendors, dear?"

"I sold them all. I wouldn't keep one of them while papa's good name was in question. The creditors took everything, you know, and I did pity the poor people, widows and orphans, who lost all they had by the failure of the bank. I seemed to feel that they would curse me if I kept anything back, so I only saved enough for my needs. It was a sort of dream. I thought I would try to be noble and good, and that then perhaps I should in some way be cared for myself."

"You poor, dear child!" said Aunt Jack. "I think it was very beautiful of you."

"And then this one and that came to me, and said I should have a home with them. I didn't think that they meant that I could stay till I could help myself, though I meant not to be a burden to them. But I soon found out what they did mean, though I suppose they were very kind, even to help me so much. When I once overheard somebody ask Mrs. L., with whom I was staying, what I was going to do, and the answer that I ought to be stirring myself to do something, a light broke in upon me. Oh, aunty, what a time that was! All help seemed to fall. I had to humble myself to try and find a situation, and then learn that all my education was superficial, and

went for nothing. Think of it; before that, dozens of young men surrounding me, happy if I would give them a rosebud cut off my nosegay; flowers sent by boxes, honours and invitations every day; then a sudden, dead silence and utter neglect. Of all who had professed so much, there was not one I could count on. Yes, there was one," with a sudden flush, "and I listened to him with utter scorn, thinking the others might come back, but they never did. But I am very glad," and she looked shyly into her aunt's face. "The past, that part of it seems like an ugly dream. Oh, aunty, it is heaven to be here, and with you, and to see things so differently, to feel that I am of some use to you, and that I really know now how to earn my own living."

"And how to keep your own house, if you should happen to marry a poor man," said Aunt Jack, suspending her knitting for a moment, as a sunray stole over her face, making her look, gray hair and all, absolutely beautiful.

"Yes, aunty, as perhaps I shall," she made reply, seriously. And then, falling down beside her, the work going one way and the pretty head another, she half sobbed that young Owens had asked her to be his wife, and she loved him, oh, she did love him so dearly! And she was willing to be poor for his sake, and what a sweet, good, kind aunt it was to teach her how to make home a paradise, even if she did have to do her own washing, cooking and sewing.

"And I never, never was so happy in my life," she ended, sobbingly.

CHAPTER XIV.

"The golden circlet of life's work well done, Set with the shining pearl of perfect rest."

MY DEAREST:—I am counting the days now till you return. There is little to tell you, except that the house is finished and furnished, and that it is very beautiful, and satisfies me thoroughly, as I know it will you.

"After all was done, I took advantage of the absence of Mrs. Mulligan from the city, and carried Flossy to see it. The child went into ecstasies over it. I suppose it woke old recollections, but when I said, 'Don't you wish it was yours?' She shook her head and said: 'We shall be just as happy in our little home.' The dear, child! she little knows of the surprise in store for her.

"Young Owens is prospering finely. I am glad we have found one honest man to whom we may conscientiously confide our interests.

"So there is a castle in the bargain, a 'real' castle, with fifty rooms. How ridiculous to have a castle and never be able to live in it! Very well, we will rent our castle. I am glad the fortune turns out so well. Of course we cannot spend our income; but bless your dear heart, what good we will do with the money! And you are to give away our sweet Flossy. I think you will love her as well as I do."

That was a part of Aunt Jack's letter. In just a fortnight after it was written, the good man himself came home, and there was great rejoicing. As to the wedding, Mrs. Mulligan had taken that into her own hands. She herself presented the bride with a wedding-dress and trousseau direct from Worth. She herself decreed that the wedding take place in her own house in the city.

"But, Aunt Jack," Flossy protested, piteously, "how can I wear such splendid things when I am to live in a plain little house and do my own work?"

"No harm to have fine things to begin with, my dear, and plenty of them. Only think how long they will last."

"Only think how little I shall wear them," said Flossy. "I'm sure I'm awfully obliged to your kind friend, but I wish she had given me more useful things."

"They will come afterwards, my dear," said her aunt.

"What kind of a woman can she be, never to have called upon me, never to have let me see her, or thank her?"

"You shall see her on your wedding night, my dear," was Aunt Jack's reply.

The grand house was alight from garret to cellar, and a moderate company assembled, when Flossy, in all the splendor of her bridal attire, came into the parlor that had been made a very hower of roses, leaning on the arm of the handsome bridegroom. A murmur of admiration followed their entrance, the music, in an improvised gallery, ceased, the bishop of the diocese, in full canonical, performed the ceremony. Young Owens' aunt, who had been to him like a mother, stood by the side of Aunt Jack. After the ceremony the bride left to change her dress for a traveling costume, accompanied by Aunt Jack, who seemed unaccountably nervous as she entered the room set apart for this purpose.

"You promised to introduce me to Mrs. Mulligan," said Flossy, looking around curiously.

"My dear," said Aunt Jack, "you see before you the veritable Mrs. Mulligan. You must know," she went on, "that your Aunt Jack has a fondness, a foolish fondness, for theatricals, and some two years ago took part in a little play, the principal character in which there was a Mistress Mulligan. So pleased was she with the role, that when you wrote to her under the impression that she was poor and old, and asked for her advice and help, it suddenly occurred to her that Mrs. Mulligan might enact the character of a rich and gracious lady, and so help me in the little comedy I had planned. My dear, Aunt

Jack is neither old nor poor. Instead of that the hutler has turned out to be a peer's grandson—though none the better for that—and a rich man, whose yearly income it will be quite impossible to spend. You will notice that I remove this wig, these spectacles, this handkerchief—the very finest lace if you will observe, my dear—and that now the original and only Aunt Jack stands before you, neither old nor poor, as I remarked before. My darling, come and kiss me."

For one moment Flossy stood, speechless, amazed. Then almost mechanically she fell into the arms extended towards her.

"Oh, what a wise woman you are!" she said, after she had come to her senses. "And oh! how young and beautiful! How could you hear to hide that lovely face? And your wisdom has cured me of so many miserable habits—has made a thinking, reasonable woman of me! How shall I ever thank you?"

"By continuing to be the same sweet, sensible woman in the future as you have been in the past that you have spent with Mrs. Mulligan and me," said Aunt Jack, laughing. "And now you must go down and thank your uncle, who has just given to your husband the deeds of this pretty house."

"Aunt Jack, I shall go to worshipping you next!" exclaimed Flossy, almost beside herself with joy. "It's not for myself I'm so happy and grateful, but for him! Oh, dear, dear Aunt Jack!"

It is needless to say that Aunt Jack had her reward, and that Mrs. Mulligan always kept the secret.

THE END.

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JOHN LEWIS CHILDS, Floral Park, N. Y.

Our Household.

[For The Farm and Fireside.]

WASHING DAY.

BY MRS. R. C. BAKER.

A most prosaic theme, I hear you say;
What rhymester cares to sing the washing
day!

Great piles of dirty clothes adorn the floor,
And wash-tubs barricade the kitchen door.

Can you keep your soul in patience,
Through this wearing weekly test?
I'm afraid you'll frown a little,
Though you do your very best.

With reckless energy, the work begin;
Woe to the luckless man who ventures in.
He only need expect ungracious snub,
Who meets a woman at the washing-tub.

What can a man expect,
When you haven't combed your hair,
And your dress quite unbecoming,
As you're very well aware?

Don't mind about the dinner—it will not pay.
Who cares for what they eat on washing
day?

The bread's a trifle sour—the pie all gone;
But that dreadful washing must be done.

Should your husband scold a little,
(The inconsiderate sinner),
He may hear what he won't relish,
Any better than his dinner.

But the clouds begin to lighten—the sun to
shine.

As you hang the snowy linen upon the line,
The unsightly tubs are emptied and put away
Thus ends the ever-dreaded washing day.

For one whole week at least,
No more washing to be done.
If ever a woman was tired and thankful,
You're sure you are the one.

CHAT WITH HOUSE MOTHERS.

BY CHRISTIE IRVING.

OBLIGED to wear an apron as often as the house mother must, it is pleasant to have it a pretty one. Nothing will convince our older housekeepers that an apron need be any more than two straight breadths of the very ugliest, darkest calico one can find. But the younger matrons prefer something prettier.

As material for aprons, calico is not fit to buy, unless it is of the very best quality of shirting in light colors, or the Dutch blue which costs from twelve to twenty-five cents a yard, and is really printed on unbleached sheeting. The best material is the heavy gingham that many people buy for pillows. This comes in blue and white plaids, and is prettier every time it comes from the laundry. Summer dress skirts can be utilized at times, but do not expect them to wear very well.

I have found unbleached sheeting of a good, heavy quality the best, trimming them with bands of some unfading material. Our illustrations give them, covering the waist also.

One of any light material, trimmed with heavy embroidery yoke. Black alpaca makes a very serviceable apron for school-girls, and are much worn. The very prettiest of patterns come for their construction.

SACHETS.—The newest thing in sachets is one shaped like an open fan, made of plaited silk and trimmed at the edge with silk cord. It is tied with a ribbon bow in the middle of the upper edge, and on being opened shows a number of pretty handkerchiefs. These pretty accessories come in all linen, hemstitched and marked with an initial, done by hand at some of our nunneries. They sell in bunches of three for a dollar, some seventy-five cents.

CONCERNING AGE.—Some one has said that as a woman nears and passes forty she should quit wearing hats and confine herself to bonnets. Our illustration gives a very quiet, refined and ladylike way of dressing for an advanced lady. Her face may be very young-looking, and the bonnet gives it a very sweet look. Ladies of coarse features should avoid large hats. We cannot always be young, but we can always look ladylike, and the older a woman gets the more attention should she give to her toilet. It is bad enough to grow old; do not add carelessness of attire and disagreeableness of manner to it also.

GIRLS.—The employment of girls in many places where boys would like to be, shows the readiness of all merchants to

avail themselves of cheaper labor. There is a reliability about girl employes that cannot be too highly commended. Many, too, upon the cheaper wages manage to make the money go farther than the boy would, simply because there are no leaks for a girl's money as there are for a boy's. Many mothers think that it is only when children are small that they are the most care, but those who know can tell of the intense anxiety felt by mothers when their young people are first launching into life. They feel so anxious to have them avoid all of their own mistakes that they are often deluged with advice. Train right and then leave the rest with God.

PORCELAIN UTENSILS.—There are many times when a porcelain grater is an exceedingly useful household utensil. Onion grated on an ordinary tin grater, and many other things grated in this way, turn black, whereas, a porcelain grater does the work in all respects as well as tin, and nothing grated upon it shows the slightest change in color. A porcelain skimmer, such as is imported from Germany, is exceedingly useful in many cases where a metal skimmer does not seem to be the proper thing. Those in Dresden onion-pattern, with wooden handles, are exceedingly quaint and ornamental enough to skim "the prime of the head cook's pottage."

HOME TOPICS.

HAM FRIED IN BATTER.—A nice change from fried or broiled ham for breakfast is to take slices of cold boiled ham, trim off the most of the fat and dust a little pep-



DRESSY HOME APRONS.

per over them. Make a batter of a cupful of milk, two eggs, one cupful of flour prepared with baking-powder and a very little salt; dip the slices of ham in the batter and fry them in boiling lard. Drain from the fat and serve the slices on a hot platter. Cold boiled side pork may be prepared the same way.

APPLE CHARLOTTE.—I wonder if I have ever given my recipe for apple charlotte? If I have, there are new readers who did not see it; and it is such a simple, easily-prepared dessert that I want everyone to know it. Pare and slice seven or eight good, sour apples. Cut some thin slices of bread, trim off the crust and butter the slices on both sides. Put a layer of the bread on the bottom of a buttered pudding-dish, put in a layer of sliced apples over this, and sprinkle sugar and a little cinnamon over them, then add another layer of bread, and so on till the dish is full. Cover the dish and bake for an hour and a half. Serve with cream or pudding sauce, made as follows: Put one pint of milk over the fire in a double boiler, with three tablespoonfuls of sugar and the beaten yolks of four eggs. Stir continually until it thickens, remove from the fire and flavor with lemon. When I have no very tart apples I squeeze a little lemon juice over each layer of apples.

CARE OF THE HANDS.—Some people, whose hands chap easily, wash their hands but seldom, thinking washing will make them worse. This is a mistake. The hands will become soiled even when no work is done, and if they are not kept clean they will not be smooth and white. If you must use hard water, soften it with a few drops of ammonia, or what is still better, enough borax to make the water feel a little slippery. Do not wash the hands just before going out, but always wash them in warm soap-suds before going to bed at night. Never use cheap, highly-scented soaps. Dry the hands thoroughly and rub them with a few drops of glycerine and rose-water, equal parts. Glycerine does not agree with some people, and if you find that to be the case, use vaseline or camphor-ice and wear old kid gloves at night, but be sure that the gloves are not tight.

TO MAKE CAMPHOR-ICE.—Take three ounces of sweet-oil, four ounces of spermaceti and one ounce of pulverized camphor-gum. Mix them in an earthen bowl, and then set the bowl where it will heat gently until all is dissolved and mixed. I have never found any better application for the hands than this. If necessary to go out soon after washing the hands, do not use soap, but a little oatmeal instead, and after drying them with the towel, rub them with a little dry oatmeal.

A month's careful attention will make rough, hard hands soft and white, but the care must not then be abated, or they will soon be as bad as ever again. It pays to take care of the hands, not only in their appearance, but also in the comfort of having them soft and smooth.

MAIDA McL.

A WOOD CABINET.

The good Quaker poet, Whittier, who has endeared himself to thousands of country-loving people, because, by putting so much of his own life into the beautiful pictures his pen has painted, has made an inheritance of fields and woods a possession to be desired. He is, indeed, the farmers' poet, and he who studies him will be richly repaid, for he will find new beauties and truths surrounding him, and he will love the dear old bard who has helped to make life fuller and richer than ever before. In his poem of "Snow Bound," Whittier tells us of his uncle, a man who although he was

"Innocent of books,
Was rich in lore of fields and brooks."

Some of the boys and girls who read the FARM AND FIRESIDE may be regretting what they consider an unattainable opportunity to gain an education. They may sigh for a chance to enter some classic hall of learning, where they may study and learn of things of which heretofore they have only dreamed. But, boys and girls, if this seems impossible to you, you do not need to grow discouraged. One of the finest instructors in Ohio, a man recognized and honored in educational circles in many states for his knowledge of things about him, does not present the dry leaves of a text-book to his students, but he takes them with him or sends them over field and wood to learn from the book of nature.

Here, then, is a door open to you. Why not begin the new year with an attempt to become "rich in lore of fields and brooks?"

How many of you have ever made a wood cabinet? You will find it a most interesting piece of work. Let your own county be your field for action; and now during these winter days, while the farm work is not so pressing, open the campaign. The objects to be secured are specimens of all the different kinds of trees native to your county. Before you know it you will be interested in the work, and before you are through you will be surprised, if your search has been faithful, at the number of specimens your collection contains. Because of this number do not obtain large specimens. From three inches in length to four and one half or five inches in circumference will be a convenient size. If you are "handy with tools," your genius will be worth something to you, for you can make a case in which to arrange and show your specimens. In order to economize space when your specimens are not on exhibition, it is bet-

ter to have a set of cases uniform in size; then one can be set on top of another. Make the cases two or three inches deep and partition them according to the length of your specimens, making one compartment for each specimen. Proportion them in such a way that each specimen will exactly fill its allotted space. Gather your specimens first, and make your cases afterwards, but be sure to cut your specimens all the same length and as near the same circumference as possible.

After you have made your collection, take a small paint-brush and with red paint, number the specimen on one end. Then get a small blank-book and in it enter the names of the specimens with their corresponding numbers. You will, of course, find different specimens coming under the same general name. Tabulate such in the following manner:

| OAK. | ELM. |
|------------|-------------|
| (1) Red. | (14) Red. |
| (2) Black. | (15) White. |
| (3) White. | |

To enhance the value of the collection, it would be well to make an herbarium of the leaves taken from the trees to which your specimens belong. This is work for girls, too; and basing what I have to say on a personal experience, it is to be supposed that the girls will have a chance to learn a lesson in tree naming from the brother "who knows so much."

But how to make the herbarium. We will call ours a leaf herbarium. The leaves will not do to collect before the latter part of June, but there is plenty to do to collect, arrange and catalogue the wood specimens to keep you busy for some time yet. Gather good leaf specimens and put them between old newspapers, being careful to see that no edges of the leaf are turned under, put a weight on them—flat-irons or a flatstone—and let them remain three days, take them out and put between fresh papers and press for three days longer. Go to the printing-office and get some paper of a rather heavy quality, but avoid a glazed surface; cut the paper into sheets of a uniform size and double them like note-paper, making them amply large for your largest leaves—a margin of three inches at least should be allowed. Then mucilage a sheet of thin writing-paper and cut it into strips one fourth of an inch in width. Then take a pressed specimen and put mucilage or good flour paste, rather thin, on the under edge of the leaf and place it in the center of the sheet (first page). Have a cloth in the hand, and with it press the leaf on the paper. Then take a short strip of the glued paper and bind the stem to its place. Then down in the left-hand corner of the page, write or print the number corresponding to the name of the wood specimen, the name of the leaf and its locality and the date, thus:

[24] Dogwood.
County. 1892.

On the third page of the sheet mount your second leaf and continue until the work is completed. For the cover of your herbarium, get a heavy linen paper, fold it into the same shape of your other sheet, only a trifle larger, then with a tape needle threaded with a narrow ribbon, sew sheets and cover together with one long stitch, bringing the ends of the ribbon on the outside and tying into a bow. Then in a pretty type, with gold or silver gilding, print:

"Herbarium of Leaves, Native
to County."

The value of the cabinet and herbarium depend much upon the neatness and taste with which the work is done. As it is always an incentive to work with some object in view, you might persuade your county fair directors to enter your work at your next fair. They may enter it with the articles on which they offer premiums. Even if you do not have this to spur you on, you may be sure that the lesson learned will be worth all the work and trouble. MARY D. SIBLEY.

AN OPPORTUNE FRIEND will be found in Dr. D. Jayne's Expectorant, when racked by a Severe Cold, and the many Lung or Throat affections which sometimes follow. This old remedy has met the approval of two generations and is to-day as popular, safe and effective as ever.

Old-fashioned tatting in silk is a new feature of new embroideries.

DRY PAINTING.

After an artist has been working in crayon, she feels a repugnance to getting her hands once more smeared with oil paints. She dreads the dirty rags, smelling of oil and turpentine. She thinks, with disgust, of the trouble of cleaning a palette. Yet, color has a charm, and no matter how haste may be the beauty of a black and white picture, the real lover of nature wishes to reproduce the various hues and tints which combine to glorify the world.

Happily, in this age of manifold inventions, we can supply all our wishes and even our whims. When we long to paint, but wish to avoid the uncleanliness of moist colors, we can use pastels. Pastels have many qualities to recommend them. They are cheap, for one thing. Unless you have some knowledge of the names of paints as they are designated in oil or water colors, it will be difficult to make you understand the use of pastels. These pastels are simply colored chalks, most of them very soft. The hard kind are smaller in circumference, and sharpened at one end. As we proceed you will be told their special use.

The primary colors, as you know, are red, blue and yellow. These, with white and black, are all which are absolutely necessary for a picture. Red and blue, mixed, make purple, varying (according to the white or black which is added) from pale violet to deepest pansy. Yellow and blue make green, and this green may be warmed if red and white are in it, or made cool if the blue predominates. Red and yellow make orange.

You readily understand that the colors must be moist to commingle and form new colors. Pastels will not act in this way, therefore you need many. In oil paints you can take, for instance, burnt sienna, and by mixing with it different quantities of white, you have three or four quite distinct tints. In pastels you would need just so many different colors of the chalk. You see, then, what a variety you will require. In selecting them you must rely on your judgment and the kind of objects you wish to put in your picture. If you are intending to work landscapes, you will need all shades of green, several grays, blues for the sky and water, warm browns and dull reds for rocks, weeds and tree trunks.

Flowers are beautiful in pastels, and you can readily select the proper hues. You would best choose some bold, brilliant blossom. A tulip, poppy or ragged chrysanthemum will make a more effective picture than any more modest flower. You will be apt to succeed better with the blossom than with the foliage. Leaves do not look well too exactly copied. An artistic dash of gray or dull red (though the inartistic will say that it is not natural) will add greatly to the beauty of the painting.

Perhaps better than anything else, fruits can be imitated in pastel, and perhaps better than any other fruit, peaches. The velvet bloom, the soft gray over the warm rose-red, is just fit for pastel painting. Naturally, as a beautiful human face has the qualities of a peach and a flower, you draw the conclusion that pastels are suitable for painting portraits. You are right. There are two kinds of pastel portraits, which, for want of a better distinction, I call old-fashioned and new-fashioned.

But before we discuss these, let me tell you what we should have mentioned sooner, the kind of material on which pastels are applied. Generally paper, but sometimes canvas. If paper, you can use any kind which has a surface rough enough to catch and hold the chalk. There is a kind which resembles very fine sand-paper. You can use Whatman's white or gray paper, having it stretched as if for a crayon portrait, if you wish. Gray partridge paper is a favorite with artists. Canvas is preferred because of its durability. It must have a gray, velvet-like surface.

Now, about the old-fashioned portraits and the new-fashioned. Perhaps that is not a proper distinction. No, it is not; but let it go. There is a weakness about one kind which, until one sees the better, stronger work, is apt to make one think that pastels are suitable only for the faces of babies, or their delicate-looking mamma's. It was my luck to see that kind when I was a little girl, and for a long time pastel portraits did not strike me, but one day within the last four years I met an

artist who had recently returned from Paris, and on visiting his studio I saw, for the first time, strong, brilliant pastels. My opinion of them became ardent admiration. Try to see a good specimen of pastel.

In nearly all arts the best plan is to go to work and try to do them. This is particularly true of pastels. The one drawback to the convenience of this branch of art is the fact that the pictures must be covered with glass; however, with this preservative and hung in a dry place, the colors will not change in centuries.

If possible, read about the artists who have excelled in using pastels. Women have been particularly skillful.

KATE KAUFFMAN.

BABY'S CHAPTER.

BY ELLA B. SIMMONS.

BABY'S BATH.—An infant who is, every morning, well bathed, seldom suffers from any of the numerous skin diseases. The water ought to be slightly warmer than new milk. Let him be washed before he has his breakfast; it will refresh him and give him an appetite, and will not interfere with his digestion. For many delicate babes, four times a week is enough for them in the winter. The alternate days, however, they should be thoroughly rubbed with sweet-oil. A little powdered borax in the water prevents chafing. A



ELDERLY LADY'S DRESS.

twilled flannel apron will protect the dress while giving the bath. And as the little one should be entirely enveloped in a warm, soft bath-sheet as he emerges from the water, the rough flannel will not touch his tender flesh. The soap should not be put directly on the sponge, as it toughens and hardens the delicate fibers, but on a soft flannel cloth. This "soapy" wash-cloth should be rubbed thoroughly and briskly over the body, after which the sponge should be used for the bath proper. For the mouth, a tiny linen cloth should be used.

BABY'S CREEPING SKIRT.—Do all mothers know the convenience of a creeping skirt, or overdress rather, for baby? This is a serviceable little garment, intended to keep the dress and skirts from becoming soiled as the little one creeps hither and thither over the floor. Make a dress of strong, dark gingham, plain waist and full skirt. The sleeves should be made somewhat longer than those of the dress proper, and the skirt fully two and one half times the length of the ordinary dresses. Hem the bottom, then gather the upper part onto the waist. Through the hem, draw an elastic, as for a blouse. When this creeping skirt is put on, turn it up under all the skirts and the elastic will adjust itself around the waist, making a sort of a sack for the clothing. In this way baby's dress is kept white and clean, and he is free to go where he pleases without fear of dirt. This

not only saves washing, but a mother's nerves as well; for what mother does not become nervous at sight of a baby's soiled white dress?

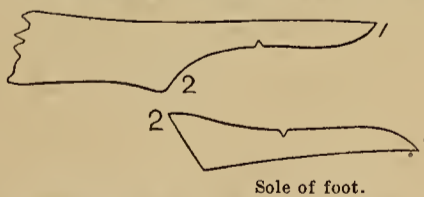
FLANNEL DRIBBLING BIBS.—A child who is teething often dribbles, thereby causing the clothing to become damp. His chest being wet causes him to take severe colds. To prevent this, have several flannel bibs that can be changed as soon as they become wet. These may be made very pretty by a scalloped edge, worked as for embroidery silk. If these flannel bibs do not seem to be sufficient, those made of oiled silk may be used, alone or under others.

KNIT JACKETS.

Many farmers and their boys wear the knit wool jackets or blouses. When badly worn otherwise, the backs of these jackets are apt to be pretty good. What do you do with them? They just make nice stockings. If not long enough for the desired person, knit on a foot. The back to a large-sized jacket will make a pair of stockings for a good-sized boy, and wool stockings for boys in knee pants are so expensive—one dollar a pair for good, warm ones—that home-made ones are quite acceptable sometimes.

If there is cloth long enough, cut out as shown below (the parts to be double, of course) and then join in seam, matching the numbers. If not long enough for the desired length in leg and foot too, make the leg as long as you wish, and finish out by knitting on a foot, or part of one. It does not take very long. Woolen yarn is so much coarser than cotton that one can get along much faster with the knitting work. Many people buy the woolen webbing for stockings, but I do not like it, as it stretches so much to fit the heel that there is soon a big hole.

If one would knit a piece in this way, begin with one stitch, and widen at each end every other time across, until there are thirty-four stitches on the needle; knit straight fourteen times across, then narrow in the center every time for six times across; knit one half way back, double the remaining half back against the first, and with a third needle knit two stitches together; and when you have two on the third needle, slip and bind the first over the second until you get them all off the two first needles. With the last stitch on third needle, begin with this needle and pick up and knit twenty stitches back along the straight edge of the work; turn, knit back the twenty-one stitches, then pick up twenty more on this straight edge, turn, and knit back and forth, narrowing at each end every other time across, until there is only one stitch left, which may be fastened. Leave a space in the seam in the webbing where the heel will come and sew in this piece you have just knit, with the first stitch at the ankle, and you will find it a great improvement on the straight webbing foot, with no heel but a stretched one. The size given will fit a number nine or ten stocking; one can make it smaller



Sole of foot.

with less stitches. The kind of yarn will make a difference, also. The kind used was common-sized knitting yarn.

GYPSY.

GOOD THINGS TO EAT.

CREAMED OYSTERS.—One quart oysters, one cupful milk with a tiny pinch of soda dissolved in it, one cupful of oyster liquor, three tablespoonfuls of butter, two tablespoonfuls of flour, one egg, juice of half a lemon, pepper and salt. Cook the butter and flour together until they bubble; add the milk and oyster liquor, and stir until you have a thick sauce. Into this drop the oysters free from the liquor. Have ready an egg beaten lightly in a cup, mix some of the hot sauce with it, turn all back into the saucepan, stir one minute—no longer—and take from the fire. Season with pepper, salt and lemon juice. Have ready buttered scallop shells, fill them with the creamed oysters, sprinkle lightly with crumbs, dot thickly with bits

of butter, and brown delicately in a quick oven. Eat very hot.

MRS. CLEVELAND'S CHAMPAGNE BISCUITS.—The ingredients are eight ounces of flour, eight ounces of powdered sugar, eight eggs, a quarter ounce of caraway seeds and a pinch of salt. Work the butter in a basin with a wooden spoon until it presents the appearance of a thick cream; then gradually add the sugar, flour, yolks of eggs, caraway seeds and salt. After this mix the eight whites of eggs, previously whipped firm for the purpose. Have a sheet of stout cartridge paper folded in reverse plaits so as to present, when opened, the appearance of a fan with angular trenches about an inch deep. Fill a biscuit-forcer with some of the batter and force into the paper trenches finger-like biscuits about three inches long. Shake some sifted sugar over them, and bake a light brown color in a moderate oven.

ALMOND BLANC MANGE.—Boil a quart of milk with half a pound of sifted sugar, adding either vanilla or bitter almonds to flavor it. Remove from the fire; have an ounce of gelatine previously steeped in cold water for two hours. Add this to the still hot milk and set over the fire for one more boil-up. Then pour it into a cold, wetted mold to set.

HOW TO KEEP FRUIT-BUTTERS.

I have had as much trouble as other housekeepers, I know, to keep peach butter or other kinds made in hot weather, from working or molding. I tried a new method this year, and it worked admirably.

I filled my jars nearly full, and then poured in melted butter one fourth of an inch deep. I set them in a cool cellar and left them until the weather became cool. They were just as nice as when put up. I thought this might help some other housekeeper. Mrs. R. C. B.

GRAPE-FRUIT AS A TONIC.

The piles of huge grape-fruit which are to be found on the fruit-stalls call to mind the tonic value of this fruit eaten as a salad or as an introduction to breakfast, says the *Ney York Tribune*. For the latter, remove the thick rind and tear off the epidermis around each lobe; arrange the pulp in a shallow bowl and serve it ice cold *au naturel*. It is delicious served as a salad with French dressing. This is the "forbidden fruit" of Paris shops. If you notice the depressions near the stem end you will see they resemble the print of teeth. This, according to popular tradition, is the mark of Eve's teeth when she bit the fruit, which was a sweet orange before, but afterwards became bitter. The negroes of the South tell the same story about the persimmon, though they do not show the print of teeth. They believe it was once well flavored, but was the one forbidden tree in Eden, and when Eve tasted it, it became acid, and has remained so ever since.

INDISCRIMINATE APPLAUSE.

It would be nice if the male portion of the audience would refrain from applauding at meetings of rural literary societies. There is always an element in attendance which sets a high value upon indecency, and most of the applause is bestowed upon pieces which ought not to be in print. J. T. M.

West Fork, Ark.

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Our Household.

SOFA PILLOWS.

In a house where down pillows are numerous there is one which pleases every eye. Its cost for the cover is a mere trifle, and for time in making, one evening's work. Blue denim is the material used, and this is combined with cream-white cheese-cloth. The combination does not sound artistic, I admit, but I hope some reader will try the experiment of making one, and see if the result is not satisfactory.

For a pillow twenty inches square, six breadths of cheese-cloth seven inches wide are required for a ruffle. Double this and gather up very full. Baste it to the edge of a square of denim and sew the other square upon it, leaving one end open. Turn, and slip the pillow in, pulling out the ruffle all around. Gather up a double strip of the cheese-cloth (this should be two yards long and one and one half inches wide when doubled) into a full rosette, and sew to the middle of the pillow. Put a similar rosette on the opposite side, drawing the pillow well together in the center with strong thread. These rosettes have much the appearance of the great double hollyhocks, and the full, white ruffle around the edge contrasts well with the dark blue of the denim.

The pillow of which I speak rests in a large arm-chair near a lamp with a yellow paper shade, and it may be that the yellow serves to bring out and intensify the blue, and that the cover owes its beauty, somewhat at least, to its surroundings.

Twilled turkey red may be made up in a similar manner, having ruffle and rosettes of the same material. Madagascar grass-cloth makes delightful pillows for summer use, and this comes in strips, which are generally sold for curtains; but a pair which may cost \$1.50 will make several covers.

Japanese crape cloth in blue and white is always effective, and the beautiful Bulgarian embroideries may be joined and used for the same purpose.

A new way to cover a pillow is to join four straight breadths of silk together and gather the ends, sewing them to the center of the pillow on each side. Place large rosettes over the raw edges, and lay any extra fullness around the outside in plaits, catching them down at intervals. This gives a full effect, and the seams run toward the center instead of around the outside edge, as in the plain ordinary covers.

White linen, embroidered with an all-over design done in white silk, makes a lovely cushion. A full ruffle of coarse, white lace should trim it all around, and this will be found to be easily laundered, which is always a consideration (or should be) in pillow-covers.—Harper's Bazar.

SOME DISHES FOR THE SICK.

Even more than with her city sister is a knowledge of how to prepare food for the sick necessary to the country housewife, who must frequently depend entirely upon her own meager resources for such diet as will be suitable. But, fortunately, she has on the farm the most necessary ingredients for preparing delicate and appetizing food, pure milk, fresh butter and eggs being acceptable and strengthening to invalids, and forming as they do the foundation of so many excellent dishes. The following are the recipes for preparing food for the sick that will all be found excellent:

BEEF TEA.—Take half a pound of lean, fresh beef, cut in pieces and let soak four hours in a pint of water; take out, put in a pint of fresh water and set on the stove, let simmer three hours; pour the boiling liquid in the water in which the beef was soaked; pound the meat to a paste and mix in. Serve hot.

RAW BEEF TEA.—Cut up lean, fresh beef; soak five hours in cold water, strain and season.

BEEF OR MUTTON BROTH.—Cut one pound of either meat in small pieces; put in two quarts of cold water and boil two hours; then add half a teacupful of rice and boil one hour longer. Strain and season.

CREAM SOUP.—One pint of boiling water, half a teacupful of cream, let heat, break in toasted bread; season.

EGG GRUEL.—Beat the yolk of an egg with a tablespoonful of sugar; beat the white separately; add a teacupful of boil-

ing water, then the white of the egg. Flavor with a little nutmeg.

CHICKEN JELLY.—Take a tender chicken, cut the flesh from the bones, break the bones; soak one hour in salt and water, put in a saucepan with three pints of water, simmer low. Sprinkle with salt and strain in a bowl. Set on ice.

CHICKEN BROTH.—Take the joints of a chicken, boil in one quart of water; season with salt and pepper. Squirrel broth made in the same way will be found very delicate and appetizing.

ESSENCE OF CHICKEN.—Cut up a tender chicken and put in a glass jar, stop tightly, and set in a pot of cold water; let boil until all the juice is extracted. Strain and season.

RAW EGG.—Break a fresh egg in a glass and beat very light, add two tablespoonfuls of wine, and sweeten to taste. This is nourishing for patients too ill to take solid food.

RICE MILK.—Boil a cupful of rice in water; pour off when tender and add new milk; sweeten and flavor.

ELIZA R. PARKER.

THE WAY OF IT.

When most pretty girls reach nineteen they become engaged to some poor young man, and as he hasn't the money to marry on, they wait until he has saved it. The waiting process is a long and tiresome one. While the young man is having a good time, spending ninety cents and saving ten cents for his marriage, the girl is growing a little older, a little plainer, a little more careworn, and wasting her youth in waiting for a man who in most cases finds some one more attractive, and breaks the engagement.

If girls will look around at the great number of girls who have "waited" for some poor man to their sorrow, they will probably hesitate before entering into an engagement that promises to be long and fruitless, and that leaves them worn out, and with no faith in human nature at the end.

Very often a girl who is waiting for a young man to become rich, throws away the real opportunity of her life; very often she is a slave to the caprice of a man who finally deserts her. Very often under such circumstances a woman gets a wrong idea of life, and accuses the world of faults it is not guilty of. In a way, men take very good care of themselves, for the reason that they accept the lessons of life, hard though they sometimes are, but women make the mistake of trusting too much, and suffering needlessly for it.—Atchison Globe.

REPLENISHING THE SWEETMEAT JARS.

Toward the beginning of spring the frugal housewife often finds her supply of jams and marmalades running low. A replenishing of both is much less trouble and expense now than during the summer months, when the intense heat and abundant supply of flies make life almost a burden.

Any unsweetened or sweetened canned fruit may be converted into jam as easily as though the fruit were freshly gathered. Less sugar, of course, will be necessary for sweetened fruit when making it into marmalade or jam. And the stirring need not be the irksome task it must of necessity be during the hot weather, when one must hurry to finish the work.

Jam and butter will cook nicely in a new tin pan placed over a kettle of boiling water.

For peach marmalade, the fruit is first rubbed through a tin fruit-strainer, just as it would have been had it been used in its fresh state, the remainder of the process being the same as for fresh fruit.

Apple marmalade may be made at this season of the year from apples that show signs of decay. Indeed, any time from fall to spring the supply of apple-butter may be replenished. Apple preserves, also sweet apple pickles, may be made any time before the apples are decayed or used up. It is not necessary to make these sweetmeats until cold weather, if one is very busy.

Plum-butter may be made of canned plums mixed with cooked apples; half plum pulp and half stewed apples, if it is not desirable to have a very tart butter.

Many a busy housekeeper has adopted the plan of deferring her jam and butter making until winter, and in so doing she has found it a very profitable plan, as it saves worry, sugar, and, most important of all, it saves self.—ELZA RENAN.

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Our Sunday Afternoon.

LINGER NOT.

The time is short!
If thou wouldst work for God, it must be now;
If thou wouldst win the garland for thy brow,
Redeem the time.

Shake off earth's sloth!
Go forth with staff in hand while yet 'tis day;
Set out with girded loins upon the way;
Up! linger not!

Fold not thine hauds!
What has the pilgrim of the cross and crown
To do with luxury or couch of down?
On, pilgrim, on!

With his reward
He comes; he tarries not; his day is near;
When men least look for him will he be here;
Prepare for him!

Let not the flood
Sweep thy firm feet from the eternal rock;
Face calmly, solemnly, the billows' shock;
Fear not the storm!

Withstand the foe;
Die daily, that forever thou mayst live;
Be faithful unto death, thy Lord will give
The crown of life.

—Bonar.

HINTS ON VISITING.

FIRST of all you want to learn not to stay too long, says a writer in the *Ladies' Home Journal*. There is such a thing, you know, as wearing one's welcome out, and you certainly do not wish to do that. Then, having discovered exactly the hours at which the meals are served, you should be on time, and if breakfast is at half-past seven, and you have always had it at nine, you must still get up when the call-bell rings and be down-stairs at half-past seven, looking bright and hungry; and, above all other things, you must not mention that you have been in the habit of breakfasting at a later hour. If you have friends in the same place, and they should come to see you, and—we will put it that way—have forgotten to ask for your hostess, suggest to them that you will go and ask her if she would not like to meet them. Insist upon this courtesy to her, or else do not return the call made, and ignore any further visits. Then, if it's a house where only one maid is kept, take care of your own bedroom, so that you will give as little trouble as possible. If some little festivity should be gotten up in your honor, turn in, and, putting your hand to the wheel, give it all the help you possibly can, both before and after the party.

Try to not talk about any subject that is very personal, and which will make any one uncomfortable; and if your host should be rude enough to get into any controversy before you, keep quiet, or, what is still better, if you possibly can, leave the room, and later on refuse to discuss the matter with anybody. When you go away carry nothing but pleasant recollections with you, and forget every family jar and every family secret that you may have heard. Then, indeed, will you always be a welcome visitor, and you will hear some day that your hostess says of you, "I like Dorothy to visit me, for she is such a comfortable girl; and my husband and the children are as glad to have her as I am. Never a servant makes a complaint of her causing any trouble, and each one of them is more than glad to do something for her. We say, 'how do you do' to her with pleasure, and 'good-by' with regret." Now, that's what every one of you wants to have said about you when you visit.

BE KIND.

"Have you ever noticed," writes Prof. Drummond, "how much of Christ's life was spent in doing kind things—in merely doing kind things? Run over it with that in view, and you will find that he spent a great proportion of his time simply in making people happy, in doing good turns to people. There is only one thing greater than happiness in the world, and that is holiness; and it is not in our keeping; but what God has put in our power is the happiness of those about us, and that is largely to be secured by our being kind to them."

"The greatest thing," says some one, "a man can do for his heavenly Father is to be kind to some of his other children." I wonder why it is that we are not all kinder than we are? How much the

world needs it. How instantaneously it acts. How infallibly it is remembered. How superabundantly it pays itself back, for there is no debtor in the world so honorable, so superbly honorable, as love. "Love never faileth." Love is success. Love is happiness. Love is a life. Where love is, God is.—*Messiah's Herald*.

IT IS GOD WHO WORKETH.

As the iron which is wholly heated can say: "I indeed burn, but from the fire which is in me, not that I am myself fire;" and as the candle may say: "It is true, I indeed give light, but from the light which is in me, not that I am myself light;" and as every kind of fit instrument may say: "I work indeed, but it is by the hand of the workman;" so the soul is said to burn, not of itself, but from the love that is in it; and it is said to shine, not of itself, but from the light of wisdom and truth that is in it; and it said to work, but it is God who worketh all things therein. And if these things shall depart from the soul, that is to say, love, wisdom and light, it will remain cold and in darkness.

But as an instrument, however fit it may be, lieth wholly useless and fruitless, unless the hand of the workman worketh by means of it, so, too, the soul, however nobly it may have been created and however full of genius and intellect, yet lieth empty and fruitless, unless God worketh in and by it.

THE ECONOMY OF GENEROSITY.

It was a maxim of Lord Bacon that, when it was necessary to economize, it was better to look after petty savings than to descend to petty gettings. The loose cash that many persons throw away uselessly and worse, would often form a basis of fortune and independence for life. These wasters are their own worst enemies, though generally found among the ranks of those who rail at the injustice of the world. But if a man will not be his own friend, how can he expect that others will? Orderly men of moderate means have always something left in their pockets to help others; whereas, your prodigal and careless fellows who spend all never find an opportunity for helping anybody. It is poor economy, however, to be a scrub. Narrow-mindedness in living and in dealing is generally shortsighted, and leads to failure. The penny soul, it is said, never came to twopence. Generosity and liberality, like honesty, prove the best policy after all.—*From Samuel Smile's Self-Help*.

LOOK TO JESUS.

We hear the people say that in all their looking around they fail to see a perfect Christian. They are looking in the wrong direction. Jesus Christ is perfect. Pilate said of him, "I find no fault in this man." "In him was no sin, neither was guile found in his mouth," is Peter's verdict. Look unto Jesus. Stumbling is out of the question, if we keep our eyes on the spotless Lamb. We will go triumphantly along, and "pass the rough rock with a smile and a shout," if our eyes continually rest on the immaculate Son. But on the other hand, if we keep looking at those around us, the devil will so magnify their faults and mistakes that we will indeed think there is "none righteous, no, not one." We will be miserable, discontented, sour and fault-finding, and will be in trouble all the time, unless we quit this way and take the Bible way of "looking unto Jesus."—*The Fire Brand*.

THE TEST OF LITTLE THINGS.

In things small lie the crucibles and the touchstones. Any hypocrite will come to the Sabbath worship, but it is not every hypocrite that will attend prayer meetings, or read the Bible in secret, or speak privately of the things of God to the saints. You find the same true in other things. A man who is no Christian very likely will not tell you a downright lie by saying white is black, but he will not hesitate to declare that whitey-brown is white—he will go that length. Now, the Christian will not go half way to a falsehood, but will boldly shun it altogether. With him the moral baseness of such a measure as trifling with the sacred duty of truth-speaking is a sufficient barrier to the committal. "Remove from me the way of lying," and cause me to make much of thy laws.—*Words of Life*.

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Queries.

READ THIS NOTICE.

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

Stable Manure.—M. B., West Fairview, Pa., asks if horse manure made with sawdust and shavings for bedding is as good as that made with straw.

ANSWER:—No.

Cow-peas.—J. M. W., Bloomfield, Mo. You can get cow-peas of seedsmen who advertise in this paper.

Book on Ensilage.—W. H. M., Sioux City, Iowa. Send 25 cents to this office for Prof. Cook's "Silos and Silage."

Jerusalem Artichokes.—C. R. M., Waverly, Neb. Plant artichokes just as you would potatoes, and cultivate them until the plants are large enough to keep down the weeds. You can turn in the hogs in September or October. Select rich, moist but well-drained soil. Two acres ought to furnish more than enough for fifty hogs.

Grasses for Southern Alabama.—J. W. G., Marlow, Ala. We suggest that you ask your state agricultural experiment station, at Auburn, what grasses are best for your sandy pine land.

Bone Mills.—A. P. S., Warm Springs, Mont. You can purchase bone mills of Chas. Kaestner & Co., 303 S. Canal St., Chicago, Ill.

Baling New Mown Hay.—J. F. K., Dunlap, Ill., writes: "I wish to know whether hay pressed in the field as soon as well cured and put in a good barn or shed would keep or not."

ANSWER:—Will some one who has had experience kindly tell us if it is practicable to bale new mown hay as soon as well cured?

Oiling Harness.—M. P., Luray, Mo. For oiling harness there is nothing better than neat-s-foot oil. To one quart of oil you may add one quarter pound of tallow and a little lamp-lack. Heavy harness should be taken apart and carefully cleaned with warm water before oiling. Then, before the water has been thoroughly dried out, rub the harness with a woolen rag saturated with warm oil. Or put the oil into a shallow pan over a very slow fire and draw each piece through the warm oil, bending it backward and forward. Then rub the oil in with a woolen rag. Hang the harness up where it will not dry out too rapidly.

Hedge Fence for River-bottom Land.—V. C., Williamsport, Md., writes: "What kind of hedge fence would be preferable for river-bottom lands subject to overflow? How would black willow answer, or osage orange? What is best to grow that will stand drift, etc., in floods and overflows? What is best time to plant, and how to plant, and best place to get plants? Has plenty of black willow here, which grows rapidly, takes great root, and is hardy and tough?"

ANSWER:—Use the black willow. Osage orange will not thrive in wet ground. Set out the willow cuttings in early spring.

Clover and Timothy Seed.—M. R. W., Cambria, Va., asks how much clover and timothy seed is required per acre. Also if it pays to sow timothy with oats.

ANSWER:—Eight or ten pounds of common red clover-seed per acre is the usual quantity, and one peck of timothy-seed. When sown together, sow less of each. If the season is favorable you can get a good stand of timothy by sowing the seed with oats in the spring. The great difficulty in sowing grass or clover-seed in oats is that about the time the oats are maturing they may pump up all the moisture in the surface soil and leave the young clover and grass plants to perish of thirst.

Getting Rid of Ants.—N. T. L., Baltimore, Md., writes: "Please inform me how to get rid of ants in my yard. In the spring of the year they attack the little buds of my dwarf pear-trees. The sap being sweet they attack them and prevent their growth. I have tried sprinkling salt around the trees, then insect-powder all over the trees, then halsam fir around the trunks, and lastly, camphor and camphor-water, but all of no account."

ANSWER:—Find their nests, remove the sod, and pour down into the galleries a few ounces of hisulphide of carbon. Cover up the holes, put back the sod and beat it down with the back of the spade. The fumes of the volatile liquid will penetrate the remotest parts of the nests and destroy every ant. If you do your work well, in ten minutes after you have finished all your ants will be dead and hurried.

Cream-separator—Hogs in Barn—Horse-powers—Greenhouse—Pump.—P. C. T., Center Point, S. D., writes: "I would like a description of a cream-separator for a dairy of about twenty cows.—Would it be objectionable to have hogs in basement of barn with cattle if they could not go out into the yard at pleasure?—Are two, three and four horse-power threshing-machines made in this country? If so, by whom?—Would it be objectionable to have greenhouse join south side of basement barn?—Would an air-compressor draw water from a tubular well some distance?"

ANSWER:—Cream-separators are sold by D. H. Roe & Co., Chicago, Ill., P. M. Sharpless, Elgin, Ill., and D. H. Burrell & Co., Little Falls, N. Y.—Would prefer not to have hogs in the basement of a barn with cattle.—Yes; Walff & Co., Albany, N. Y., Heehner & Sons, Lansdale, Pa., Trenton Agricultural Works, Trenton, N. J.—No.—A good pump would do the work for you.

Removing Corn-tassels.—J. W. M., North Benton, O., writes: "During the year I read a piece in your paper by some one who claimed that corn would do better and yield more if the tassels were removed. It is all a notion. I did not see why it had a tassel if it was of no account, so I plucked a few hills by themselves and removed the tassels. The consequence was there was no corn, or only a very few grains on a cob. It grew very rank, though."

REPLY:—In the experiments referred to, the tassels were removed from the corn in every alternate row. The pollen from the remaining tassels fertilized all the silks in the field. The experiments showed that the rows from which the tassels had been removed produced more corn than the others. In your experiment you removed all the tassels, and the consequence was there was no pollen to fertilize the corn, except what was blown on the winds to it from distant fields. You didn't understand the experiment and you did not duplicate it. One of the bulletins of the New York State Experiment Station, Ithaca, contains a full account of experiments made in removing tassels from corn.

Celery Growing.—W. T. K., Galloway, Mo., writes: "I have a piece of land that I can irrigate, and wish to plant in late celery. Should seed be sown in hotbeds or open ground? There is a dark, damp cave close by. Will celery bleach when put in it, and would it be a good place to keep celery? How many plants will a pound of seed produce?"

REPLY BY JOSEPH:—For late celery, seed can be sown in open ground. In my latitude this should be done as early as the ground can be got in shape, and spot selected for a seed bed should be in a warm exposure and very rich. Farther south seed may be sown later, and protection from too much sun is more necessary than from cold. Sow plenty of seed; do not cover it, but simply firm the ground with a roller or the foot. Keep the ground well stirred between the rows and all weeds pulled out from between the plants. Mulching with coarse litter will be beneficial. Thin the plants early so they will have room enough to become straggling and stalky. A pound of seed, under favorable conditions, may give you several hundred thousand plants. It depends on management in sowing, and on how thickly you plant, and how many of the young plants you pull up in thinning. I often kill ten young seedlings and more for every one I leave to make a plant. I am afraid the cave will prove too damp and close for the good of the celery. Ventilation is needed to keep the plants, put up for bleaching or storage, from rotting. But try it by all means.

Station Bulletins.—W. J. M., Fort Edward, N. Y., writes: "Being a market gardener, I would like to get bulletins No. 29 and No. 32 with notes on tomatoes, from the Cornell University Experiment Station, if I can. If there is any charge for them I will gladly pay."

REPLY BY JOSEPH:—It is too bad that so many farmers and gardeners do not seem to be aware of the fact that the experiment stations are only too glad to render aid and give information, by bulletins or otherwise, free gratis to people in their own and perhaps other states. The farmers in the state of New York are especially favored, in so far as they have two stations, which will send them their bulletins on application and without charge. Address your request to Cornell University Experiment Station, Ithaca, N. Y., also to the State Agricultural Experiment Station, Geneva, N. Y. Farmers in other states should know the address of their own stations as well as that of their best friend.

Kainit on Asparagus.—A. A. M., Norfolk, Va., writes: "Is kainit a good fertilizer for asparagus when used together with well-composted stable manure? How many pounds should be applied, how and when? Has kainit sufficient salt for asparagus? Will it be safe to cut from a bed after two years' growth?"

REPLY BY JOSEPH:—The application of potash will usually not be of much account for asparagus so long as stable manure is freely used. Additional doses of nitrate of soda in early spring have often far better results. But I would like to scatter kainit in small quantities over the fresh manure in order to save all the ammonia there is in it. I doubt whether your asparagus will be benefited by applications of salt. Kainit, of course, has a large percentage of that article. If you apply kainit at all, and alone, it should be done in fall or winter, although it will do no harm at any other time. Cut the shoots sparingly the second season after planting a new bed, and freely the third and after that.

VETERINARY.

Conducted by Dr. H. J. Detmers, Professor of Veterinary Surgery in Ohio State University.

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

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 under any circumstances. This time half a dozen anonymous inquiries found repose in the wastebasket.

Wolf-jaw.—D. E. M., Grove Lake, Minn., writes: "Please send me a cure for wolf-jaw in cattle."

ANSWER:—I do not know what you mean by "wolf-jaw," consequently, unless you take the trouble to describe the condition you complain of, I cannot advise you what to do.

Something Like Nasal Gleet.—J. E. F., Fiketon, Tenn., writes: "I have a mule that has something like nasal gleet; has had it for a long time."

ANSWER:—What is usually called nasal gleet is simply the first stage of glanders, and for that disease I cannot give you a remedy. If you apply the term to some other morbid condition, I have no means of knowing what that morbid condition may be.

A Lame Horse.—M. E. B., Clinton, Mo., writes: "I have a horse that has been lame for one year in the right fore foot or leg. There is no swelling any place. He has high heels. Now it is in his left fore foot. He is worse at first moving."

ANSWER:—It is impossible to base a diagnosis upon your meager description. There are too many possibilities. So, for instance, your horse may have corns, contracted hoofs, ringbone, or even navicular disease. Can't you have the animal examined by a veterinarian or by some other competent person?

Ringworm.—L. W. H., Alhlon, Ind. The disease of your cattle is known as ringworm. A cure will be effected if you apply to the scaly places or blotches tincture of iodine or else a five-per-cent solution of carbolic acid. The applications may be repeated once a day until improvement becomes visible. At the same time, however, the stable must undergo a thorough cleaning and disinfection; otherwise the disease, very likely, will soon reappear.

Umbilical Hernia.—W., Washington county, O., writes: "A mare colt about seven months old is ruptured at the navel. Something usually hangs down in the skin underneath, which, when pushed up through said rupture, leaves all smooth under the skin. Then by pushing the skin up into said opening in belly, it is large enough to admit the ends of my first and second fingers. I don't know how long this condition has existed. Is there a probability that this opening existed since the colt was foaled? Can it be cured?"

ANSWER:—Yes, the opening existed ever since the colt was born. An umbilical hernia is easily removed by an operation, which has to be performed by a veterinarian, but it will be tolerably safe to wait with it until the fore part of next summer, because, since the hernia

is not a large one, there is yet a prospect that it may disappear and thus make an operation unnecessary, and there is not much danger in waiting.

Garget.—T. D., Carlyle, Ill., writes: "Please tell me what to do for a young cow with first calf. She had her calf about two months ago. She was all right when fresh, and gave one gallon of milk at a milking. About a week ago she decreased in milk, and now she only gives about one pint. A kind of yellow-looking, strugly matter issues from all her teats when milking. Condition of cow seems otherwise all right. Please tell me by return mail what to do for her."

ANSWER:—What you complain of seems to be a case of garget. A request to reply to an inquiry by return mail must be accompanied by the regular fee of one dollar, as plainly stated at the head of the veterinary column.

Sore Eyes.—W. J. L., Middleton, Wis., writes: "Will you please inform me what is the matter with my sheep? A good many of them are going blind. I have twenty-five, and most of them have sore eyes. They have been running at a barley straw-stack in cold and wet weather, and I don't know whether that is the cause or not."

ANSWER:—The eyes of your sheep probably have been injured by the barley sheaves. Hence, the only thing you can do is to examine the eyes, and to remove the beads. This done, an eye-water composed of acetate of morphine, one part, and distilled water, two hundred to two hundred and fifty parts, may be applied twice a day to allay the irritation.

Possibly Traumatic Carditis.—D. W. A., Baltimore, Ohio, writes: "I have a cow that has something wrong with her. The large veins on either side of the neck and all over the larynx are swollen. It does not interfere with her breathing. All along under her jaw there is a soft, flabby swelling. The heart beats from ninety to ninety-five, but there is no fever."

ANSWER:—What you complain of may be an inflammation of the heart, caused by a pointed, foreign body, which has been swallowed with the food, and has worked its way through the wall of the second stomach, through the diaphragm, and through the lungs to the heart; but when this reaches you, the case, very likely, will be decided; because if my diagnosis is correct, the cow will have died, and a post-mortem examination will have revealed what ailed her.

Bog-spavin.—L. C. C., Hooker, Ind., writes: "For the last six months my two-year-old colt has had his hock-joint puffed up on the front and inside. Sometimes the outside of the same hock will puff up. Sometimes it is better and sometimes not so well. The puffs are soft and do not lame him. Is it thorough-pin or is it bog-spavin, and what can I do to remove the trouble?"

ANSWER:—Your colt has what is called bog-spavin and thorough-pin, but not blood-spavin, which is an entirely different thing. You may succeed in temporarily removing both, the bog-spavin and the thorough-pin by daily applications of tincture of iodine or other iodine preparations, if at the same time the animal is kept on good, dry food—good oats and sound hay—but your success, very likely, will only be temporary, because bog-spavin and thorough-pin are apt to make their reappearance. Both consist in an abnormal accumulation of synovia in, and an enlargement of, the same capsular ligament.

Swelled Thyroid Glands.—E. E. S., Boulder, Ill., writes: "Will you please tell me what to do with my mare? She had distemper about two months ago, and since then there are two little lumps, or kernels, one on each side of the wind-pipe. She has good wind when at work, but when eating she seems to be in considerable pain. She holds her head first to one side and then to the other, and gets her breath as if every time would be her last. She has a good appetite. I think she breathes through her mouth, and when it is full of grain, it shuts off her wind. She makes a noise when breathing and eating."

ANSWER:—The "two little lumps" on each side of the wind-pipe are probably the swollen thyroid glands. The same, however, do not interfere with the process of eating and with the respiration. The difficult and noisy respiration is caused by some other morbid change, probably in the pharynx or larynx. Have the animal examined by a competent veterinarian.

Some Disorder of the Respiratory Organs.—G. S., Tipton, Iowa, writes: "Some of my cattle cough and run at the nose. Some of my spring calves have it also. One of my best cows got it and went down to nothing."

ANSWER:—Your cattle unquestionably suffer from some disorder of the respiratory organs, but whether they suffer from tuberculosis, from lung-worms, or from some other affection, does not proceed from your communication. If any of them die, make or have made, by a competent person, a careful post-mortem examination. If it is a tuberculosis, you must know it as soon as possible, for in that case the use of the milk is apt to communicate the disease to the human beings.

Sweeny.—W. S. H., Little Creek, Del., writes: "Please let me know if there is any cure for a sweened horse. It is in the horse's fore shoulder. He is only eight years old."

ANSWER:—So-called sweeny is a comparatively rare occurrence in a horse eight years old. Still, the same as in a young animal, a special or local treatment is unnecessary and useless. Time, good food and voluntary exercise, or, at any rate, but light work, will do all that is required. However, if the horse has to work, it will be necessary to see to it that the collar accurately fits, and that the tugs are of exactly equal lengths, no matter how light the work may be. In about six to twelve months the shrieking will have disappeared, providing no quacking is resorted to.

Wants to Know What Ailed the Hog.—B. M. G., Liberty, Mich., writes: "I fattened a hog for family use that dressed 300 pounds and was very fat. It appeared perfectly healthy. When cutting him through the back I found a diseased spot along the backbone on either side, following the heavy lean meat under the ribs for about one foot in length, that seemed to be decayed but had no bad smell. No other parts were affected. What ailed the hog?"

ANSWER:—I cannot answer your question; your description is too vague, and don't throw any light upon the condition of the muscles you say "seemed to be decayed." There is probably no mystery about it, if you only had given a good description.

Probably Spavin.—J. M. R., Canton, N. Y., writes: "I have a mare four years old which is lame in one hind leg when she trots. She does not show it when she walks, but rests it considerably by standing on the other leg alone. The lameness seems to be in the hip, although there is no displacement to be seen. I was told by the man I got her from that it was done while driving on a stony road, she apparently stepping on a rolling stone. She seems to swing her leg when trotting and is worse when driven much than when she first

starts off. Do you think she will come out all right? What is the difficulty and remedy?"

ANSWER:—Your description contains some hints which would indicate that your mare has spavin. For prognosis, treatment, etc., please consult FARM AND FIRESIDE of Nov. 15th. The seat of the lameness, most assuredly, is not in the hips, and the shrinking of the muscles, which causes the hip to be more projecting, is simply a consequence of the comparative inactivity of the same, due to the lameness, and will gradually disappear after the lameness has been removed.

A Bloody Wart.—I. C. M., Tenaha, Texas, writes: "I have a mule that has a large, bloody wart on the side of its face. It was small at first, but is growing, and is now about as large as a silver half dollar. It bleeds nearly all the time, and matters some, too."

ANSWER:—You will probably succeed in removing the wart by repeated applications of nitric acid to its surface. The acid is best applied by means of a small piece of so-called surgeon's sponge tied to a stick, and the applications may be made once every two minutes until the wart is reduced to nearly—not quite—a level with the surrounding skin; but great care must be exercised not to have too much acid in the sponge, and also to bring it in contact with nothing but the surface of the wart.

Died of Dropsy.—J. L. M., Jenkin's Bridge, Va., writes: "Will you inform me what was the matter with my horses? I lost two when first taken. They would walk or trot with a straddling gait and seemed very stiff. Their legs were swollen and were very cold. About a week after taken, a swelling appeared under their belly near the elbow, which seemed to contain water. It would work toward the hind parts of the animal until it would go away, and then the animal would get better. Afterward it returned and the animals fell off very fast until they died. One lived about twenty days and the other about two months. Both seemed to have heart trouble."

ANSWER:—Your horses probably first suffered from influenza, then they very likely were bled, and the bleeding, as is usually the case, was followed by dropsical effusion, which latter caused the death of the animals.

Black-leg.—J. W. B., Lebanon, Mo., writes: "Can you tell me what is the matter with my calves? I see nothing wrong with them until they are dead. They are in fair condition. The affected part is in the hind quarters, which looks as if a horse had kicked them. The bruise does not run down to the feet and is worse on the inside of thighs."

ANSWER:—Your calves died of so-called black-leg, or black-quarter, a very fatal infectious disease. If you remove your calves to another place, the mortality, probably, will cease. There is no reliable remedy for those once affected. The cause of the disease consists in a pathogenic micro-organism (bacterium) present in the soil, which enter the animal body through small wounds or lesions.

Pigs Dying.—J. N. T., writes: "Can you tell me what is the matter with my pigs? They are three months old. Two of them were taken sick with a strange disease. I found them in bed during the day. I went to see what was the matter and found they had great difficulty in getting out, but after they got on their feet and steadied themselves a little they scampered off quite lively, so much so that I could not catch them; but they soon got back. They had spasms, which increased in number and severity for three days, when one of them died. The other lingered for another day, having terrible spasms every few minutes, when I killed it. Just nine days later another one was taken in the same way, and I had it killed. Was it poisoned, or was it hydrophobia, or what was it?"

ANSWER:—The questions you ask are rather serious ones; far too serious to be answered without a thorough examination. I, therefore, would by all means advise you to have the animals, if any more take sick, examined by a competent veterinarian. You might have made a post-mortem examination and thereby ascertained the nature of the disease.

Brain Trouble.—E. C. F., Antelope, Oregon, writes: "Our horses on the range are affected with some kind of a disease. It makes them stagger and reel when you start to drive them, and they will run first one way and then the other. They act as though they were wild; will run over a fence as if they did not see it. If they come to a ditch they try to jump it, but are as likely to jump into it as across it. Their legs are stiff. If you touch one on the neck or head it will stagger back and likely fall down. They act as if they were trying to look over their heads. Their eyes look dull and heavy; get poor but will eat very well. Some say they have eaten rattle-weed or crazy-weed."

ANSWER:—Your inquiry plainly indicates that your horses are affected with some kind of brain disease—abnormal pressure upon the brain—and it is very well possible that some narcotic poison is at the bottom of it, but not being familiar with the popular names of the weeds peculiar to the Pacific slope, I can only advise you to send some of the accused weeds to Mr. Moses Craig, botanist of the Oregon Agricultural Experiment Station, for information. The station is at Corvallis, Oregon.

Worms in Pigs—Lung-worms in Heifer.—J. W. A., Moscow, Tex., writes: "I killed a ten-months-old pig to-day, weighing two hundred and fifteen pounds. One fourth of his small, white entrails were full of long, white worms. Their heads were pinned into the entrails, with a little, white lump on the outside of the entrail where each one was pinned. What are they called, and what will expel them? The same pig had small, hard worms in the fat around the kidneys. What are they called, and is there a remedy?—I have a Holstein heifer, one year old. Occasionally there is a white mucous discharge from the nostrils, and her eyes sink into the head; at other times she seems to be all right. What will cure her?"

ANSWER:—The worms in the intestines of your hog belong to the species known as Echinorhynchus gigas. The same passes its larva, or embryo stage in the larva of the May-hug, Melolontha vulgaris. Hence, pigs will not become infected if they are kept away from all places where the larva of the May-hug are found. For treatment I refer you to a recent number of this paper. The smaller worms in the kidney fat are known as lard-worms, Stephanurus. They cannot be killed where they are, and consequently cannot be expelled.—Your heifer, very likely, is suffering from lung-worms, Strongylus micurus. They, too, for obvious reasons, cannot be expelled. The prevention consists in keeping young cattle away from low and wet places, and in not allowing them to drink water from stagnant pools, which are apt to contain the worm brood.

GRASSLANDS.

Mr. M. L. Hare, of Indianapolis, owner of above farm, writes: "I have tried all different remedies advertised for removing Corns, Splints and Bunches. I feel safe in saying Quinn's Ointment is by far the best I ever used." Send 25 cents for trial box, silver or stamps. Regular size \$1.50 delivered. Address W. B. Eddy & Co., Whitehall, N. Y.

Winners of the Grand Prizes.

For the week ending January 23d, the prizes were awarded as follows:
 B. F. Baker, of Grantsburg, Wis., received the first grand prize, a Gold Watch, for the largest club sent us during the week.
 Anna Hedlund, of Burlington, Neb., received the second grand prize, a Webster's Unabridged Dictionary, for the second largest club.
 For the Week Ending January 30th, 1892:
 H. B. Riddell, Lockport Station, Pa., received the first grand prize, Singer Sewing Machine, for the largest club sent us during the week.
 Mrs. G. Eugene Furnum, Wellsville, N. Y., received the second grand prize, a Set of Dishes, for the second largest club.
 Grand Prizes are offered every week to those who send the largest number of subscribers during the week. Any one can act as agent and enter the contest for the Grand Prizes, which are sometimes secured for only very small clubs. See our offers on another page.

Our Miscellany.

SWEDISH NATIONAL HYMN.

Our land! our land! our fatherland!
 Sound high, thou precious word!
 No green-clad hills, no gold-filled sand,
 No vale, no wave-enfolded strand
 Is loved as is our land in North,
 Endeared through ancient worth.
 We love our streams, their changing moods;
 We love our rivers' song;
 The sombre stillness of our woods,
 The light, our summer midnight floods—
 All these, what else our mind may throng,
 Again to see we long.
 Our land is poor, and shall so be
 To those who ask for gold.
 A stranger can the cause not see;
 But this poor land, we love it, we!
 To us, with reefs and mountains hold,
 It is a land of gold!
 —Translated by G. A. Bjoerhman, M. D.

READY money is a good thing to have, but a contented mind is better.
 ALL the trees of the tropics, except those imported from the colder climates, are evergreens.

A CONSIDERATE SON—"Tommy Figg," said the teacher, "you wrote this excuse yourself." "Yep," admitted Tommy. "You see, paw writes such a poor hand 'at I felt 'shamed for you to see it."—*Indianapolis Journal.*

SCIENCE comes to the front in the manufacture of grindstones. The best now made are composed of a mixture of pulverized quartz, powdered flint, powdered emery and rubber. They outwear by many years any natural stone.

MR. FRANCIS DARWIN has proved by experiment that insect or meat-fed plants bear heavier and more seeds than those unfed. He grew two lots under similar conditions, feeding one with roast meat and the other with nothing. The pampered plants bore 250 seeds to the others' 100, with a superiority in weight of seeds.

THE earliest known attempt at the production of an article similar to the paper of later or modern times, and was made in Egypt many centuries before the Christian era, some writers affirm 2,500 years B. C. The oldest manuscript in existence is on papyrus, and is supposed to bear date of 1552 B. C. There are accounts of manufactories of paper for exportation at Memphis, 700 B. C.

THE hides of black-poled breeds of cattle make fur robes of fine quality. Properly tanned, they are equal, if not far superior in beauty and desirability to the now scarce and costly buffalo robes. The fur is sometimes three or four inches long, black and glossy, while below this is a short, mossy coat, which protects the hide from wet, and makes it warm. A coat made from such a hide is very handsome, weighs about eight pounds, and is free from odor.—*Northwestern Agriculturist.*

THE very latest fashion in diamonds is not to lose them, but to announce that they are about to be sold for the erection of a hospital.

LA GRIPPE CURE FREE.

Last Season I discovered a sure preventive and cure for that sneezing, coughing, backacheing Malady, Epidemic Influenza. Address Old Dr. Brown, Box 28 Augusta, Maine, and I will send samples free, as I want to help ward off this dreaded disease from its millions of Victims. This remedy is not a medicine, can be easily carried in vest pocket and has also cured thousands of women and children of Catarrh and Nervousness; don't wait until sick. Send today.

THE most ancient sacred fire now existing in India was consecrated twelve centuries ago, in commemoration of the voyage made by the Parsees when they emigrated from Persia to India. The fire is fed five times every twenty-four hours with sandalwood and other fragrant materials, combined with very dry fuel. This fire, in the village of Oodwada, near Bulsar, is visited by the Parsees in large numbers during the months allotted to the presiding genius of fire.

It does not disgrace a gentleman to become an errand boy or a day laborer, but it disgraces him much to become a knave or a thief, and knavery is not the less knavery because it involves large interests, nor theft the less theft because it is countenanced by usage. It is an incomparably less guilty form of robbery to cut a purse out of a man's pocket than to take it out of his hand on the understanding that you are to steer his ship up channel when you do not know the soundings.—*Ruskin.*

MAKE your home pleasant and attractive. Spend an hour each week in fixing up the yard. Run the lawn-mower over the grass and trim up the shrubs and flowers. This one hour in the week will be the best spent hour in the whole year and will tend to heautify the homestead and make it attractive to the children. Give the boys a patch of land and encourage them to raise a crop for themselves. When you work them pay them as liberally as you would pay others for the same amount of labor. These and many other like methods will tend to keep the boys on the farm.—*N. E. Homestead.*

If our scientists keep on discovering ways and means of overcoming the difficulties of securing a sure crop of grain every season, we may be able to grow enough grain to supply the home demand after all—pessimists and alleged crop statisticians to the contrary. We have a cure for smut, two contagious diseases for chinch-bugs, a destructive parasite for the Hessian flies, a weevil exterminator, smudges for frosty nights, irrigation and artificial rain for dry land, and the last and latest is a destructive disease of the white grub, germs of which have recently been imported from France by Prof. S. A. Forbes, state entomologist for Illinois. Prof. Forbes is now growing the spores of the fungus in gelatine, and by spring will have a large supply with which to commence a crusade against the white grub.—*American Elevator.*

HE was a bright boy. He had exhausted every scheme he had thought of in connection with the capture of sparrows. Then he asked his mother to suggest something. Alcohol, she said, tasted nicer than whiskey. Sparrows are greedy in their nature, she continued, and perhaps they would go far enough to get helplessly drunk. That was all the boy wanted to know. To the nearest drug store he went. He carried with him a bottle and some money. A little while after he showed the bottle and its contents to some men. "I had to lie to get de alcohol," he said, "but I told der feller dat it wuz for a cop, an' he gave it to me." Then, advising the men to watch him, he went to work. In a tin pan he poured his alcohol. Then he soaked some oats in the deadly spirits and scattered a tempting meal in the yard. The plan worked. Six drunken sparrows were plucked up out of the first batch that tackled the oats. They were helpless and sorry-looking birds when the boy pulled their heads off, and if the supply of alcohol and oats holds out, that boy will have a big string of sparrow heads to cash in with the city clerk.—*Chicago Inter-Ocean.*

NUT PLANTING.

Nuts for planting, says the pomologist of the Department of Agriculture, should invariably be selected for superiority of size, flavor, or thinness of shell. As early as possible after their maturity they should be placed in boxes of soil, the conditions of moisture and depth which are provided being closely patterned after those furnished by nature in the forests. The chief object of the box is to prevent mice and moles from disturbing the nuts before the tap-root has begun its growth. The boxes of imbedded nuts should be sunk to the level of the surface in some place protected from pigs, squirrels and chickens. In the spring, when bursting open with the growing germ, the nuts may be transplanted to the nursery row or to the spot in which the trees are desired to stand. A bulletin on nut culture is soon to be issued by the department. Concise reports on matters kindred to the subject will be acceptable to the pomologist, and will insure for the sender a copy of the bulletin when published.

Any one can act as agent and enter the contest for the Grand Prizes. See page 19.

HOW TO HANDLE GUNS.

1. Empty or loaded, never point a gun toward yourself or any other person.
2. When afield, carry your gun at the half cock. If in cover, let your hand shield the hammers from whipping twigs.
3. When riding from one shooting-ground to another, or whenever you have your gun in any conveyance, remove the cartridges, if a breech-loader, it being so easy to replace them. If a muzzle-loader, remove the caps, brush off the nipples and place a wad ou nipple, letting down the hammers on wads—simply removing caps sometimes leaves a little fulminate on the nipple, and a blow on the hammer when down discharges it.
4. Never draw a gun toward you by the barrels.
5. More care is necessary in the use of a gun in a boat than elsewhere; the limited space confined action and uncertain motion making it dangerous at the best. If possible, no more than two persons should occupy a boat. Hammerless guns are a constant danger to persons boating.
6. Always clean your gun thoroughly as soon as you return from a day's sport, no matter how tired you feel; the consequence of its always being ready for service is ample return for the few minutes' irksome labor.—*Forest and Stream.*

GERMAN FARMERS.

Our German residents who are engaged in the business of farming are proverbially thrifty and successful. We were led to reflect upon the reason of this recently when going through a comparatively new region that had been largely settled up by them. The fields, to be sure, were clean and well cultivated, but not so strikingly different from others in this respect as to call for special comment; but every farm possessed a good barn. The houses were small and cheap as a rule, and no more money had been expended on them than was required to make them serve the stern necessities of life; but the barns were large and substantial, and what is more, they were utilized. The crops were housed in them and not left exposed in the fields. There was room for all the stock, so that it could be kept clean and comfortable. We presume these barns had been built only by the most stringent self-denial; perhaps money had been borrowed and the farm mortgaged in order to do it. If so, it was the part of wisdom, for it is just as true that a good barn will earn double the interest on its cost each year, as it is true that a poor barn will make a poor farmer.

THE PASSING OF THE BUFFALO.

Twenty years ago ten million buffaloes roamed about the western prairies. Now not one is to be found, save in menageries and "preserves." There are two hundred and fifty in the Yellowstone national park. A wealthy private land owner in Oklahoma has a herd of about seventy-five. The next largest collection is in the zoological garden of Philadelphia, and numbers sixteen. Aside from these there are, perhaps, a dozen scattered over the land. The Cincinnati zoological garden has two. The effort has been made with these few remnants to preserve the species to America, but it is in peril of failure through the strange fact that all, or nearly all, the births are males. Last week in the Philadelphia garden two female calves were born, but both weak and sickly. In the Yellowstone there has not been a female calf for five years. It looks as if the buffalo must go.—*Cincinnati Enquirer.*


LARGE BARN.

In FARM AND FIRESIDE, Jan. 1, 1892, I read a notice of what is claimed to be the largest barn in the world. At Castleton, Vermont, I saw a barn 60x150 feet with posts 28 feet high. There was room for one hundred head of cattle on the ground floor and for 200 tons of hay above them. There was a large basement for manure underneath. Perhaps some of your readers know of others that beat this.
 New York. ALBERT N. DOANE.

LEMON juice and salt will remove spots of iron rust which sometimes appears in calico, linen and muslin. The articles must be exposed to the sun after being well saturated with the compound.

12 pkts. Flower Seeds, 10c. 12 pkts. Vegetable Seeds, 30c. 6 Dahlias 50c. 10 Gladiolus 30c. All \$1. Half 50c. H. F. BURT, Taunton, Mass.

MENTION THIS PAPER WHEN YOU WRITE



LOVELY FACES,
 WHITE HANDS.
 Nothing will
 WHITEN and CLEAR
 the skin so quickly as
Derma-Royale
 The new discovery for dissolving and removing discolorations from the cuticle, and bleaching and brightening the complexion. In experimenting in the laundry with a new bleach it was discovered that all spots, freckles, tan and other discolorations were quickly removed from the hands and arms without the slightest injury to the skin. The discovery was submitted to experienced Dermatologists and Physicians who prepared for us the formula of the marvelous Derma-Royale. THERE NEVER WAS ANYTHING LIKE IT. It is perfectly harmless and so simple a child can use it. Apply at night—the improvement is apparent after a single application will surprise and delight you. It quickly dissolves and removes the worst forms of moth-patches, brown or liver spots, freckles, black-heads, blotches, sallowness, redness, tan and every discoloration of the cuticle. One bottle completely removes and cures the most aggravated cases and thoroughly clears and whitens the complexion. It has never failed—IT CANNOT FAIL. It is highly recommended by Physicians and its sure results warrant us in offering
\$500 REWARD.—To assure the public of its merits we agree to forfeit Five Hundred Dollars cash, for any case of moth-patches, brown spots, liver spots, black-heads, ugly or muddy skin, unnatural redness, freckles, tan or any other cutaneous discolorations, (excepting birth-marks, scars, and those of a scrofulous nature) that Derma-Royale will not quickly remove and cure. We also agree to forfeit Five Hundred Dollars to any person whose skin can be injured in the slightest possible manner, or for any complexion (no matter in how bad condition it may be), that the use of Derma-Royale will not clear, whiten, improve and beautify.
 Put up in elegant style in large eight-ounce bottles.
Price, \$2.00. EVERY BOTTLE GUARANTEED. FREE BOTTLES TO PROVE ITS MERITS.
 To advertise and quickly introduce Derma-Royale, 5,000 full size \$2.00 bottles have been provided for free distribution, one of which will be sent, safely packed in patent wooden box, (securely sealed from observation), safe delivery guaranteed, to anyone sending us their post-office address and **ONE DOLLAR** to help pay for this advertisement, boxing and other expenses, and who after having been benefited will mention Derma-Royale to their acquaintances. Send money by registered letter or money order to insure its safe delivery. Postage stamps received as cash. Correspondence sacredly private. Address
The DERMA-ROYALE COMPANY,
 Corner Baker and Vine Streets, CINCINNATI, OHIO.
AGENTS WANTED Send for terms **SEE BIG PROFITS**
 Sells on Sight

MENTION THIS PAPER WHEN YOU WRITE

MILLERS IT WILL PAY.
 Get the best wall paper for the least money. Samples for our new line of samples. Agents wanted.
WALL PAPER
J. KERWIN MILLER & COMPANY,
 543 Smithfield Street, Pittsburg, Pa.
 Mention this paper.

\$10. ECLIPSE KNITTER.
 Knits 15,000 stitches a minute. The only machine that knits wool stockings with cotton lining, or goods in vertical stripes. Will knit a pair of socks or stockings complete, with heel and toe, in 10 minutes. Will knit any article wanted in the household from doll stockings to blankets. Simple, durable, practical, rapid. The most complete Home Knitter ever made. Write for circular and sample. Knits homespun. **ECLIPSE KNITTER CO.** 1207 Arch St. Phila. Pa.
 Agents Wanted. Mention this paper when you write.

SYLPH CYCLES RUN EASY
 Perfection of cycle machine; no need now to ride springless cycles or depend on tires alone for comfort. **Sylph Spring Frame** destroys vibration. Light, simple, strong. Cata. free. **Rouse-Duryea Cy. Co.** 32 E St., Peoria, Ill. AGTS. WANTED
 Please mention this paper when you write.

AGENTS WANTED—To show & take orders for ATLAS OF THE WORLD Official Census Edition. Also Family Bibles in all Languages. Addr. **JOHN W. HILFE & Co.** 105 & 108 Wabash-ave, Chicago, Ill. Mention Farm and Fireside when you write.


DYSPEPSIA NEW, CERTAIN CURE
 Trial package free,
F. A. STUART,
 Marshall, Mich.

How They Do Sell.
AGENTS easily make Big Wages selling the Peerless Atlas of the World, in handsome and ornamental Gold Titles. It sells on sight, because all who see it acknowledge it to be the best ever offered for the price. Locates towns, cities, railroads, etc. Full of statistics, with Census of 1890. Illustrated. Agents make 100 per cent. Address **Mast, Crowell & Kirkpatrick, Springfield, O.**
 Always mention this paper when answering advertisements, as advertisers often have different articles advertised in several papers.

COLUMBIA LIGHT ROADSTER SAFETY.
 1892 PATTERN.
 The manufacturers have kept the Columbias always in the front ranks of the highest grade machines, and the 1892 pattern is in every way worthy of the position. It combines all the features of strength, comfort, weight, appearance and simplicity. In selecting a wheel you are sure to be right in choosing the Columbia we offer.
 The following description briefly enumerates the points of excellence in the wheel, and will be appreciated by every wheelman who has the pleasure of such a mount:
 All steel forgings, no castings used. 30-inch rear, 32-inch front wheel, 14-inch Columbia cushion tires, Tangent spokes, 40 rear, 36 front, double butt-ended and adjustable at felloe. Columbia adjustable ball-bearings all around. Columbia spring forks. Columbia seamless steel tubular double diamond frame. Detachable rear sprocket wheel. Improved Elliott self-oiling chain. Detachable round knox cranks, 6 1/4 and 6 3/4 inch throw. Columbia double-grip ball pedals, 3 1/2 inches wide, 6 1/4-inch ball-bearing steering-head. Seamless steel tubular tapered and curved handle-bar, adjustable for height. Adjustable rear wheel brake. Adjustable saddle-rod. Kirkpatrick saddle. Detachable steel wire lantern bracket. Round step. Adjustable foot-rests. Guards to steering wheel and chain. Tool bag, with Columbia B. & S. monkey-wrench. Screw-driver and oil-can. Gear 53. Weight, 54 pounds. Finish, enamel with nickel tips and spokes. Any of the following variations in equipment may be had if desired: 1/2 and 3/4 inch solid tires with seamless steel hollow felloes. Continuous forks. 5 1/2 to 6 inch cranks. 3 1/4 or 4 inch ball pedals. Gear, 57 or 60.
 Given as a premium for 700 subscribers to this paper. Or for 550 subscribers and \$25 additional. Or for 380 subscribers and \$50 additional. Or for 50 subscribers and \$100 additional.
 Price, including one year's subscription to the FARM AND FIRESIDE and the LADIES HOME COMPANION, both journals one year, \$135.
 The wheel must be sent by express or freight, receiver to pay charges. Address
FARM AND FIRESIDE, Philadelphia, Pa., or Springfield, Ohio.



No good farmer turns his back
 on the "Planet Jr." machines. Even the most conservative see the immense advantage they give. The Double Wheel Hoe, Cultivator, Rake and Plow is actually fascinating to any one not already familiar with the wide range of work done by this wonderful tool; and others of the series are just as interesting.
 Be sure to get the latest (1892) Catalogue, as new tools have been added which will surprise even those who thought they knew all about the "Planet Jr." machines. Sent free. Write direct to the manufacturers.
S. L. ALLEN & CO., 1107 Market St., Philadelphia.



Smiles.

A TALE OF TOE.

A little corn on a maiden grew,
Listen to my wail of toe,
Caused by the pinch of a too tight shoe,
Instead of a three a number two.
It grew! It grew!
Listen to my wail of toe.

As time went on (as time will do),
Listen to my wail of toe,
The corn waxed red—the maiden blue,
'Twas ten times worse than the grip (kerchew!)
Too true! Too true!
Listen to my wail of toe.

She had a seat in the end of the pew,
Listen to my wail of toe,
And a man with another seat in view
Put his cowhide boot on her kangaroo.
Oh, whew! Oh, whew!
Listen to my wail of toe.

—From City and Country.

MY LOVE.

She most dislikes a compliment;
She says they are not true;
With statements plain she is content.
Now, pray, what can I do?

I want to tell her she's most fair
Of all the maids I know,
And other things; but I don't dare,
For she dislikes it so.

But I suppose if I were she,
Like her I then would do,
For she's as sweet as sweet can be;
What's more, she knows it, too.
—F. S. M., in Harper's Bazar.

MISDIRECTED AFFECTION.

She sent him a kiss in her letter,
Two thousand miles away;
And the dead-letter clerk paused to take at his work
That kiss that went astray.

—Puck.

"THE DEVIL TO PAY!"

THE phrase, "The devil to pay," is not so profane in its origin nor so illegitimate as some might suppose. In every printing-office is a youthful specimen of humanity who cannot be understandingly designated to the craft without borrowing the Plutonio appellation. The phrase in question doubtless originated in a printing-office on the occasion of the Saturday night's settlement of weekly accounts. The publisher, with a scant purse, receives the ominous call of his foreman.

"Well, John, how is it? What must I pay you to-night?"

"Typus wants five dollars, and Shootingstick wants four, and Columnrule say he must have seven."

"You'll clean me out entirely. My subscribers haven't done a thing at paying up this week. But, let's see. Yes, here's the money."

"And, sir, I should like a few dollars for myself."

"That's bad. But here you have it—all I've got."

"But, sir, you forgot—there's the devil to pay." And can we wonder that hereafter, when the poor publisher wished to particularly emphasize what he deemed to be a perfect crusher in the way of business, he borrowed this significant phrase?

DEFINITE DIRECTIONS.

"About how far is it to Gourdville?" asked the stranger of a lank North Carolinian, who sat on the veranda holding up the front side of his house.

"Twicet as fur as yo' kin holler an' as fur as yo' kin see beyond that."

"But I'm consumptive and can't 'holler' at all," urged the traveler. "How am I to tell anything from such a direction as that?"

"Two hoots an' a look, I reck'n," was the laconic reply.

"Well, how far is that?" queried the stranger impatiently.

"Better look twicet an' not holler at all," was the answer. "Gourdville ain't wuth hollerin' about, nohow."—Boston Post.

A GRAVE CASE.

Doctor—"You noticed, you say, a marked increase in your appetite?"

Patient—"Yes."

Doctor—"Sleep longer and more heavily than usual?"

Patient—"Yes."

Doctor—"Feel greatly fatigued after much exercise?"

Patient—"Yes."

Doctor—"Ahem! very grave case. But the researches of science, sir, enable us to cope with your malady, and I think I can pull you through."—Harper's Bazar.

GRADUATED IN HIGH STANDING.

Cal Larrin—"Well, neighbor, busy as usual making footwear? But what a peculiar lap-stone you have!"

Hyde Cutter—"Yes, sir. That lap-stone has a history. Eight months ago my little girl graduated from the cooking-school. This lap-stone of mine is the first sponge-cake she made."

IN NO HURRY.

Mrs. O'F.—"Can I have my husband put in jail for slapping me in the mouth?"

Magistrate—"Certainly; that is assault and battery."

"Well, I'll come around in about a month and make the charge."

"Why not have him arrested at once?"

"Well, you see, when he slapped me I hit him in the head with a rolliu'-pin, and he's now in the hospital, and the doctors say he won't be able to be out for a month yet."—Life.

HE WAS IN DARKNESS.

Mr. Ray has a number of anecdotes of "Parson" Moore among his profuse collection of bright stories. Here is one: "Parson" Moore was invited to pronounce a blessing at a large Masonic banquet in a New Hampshire town, and he said: "O Lord, Thon knowest why we are assembled together. I don't. Thou knowest the object of this organization. I don't. If they be for thy good, O Lord, bless 'em; but if they be for the evil, O Lord, cuss 'em. Amen."—Manchester Mirror.

JUST LIKE A WOMAN.

A woman's heart, even when most obdurate, may relent. Margaret was asserting in the nursery that she never, never meant to marry.

"Very well, you shall not," said her papa; and, going to the door, he called out to an imaginary suitor, "Go away, man! Margaret does not want you."

"Call him back!" cried Margaret. "Let me see what he looks like!"—Kate Field's Washington.

A FAIR FINANCIER.

Miss Hillaire—"You seem to be getting along nicely on your alimony."

Mrs. Grasse—"Yes, indeed. I used to so hate asking my husband for pin money. Now, when I see anything I like I can buy it without feeling I'm extravagant."—Epoch.

A STICKLER FOR FORMALITY.

Snooper—"If you saw the gentleman drop the bank-note why did you not restore it to him?"

Jaysmith—"We had never been introduced to each other, and I felt a delicacy about addressing him."—Judge.

FILLS A LONG-FELT WANT.

Fangle—"I have just patented the greatest invention of the century."

Cumso—"What is it?"

Fangle—"A collar-button which does its own swearing when it rolls under the bureau."

AN EASY SORT OF A PLACE.

Smith—"Like your new position?"

Brown—"Regular snap!"

Smith—"What are you doing?"

Brown—"Sorting rubber bands."—Kate Fields Washington.

A DIFFERENCE.

Sympathetic friend—"Your health appears to have improved greatly of late."

Convalescent—"Yes; I've been off among strangers who didn't eternally talk about it!"

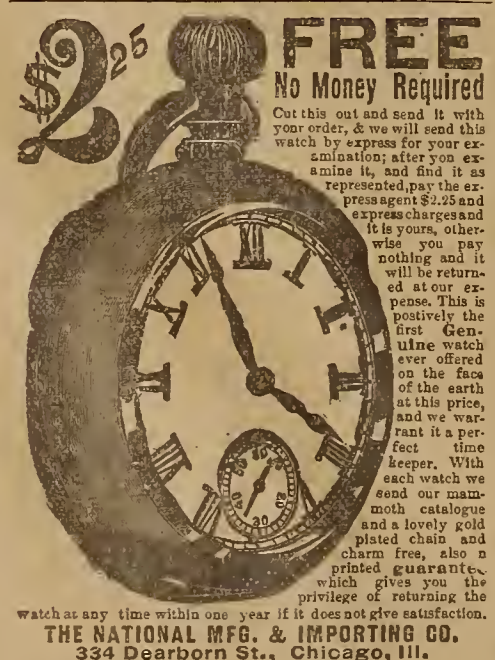
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by local applications, as they can not reach the diseased portion of the ear. There is only one way to cure Deafness, and that is by constitutional remedies. Deafness is caused by an inflamed condition of the mucous lining of the Eustachian Tube. When this tube gets inflamed you have a rumbling sound or imperfect hearing, and when it is entirely closed Deafness is the result, and unless the inflammation can be taken out and this tube restored to its normal condition, hearing will be destroyed forever; nine cases out of ten are caused by catarrh, which is nothing but an inflamed condition of the mucous surfaces.

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ALICE STRINE.

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MRS. LIZZIE ANDRE.

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Descriptive catalogue of tested garden seeds grown and for sale by A. T. Cook, Hyde Park, Dutchess county, N. Y.

Vick's Floral Guide, 1892. One of the most beautiful and useful catalogues published. Price 10 cents, to be deducted from first order for seeds or plants. James Vick's Sons, Rochester, N. Y.

Annual descriptive catalogue of seeds. Largest collection in the world. J. M. Thorburn & Co., 15 John St., N. Y.

Wholesale catalogue of trees, plants, shrubs, etc., of the Bloomington Phoenix Nursery, Bloomington, Ill.

Catalogue of Faust's garden, field and flower seeds. H. G. Faust & Co., Philadelphia, Pa.

Cole's Garden Annual. Garden, farm and flower seeds. Cole's Seed Store, Pella, Iowa.

Seeds for the garden, farm and field. Descriptive catalogue of the Plant Seed Co., St. Louis, Mo.

Seed Catalogue for 1892. Wm. Elliott & Sons. Importers and growers of seeds and bulbs, 54 and 56 Dey St., N. Y.

"How We Made the Old Farm Pay," is the title of a sixty-four page book, by Charles A. Green, editor of Green's Fruit Grower, Rochester, N. Y. It gives the personal experience of one who has made a notable success of fruit growing, and is an interesting and instructive little book. Price 25 cents.

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Catalogue of stallions and mares to be sold at the annual sale of the American Clydesdale Association, to be held at the Union Stockyards, Chicago, February 17, 1892.

EXPERIMENT STATION BULLETINS.

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

ALABAMA.—(Auburn) Bulletin No. 28, November, 1891. Watermelons and cantaloups. Bulletin No. 29, November, 1891. Grapes, raspberries and strawberries.

ARIZONA.—(Tucson) Bulletin No. 95, December, 1891. Production of seeds and

ARIZONA.—(Tucson) Bulletin No. 15, October, 1891. Cultivation.

ARIZONA.—(Tucson) Bulletin No. 37, December, 1891. A comparison of the production of seeds and valuation of Indiana feeding stuff.

NEVADA.—(Reno) Bulletin No. 13, October, 1891. Sugar-beet experiments.

NEW YORK.—(Cornell Station, Ithaca) Bulletin No. 33, November, 1891. Wireworms.

ONTARIO.—(Agricultural College Station, Guelph) Bulletin No. 70. Feeding grade steers of different breeds.

TENNESSEE.—(Knoxville) Bulletin No. 5, Vol IV, December, 1891. A chemical study of the cotton-plant.

UTAH.—(Logan) Bulletin No. 9, December, 1891. Time of watering horses. Whole or ground grain for horses. Bulletin No. 10, December, 1891. Experiments with strawberries, peas and beans.

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A SURE and permanent cure for Epilepsy, Fits, in 24 hours. Free to poor. A. A. Ferdinand, St. Louis, Mo.

OPIUM or Morphine Habit Cured at Home. Trial Free. No Pain. Comp'd Oxygen Ass'n, Ft. Wayne, Ind.

If afflicted with Dr. Thompson's Eye-Water sore eyes use

OPIUM Morphine Habit Cured in 10 to 20 days. No pay till cured. Dr. J. Stephens, Lebanon, O.

PILES CURED FREE, less, Certain. Gives instant relief and lasting cure. Never returns. To prove it we will send a trial package FREE. To any address. PYRAMID DRUG COMPANY, Box 35, ALBION, MICHIGAN.

We can in ONE RHEUMATISM DAY alleviate and quickly CURE Medicine sufficient for one week's treatment sent on receipt of 25 cts. money or stamps. Address: CALENICAL MEDICINE CO., 1449 Broadway, New York City.

VARICOCELE We will send you the MARVELOUS French remedy CALTHOS free. It is an absolute and permanent cure. Use it and pay if satisfied. Address Von Mohl Co., Sole Agents, Cincinnati, O.

RUPTURES CURED by my Medical Compound and Improved Elastic Supporter Truss in from 30 to 90 days. Reliable references given. Send stamp for circular, and say in what paper you saw my advertisement. Address Capt. W. A. COLLINGS, Smithville, Jefferson Co., N. Y.

VARICOCELE The recipe of a positive lasting remedy for self-cure sent Free to any sufferer. J. D. HOUSE, Box 100, Albion, Mich.

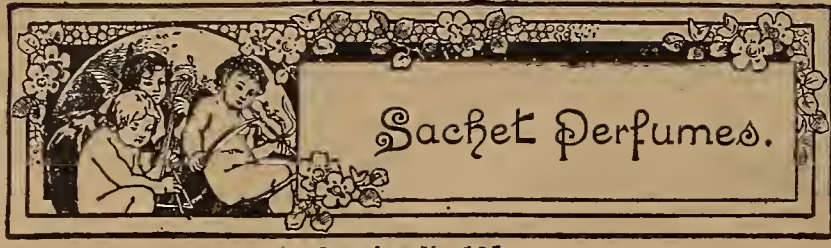
ON 30 DAYS' TRIAL. THIS NEW ELASTIC TRUSS Has a Pad different from all others, is cup shape, with Self-adjusting Ball in center, adapts itself to all positions of the body, while the ball in the cup presses back the intestines just as a person does with the finger. With light pressure the Hernia is held securely day and night, and a radical cure certain. It is easy, durable and cheap. Sent by mail. Circulars free. COLLESTON TRUSS CO., Chicago, Ill.

Always mention this paper when answering advertisements, as advertisers often have different articles advertised in several papers.

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By Paying Only 50 Cents for One Year's Subscription to this Paper.

This offer good for 30 days from date of this paper. All the articles sent by mail, postage paid by us. These offers are open to everyone, and Agents or Club Raisers may count toward a premium all subscribers who accept any of them.



Premium No. 135.

Six Packages of Delicious Perfume

Given Free with this Paper one Year for 50 cents. For sale for 25 cents.

This premium consists of six sachets of the most pleasing and popular perfumes that are now in the market. The selection has been made with the view of pleasing the ladies, and the following odors comprise the list. FEDORA, HELIOTROPE, VIOLET, LILY-OF-THE-VALLEY, NEW MOWN HAY and WHITE ROSE. The advantages of perfumes prepared in this manner are well known. When laid in among handkerchiefs, gloves or clothing, they in a short time acquire and retain the delicate perfume of the sachet, and the whole dresser is soon filled with the delicious fragrance. They retain their strength for a long time, and can be carried in the pocket or about the person with no inconvenience whatever. These sachets have been prepared especially for us, and we think will become justly popular with our readers. In order to secure many additional subscriptions at this time, this whole list of six perfumes will, during the next 30 days, be mailed FREE to any one paying 50 cents for one year's subscription to this paper. If you are already a subscriber you can have your subscription advanced one year by accepting this offer. Given as a premium for 1 new yearly subscriber, and the new subscriber is also entitled to a choice of one of the free presents. See "Who is a new subscriber?" below. We offer them for sale for 25 cents. Postage paid by us in each case.

Our 1892 Stamping Outfit.

Owing to the satisfaction this Outfit has given we continue to offer it Free with this paper one year for 50 cents. For sale for 30 cents.



Premium No. 421.

A stamping outfit complete, with a variety of beautiful and artistic designs suitable for using on those tasty articles of adornment that should beautify every home and give so much pleasure in the making. The outfit contains 40 correctly drawn designs, with two complete alphabets that will be especially appreciated, they being both capital and small letters, box of stamping powder, pad and sheet of Instructions. We name here only a few of the designs, to show the great variety of subjects they cover: Spray of Wild Roses, Bunch of Plums, Cup and Saucer, Owl on Branch, Butterfly, Decorated Fan, Bird Flying, Horse-shoe, Spider Web, Braid Designs, Edgings, etc., etc. The paper used is a good, strong bond paper that will not tear easily and will last a long time. Equal in every respect to many high-priced outfits. During the next 30 days this outfit will be mailed FREE to any one paying 50 cents for one year's subscription to this paper. If you are already a subscriber you can have your subscription advanced one year by accepting this offer. Given as a premium for 1 new yearly subscriber, and the new subscriber is also entitled to a choice of one of the free presents. See "Who is a new subscriber?" below. We offer them for sale for 30 cents. Postage paid by us in each case.

Premium No. 836.

NEEDLES AND HOOKS AND WHAT IS MADE WITH THEM.

Given Free with this paper one year for 50 cents. For sale for 25 cents. 128 Pages and 46 Beautiful Engravings.

A copy of this book should be on every lady's work-table. Every article has been tested, and the directions are reliable. The fact that it is compiled by Mrs. Marcia Watson is in itself a guarantee of the correctness and beauty of the designs, a great number of which are entirely original. It is printed on the best of paper, with artistic covers, and has a complete index of contents. Contains directions for making many other articles besides those mentioned here. Lack of room forbids naming them all. Block Insertion, Edging to match Block Insertion, Knitted Edge, Knitted Mechlin Lace, Braid Lace, Wide Diamond Lace, Crocheted Edging and Insertion, very handsome Baby's Sock, Pin-wheel Lace, Geneva Knitted Lace, Baby's Knitted Jacket, Baby's Socks, Table Mats, Crocheted Medallion, Knitted Shoulder Cape for lady, Wheat-head Lace, Shell Point Edging, Baby's Crocheted Jacket, Bar Lace, Crazy Pattern Edging, Crocheted Spider-web Tidy, Bettie Lace, Work-bag, Marguerite Edging, Knitted Fan Lace, Insertion Crocheted, Knitted Boots for Invalids, Easy Knitted Lace, Crocheted Edging, Crocheted Lace, Baby's Socks, Knitted Polish Boots, Knitted Ball, City Point Edging, Block Lace, Crocheted Diamond Edging, Marlboro Lace, Baby's Crocheted Shirt, Saw Teeth, Leaf Lace, Crocheted Oak-leaf Edging, Leaf and Trellis Pattern, Square Point Lace, Knitted Dress, Crocheted Tam O'Shanter Cap, Crocheted Lace, Medallion Lace, Crocheted Edging, Beautiful Edging, Crocheted Purse, Crocheted Lace, Knitted Baby's Shirt, Silk Railroad Stockings, Knitted Braided Stitch, Wheel Lace, Infant's Knitted Bootie, Crocheted Edging, Lady's Knitted Undervest, Lace for Pillow-cases, Sheets, etc., Knitted Bedspread, Victoria Opera Hood, Fancy Pattern for Back of Mitten, Crocheted Lamp-mat, Crocheted Lace, Bath Mittens, Tatting Lace, The Little Strawberry, Knitted Skirt, Honeycomb Pattern, Knitted Knee Caps, White Crocheted Toboggan, Lady's or Gent's Mitts, Shell Edging. During the next 30 days this book will be mailed FREE to any one paying 50 cents for one year's subscription to this paper. If you are already a subscriber you can have your subscription advanced one year by accepting this offer. Given as a premium to any one sending 1 new yearly subscriber to this paper, and the new subscriber is also entitled to a choice of one of the free presents. See "Who is a new subscriber?" at foot of this page. We offer it for sale for only 25 cents. Postage paid by us in each case.



Our limited space will not allow illustrations and complete descriptions of all the articles included in this special offer, but any of the following premiums will be given for one new subscriber, or mailed free to anyone paying fifty cents for one year's subscription to this paper. Full descriptions of some of these articles may be found in our Premium List.

- "Christ Before Pilate." Premium No. 100. A reproduction, in the original colors, of Munkacsy's famous painting, said to have sold for \$120,000.00. Many thousands of our subscribers place a value of more than ten dollars on this picture. Size, 21 by 28 inches. "Christ on Calvary." Premium No. 210. The great companion picture to "Christ Before Pilate." Said to have sold for \$125,000.00. Size, 21 by 28 inches. A Good Fountain-Pen. Premium No. 324. Combining penholder, pen and ink. Complete, useful and convenient. Everybody should carry a Fountain-Pen, and the only excuse for not doing so has heretofore been the cost of a good one. This perfect Fountain-pen is a triumph of ingenuity, combining the good features of old styles with new improvements. With this pen in your pocket you are always prepared with pen and ink, at all times and places, and yet it is but little larger than a lead-pencil, and just as convenient for carrying in the pocket. The holder contains a supply of ink that will last the average writer several weeks, and may be refilled with ink in a moment. Wire-Splicer and Staple-Puller. Premium No. 489. No man who has wire fences can afford to be without it. With the wire-splicer two pieces of wire can be spliced as neatly and strongly as it is done at the factory, one wire being wrapped tightly around the other. This is the only tool of the kind on the market. In combination with the wire-splicer is a staple-puller. Everyone knows how hard it is to get the staples out of a fence post. With this little tool and a hammer they can be taken out as fast as the puller can be placed in position. The same tool also has a claw for drawing light nails or tacks, a hammer head for driving tacks, and the handle is in shape to use for a light wrench; the hook is very useful for hauling barbed wire and protecting the hands from injury. Thus, there is combined in this one tool half a dozen that would cost separately one or two dollars. Directions for use go with each tool. Silver Plated Butter-Knife and Sugar-Shell. Premium No. 325 includes both articles. They are made in an elegant, neat and stylish pattern by a leading manufacturer. Are first nickled and then plated with silver. With reasonable care they will last for years.

2 Good Dollar Books

And This Paper One Year, Only 50 Cents.

This offer good for 30 days from date of this paper.

We have a Large Supply of the following Books, and to Reduce our Stock will GIVE THEM AWAY as follows:

Any TWO of the following books will be sent to any person sending 50 cents for one year's subscription to this paper; or to any person sending only 75 cents for Farm and Fireside and the Ladies Home Companion, both journals one year.

Any TWO of the books will be given as a premium to any one sending one NEW yearly subscriber, and the NEW subscriber will also be entitled to a choice of ONE of the books.

Any SEVEN of the books, together with this paper one year, will be sent to any person sending only \$1.

The books and papers all sent by mail, postage paid by us.

THE MODERN COOK BOOK.

Premium No. 803.



It contains 320 pages, over 1,200 recipes, and hundreds of illustrations. The recipes are the choicest selections from 20,000 that were received from practical housewives living in all parts of the United States, to which were added hundreds of the newest, best and most practical recipes of this progressive age, all of it set in new and large type, and the whole book handsomely illustrated. It has a beautiful illuminated cover and is an elegant and admirably arranged volume of recipes for practical every-day use. Among the excellent features of this richly illustrated Cook Book are the following: Practical Suggestions to Young Housekeepers, Necessary Kitchen Utensils, Suggestions and Recipes for Soups, Fish, Poultry, Game, Meats, Salads, Sauces, Catsups and Relishes, Breakfast and Tea Dishes, Vegetables, Bread, Biscuit, Pies, Puddings, Cakes, Custards, Desserts, Cookies, Fritters, etc. Also for Preserves, Candies and Beverages; Cookery for the Sick, Bills of Fare for Family Dinners, Holiday Dinners, etc. A Table of Weights and Measures; Chapters on the Various Departments of Household Management and Work.

Among the excellent features of this richly illustrated Cook Book are the following: Practical Suggestions to Young Housekeepers, Necessary Kitchen Utensils, Suggestions and Recipes for Soups, Fish, Poultry, Game, Meats, Salads, Sauces, Catsups and Relishes, Breakfast and Tea Dishes, Vegetables, Bread, Biscuit, Pies, Puddings, Cakes, Custards, Desserts, Cookies, Fritters, etc. Also for Preserves, Candies and Beverages; Cookery for the Sick, Bills of Fare for Family Dinners, Holiday Dinners, etc. A Table of Weights and Measures; Chapters on the Various Departments of Household Management and Work.

HANDY HORSE BOOK.

Premium No. 820. Contains 178 Pages.



A complete manual for horsemen, embracing How to Breed, Buy, Train, Use, Feed, Drive, and How to Ride a Horse. It also gives the symptoms, causes and cures of all known horse diseases. It is invaluable when horses are attacked with diseases requiring prompt attention in districts remote from veterinary surgeons, because it enables any one to doctor their own horse. It contains a large number of illustrations. No one who owns or uses a horse should fail to have a copy of this book. The veterinary department was edited by Dr. A. T. Wilson, who was in active practice for fifty years. More than 250 topics are indexed, among them Plans for Stables, Care and Management of Colts, Breeding, Control of Sex, Age as shown by Body and Teeth, Appetite, Bots, Colic, Cough, Cramps, Cribbing, Curb, Distemper, Blindness, Food and Drink, Hoofs, Lameness, Rheumatism, Rupture, Worms, Sprain, Ringbone, Spavin and over 200 other subjects of great value to all owners of horses.

ETHEL'S VOW; or, The Roxbury Tragedy, and THE SQUIRE'S ONLY DAUGHTER.

Premium No. 829.

A new book containing two great and popular stories. Both novels were published in the Farm and Fireside, and are intensely interesting. The pages are large, printed on heavy, cream-tinted paper, of fine quality. Handsomely illustrated.

BLACK BEAUTY. Premium No. 719.

This work is the "Uncle Tom's Cabin of the Horse." It is the latest popular book in the literary world. Nearly 300,000 copies have already been sold in America and England. It is universally praised and recommended by the religious and secular press. Elegantly printed in large type.

A BARTERED BIRTHRIGHT. Premium No. 832.

This is the title of a very interesting serial recently published in the Farm and Fireside, written by James Franklin Fitts, the popular story writer. It met with such a hearty reception from the thousands of our readers who delight in good stories, that we have published it in book form. The book is printed on good, heavy paper, with large type, and is freely illustrated.

DICK ONSLOW AMONG THE INDIANS. Premium No. 823.

A book full of exciting incidents of adventures among Indians in the far west. It is only necessary to mention a few items in the table of contents: Encounter with a bear, a prisoner among redskins, the escape, a fierce attack, rescue of a stranger, a ride for life, wolves and bears, under the snow, night in a cavern, battle with hawks, fight with a rattlesnake, treed by a bear, etc.

THE Widder Doodles' Courtship.

By "JOSIAH ALLEN'S WIFE." Premium No. 726.

To simply mention the author's name is equal to saying that there is no end of good, clean, sparkling fun in the book, not a page of which can be called dull or uninteresting. No other writer hits off the every-day occurrences of life in the keen, witty and laughable style of "Josiah Allen's Wife." The book is a collection of fifteen sketches, all written in the most inimitable style of the author, on a variety of subjects, and everyone of them full of good points.



This cut, illustrating one of the sketches, "The Surprise Party," shows the laughable side of a surprise on both sides.

There is many a hearty laugh in store for you in reading this collection, and our offer is such that everyone can get it and "laugh and grow fat."

SWISS FAMILY ROBINSON. Premium No. 812.

Or the adventures of a father, his wife and four sons on a Desert Island. This companion volume to Robinson Crusoe is equal to it in intense interest and popularity. It is the story of a Swiss family, consisting of a father, his wife and four sons, who were deserted by the cowardly action of a captain and his sailors, and left upon a storm-tossed vessel, of their miraculous escape from death, of their life and adventures upon a desert island for many years, and of their deliverance by a British vessel. Full of interest to old or young readers. Illustrated.

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This well known book may be ranked as the most popular standard juvenile book ever printed. Our edition has recently been greatly improved by the addition of new illustrations and a handsome new cover, in bright colors.

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A collection of the world's most popular songs, comprising American, English, Scotch and Irish songs of all kinds—Sentimental, Comic, Operatic and Ethiopian. Words and music with every song, 256 pages. Why pay 30 to 50 cents for ONE song, when you can get this large book with 600 songs for only 25 cents? It includes the very latest popular songs.

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By John Bunyan. This is a new and large edition, complete, printed with large, new type. Contains many handsome illustrations, 300 pages. In beautiful colored cover. Bunyan is acknowledged as the most popular religious writer in the English language. It is said that more copies of "Pilgrim's Progress" have been sold than any other book except the Bible. This new edition is now offered for the first time and is sure to please.

WHY I AM WHAT I AM. Premium No. 723.

A book of 160 large pages, containing a series of fourteen articles written by the most prominent clergymen in the country, giving their reasons for belonging to and advocating the principles of their different religious denominations. The list of contributors is as follows: Why I Am a Baptist. By Rev. R. S. MacArthur, D. D. Why I Am a Presbyterian. By Rev. Charles Seymour Robinson, D. D. Why I Am a Methodist. By Rev. G. H. McGrew. Why I Am an Episcopalian. By Rev. William R. Huntington, D. D. Why I Am a Catholic. By Rev. Walter Elliott, C. S. P. Why I Am a Congregationalist. By Rev. Lyman Abbott, D. D. Why I Am a Universalist. By Rev. Charles H. Eaton. Why I Am a New-Churchman. By Rev. S. S. Seward. Why I Am a Unitarian. By Rev. John White Chadwick. Why I Am a Jew. By Rev. Dr. Gustav Gottheil. Why I Am a Lutheran. By Rev. G. F. Krotel, D. D. Why I Am a Friend. By John J. Cornell. Why I Am a Disciple. By Rev. B. B. Tyler. Why I Am a Seventh-day Baptist. By Rev. A. H. Lewis. Crumbling Creeds. By Col. Robert G. Ingersoll.

Who is a NEW Subscriber? The above offers are made to increase our subscription list, therefore a change from one member of a family to another is not securing a new subscriber. A new subscriber must be a person who is not now on our subscription list, and one whom you have sought out and solicited to take the paper. Sending your own subscription, or the name of your wife, husband or any other member of your own family, is not sending a new subscriber in the sense we intend it, and will not entitle you to an additional premium. You may count your own name, or the renewal of any former subscriber, towards a premium when three or more names besides your own are sent, as this shows you have actually done some work, and been out among the people telling them of the merits of our paper.

For any articles on this page, order by the Premium Numbers and address all letters to FARM AND FIRESIDE, Philadelphia, Pa., or Springfield, Ohio.

VALUABLE PREMIUMS OR BIG CASH COMMISSIONS.

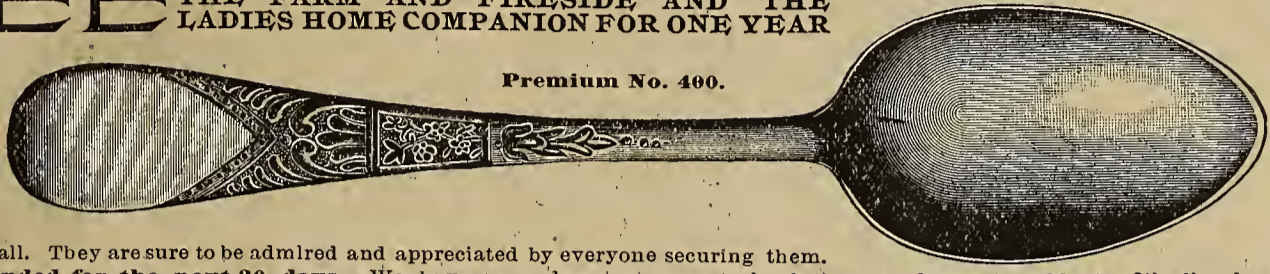
Agents or Club Raisers can secure these Valuable Premiums with less work than those offered by any other publication. Why? Because we give a Free Present to every subscriber you get (see offers on opposite page) and allow you to count all such subscribers toward the premium for which you are working. They also count toward the Grand Prizes.

Agents or Club Raisers may offer to Subscribers any premium described in this paper, or in our Premium List, at the "PRICE, INCLUDING ONE YEAR'S SUBSCRIPTION," and receive a Cash Commission on the whole amount. Write for Confidential Terms to Agents for Cash Commissions. No other journal gives subscribers so much for the money.

A BEAUTIFUL SET OF 6 STERLING SILVER PLATED TEASPOONS

FREE TO ANY ONE PAYING ONLY \$1 FOR BOTH THE FARM AND FIRESIDE AND THE LADIES HOME COMPANION FOR ONE YEAR

These Spoons are Genuine Sterling Silver Plate, full size, and the handles very ornamental. The pattern was selected from many as being the most tasty and artistic of them all. They are sure to be admired and appreciated by everyone securing them.



Premium No. 400.

This offer is extended for the next 30 days. We have secured an immense stock of these goods, to be able to fill all orders promptly upon the day we receive them. Each set packed neatly in a box. Many thousands of our readers have already sent their subscriptions for another year, and to give them an opportunity of securing these Spoons Free, we make these additional offers:

THESE OFFERS ARE OPEN TO EVERYBODY.

We will send this set of Six Sterling Plate Teaspoons Free, postage paid by us in every case, to any person paying \$1 for both the Farm and Fireside and Ladies Home Companion one year. If you are now a subscriber to either of these papers we will extend your subscription to that paper one year and send the other one year. Or, we will send the set free to any person paying \$1 for Farm and Fireside for two years. Or, to any person paying \$1 for Ladies Home Companion for two years. Or, the set will be given as a premium for two subscribers to either the Farm and Fireside or Ladies Home Companion, and each subscriber will receive one of the free presents on opposite page.

Notice.—The regular subscription price of either of the papers is 50 cents a year. We add nothing to this price to pay for the spoons. You simply become a subscriber to the papers on the above terms and we give them to you, postage prepaid.

GRAND PRIZES FOR THE LARGEST CLUBS.

Besides the Free Presents to subscribers, and the Valuable Premiums or Big Cash Commissions offered to our Agents, we also give Grand Prizes each week to Agents sending the Largest Clubs. The clubs may include both new and old subscribers. These prizes are given in addition to the premiums or commissions allowed for each club.

Grand Prizes are often secured by Agents sending only small clubs. The contests are open to everybody. Try it. You may win one of the Grand Prizes.

FIRST GRAND PRIZE

For the Week Ending Saturday, Feb. 20, 1892.
GENTLEMAN'S GOLD WATCH.

A Genuine American Jeweled Movement, in a gold-filled case, handsomely engraved, and warranted by the manufacturers to wear 15 years, will be given to the Agent or Club Raiser sending the largest number of yearly subscribers for this paper during the week ending February 20, 1892. This watch is sold in jewelry stores for \$25.00 to \$30.00.

SECOND GRAND PRIZE.

Rogers' Silver Plated Tableware, Consisting of 6 Knives, 6 Forks, 6 Tablespoons, 6 Teaspoons, 1 Sugar Shell and 1 Butter Knife. 26 pieces of elegant and serviceable tableware. The Rogers have a reputation for making only standard goods. Sets like this sell in the stores for \$12.00 and more. See our Premium List for description and cuts of the ware.

FIRST GRAND PRIZE

For the Week Ending Saturday, Feb. 27, 1892.
SINGER SEWING MACHINE.

A high-arm, five-drawer machine, with complete set of attachments. We have sold thousands of them for \$17.00 each, though they sell in stores for more than double that amount. It will be given to the Agent or Club Raiser sending the largest number of yearly subscribers for this paper during the week ending February 27, 1892. Many who have purchased the machines from us pronounce them equal to \$55.00 machines.

SECOND GRAND PRIZE.

Decorated China Dinner and Tea Set Containing 78 pieces, of genuine Porcelain China, usually selling in the stores for \$18.00 to \$25.00, will be given to the Agent or Club Raiser sending the second largest number of subscribers for this paper ending February 27, 1892.

The names of the winners of the above prizes will be announced on March 15th.

Names of Prize Winners

For the Week Ending January 23, 1892.

B. F. Baker, Grantsburg, Wis., was awarded the First Grand Prize, a Gents' Gold Watch, for sending 12 subscribers, the largest club received during the week.

Anna Hedlund, Burlington, Neb., secured the Second Grand Prize, Webster's International Dictionary, for sending the second largest club, 9 subscribers.

For the Week Ending January 30, 1892.

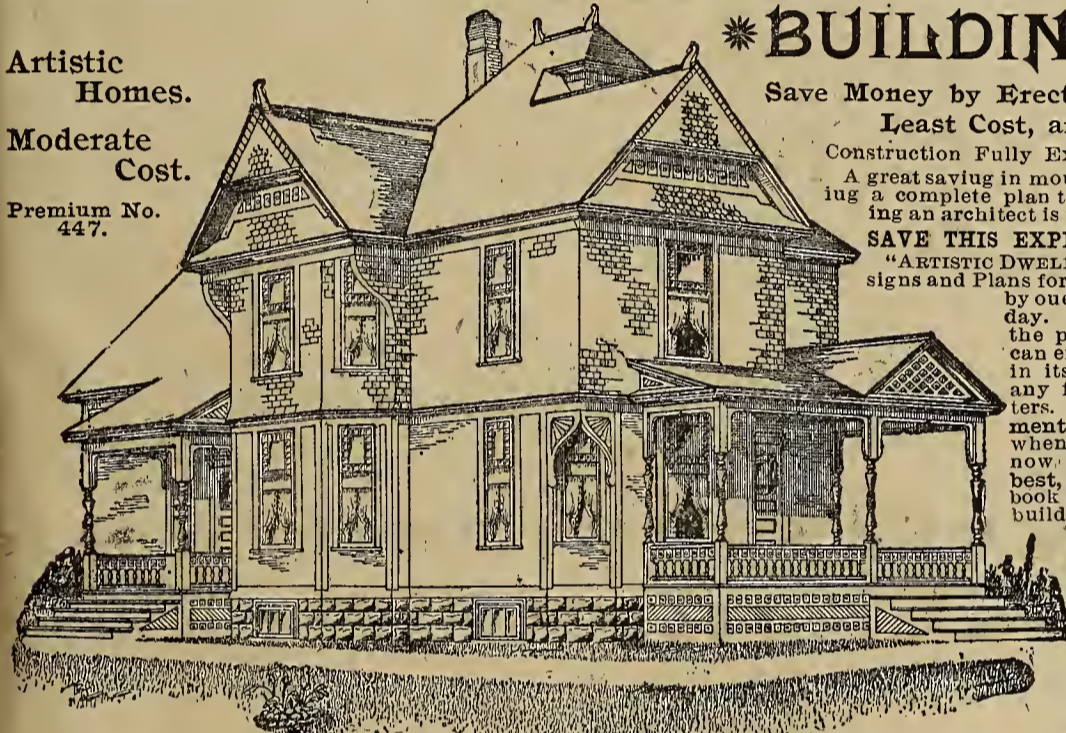
H. B. Riddell, Lockport Station, Pa., was awarded the First Grand Prize, a Singer Sewing Machine, for sending 21 subscribers, the largest club received during the week.

Mrs. G. Eugene Furnum, Wellsville, N. Y., secured the Second Grand Prize, a Decorated China Dinner and Tea Set, for sending the second largest club, 20 subscribers.

Artistic Homes.

Moderate Cost.

Premium No. 447.



A \$2,000 DWELLING.

* BUILDING PLANS. *

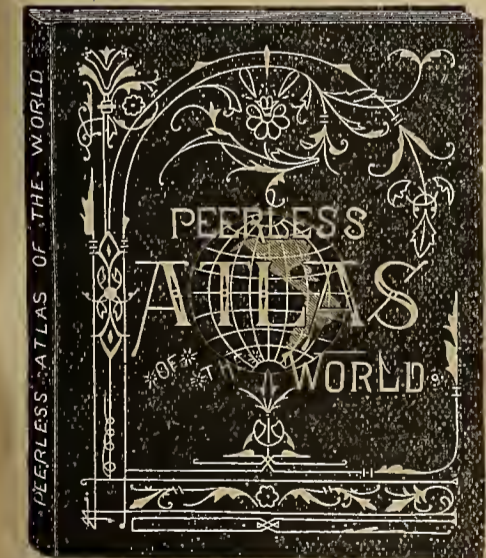
Save Money by Erecting the Best Building, at the Least Cost, and Avoiding Mistakes.

Construction Fully Explained and Cost Carefully Estimated. A great saving in money is always made in building by having a complete plan to work from, but the expense of employing an architect is too great to be considered, by many.

SAVE THIS EXPENSE BY SENDING FOR OUR BOOK.

"ARTISTIC DWELLINGS" is the latest and best book of Designs and Plans for Modern Houses and Buildings, prepared by one of the most prominent architects of the day. By consulting this book and following the plans, in general design, a local builder can erect a dwelling that will be as complete in its appointments, artistic in its finish, as any found in the large cities or building centers. Artistic Homes, Convenient Arrangement, Moderate Cost, were the points in view when these plans were drawn, and the work is now offered for the first time as being the best, completest and most comprehensive book of plans and estimates of dwellings and buildings now in print. The decision to build is always followed by the all-important question, "How shall we build?" and as an aid to deciding this question this book of plans and estimates will be of great value. The work contains Views, Floor Plans and Estimates for fifty-six dwellings and four stables, besides a number of extra pages, prepared especially for our subscribers, giving a number of new designs for Barns, Poultry-houses, Ice-houses, Well-curbs and Buildings especially adapted to farm and suburban residents. This feature will add greatly to its value and commend itself to our readers. Views and Floor Plans of each building in the locality where the building is erected.

The design are shown and careful estimates given of the cost of each, based upon cost of material in the locality where the building is erected. The buildings range in cost from \$650 up—the greatest number being houses of medium cost—from \$1,200 to \$3,000—this class of buildings being most in demand. Every device known to the profession has been employed in the designing of these dwellings to produce, at a low cost, convenient and tasteful houses, and any one contemplating building can get many new and valuable ideas, and make a great saving in cost by a careful study of these plans and estimates. The book is printed upon heavy plate paper and is a beautiful specimen of the printer's art. The regular price of the book, without the plans that have been added for us, is \$1.00, but we offer the complete book, with extra pages, and this paper for one year for only \$1. or give it as a premium for five yearly subscribers to this paper, and each subscriber is entitled to one of the presents on opposite page.



The PEERLESS ATLAS FOR 1892.

Premium No. 331.

Sent free as a premium to any one sending 3 yearly subscribers to this paper, and each subscriber will be entitled to one of the presents offered on opposite page.

Or, the Atlas, together with this paper one year, will be mailed to any address for only \$1.

It Gives the Population, by the Census of 1890,

Of each State and Territory, of all counties of the United States, and of American Cities with over 8,000 inhabitants.

The Peerless Atlas meets the wants of the people more completely than any similar publication ever published. For the price, it stands "Peerless" in every sense of the word. The edition for 1892 contains new maps of southern states never before published,

while accurate and timely information, statistical and otherwise, is brought down to the latest date. As an atlas and general reference book it is broad and comprehensive, valuable alike to the merchant, the farmer, the professional man, in fact, everybody. It is equal to any \$10.00 Atlas. To keep pace with the progress of the age, to understand comprehensively and intelligently the current happenings daily telegraphed from all parts of the earth, you must have at hand the latest edition of the "Peerless Atlas of the World."

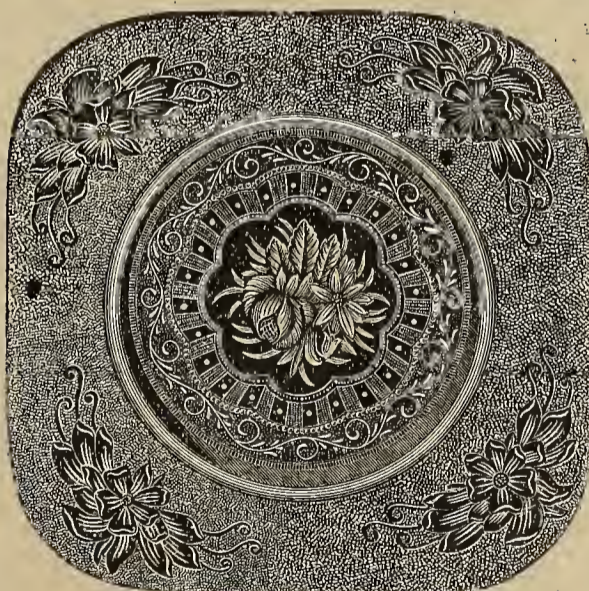
LARGE AND MAGNIFICENT ILLUSTRATIONS embellish nearly every page of the descriptive matter, and faithfully depict scenes in almost every part of the world. They are intensely interesting and constitute an art collection which will be viewed with pleasure and admiration for years to come. Among these are included illustrations of 10 of the principal buildings to be erected for the World's Fair, at Chicago, in 1893.

The Peerless Atlas has as Large and Fine Maps as are found in \$5.00 and \$10.00 Atlases.

Any one may get up Clubs for this Paper and compete for the Grand Prizes.

Even if you do not secure one of the Grand Prizes, you are sure of valuable premiums for your trouble, as the above Grand Prizes are given in addition to the premiums offered to those who get up clubs. See opposite page.

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Premium No. 326. 1 Plate. This little plate makes such a pretty piece of bric-a-brac, when used as a pin-tray, etc., that we offer a single plate for 1 yearly subscriber, or give one free with this paper one year for 50 cents.



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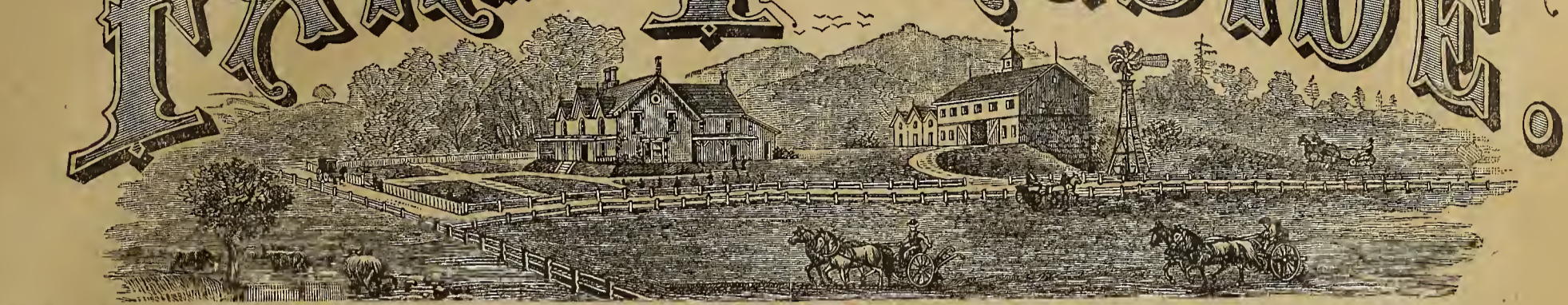
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FARM & FIRESIDE



FOUR EXTRA PAGES THIS ISSUE.

EASTERN EDITION.

VOL. XV. NO. 11.

PHILADELPHIA, PA., and SPRINGFIELD, OHIO, MARCH 1, 1892.

TERMS 50 CENTS A YEAR.
24 NUMBERS.

The Circulation of FARM AND FIRESIDE
this issue is

303,200 COPIES.

The Average Circulation for the 24 issues of
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To accommodate advertisers, two editions
are printed. The Eastern edition being
125,800 copies, the Western edition
being 177,400 copies this issue.

Farm and Fireside has More Actual
Subscribers than any Agricultural
Journal in the World.

Current Comment.

FROM the "Flour of the Future," by
Erastus Wiman, in the *North
American Review* for February, we
take the following:

"What part has science in making of bread? To what extent has this staple article of food been improved and benefited by the immense strides made in scientific knowledge, applicable to almost every other article? There seems a great lack of knowledge of the proper composition and nutritious qualities of flour; of the process of fermentation; of the generating of gases in baking; of the effect of the absence or superabundance of any certain ingredient in bread. It is true that the bread of this century is whiter than that of our forefathers; it may be lighter, from the addition of artificial baking-powders and similar compounds; but is it better, more wholesome, nutritious and digestible? Compared with the making and the composition of bread, which everybody consumes, there is ten times as much science employed in the making of beer.

"The demand has been made for white bread; fashion calls for it; the millers have complied. Mechanical skill has come to their assistance, and every part of the wheat which would tend to darken the flour is being removed with a precision and thoroughness which are simply wonderful. But does this tend to make the bread better? Does it give the workingman a greater return for his hard-earned loaf? Does this refined milling process give to the convalescing invalid, to the growing child, more strength and nutriment than did the old-fashioned dark bread? The answer to the foregoing questions is decidedly in the negative. Indeed, on the other hand, it is impossible to estimate the injury done by the elimination of the most valuable constituents of the grain. A prominent English physician, when discussing this question, has recently said:

"Wheat and water contain all the elements necessary for man, and for the hard-working man, too. Where is the man that can exist on our present white bread and water? There is an old joke about doctors-being in league with undertakers; it would rather appear as if the millers and bakers were in the doctors' pay, as if, were it not for them, and for the white bread they are so zealous in producing, the doctors would have less to do. Separating the bran from the flour became fashionable at the beginning of the present century. This fashion created the dental profession, which, with its large manufacturing industries, has grown up within the last two generations. It has reached its present magnitude only because our food is systematically deprived of lime, of salts and phosphoric acid, the creators of nerve, bone and tissue, which especially are so signally absent from our modern white bread."

"What we need is a reversal of the opinion which demands a white, starchy flour. We further need a milling process which will grind the whole berry of the wheat to such fineness that the grain will not act as an irritant on the membrane of the stomach and bowels. It

is well-known that the germ of the wheat contains a high percentage of ash and phosphoric acid, and also fat; indeed, the germ contains almost all the fat of the grain, and it therefore becomes one of the most important elements of food. The slight discoloration of the flour which is caused by its presence has, however, condemned it, and in the modern system of dressing white flour it is discarded. For much the same reason the cellulose and the cerealine, which are part of the bran, are also unavoidably cast out. This cerealine is one of the most important of the soluble albuminoids in respect to the energy with which it attacks the starch of the grain and converts it into a species of sugar, called maltose or dextrose. It also has a diastatic action, which sets up a ferment wherever it is present, thus largely assisting in the digestion of other articles with which it comes in contact. It acts on the food much in the same way as the saliva or gastric juice. It is, in fact, one of nature's wonderful aids to digestion.

"The bread made from whole-wheat meal has a richer, more palatable taste than ordinary wheat bread. Certainly its constituents, being those provided by nature, are calculated to assist the digestive powers, and especially to counteract any constipated tendencies. For the health of the whole people, as well as upon grounds of economy, it would appear to be a duty to better utilize the nutritious and digestive substances in the wheat.

"This question of proper food is one that thinking physicians might discuss. If it is a fact that, by a simple reform in the grinding and preparation of an article of such universal use as flour, a great benefit can be effectually secured, no greater good could be achieved than by encouraging such a reform. It is important to create a popular feeling strong enough to carry reform and improvement over the strong fortifications which prejudice, ignorance and habit have formed around the present starchy compound which we call wheat bread."

LAST month the big "deal" that combined the eastern Pennsylvania and New Jersey railroads, which control seventy-five per cent of the production and distribution of anthracite coal, threw Wall street into wild excitement over coal stocks. But that excitement will be nothing compared to the deep indignation of consumers of anthracite when they realize that they are completely at the mercy of a gigantic monopoly.

It is said that this railroad consolidation represents an aggregate capital of over \$360,000,000, and that it is one of the largest in railway history. The professed object of this combination is to harmonize producers and carriers of anthracite, and to cheapen its production and distribution. Public opinion stamps it as an evil monopoly, formed for the purpose of destroying competition and realizing immense profits through its absolute control over the wages paid to miners and the prices paid by consumers of anthracite coal.

The combination has been shrewdly planned to evade state laws, but will receive prompt attention from the legislatures of Pennsylvania and New Jersey. The lower house of the legislature of the latter state has already adopted a resolution providing for a full investigation of the deal. If it is found that any corporation doing business in that state as a common carrier has combined with others to advance the price of coal or prevent fair competition in transportation rates, its charter can be repealed. When a corporation joins others in a combination against the welfare of the people for the purpose of enormously enriching the few

by imposing on the necessities of consumers, the state clearly has the right to end the existence of the corporation by a repeal of its charter. That this reserved right has not been exercised as frequently in the past as it should have been, is not to be taken as a precedent for the future. The deep and growing distrust among the people against all great aggregations of capital may soon manifest itself in summary action against all combinations imposing on consumers.

THE Bland coinage bill provides for the free and unlimited coinage of gold and silver bullion into standard coins, for the retirement of all gold and silver certificates now in circulation, and for the issue of notes for bullion deposited in the United States treasury redeemable in coin on demand. The bill abolishes the distinction between gold and silver certificates and notes and converts them all into bimetal paper. These coin notes are to be redeemable in either standard gold or silver dollars, whichever is more convenient to the government.

The bill is accompanied by able majority and minority reports from the committee on coinage, weights and measures, the one explaining and defending the bill and the other opposing it. The minority report says:

"Substantially, all obligations now existing in this country are expressly payable in gold, or have been incurred since this nation resumed specie payments, and has continued on a gold basis. The gold dollar is, therefore, not only the best, but the only honest dollar in which obligations can now be discharged. But, under plausible theory or confident prophecy, the citizens of this country may be misled into repudiation, which they would not consciously approve. To make this bill understood as a measure of repudiation is to secure its defeat.

"The bill provides that the mints of this country shall receive all the silver which may be sent from any quarter for coinage into dollars, sixteen of which shall be convertible into one gold dollar. It is perfectly clear that at the very moment the treasury of the United States shall refuse to pay gold coin upon demand, no one else will receive sixteen silver dollars in lieu of one gold dollar, because the single customer of the world for silver at that price has refused to purchase. Surely there can be no doubt that the effort to raise the market price of silver from ninety cents an ounce to \$1.29 $\frac{1}{2}$ is dependent entirely upon the combined willingness and ability of the United States government to stand alone as a buyer of silver at all times and in any quantity, at the price fixed by this law in gold.

"The minority of this committee submit that the only possible result of the legislation proposed on this bill is the prompt suspension of gold payments by this government and the immediate adoption of the cheaper monetary standard of silver."

Summarizing, finally, the minority urge that

"Not even the advocates of free silver coinage deny that this law is an experiment, new in the history of mankind, and based upon conditions which have never existed. For such an experiment as is proposed, nothing can be a justification which has not in it a certainty of a great reward to the people which undertakes the task. That reward is not in sight of any one save of the owners of mines, who desire to receive at the hands of the law \$1.29 $\frac{1}{2}$ an ounce for a commodity which is sold in eager competition for two thirds of that sum, though diligently produced at an average cost of fifty-one cents an ounce.

"When we attempt to raise the price of the annual product of our mines more than forty per cent, we undertake to lift also the value of

\$3,400,000,000 worth of foreign silver, in the value of which we have not the slightest interest, the co-operation of the foreign owners of the silver is not asked, and the risk of this experiment, six sevenths of which is for the benefit of foreign countries, is to be thrown upon the shoulders of this republic."

A SUBSCRIBER writes: "You say that farmers must build and maintain the public highways. Allow me to say that the highways are for the use of all, and therefore all should build them. If the cities and towns have no use for the roads they should not aid in building them. If the farmers only use the roads, they ought to build them, and should be allowed to build them to suit themselves. But others do use them, and they would make slaves of the farmers for their pleasure and profit. That you, professing to advocate justice and freedom, should thus lend your influence to the further wronging of the farmers, is beyond my comprehension. If the highways are not satisfactory to others than farmers, let them stop using them, or turn out and help improve them and stop cursing the farmers for not being willing slaves." Evidently, this correspondent misunderstands the statement to which he takes exception. It is simply a statement of fact. It is the law and the custom in Ohio, Indiana and some other states to construct and maintain turnpikes with funds raised by assessments on the adjacent lands that are benefited by them. Under such a custom the farmers do bear the expense of building and maintaining the public roads. Understanding this, our correspondent can look at the comment to which he refers in a different light, and appreciate the fact that the FARM AND FIRESIDE is not lending its influence to the further wronging of the farmer or anybody else.

The burden of expense for building and repairing roads should be distributed in accordance with the benefits received. His point, that all who use the highways should help build them, is a good one. In another respect he is quite illogical. Town people build streets and farmers have free use of them. We do not think that he will stop using streets because he did not help build them.

AN Arkansas subscriber, writing in commendation of the article entitled "Ethical View of Speculation," recently published in this paper, declares that all it says about wheat will also apply to cotton. He says that speculation is now working greater evils in the cotton market than in the wheat market, the "bears" having pulled the price of cotton down below the cost of production. There is no other cause of the present low price, the world's product being just sufficient to supply the world's demand. It has been said, "Cotton is the wealth of the South," but the time has come when this great crop is a paying one only to the speculators. He thinks farmers should demand measures of relief from Congress, if they can only get it to stop political scheming long enough to do a little business. But, in the closing words of the author of the article referred to, "It is to be feared that the profits will be pocketed by the speculators so long as the farmer does not realize that as much judgment is required in marketing a crop advantageously as is required in producing it successfully."

FARM AND FIRESIDE.

ISSUED 1st AND 15th OF EACH MONTH BY
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When renewing your subscription, do not fail to say it is a renewal. If all of our subscribers will do this, a great deal of trouble will be avoided. Also, give your name and initials just as now on the yellow address label; don't change it to some other member of the family; if the paper is now coming in your wife's name, sign her name, just as it is on label, to your letter of renewal.

We have an office at 927 Chestnut Street, Philadelphia, Pa., also at Springfield, Ohio. Send your letters to the office nearest to you and address

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

The Advertisers in this Paper.

We believe that all the advertisements in this paper are from reliable firms or business men, and do not intentionally or knowingly insert advertisements from any but reliable parties; if subscribers find any of them to be otherwise we should be glad to know it. Always mention this paper when answering advertisements, as advertisers often have different things advertised in several papers.

Our Farm.

THIRTY-SEVENTH MEETING OF THE WESTERN NEW YORK HORTICULTURAL SOCIETY.

THE FOUNTAIN HEAD.

HERE is no place in the United States where one can learn more of the year's progress, discoveries and success in horticulture than by attending the annual meeting of the western New York society, which is held toward the close of January each year, at Rochester.

This city was noted for its nursery products and its horticultural influence more than half a century ago, and it is to-day the center of a vast tree and fruit producing region, unequalled, probably, all things considered, elsewhere in the world. Some of the statistics, as given in the address of President W. C. Barry, are startling and almost incredible. We are wont to consider the grape products of California as immense and unapproachable, yet the total returns from sales of vineyard products in California for 1889 was only \$4,749,097, while that of New York was \$5,512,215. There were shipped from the port of New York this season, 378,257 barrels of apples to Europe.

Mr. Barry said of horticulture: "It is an industry which, in addition to the advantages it confers from a business standpoint, contributes largely to the health, pleasure and comfort of mankind. To those engaged in it, it affords endless opportunities for experiment and investigation, and opens a field for improvement so vast that we are at loss to determine where to begin and what particular line of experiment to follow.

"Inseparable from the toils and anxieties it involves, there are peculiar delights, charms and surprises, and when the day's labor is accomplished we can turn from the serious and tedious work of money-getting to the consideration of subjects so beautiful, so wonderful, so interesting, that temporarily we are lifted from the scene of our labors here to a new world. I often think that we do not appreciate our occupation, and that we fail to enjoy much that we could were we as observant and studious as we should be. This brings us to the consideration of a particular line of work,

"THE PRODUCING OF NEW FRUITS.

"The possibilities in this direction are so great and the rewards so sure and so rich, that every member of this society, young and old, is warranted in engaging in the undertaking. When we consider that every seed planted is likely to produce something new and different from its parent, we realize what opportunities we possess. The flowers and fruits we have

are beautiful and luscious, but who can tell what can be obtained by intelligent and well-directed efforts in crossing and hybridization? Look at the improvements made in the chrysanthemum during the last half dozen years. The most sanguine could not anticipate or expect such advances as have been made. Judicious efforts will enable us to produce new fruits surpassing all previous introductions in nice appearance and quality, or if it be a flower, one exceeding in beauty and attractiveness of anything yet known or in cultivation." He quoted from President Wilder as follows:

"Plant the best seeds of every good fruit. Good fruits to raise, some lands to suit; Fruits which shall live, their bounties to shed On millions of souls when you shall be dead. There are creations which shall do the world good, Treasures and pleasures, with health in your food; Pleasures which leave in memory no sting, No grief on the soul, no stain on time's wing."

Of the crops in western New York, he said the year 1891 will long be remembered by fruit growers for its remarkable yield of fruit. Almost every tree of an age and in a condition to bear produced an over-crop. Along the highways, in fence corners and other out-of-the-way places, as well as in the extensive orchard and small garden, the trees were fairly breaking beneath the heavy burden they were called upon to sustain. Such sights were never before witnessed by fruit growers, and the lesson it taught most forcibly is this: that fruit culture in this country, and western New York in particular, is an industry of the highest importance to the state, contributing largely to the wealth and prosperity of its citizens, and justifying its development to the fullest extent possible. A good crop of fruit means thousands upon thousands of dollars in ready cash, with which the grower can pay off his debts and indulge in many of the luxuries of life. A good crop of fruit means health for the people, for while fruit as food is not fully appreciated and not employed as extensively as it should be, still the time is not far distant when the value of this product as food will be better understood, and the increased production will enable the people generally to avail themselves of the great advantage of a fruit diet.

Western New York has many special advantages in fruit production. It may not be able to produce fruits as large as those of California, but they are far ahead in quality.

EVERGREENS.

W. S. Little read an interesting report on "Evergreens Hardy in Western New York." The climate was quite severe, for some reason, on evergreens, and it was discouraging to grow a handsome tree like Dawson's cypress to the height of a dozen feet and then have it killed to the ground in a single winter. Even white pine and hemlock were not climate proof, and not infrequently would lose a portion of their foliage. Nothing could be prophesied in relation to the hardiness of a variety on the basis of its origin. The *Sequoia gigantea*, or big tree of California, was hardy, and there were trees in Monroe county fifty feet high. Trees that were hardy in maturity but tender when young could be protected by groups or belts of Norway spruce, or Scotch or Austrian pines. These varieties were too common and had been planted *ad nauseum*, but they had their place as shelter trees.

Newer or rarer kinds should be planted for ornamental specimens. The *Pinus Montana* was an irregular but picturesque tree of small size and perfectly hardy. It grows fifteen feet high and as many broad. *Pinus cembra*, or Swiss pine, was a beautiful, slow-growing tree, with rigid foliage. In Switzerland it grew sixty feet high, but it did not reach this height until after many years. The Japanese cypresses, or *Retinisporas*, were hardy, small trees of great beauty. *Pissifera* was the largest variety. The blue spruces are hardy, and everyone admires their beauty. *Picea pungens* looks as if blue powder had been thickly sprinkled over the green undercolor, as if it had been covered with a blue hoar-frost. *Abies concolor* had a silvery shade. Mr. McMillan, the Buffalo superintendent of parks, considered the blue spruces as hardy and a very important addition to winter shades or coloring. L. B. PIERCE.

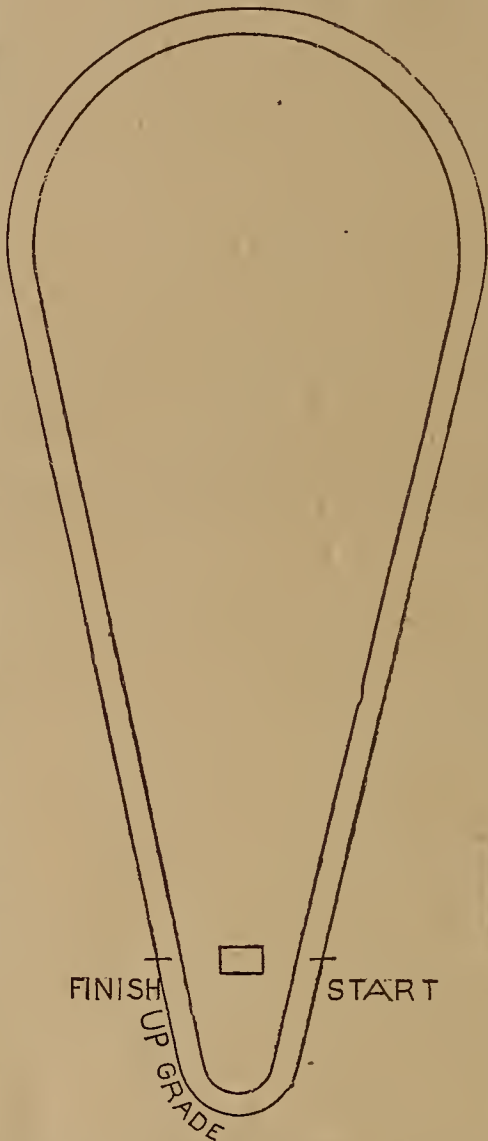
ALL THE WAY DOWN HILL.

A mile track all the way down hill! Such an idea at first thought will probably seem absurd to those who have only seen oval or circular tracks, where horses finish at the same point from which they start. A down-hill track, however, is not only a possibility, but is likely to be a reality in the near future.

A mile track of ironing-board pattern, such as is represented in the cut, can, by grading, be so constructed as to have a gradual descent from the point of starting on one side of the course to that of finishing on the other side. The descent, of course, must be very gradual; still, an elevation of ten feet at the starting point would be sufficient to make some difference in the time made by a trotter, as it would be equivalent to trotting with less than regulation weight.

When the trotting rules of the National and American Associations were framed, the idea of such a track had probably never been discussed; hence, no provision has ever been made by either association to prevent a record over such a course being credited to any horse trotting in races or against time.

As fast records increase the selling value not only of the trotters making such records, but of all the get of the stallions which sire these phenomena, there is a great incentive to secure them. Everyone will concede that a record of 2.10 on a down-hill track would not be equal to a



record of 2.10 on a track where the points of starting and finishing are on a level. It has been suggested that this matter should be brought to the attention of the officers of the associations, who should have their by-laws so amended as to require that the point of finishing the mile on any track shall not be lower than that of starting, and time made over tracks that do not meet this requirement shall constitute a bar. This idea is a good one, and should be acted upon.—*American Horse Breeder*.

CO-OPERATIVE FRESH BEEF.

You may remember publishing once a story—more truth than fancy, I suspect—of a butcher buying a bullock from a farmer for \$16, and charging that same farmer \$18.50 for a dressed quarter of his bullock. Some of us in the South have a partial remedy for the great disparity of price between bullocks and beef, and it could be imitated elsewhere with advantage to farmers.

Eight farmers in one neighborhood form a local "beef market" in the fall. Each week one of them kills and dresses a young animal, usually from a year to a year and a half old, divides it into eight pieces, retains one himself and delivers one to each of his seven partners. With

our small cattle, the half quarters range in weight from twenty to thirty pounds. Account is kept of the weights, and at the end of the season balances are adjusted in money or otherwise, at the convenience of the parties. In this way eight families have eight weeks' supply of fresh beef with very little cash outlay. S.

Huntsville, Ala.

COMMENTS ON RECENT STATION LITERATURE.

BY T. GREINER.

WIREWORMS.—Bulletin No. 33 of the entomological division of Cornell University Experimental Station (Ithaca, N. Y.) is quite voluminous for such a small subject, "Wireworms," containing 172 pages, with many fine and interesting illustrations. I believe every farmer knows the wireworm. It is a slender grub of a yellowish-white color, and unusually hard body, and entirely distinct from the millipede, or "thousand-legged worm." The parent of our wireworm is the "click-beetle," "snapping-bug" or elater, a very common insect with which all our readers are undoubtedly well acquainted. The station has tried a good many ways to prevent injury from these worms, or destroy them and their parents.

The injury most feared by farmers from wireworms is the destruction of seed immediately after it is planted, and before it has had time to germinate. How to protect the seed was the first question. Coating with Paris green paste was tried without effect. A tar coat also failed to protect the seed. Sweet-corn soaked in a saturated salt solution, was found to be as readily eaten by wireworms as if not thus soaked, and no injury resulted to the worms. This, by the way, disposes of the doctrine that wireworms could be driven off or destroyed by applications of salt to the soil. Seed soaked in a copperas solution also served as food to the worms; nor did the addition of chloride of lime to the copperas in the solution help the matter. In the next experiments the seed was soaked in kerosene-oil, but without better effect. Soaking in spirits of turpentine came next. The worms ate the corn and seemed to enjoy it. Even soaking seed corn in a strong solution of strychnine rendered it neither distasteful nor destructive to the wireworms. The results of these tests are quite conclusive in showing that we cannot hope to prevent injury to the seed by treating it with drugs.

The destruction of the worms by starvation was tried next, not only by means of a clean fallow, but also by planting crops upon which it is said wireworms will not feed; namely, buckwheat, mustard and rape. In all cases the worms lived, and seemed to do as well as on land in clover. Insecticides were then put to the test, among them kerosene and kerosene emulsion, crude petroleum, pure and as an emulsion. All these proved practically worthless. Poisoned, sweetened dough, placed on the surface of the ground, was not touched by the worms. Bisulphide of carbon, poured into holes made with a rod in the ground, and the holes immediately stopped up, will kill the wireworms, but the cost of the drug must limit its use to small, valuable areas, where choice plants are attacked, as it would require 150 gallons, or more than 1,000 pounds, of the liquid to treat an acre. Of dry applications to the soil, the station tried salt, kainit, muriate of potash, lime, gas lime and chloride of lime, but all without encouraging results.

All these experiments are valuable in showing us where it will be useless to look for remedies. The destruction of the pupæ and adult click-beetles, however, can in some measure be effected by fall plowing and by trapping. When the worms are full-grown they change to soft, white pupæ, which resemble the beetle in form. This change takes place in the species that commonly infest field crops during the month of July. The pupa state lasts only about three weeks, the insect assuming the adult form in August; but the insect remains in the cell in the ground in which it has undergone its transformation till the following April or May, nearly an entire year. During all this time it passes through its vulnerable stage, for in every case that the soil is disturbed around it, the beetle perishes. This shows that we can destroy

the beetles in the soil by fall plowing. This may be done any time after July 20th, and the ground should be thoroughly pulverized and kept stirred up so that the little earthen cells of the pupæ and adults may be destroyed.

The station people earnestly recommend the method of short rotation of crops to farmers having land badly infested by wireworms. The soil will be rendered comparatively free from the pests in this way. Trapping the adults can also be made a success. The best results were obtained by dipping a small handful of freshly-cut clover in Paris green water, and placing the bunches under boards in various parts of the field. The worms seem to be much more likely to do serious injury in land that has remained in grass a number of years, and upon low ground, especially that of a peaty character and black color. Trapping by lanterns did not give satisfactory results.

TESTING SMALL FRUIT VARIETIES.—How difficult it is to settle definitely the true status of any variety of new fruits when tested by the side of others, is shown quite vividly in the remarks on raspberry varieties, found in bulletin No. 29 of the Alabama Agricultural Experiment Station. "Of the Red Caps," says the report, "the Turner has been perfectly satisfactory, being hardy and prolific, with a fruiting season of three to five weeks. Next to this ranks the Cuthbert, which produces a larger plant and a larger berry, but is less prolific. Golden Queen ranks first as to the size and quality of the berries, but it is neither so hardy nor prolific as the other two."

Now, the Golden Queen is nothing more nor less than a yellow Cuthbert, a sport from red Cuthbert, and the exact counterpart in shape, quality, yield and hardiness. Quite frequently berries are found on Golden Queen plants that are partly red and partly yellow, and it would be the easiest thing in the world to develop a red sport again—a true red Cuthbert—from the Golden Queen. The differences, outside of color, which the station people found between Cuthbert and Golden Queen, were either imaginary or due to environment rather than inherent characteristics.

VEGETABLE TESTS.—Prof. Taft, of the Michigan Experiment Station, and his assistant gave much attention in 1891 to the testing of vegetables, especially novelties. The results of trials are given in bulletin No. 79 of that station. The following is a list of varieties found satisfactory:

Wax Beans.—Cylinder Black Wax, Speckled Wax, Saddleback and Mammoth Wax.

Green-podded Beans.—Osborn Forcing, Dakota Soup, Hatt No. 3 and Shat.

Beans for Field Culture.—Burlingame Medium, Snowflake, Hatt No. 2½.

Beet.—Egyptian and Eclipse for early, Bassano and Blood Turnip for home use, Edmand's Blood Turnip, Lentz, half long Blood and long Blood for late, Salzer Beauty.

Egg-plant.—New York Improved and Black Pekin.

Cucumber.—For pickling, Green Prolific, Long Green, Russian, Parisian and Ever-bearing; for table, Hill's White Spine, Pera and White Japan.

Lettuce.—Grand Rapids is best for the forcing-house. Other good sorts are Chicago Forcing, White Tennisball, Boston Curled, Hothouse, Golden Queen; for hotbed, Chicago is best, but Tennisball, California Butler, Hanson, Simpson, Golden Queen, Hothouse and Landreth Forcing will do well. For summer varieties the following are good: Hanson, Simpson, Grand Rapids, Tennisball, California Butler, Tomhannock, Chicago, New York, White Star.

Radishes for Forcing.—Olive Deep, Scarlet Short Top, French Breakfast, Scarlet Turnip, Round Dark Red, Scarlet Button, Rapid Forcing, White Globe, New Champion, Acme, Non Plus Ultra, Wood Frame.

Radishes for Open Air.—Non Plus Ultra, French Breakfast, Wood Frame, Rapid Forcing and Long Bright Scarlet for early; Chartier, Scarlet Short Top, Surprise and White Summer for summer use.

Tomatoes.—Vaughn's Earliest was first to ripen, and one of the most productive grown. Early Ruby and Atlantic come next. The Ignatum still holds its place at the head of the list as the best all-around tomato. It is very large, regular, solid,

quite productive and medium in time of maturity. Of the new sorts, Long Keeper and Potomac of the pink kinds, and Cumberland Red and Mitchell of the red ones, gave the best satisfaction. They seem to have no bad qualities, and in plant, size, shape, quality and quantity of fruit, leave little to be desired.

My friends may find this list useful. Of course, there are still many other varieties in each class of the vegetables named that are good and reliable; of course, also, there is no need of any home gardener having and planting the whole list. But you can select almost any of these sorts, to the number you may desire, and you cannot easily make a mistake.

MEADOW GRASSES.—Prof. W. J. Beal, of the Michigan Experiment Station (see bulletin No. 77, for November, 1891), has for years been making tests for the sake of comparing the yield of old meadows with those recently seeded. The outcome is instructive in several respects. It shows us that the average yield of the natural sod in all cases was light when compared with plats recently seeded. On the other hand, it is recognized that permanent grass lands accumulate a surplus of nitrogen, the plant food just needed for most other crops. Every farmer should take into consideration the risk of having the grasses of the old sod injured by insects, by the cold of winter or the drouths of summer, and the greater yields, on one hand, and the cost of seed and labor in breaking up and reseeding every two or three years, on the other hand, and use his own best judgment to decide the question whether to keep arable lands of the farm in permanent pasture and meadow or not.

One of the most striking points in Prof. Beal's experiments is the large yield of the plats sown with a mixture of eight different sorts of grasses. This mixture consisted of timothy, tall oat-grass, orchard-grass, tall fescue, fowl meadow-grass, red clover, mammoth clover and *Agropyrum tenerum*, the last named being a wild western grass. The land did not seem to be adapted to growing orchard-grass nor tall oat-grass, but for all that the mixture gave by far the heaviest yield.

I wish to make this more emphatic. We rely too much on one or two grasses for our pastures and meadows. We should use a greater variety to insure not only more pasture and hay, but also a better quality. Different grasses supply different rations, and consequently a more perfect nutrition, besides the "variety" or "change," which is just as acceptable and beneficial to animals as change and variety in food is for human beings. The selection of such grasses, of course, should be made with proper regard to soil and surroundings, but we will not make a mistake if we use plenty of different kinds and plenty of seed.

RINGWORM.—Bulletin No. 16 of the Arkansas Agricultural Experiment Station (Fayetteville) treats on the nature and treatment of a very common skin disease of young cattle, known in most western states as "white scab," and probably under other local names, and termed "ringworm" because of its similarity to ringworm of man. This similarity refers to its existing cause rather than its outward phenomena. Ringworm in cattle does not in every respect present the same characteristics as in mankind. The cause of the disease is a parasitic fungus, and it is very contagious. Preventive measures should be adopted before the disease spreads through the herd and possibly extends to other species of animals. Diseased cattle should be separated from the rest, and brooms or brushes used on the former, not used on healthy cattle. The stables should be thoroughly cleaned and whitewashed, the bedding burned and the halters disinfected. Individual animals are best treated as follows: The hair is clipped close for some distance around the diseased patch and the latter well washed and soaked with hot water and soft soap. The water ought to contain some fungicide. After the scales have been removed by these means, apply over the diseased part an anti-parasitic remedy, such as tincture of iodine, iodine ointment, citrine ointment, solutions of corrosive sublimate, carbolic acid or sodium sulphite. All of these, and many others, are effective when thoroughly and frequently enough applied. In mild cases the iodine ointment or tincture may be used, especially when the disease is situated above

or close around the eye. The tincture is best applied with a small brush or sponge fastened to the end of a short stick of wood, while the ointment may be rubbed in with the finger. Both preparations must be thoroughly rubbed into the diseased parts, and also some distance around it, and the application repeated daily for a week or more. In other situations a more prompt cure may be expected from the use of stronger preparations, such as citrine ointment (nitrate of mercury ointment) or a blistering ointment composed of red iodide of mercury, one part, to six parts of lard and a few drops of croton-oil. One application of this last remedy will effect a cure wherever applied, but it should not be used over too great a surface, nor in the neighborhood of the eye, nor should it be reapplied to the same place. All remedies may be washed off twenty-four hours after being applied. In horses the iodine ointment, nitrate of mercury ointment and carbolic solution (20 per cent in glycerine) are suitable. They must be repeated, and if necessary changed and combined until recovery is obtained. A change of diet, especially to good pasture, is also recommended.

SURFACE STONES.

The question has been asked many times, "Where do the stones come from?" Geologically, they are accounted for; otherwise we know little about them, and perhaps there is not much to learn that is of interest to the tiller of the soil.

A truck-gardener, pointing to a field, said: "I've ploughed that field every year for fifteen years, and every fall I gather a cart-load of stones from it. They keep coming to the surface." This is in accordance with the accepted theory; namely, that all stones are moving to the surface. The frost helps, and a scientist declares that centrifugal force is a factor. The latter, as the result of the earth's revolution, must be slight.

There is no doubt, however, about the fact that stones are working toward the surface, and that is one reason why stones should not be buried—sunk in the earth—even below the reach of the plow, to get rid of them. They may appear again and surprise the farmer by taking off the plow-point. Many a farmer has spent more time to bury a boulder—all time wasted, according to the moving-stones theory—than is required to drill a hole in it, blow it up, and cart away the pieces.

A farmer known to the writer declares that the small, loose stones on the surface are useful; that they absorb heat during the day and give it off at night, thus warming the earth. Anything for a hobby, or an excuse for not working.

Stones are in the way. The more stones in a cultivated field, the greater will be the cost of implements. "There it is again," exclaimed a farmer. "I intended to dig up that rock long before this. This is not the first plow-point it has broken." Look at the hoes and shovels used on a rocky farm—dull, bent, nicked.

Farm tools, even hoes and shovels, should be sharp; not like an ax, but with a clean edge that is not blunt or bent. There are farmers who grind their shovels and hoes as they grind other cutting tools, although not to a point so fine. There are stones, ledges and boulders on farms that must remain; but the loose cobbles, the shifting slate and cleavage have no place in cultivated fields. On the surface or below it, they impede the growth of plants.

The industry of some New England farmers is shown by the stone fences or walls they have built with the stones taken from the fields. There are stone walls so broad that an ox team may be driven over them. But what a waste of land—acres taken up by stone walls. Stones, however, are better piled up than lying in the fields. GEORGE APPLETON.

BUTTER MAKING.

I cannot see the benefit of making butter to keep when the factories make it all the time in large and small quantities. I have worked more or less at the dairy business for over thirty-five years, and could always manage to have my cows fresh about when I wanted them to make good butter. To begin with, you want good cows, young and vigorous. Then give them pure, clean water—not water which is foul from the sewerage of the barn—and good, wholesome feed.

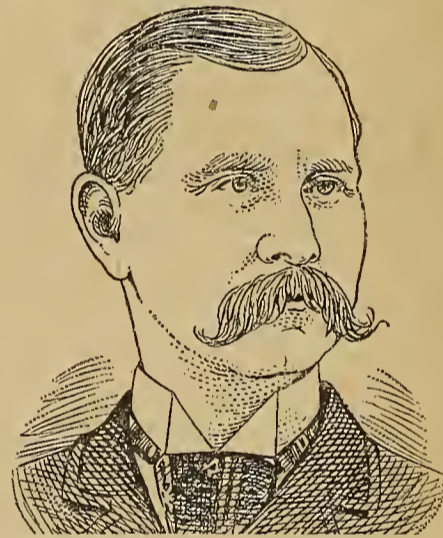
The best feed I ever tried was fodder made by drilling corn thickly. I cut it up when the nubbins got hard, laid it in piles till it got well cured, then shocked it up in medium-sized shocks, tied at top to shed rain, and when so situated, hauled it as I fed it. This beats all clover hay. Cows will do better on it and give more milk.

I also give about one pint of yellow corn-meal once a day, with bran and ship stuff during winter, and about half a peck of sugar-beets, chopped fine and mixed with ship stuff, once a day. This will give more milk and butter than any other feed, I do not care what other mode you try. For spring soiling, sow wheat in the fall, on good ground, and cut as soon as it begins to joint, and feed.

Most people let their cream get too sour before churning to make good, sweet butter. The cream wants to be only slightly acid, and at a temperature of about 68°. When saving cream, do not put warm strippings, as the last milk from the cow is called, into the cold cream. Put about a pint of sour buttermilk in the cream about twelve hours before you churn. If the temperature of the room is 68° or 70°, the cream will be right to churn. Wash the butter with clean, cold water; then work water and the milk out, and salt to taste. No other process will beat this.

The cows need warm stables in winter, and must be kept clean. The udders should be washed off and wiped clean after the stables are cleaned, and the cows brushed and made clean. Too great care cannot be taken in keeping the milk clean in handling. N. E. NORRIS.

Farmers should start the new year determined to raise high-class horses that the markets want at good prices. The experience of the past ten years has been varied, but instructive as well as profitable to horse breeders. Those who have bred high-class horses, have sold their surplus at good prices, and have now the best mares to produce the profitable sort, while those who have not improved have been getting experience, and find the cheap service fee has given them cheap horses that do not pay for the feed they eat.—*Western Agriculturist.*



Officer A. H. Braley of the Fall River Police

Is highly gratified with Hood's Sarsaparilla. He was badly run down, had no appetite, what he did eat caused distress and he felt tired all the time. Hood's Sarsaparilla effected a marvelous change. The distress in the stomach is entirely gone, he feels like a new man, and can eat anything with old-time relish. It is very important

that during the months of **March April May** the blood should be thoroughly purified and the system be given strength to withstand the debilitating effect of the changing season. For this purpose Hood's Sarsaparilla possesses peculiar merit and it is the **Best Spring Medicine.**

April The following, just received, demonstrates its wonderful blood-purifying powers:

"C. I. Hood & Co., Lowell, Mass.:

"Gentlemen: I have had **salt rheum** for a number of years, and for the past year one of my legs, from the knee down, has been **broken out very badly.** I took blood medicine for a long time with no good results,

and was at one time obliged to **walk with crutches.** I finally concluded to try Hood's Sarsaparilla, and before I had taken one bottle the improvement was so marked that I continued until I had taken three bottles, and am now better than I have been in years. **The inflammation** has all left my leg and it is entirely healed. I have had such benefit from

May Hood's Sarsaparilla that I concluded to write this voluntary statement." F. J. TEMPLE, Ridgeway, Mich.

Hood's Sarsaparilla

Hood's Pills act easily, promptly and efficiently on the liver and bowels. Best dinner pill.

Our Farm.

SOME GARDEN REMINDERS.

BY JOSEPH.

HOTBED MAKING.—Now is the time to start the hotbed. By all means have a hotbed. It is soon made. It involves only a slight expense, and gives a great deal of comfort and value for the money expended. I am now talking to my farmer friends, who heretofore have thought it cheaper to buy plants than to raise them. I think you cannot afford to do without a hotbed. I know you cannot, if you wish to enjoy all the privileges that are to be had from the garden, and from rural life. This is especially the case at the north, where many of our choicest vegetables can be brought to maturity only with considerable coaxing and petting. In many sections of this state (New York), for instance, farmers have seldom a full supply of tomatoes, and this simply because they can get but a very small part of the crop to ripen. The reason for this failure, again, is that they use plants bought for a mere pittance of some plant-grower near by, who, knowing he will have to sell them cheap, has also grown them cheaply. The great majority of tomato-plants found on sale in our country towns are not worth the little that is asked for them. It might be just as well, in most cases, if people would sow tomato seed right in open ground.

Good plants, such alone as are worth setting, cannot be bought for fifteen or twenty cents a dozen, and sometimes not at all. If we want to be sure of getting them, and of good varieties, too, we will have to raise them. But we cannot raise them without a hotbed, or without glass protection of some kind. This also is the case with peppers, egg-plants, early celery and cabbage plants, and many other things.

A few boards are available on any place. A couple of ordinary hotbed sashes go a great way in the production of plants for the home garden. They will cost, glazed and ready for business, about \$1.75 apiece, and they will do service for many years, if properly taken care of. Don't fool with waterproof muslin and the like. This is more expensive in the long run, because after a year or two it will be unfit for further use, and it never is half as satisfactory as glass, except, perhaps, in more southern localities and for special purposes. My advice is to use glass. Sometimes second-hand sash can be bought at a mere song.

Now, provided you have two regular sashes, select a sunny spot to the south side of a building, tight board fence or hedge, and dig a pit two feet deep, to correspond in size with the size of frame. Should mice or moles abound in the vicinity, board it up tightly from the bottom. The frame may rise twelve inches above the surface at the back (north) end, and eight inches at the front or south end. Fill the pit full of reasonably fresh, fermenting horse manure; if possible, of well-fed working horses. Tramp it down pretty hard, especially in the center, where it would otherwise be apt to settle, causing a depression in the bed. Put on the sashes and give the manure time to come to an active state of fermentation again, which will be in two or three days; then put on five or six inches of rich, clean garden soil, or better, for part of the bed, set in some boxes (flats) such as your groceryman receives his canned meats and fish in, filling these boxes with good loam. The boxes or soil should come within a few inches of the glass. You are now in shape to start all the early plants you may want for the garden. Plant tomato, pepper and egg-plant seeds, and in fact all others, if you have the boxes, in these flats. Be sure to firm the ground well over the seeds. The secret of getting good tomato and egg plants is to start them early, and give them plenty of space afterward, without forcing their later growth by an excess of bottom heat. Early start, slow and healthy development, and stocky growth are what you want.

I usually raise my early cabbage-plants, early celery, cauliflower, onion-plants, etc., in the soil-filled part of the bed, always sowing seed in rows across the bed; that is, from front to rear (north and south).

How do we KNOW that BURPEE'S SEEDS GROW? Because they have all been thoroughly tested by us before they are offered to you. We know their Vitality and Vigor. We also know that their QUALITY IS THE BEST. We raise them from the choicest selected strains, either upon our own farm or subject to our personal supervision, and we are justified in the warrant given in our Catalogue—that there are NO BETTER SEEDS than BURPEE'S. From good seeds only can good crops be grown; nothing should induce you to risk planting any others. You can learn all about THE BEST SEEDS, and what they cost in BURPEE'S FARM ANNUAL for 1892. Write for it to-day. W. ATLEE BURPEE & CO. PHILADELPHIA, PA.

SEEDS, ROSES, PLANTS WE SEND PREPAID BY MAIL 40 Packets Choice FLOWER SEEDS; all different. These will be sufficient to plant a whole flower garden. . . \$1.00 30 packets choice VEGETABLE SEEDS; you will get everything in this collection. . . 1.00 20 very fine EVER-BLOOMING ROSES, 20 kinds; all will flower this year. . . 1.00 25 choice "Rainbow" Pansy Plants; an elegant bed. . . 1.00 8 Double and 8 Single Geraniums; all different. . . 1.00 20 choice Chrysanthemums; different; prize winners. . . 1.00 12 elegant sorts of Begonias; all flowering kinds. . . 1.00 Handsome illustrated 96 page Catalogue, with best terms to agents, describing above Roses and all Plants, mailed for 8c stamps. Don't order your Roses, Plants or Seeds before seeing our prices. Can save you money. We have all the new Begonias, Chrysanthemums, Geraniums, Roses, etc. GOOD & REESE CO., Box 6, Champion Greenhouses, Springfield, Ohio.

NEW TOMATO TRUCKER'S FAVORITE. For Main Crop. Very large, smooth and solid. Good shipper, extra quality, ripens even and don't crack. Color purplish red. 25c. per pkt. 5 for \$1. For full descriptions, testimonials and colored plates of these valuable entirely new vegetables send for our 1892 Descriptive Catalogue of Seeds and Plants, a full list of tested Seeds, Grape Vines, Early Westbrook and other Strawberries, Blackberries, Raspberries, Currants, Champion Peach, &c., and all desirable Flower Seeds. It should be read by every one that plants seeds. THE BEST LIMA BEAN For MARKET GARDENERS and FAMILY. Earlier than Early Jersey and matures farther North—extra large. Most prolific. Grows very compact, and shells more quarts to the bushel of pods than any other. Quality absolutely the best. 25c. per pkt. 5 for \$1. Sold by us only. JOEL HORNER & SONS, Delair, Camden Co., N. J.

SEEDS POPULAR NEW VEGETABLES. 32 Regular Size Packets worth \$3.00, only 50 cents. Lentz's Blood Turnip Beet, earliest and best; New Golden Champion Pole Bean, mammoth size, extra quality, enormous yield, fit for use in July; Yosemite Mammoth Wax Bush Bean, giant pods 12 to 14 inches long, best quality; Bell's Surehead Cabbage, sure to form a large, fine head; Everbearing Cucumber, extra early, bears continuously; Giant Pascal Celery, immense stalks, 2 feet long and very heavy, excellent, nutty flavor; Gold Coin Sweet Corn, three giant ears of sweetest flavor on each stalk; Big Boston Lettuce, mammoth sized heads, fine and tender; Princess Musk-melon, thickest, finest, and most luscious; Dixie Watermelon, only one that paid shippers will last season, best quality, productive; Giant Red Onion, large size and desirable; Blue Beauty Pea, extra quality, early, productive; Logan's Giant Tomato, often weighs 2 to 3 pounds each, early, fine quality, enormous bearers, 9 feet high; Bell's World's Fair Ruta Baga, the best in every respect. The above 14 packets of Vegetable Seeds, together with 8 other varieties and 12 packets of choice Flower Seeds, mailed in a box with our Beautiful Floral Annual for only 50 cents. Our Floral Annual (costs about 10c), together with a packet each of Henderson's Bush Lima Beans, Crozy's Cannas, Bell's Everblooming Pansies, only 10 cents. About 50,000 plants tried our Seeds last season, and pronounced them the Cheapest and Best. Address J. J. BELL, Windsor, N. Y.

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BLOOMINGTON (PHENIX) NURSERY. 600 ACRES. 13 GREENHOUSES. TREES AND PLANTS We offer a large and fine stock of every description of FRUIT and ORNAMENTAL TREES, Shrubs, Roses, Vines, Small FRUITS, Hedge Plants, FRUIT and FOREST TREE SEEDLINGS. Priced Catalogue mailed free. Established 1852. PHOENIX NURSERY COMPANY Successors to SIDNEY TUTTLE & CO., BLOOMINGTON, ILL. Do not fail to mention Farm and Fireside when you write to advertisers.

You Will Find among the immense collection in my seed catalogue (free to all)—some varieties of reliable vegetables not to be found in any other, native or foreign. Among others: THE NEW ONION.—All who raise red onions should plant the new one, Southport Early Red Globe; early as Danvers, round as a ball; a splendid cropper. My catalogue (free) tells all about it. THE NEW PEA.—Which is soon to take the place of the American Wonder—as early a dwarf, with larger peas, larger pods and a better cropper. See engraving in my catalogue. VALUABLE BOOKS.—"Cabbages and Cauliflower," "Squash Raising," "Onion Raising," "Carrot and Marigold Raising." No other books will compare with these for minute instruction. 30 cts. each; the four for \$1.00. Also "Fertilizers," how to make and how to use, 40 cts., or all five for \$1.25. Seed Catalogue free. J. J. H. GREGORY & SON, MARBLEHEAD, MASS.

A BARGAIN FLOWER SEEDS! Collection of 10 Choice Annuals (everybody's favorites), all new fresh seed, sure to grow and bloom this season. Pansy, 40 colors and markings; V. Phlox, 20 colors; Verbena, 18 colors; Pinks, 10 colors; Petunias, 10 colors; Asters, 12 colors; Balsam, 8 colors; Portulaca, 7 colors; Mignonette and Sweet Alyssum. FOR 12 CENTS two of your friends who grow flowers, I will send, post-paid, the complete collection, one pkt. each of the ten varieties (enough for any ordinary garden.) This is a BONA FIDE offer, made to introduce my home grown flower seeds to new customers and which I guarantee to please you or the amount paid will be refunded and the seed given as a present. Address, Miss C. H. LIPPINCOTT, 528 Sixth Street, South, Minneapolis, Minn. Mention Farm and Fireside when you write.

GRAPE VINES Small Fruits. All old and new varieties Extra quality. Warranted true. Lowest rates. New Descriptive Catalogue Free. T. S. HUBBARD CO., FREDONIA, N. Y. Please mention this paper when you write.

By all means, try a few rows of onions of the larger kind for transplanting also. Then you may have a row or so of potato seedlings (if you have the seed), a row of early lettuce-plants, and certainly a few rows of radishes of one or the other of the early, round forcing kinds. The latter will reach table size in about four weeks from the time of sowing, and give you an early taste of the good things that are to come. When the radishes are off, you can use the space for the tomato-plants, which will now require more room. The seedling onions also can be taken out and transplanted in time for giving room to tomato and egg plants, etc.

Now friend, if you have never made a beginning in such work, do it now. Don't wait any longer. I know if you go at it right you will like it, and sure enough add a couple more sashes to your hotbed next season. If you are too busy yourself, in April and May, to open the sashes a little every bright, warm day, and close them again in the afternoon, or to give what little watering the bed may need, certainly some member of the family—the wife, a daughter or young son—will volunteer to give this slight attention. It is not much that is needed, and it will make quite a difference later on in the appearance of the family garden and proceeds from it.

Where other vegetables, such as beets, carrots, beans, melons, etc., are wanted as early as they can be had, seed of all of these may also be started in hotbed and transplanted. Beets and carrots transplant easily, if started early and set out a few inches apart in rows in the open ground, as early as the soil is fit to work. These vegetables can be had weeks before your less provident neighbors would even think it possible to raise them in open ground. Melons and the like should, of course, be started on inverted sods, or in pots, cans, etc., and transplanted with the soil attached to them.

NEW TOMATOES.—I was astonished to see in an Illinois agricultural weekly, an editorial notice that the Mansfield tree tomato had made "the greatest sensation of any recently introduced vegetable." Have I been asleep for a year or two that I did not notice anything about this "sensation?" I believe I have spoken of this novelty before. It is a strong grower, with heavy, dark-colored, rank foliage and large, somewhat irregular but very solid fruit. Of course it is not a "tree" tomato in any sense. In fact, it grows so rank that it sprawls all over the ground. But you can train it to single stalk and tie it to a ten-foot pole, with the expectation that in rich soil and a good tomato season and location, it will reach the very top of the pole. On the other hand, we have other varieties that will nearly or fully accomplish the same thing. Henderson's Ponderosa (No. 400 of last season) is not a bit behind Mansfield's tree in rankness. Both indeed are representatives of the same type and very similar in most respects, except that Ponderosa is even larger and more solid, and perhaps less irregular than the other. If my friends want a real ponderous tomato, let them try Ponderosa. A prize of \$500 is offered for the largest specimen grown this season. Unfortunately it is only one who can get this, and it may be the one least skilled in horticultural matters who will get it. Now that the Louisiana lottery concern, fortunately, seems to be dead, here is a legitimate chance for giving luck an opportunity to reach you.

Small Business. Many advertisers say, "Send stamp for circular"—petty business this—asking the public to share the cost of advertising. Think of it; you are expected to spend two cents for your own postage and two cents for return postage on circulars! THE BUCK-THORN FENCE CO., Trenton, N. J., don't do business that way. Send them your address on a postal card; they will send you sample, circular; write you a letter—all costing them about six cents. "Best of Satisfaction." The BUCK-THORN I ordered from you last spring is giving the best of satisfaction. C. W. LOVE, Fairpoint, Ohio.

12 pkts. Flower Seeds, 10c. 12 pkts. Vegetable Seeds, 30c. 6 Dahlias 50c. 10 Gladiolus 30c. All \$1. Half 50c. H. F. BURT, Taunton, Mass.

Our Farm.

Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

ORCHARD NOTES.

METHODS OF PLANTING.

I do not feel quite so ready to coincide with Mr. Stayman in regard to the importance of placing a flat stone under a newly-planted tree. As he well says, there are many good orchards twenty years old, and more, which were grafted on piece roots; so I can say there are many others, equally good, of which the roots were allowed to grow without artificial control. In both cases there may be good orchards under both methods, or one orchard may be better than the other, without the difference being due to the supposed cause. My experience with apple-trees is that their roots will go down to permanent water if they can, and if the land is such that they cannot, their longevity will not be great. A well-drained soil, in which the water moves freely, is also essential. I have heard of the use of flat stones under trees for many years, but have regarded it as a mere notion. Mr. Stayman's advocacy makes the idea more respectable, because of his intelligence and experience; and thinking the matter over, it occurs to me that some good may sometimes be done by causing the roots at first to make a free horizontal growth. But as there must be a limit to the size of the stone, it cannot prevent the roots from turning downward at its edges, and penetrating the soil as deeply as if no stone had been there. It is very hard to control the natural habit of growth of a vigorous tree.

LOCATION FOR ORCHARDS.

In New England I have generally found the best and longest-lived orchards growing on rich hill-sides of moderate slope. If the ground is somewhat springy, so much the better. If the rock beneath is of a decaying slate, rich in lime and potash, so much the better still. In these localities it does not seem necessary to cultivate or manure the orchard at all. Such land is capable of growing both grass and apples for many years; but it is better to feed off the grass with sheep than to mow it. The sheep will not gnaw the bark while the grass is abundant. Daubing the trees with fresh blood protects against sheep as well as rabbits. The best protection, however, is thin, flat strips of wood, lath, old staves, or waste veneer, tied about the trees. It will not do to plant apple-trees in land underlaid with solid ledge within eight or ten feet of the surface. Such an orchard may do very well for a time; but let a long drouth occur, and it will be greatly damaged. Orchards on light soils with previous sub-soil will thrive, if the land is made rich at first and frequently top-dressed. On level land of this character it is advantageous to keep the ground in cultivation with low-hoed crops that will pay for the manure used. In this way the orchard may be fertilized until in full bearing at no expense, and will come to that stage of growth more quickly for the cultivation.

TAKING UP NURSERY TREES.

A good many years ago I sent a large order of trees to a Canadian planter, who wrote me on their receipt, approving of their appearance, and concluding with the remark that I had the somewhat unusual custom of sending the roots along with the trees. I have met this gentleman many times since, at the meetings of the Montreal Horticultural Society, and he almost always refers to the matter. The orchard has been a very successful one, but I think much the fuller share of credit belongs to the owner. Many good trees are ruined in a few years, if not the first year, by the bad treatment they receive at the hands of the planter; and I have noticed that this class of planters are the ones who want the nurseryman to warrant the trees to live. That is a warrant that I have never given yet. I think the nurseryman does his whole duty when he sells well-grown trees true to name, takes them up carefully and packs and ships them in a businesslike manner. I am not now a nurseryman, but as a buyer I am quite satisfied when so treated. I want roots to the trees as nearly two feet long as possible, and want them dug, not pulled up. Pulling on a young tree before its roots are well loosened almost invariably tears them off at their junction with the stem of the tree, making a most injurious wound.—T. H. Hoskins, in Orchard and Garden.

SPRAY YOUR TREES \$17 Brass Spray Pump \$5.50

Express paid for. Endorsed by the leading Entomologists of the U.S. Valuable illus. book, "Our Insect Foes," free. Our farmer agents are making \$5 to \$20 per day. Send 2 cent stamp for 120-page illus. Farm Book. Satisfaction guaranteed or money refunded. Ill'd Catalogue free. Address: P. C. LEWIS MFG. CO., Catskill, N. Y.

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Reasons why YOU SHOULD ORDER YOUR SEEDS FROM T.W. WOOD & SONS RICHMOND, VA. GARDEN SEEDS. At 1,000 miles distance we make it just as easy for you to obtain the best and most improved varieties and latest novelties, as we DELIVER POSTPAID anywhere all Garden Seeds at packet and ounce rates, and give 25 cts. worth extra pkt. Seeds for each \$1.00 worth ordered. We also have special low rates on Seeds in bulk. Our GRASS, CLOVER, and Field Seed trade is the largest in the Southern States—most convincing proof of our high-grade Seeds and reasonable prices. NO RISK IN SENDING MONEY through the mails, and we guarantee the safe arrival of all orders filled by us. Full information and cultural directions of all Farm and Garden Crops is given in our New Catalogue, which is the most instructive ever issued. Mailed free. Send for it. T.W. WOOD & SONS Seedsmen, RICHMOND, Va.

NEW CHAMPION SWEET CORN THE EARLIEST SWEET CORN IN THE WORLD EARS GROWN IN 61 DAYS 12 1/2 INCHES LONG BY 8 1/2 INCHES IN CIRCUMFERENCE WEIGHING 1 1/2 POUNDS EACH WE WILL SEND ONE PACKET EACH OF THIS CORN, CHAMPION RADISH AND GRAND RAPIDS LETTUCE TOGETHER WITH OUR BEAUTIFUL ILLUSTRATED SEED CATALOGUE FOR 1892 FOR 10 CENTS. OR 4 PEARL TUBEROSE BULBS. PRICE & REED, ALBANY, N.Y.

THE BEST TOMATOES. A.W.L. LIVINGSTON'S. Everybody Admits. OUR OTHER SEEDS ARE EQUALLY AS RELIABLE. Seed Annual Free. Write for it NOW! A.W. LIVINGSTON'S SONS, BOX 135, COLUMBUS, OHIO.

FRUIT TREES, GRAPE VINES, PLANTS AND ORNAMENTAL STOCK. Apple, Peach, Pear, Plum, Cherry, Quince, Apricot Trees, Grape Vines, Raspberries, Blackberry Bushes, Currant and Gooseberry Bushes, Asparagus and Rhubarb Roots, Shade and Ornamental Stock, Orange Ridge Plants. Peach Trees by the dozen, hundred or thousand, or by the car-load—no yellows, no contagious disease. 150,000 Peach Trees for sale. Write for terms and catalogue. Address J. A. RAMSBURG, Nurseryman, Frederick City, Md.

PLEASANT AND PROFITABLE Employment selling Fruit and Ornamental Trees, etc., around home and elsewhere, with Catalogue Free and description of premium given. Address, J. HAMMOND, Nurseryman, Geneva, N. Y.

850,000 GRAPE VINES 100 Varieties. Also Small Fruits, Trees, &c. Best rooted stock. Genuine, cheap. 2 sample vines mailed for 12c. Descriptive price list free. LEWIS ROESCH, Fredonia, N. Y.

HIGH-BRED SEED POTATOES. One barrel worth two of Northern seed. All that grow Irish Potatoes should have my catalogue, free, with testimonials. J. W. HALL, Marion Station, Maryland.

Order Your New SEED POTATOES Now. We are now offering our complete stock, including our newest and most valuable varieties at reduced rates. Send for prices. HOOKER, GROVER & CO., Nurserymen and Seedsmen, ROCHESTER, N. Y.

WHY NOT buy your Seed Potatoes, Oats and Field Beans right from the grower and save money? Catalogue of twenty BEST varieties FREE. Edward F. Dibble, Honeye Falls, N. Y.

STRAWBERRY PLANTS by mail. 300 of 4 kinds, early to late, ONLY \$1. By Ex. per 1,000, \$1 and up. Best plants and packing. Price list free. All berry plants. SLAYMAKER & SON, Dover, Del.

SEEDS 10 pkts. Flower seeds 10c. 5 pkts. Vegetable Seeds 10c. Cat. Free. J. J. Bell, Windsor, N. Y.

INQUIRIES ANSWERED

BY SAMUEL B. GREEN. Strawberries Wanted.—F. J. D., Greenfield, Tenn. You had better write to several nursery concerns for their catalogues. I suggest the following: M. Crawford, Cuyahoga Falls, Ohio; J. T. Lovett, Little Silver, New Jersey; Ellwanger & Barry, Rochester, New York. Transplanting the Catalpa.—C. C. P., Madison county. They may be transplanted in the spring as soon as the land can be worked, and any time thereafter before the leaves start. If good, ordinary care is used they should all live, for they move very readily.

Orange Seedlings.—G. G., Hymers, Md. Oranges from seeds should be budded with some early fruiting kind. You had better get some greenhouse man to do the work for you. Most greenhouses have fruiting orange-trees, and the buds are readily obtained from them.

Root-rot in Peach-trees.—J. C., Annona, Tex. There is no known remedy for root-rot in peaches. The trees may suffer for moisture, which, with the bearing of fruit, seriously weakens them. I would suggest manuring with wood ashes and then mulching the ground around the trees.

Russian Apricots.—C. D. G., St. John's, Mich. The Russian apricots are still in the experimental stage, and we know too little about them to warrant setting them on a large scale. It is my opinion that they will have to be greatly improved before they will be much in demand.

Missouri Pippin—Inclining Trees.—A. K., Juniata, Mich. Originated probably by Brink Hornsby, Johnson county, Mo. Tree is hardy; a strong, upright, rather spreading grower, and good annual bearer. Of good quality, but a little coarse, sub-acid. Season late winter.—I would recommend inclining them to the south-west, but not enough to disfigure the planting. This is not so important in Michigan as in the north-west, where apple-trees sun-scaled badly.

Best Varieties of Fruit.—E. K. M., Arcola, Ind., wants to know (1) what is the best early pear for northern Indiana; (2) the best fall and winter pears; (3) the best plum for same section; (4) the four best kinds of raspberries; (5) strawberries; (6) and if the LeConte and Keiffer pears would do well in northern Indiana.

REPLY.—1. Probably the Clapp's Favorite. 2. Seckel, Keiffer, Beurred Anjou. 3. Wild Goose and Blue Damson. 4. Black raspberries, Gregg, Ohio, Nemaha Red raspberries. 5. Pistillate kinds: Warfield No. 2, Crescent, Haverland; perfect-flowering kinds: Captain Jack, Wilson. 6. They are well adapted to that section.

Gas Lime.—E. J. E., Barnesville, O. Gas lime is not a very valuable fertilizer for most soils, but if it can be had for the hauling it could probably be used to advantage. It is especially valuable for clover. It must never be used fresh, as it will kill most anything until exposed to the air, but it should be piled up for four or five months, after which it is harmless. Two tons to the acre would probably be enough. If put in small heaps in autumn it will be ready for use by spring. If hauled now it would not be safe to use if it is fresh, but if it has been exposed at the gas works for a considerable time it is all ready to use.

Pear Scions—Book Culture.—F. S., Blackwell, Mo., writes: "Do you mean to say by putting pear scions in the ground they will take root and make young trees?—Please oblige me by telling me where I can get the best book on raising apple, peach, plum, cherry trees, etc., with plates plainly showing how its done."

REPLY.—All kinds of pears will not root from cuttings, but the Keiffer may be easily propagated in this way in a warm climate, such as that of Alabama. Farther north it is necessary to use some artificial heat under them to make them root.—I think Thomas' American Fruit Culturist would be the best book for you to study on the cultivation of fruits. It is profusely illustrated. Can be obtained of Orange Judd Co., New York City.

Earliest Grapes—Grafting Queries.—J. W. R., Manertown, Va. The earliest grapes of good quality are Moore's Early, Brighton, Lady, Worden, Hartford Prolific.—1. Scions for grafting should be cut in autumn, but in your section are generally all right to use if cut during mild days in winter or in spring. 2. I have been most successful in grafting the grape during the first warm days of spring, before the sap started. You had probably better begin the last of February or first of March. 3. I use an ordinary cleft graft and insert scion in the stump below the ground and cover the cut surfaces with blue clay or grafting-wax. 4. Scions for grafting may be obtained from any reliable nurseryman. They can be sent safely by mail.

New Grapes.—V. S. C., Mill Grove, Mich. The Moyer is a new red grape that originated in Canada. It resembles the Delaware in fruit and habit of growth, but it is perhaps a little healthier and more vigorous. Clusters quite small and somewhat imperfect. Berries a little larger than Delaware. It ripens with Moore's Early, and is chiefly valuable on account of its earliness. The Eaton is a very promising new black grape, similar in foliage, growth and other respects to Concord. Bunch and berry large and more attractive than Concord. Double shouldered, compact; skin thin but tough. Ripens with Concord or a little earlier. A very promising new grape. The Moore's Diamond is a new white grape of fine quality and a heavy cropper. Bunch large, shouldered, compact. Ripens eight days before Concord. Berry sprightly, sweet, melting; skin tough. Foliage and vine strong and vigorous. The most promising new white grape, and I think is destined to be largely planted for market.

FINCH'S IMPROVED EXTRA EARLY TREE TOMATO. This excellent variety is distinguished from all others by its large stiff stalks, as shown in the engraving, standing up like a tree without support of any kind. It bears very abundantly of large, bright red tomatoes, very smooth, and of fine flavor; it is extremely early and entirely free from rot; the leaves are very curly and of a very dark green, almost black, making the plant very ornamental as well as useful. FINCH'S EVERGREEN CUCUMBER A very handsome variety of superior quality, firm and crisp, of a dark green color, growing from 10 to 12 inches in length, and immensely productive. FINCH'S SURE HEAD CABBAGE Is all head and sure to head. Very uniform in size, firm and fine in texture, excellent in quality, and a good keeper. Alfred Rose, of Penn Yan, N. Y., grew a head which weighed 6 1/2 pounds. I will send a Packet each of Tomato, Cucumber and Cabbage, with my illustrated Catalogue, for only 25 cents in Silver or 25 cents in Stamps. FIVE CINNAMON VINES FREE This rapid growing Vine, with its beautiful heart-shaped leaves, glossy green peculiar foliage, and delicate white blossoms, emitting a delicious cinnamon fragrance, will grow from 10 to 30 feet in a single season, and for covering Arbors, Screens and Verandas is without a rival. I will send 5 BULBS FREE, and postpaid, to every person sending me 25 cents for the above Tree Tomato Collection; the bulbs will produce 5 Beautiful Vines exactly the same in every respect as I have been selling for One Dollar. Address plainly FRANK FINCH, (Box S) CLYDE, N. Y. Every person sending SILVER for this collection will receive extra packet of the Mansfield Tomato (also known as the Prize) which has been grown over nine feet in height, bearing fruit of good quality, weighing from one to two pounds each. MANSFIELD TREE TOMATO GIVEN AWAY Mr. Finch is perfectly reliable and trustworthy.—Ed. Mention this paper when you write.

BUY NORTHERN SEEDS GROWN SEEDS Laugh and Be Merry. Hard times will be no more if you plant Salzer's Northern Grown Seeds. Why? You ask. Because they are vigorous and prolific. You have often seen seed come up weak and sickly—that wasn't Salzer's Seed. Then again when it came up it failed to produce a crop—it hadn't vitality enough—that wasn't Salzer's Northern Grown Seed. THEY DON'T ACT THAT WAY. Now when you sow, you want to reap. That is eternally right. You can't reap bountiful crops from poor seed. That you may have glorious harvest I offer you my SEEDS Because being Northern Grown they are full of life, vigor and productiveness—won't be downed—must produce. I am the ONLY Seedsmen in America—cultivate 5,000 acres—making a specialty of Farm Seeds, growing same with great care. WHAT DOES IT DO FOR YOU? It gives you rousing crops, gladdens your heart and fills your purse! No weakly crops from my seeds! 100,000 Farmers will tell you this. Unsolicited they attest to yields of 64 bu. Barley, 134 Oats, 120 Corn, 40 Spring Wheat, 400 Potatoes, 5 Ton Hay, Etc. per Acre. FOR 12 cts. In order to introduce my splendid Northern Grown Seeds everywhere, I offer postpaid; 1 Pkg. Melon, 1 Pkg. Radish, 1 Pkg. Lettuce, 1 Pkg. Tomato, 5 Pkgs. Elegant Flower Seed. 9 Pkgs. listed in no Catalogue in America under 50c. Elegant Catalogue contains 4 Col'd Plates 5c. Catalogue above 9 Pkgs. Seed, 17c. postage. Catalogue & 10 Farm Seed Samples 18c. stamps SEND NOW. JOHN A. SALZER LA CROSSE, WIS.

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Our Farm.

LAND FOR FREE HOMESTEADS IN CALIFORNIA.

HAVE four inquiries from FARM AND FIRESIDE readers for government lands on this coast. I have repeatedly said that there were millions of acres of such, but all either hill or mountain, steep, mostly brush covered, and very little plowable land to be found near the coast. Nearly all have fine, rich soil, healthful climate, plenty of wood, water, game and fish; but generally only suited for stock range, dairies, poultry, bees, and the hand culture of fruits of all kinds, especially olives.

In the interior, these hill and mountain lands will only produce crops and fruits where irrigated. There are desert or arid lands, which can be reclaimed only by great, expensive irrigation works, and storing water in immense reservoirs. When brought under sufficient water, they are exceedingly valuable. The climate is generally good and healthful, the soil exceedingly rich and lasting, and if sufficient water is provided, then there can be no crop failures if the man does his duty. He "touches the button;" water, soil and sunshine do the rest.

Furnishing the water makes these lands expensive, but not nearly so costly as they seem to my fellow-citizens east. For forty acres of such land will produce more value every year, in common farm and fruit crops, than one hundred and sixty acres of the best prairie land in Illinois or Iowa.

Then, again, they are high because capitalists have gained possession of millions of acres of the very best of such lands, and ask ten times too much for the land and twenty times too much for the water. I mean just what I say. It is simply abominable extortion, and I have the facts and figures to prove it.

Here is an example: In the great, rich San Joaquin valley capitalists have secured, practically by fraud on government and people, 300,000 acres, which cost them from twenty-five cents to \$2.50 an acre, to which they have brought irrigation waters at a cost of from \$1.60 to \$2 an acre. And they are now trying to sell them to settlers at from \$60 to \$150 an acre, with an entailed yearly water tax on each acre of from \$2 to \$10.

Now, let us see how extortionate this is. On the east side of the Sierra Nevadas, in Lassen county, California, in Honey Lake valley, sixty-five miles north of Reno, are 300,000 acres of the richest, finest, sandy loam lands, six to one hundred feet deep, mostly free from alkali; climate one of the very best for all crops, mild winters, delightful summers, simply perfect for all fruits as hardy as the apricot; fine scenery, the purest of mountain water; a perfect home market for everything, with a railroad in operation through the valley, opening up the world's markets to it at Reno.

Now, a company has been formed, and will put an abundance of water on this land, and deed the water to the occupier of the land at a total cost to the occupier of \$7.50 an acre. If the settler has his homestead right, he can save \$200 on one hundred and sixty acres by using that right. This company will have, when completed, one of the very largest dams and reservoirs (holding back eleven billion gallons of water) in the world, with one of the finest bodies of land to distribute it on in the world. And I know that at this small cost per acre, that they will have made in the end an exceedingly handsome profit; handsome if they only sell one half of the water.

This is the very best chance for cheap and good homes I know of on this coast, and gives something of a showing of what it should cost to store up water to make the vast, arid interior one of the finest producing countries on this earth, and the safest and surest.

I do not wish my readers to get scared over what I have said about alkali killing irrigated land, for there are very few points in these arid regions where they would be injured in this or the next generation by alkali. But it would surely come in due time. Alkali can be gotten rid of in many places by winter-flooding the land with water. This is amply provided for in the Honey Lake system.

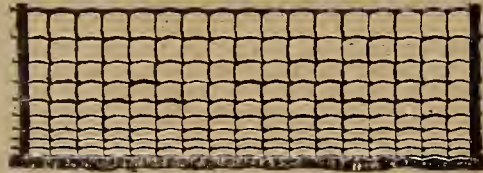
Sonoma county, Cal. D. B. WEIR.

EXTRACTS FROM CORRESPONDENCE.

FROM OREGON.—The Illinois valley is the garden spot of southern Oregon. All we need to bring this section forward is a railroad, there being thousands of acres of the best fruit land in the state to be had for the taking. There is one thing I wish to impress on all intending fruit growers: raise nothing but first-class fruit. There is no money in scrub fruit any more than there is in scrub stock. The best peaches, green and dried, prunes, dried, and late-keeping apples, green, always bring good prices. E. F. M. Kerbyville, Oregon.

FROM MISSISSIPPI.—Boonville, the county-seat of Prentiss county, is a new town with about six hundred inhabitants, but is rapidly building up and with the possibilities of a city, when we consider the immense crops of fruit and vegetables raised in and around it. Our country has fine soil and the best of climates, which are now attracting many enterprising farmers, whose labor will be richly rewarded by immense crops of cotton, corn, potatoes, oats and fine stock. The scenery of the country is beautiful. You look across picturesque valleys, the soil of which is generally of a dark sandy loam or black hammock land. Some good farms of all sizes are for sale cheap, as labor is scarce since the negroes have generally left for more congenial climates—Arkansas and the Mississippi bottoms. D. T. B. Dry Run, Miss.

FROM MICHIGAN.—The farming season of 1891 was, in some respects, a very favorable one, and in others very unfavorable here. Frost about the first of June killed much of the wheat and growing hay. This was followed by a drouth, not severe, but the frozen wheat and grass could not start for want of rain. But for the frost the drouth would have been harmless. As it was, both of these crops were light, and hay is as high as \$13 to \$15 per ton. Another frost, July 31st, utterly ruined much of the corn and bean crops and injured the potato. Where these crops were not injured by frosts they were unusually good. Potatoes sold from the field at twenty-five to forty cents per bushel. Now they are worth the latter figure. Winter wheat and rye were looking well when the snow covered them, and the acreage is larger than ever before in this (Mecosta) county. H. C. P. Big Rapids, Michigan.



The Greatest Thing in the World is Love.

Coiled Spring Fence will better restrain domestic animals; but even then the "greater includes the less", for LOVE prohibits the use of barbed wire. Send for FREE copy of the "Coiled Spring Hustler."

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

45 sold in '88
2,288 sold in '89
6,268 sold in '90
20,049 sold in '91
60,000 will be sold in '92

A Steel Windmill and Steel Tower every 3 minutes. These figures tell the story of the ever-growing, ever-going, everlasting Steel Aermotor. Where one goes others follow, and we "take the country."

Though sold, we were unable to make all of the 20,049 Aermotors in '91. Orders often waited 8 weeks to be filled, but now we have vastly increased our plant and are prepared promptly to plant our increase in every habitable portion of the globe.

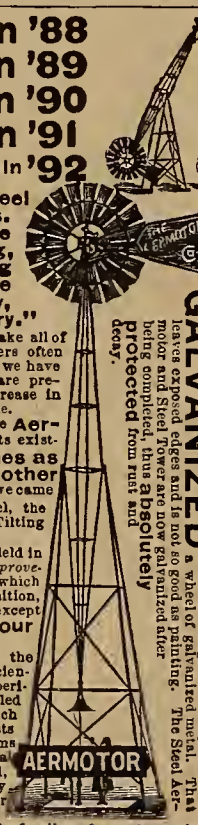
Are you curious to know how the Aermotor Co. in the 4th year of its existence, came to make many times as many windmills as all other makers combined? How we came to originate the Steel Wheel, the Steel Fixed Tower, the Steel Tilted Tower?

1st. We commenced in a field in which there had been no improvement for 25 years, and in which there seemed no talent or ambition, and none has yet been shown except in the invention of our Aermotors.

2d. Before commencing the manufacture, exhaustive scientific investigation and experiments were made by a skilled mechanical engineer, in which over 5,000 dynamometric tests were made on 61 different forms of wheels, propelled by artificial and therefore uniform wind, which settled definitely many questions relating to the proper speed of wheel, the best form, angle, curvature and amount of sail surface, the resistance of air to rotation, obstructions in the wheel, such as heavy wooden arms, obstructions before the wheel, as in the vanless mill, and many other more abstruse, though not less important, questions. These investigations proved that the power of the best wind wheels could be doubled, and the AERMOTOR daily demonstrates it has been done.

3d. To the liberal policy of the Aermotor Co., that guarantees its goods satisfactory or pays freight both ways, and to the enormous output of its factory which enables it to furnish the best article at less than the poorest is sold for. For 92 we furnish the most perfect bearings ever put in a windmill, and have made an exhaustive revision of the Aermotor and Towers.

If you want a strong, stiff, Steel Fixed Tower—if you want the tower you don't have to climb (the Steel Tilted Tower) and the Wheel that runs when all others stand still that costs you less than wood and lasts ten times as long (The Steel Aermotor) or if you want a Geared Aermotor to churn, grind, cut feed, pump water, turn grindstone and saw wood, that does the work of 4 horses at the cost of one (\$100), write for copiously illustrated printed matter, showing every conceivable phase of windmill construction and work, to the AERMOTOR CO., 12th and Rockwell Sts., Chicago, or 12 Main St., San Francisco.



GALVANIZED It is not enough to make portions of leaves exposed edges and is not so good as painted. The Steel Aermotor is protected from rust and decay.

BROWN'S FRENCH DRESSING FOR LADIES' SHOES. B. F. BROWN & CO., Boston, U.S.A., M'fgs. Mention this paper when you write.

HENCH & DROMGOLD'S ALL-STEEL FRAME SPRING-TOOTH HARROW. THE BEST Tooth Holder ever invented. HENCH & DROMGOLD HARROW. Ask your dealer for it.

What? and How? THE DINGEE & CONARD CO., Rose Growers and Seedsmen, West Grove, Pa. Mention this paper when you write.

RAWSON'S TESTED SEEDS. Mr. Rawson grows annually 50 Acres of Celery, 15 Acres of Tomatoes, 20 Acres of Squash, 10 Acres of Cauliflower, 10 Acres of Beets, 20 Acres of Spinach, in addition to many other varieties not included in the 10 Acres cultivated under glass, in which he makes a specialty of growing Lettuce, Cucumbers and FLOWERS. W. W. RAWSON & CO., Boston, Mass.

IF all farmers knew what some farmers get out of "PLANET JR." catalogues, we could sell them at a dollar apiece. S. L. ALLEN & CO., 1107 MARKET ST., PHILADELPHIA. Be sure to mention this paper when you write.

THE COST IS THE SAME The Hartman Steel Picket Fence. Costs no more than an ordinary clumsy wood picket affair that obstructs the view and will rot or fall apart in a short time. HARTMAN MFG. CO., BEAVER FALLS, PA.

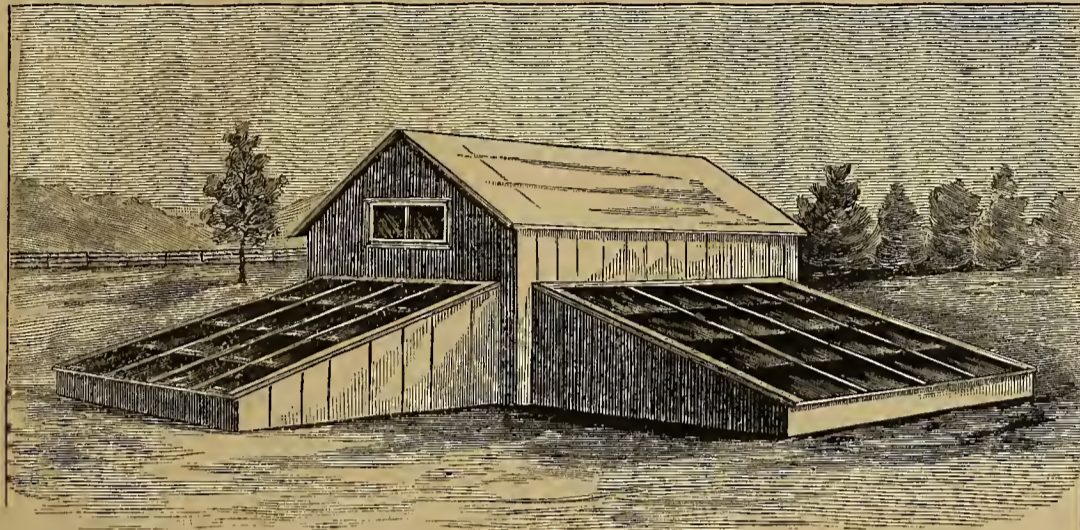
Our Farm.

THE POULTRY YARD.

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

HOUSE WITH GLASS RUNS.

The plan given is for a house made of rough material, or ornamental, as preferred, the object being not so much to show the interior arrangement as to give sunlight from sunrise to sunset. If the house faces the south-east, the warmth will enter as soon as the sun is up. When the sun gets around to the west, the warmth will reach the other run, one being on the south-east and the other on the south-west sides of the house.



The door to the house may be placed anywhere at the opposite sides. The window at the gable end is intended simply to light the interior to permit of the hens seeing how to get on and off the roost, though a window may be on one of the sides also. A house 10x12 feet, with each run 6x8 feet, will be sufficient for a flock of fifteen hens, and they will have a warm place, with plenty of light, as well as ample protection from snow and cold winds.

MIXED FOOD.

Wheat, corn and oats are better than any one of the grains exclusively. A variety is always an advantage, but when several kinds of grain are fed, and the fowls are given a variety of it, they have not received a variety of food, but a variety of grain only. No kind of grain, nor mixtures of grain, will serve to promote egg production, or satisfy the demands of the hens. They need something more than can be had from grains. A variety of food consists of grain, milk, meat, bones and bulky food in some form. If you cannot procure all of these materials, feed a portion of them. Give something else besides grain. Do not deprive the hens of grain, but do not compel them to exist on grain. There are many readers who have written us to know why their highly-fed hens do not lay. Grain is fed three times a day, and the feed-hopper is kept full, but the hens do not lay, and finally become sick and die. Such hens are overfed. They are "grain sick," having been supplied well with grain food, yet are literally wasting away in bone and tissue because they have not a variety of food, the grain being an incomplete ration.

INSIDIOUS ROUP.

The hens eat heartily until they die, says a subscriber, and he states that they are poor in flesh, combs pale, no lice, yet they die, showing no symptoms. The food is grain and potatoes. The difficulty is probably roup, which is of a form affecting the fowl as consumption. There is sometimes a discharge from the nostrils, and again large lumps appear on the head and body. When this happens it indicates a scrofulous form. To attempt to cure either disease is as difficult as to attempt to cure the same in human beings. One cannot afford to administer doses of medicine daily to a flock of hens. The hens afflicted as mentioned are constitutionally weak, and have inherited the disease. The remedy is to destroy them and begin anew, first disinfecting the premises. Some of the difficulties arise from draughts in the poultry-houses, and when only corn and potatoes are given the hens become enfeebled from a lack of more nutritious food. Roup is an insidious disease, and may be present when least expected.

CHEAP FENCE FOR DUCKLINGS.

If ducklings are hatched early, do not allow them to run at large, but confine them in a little yard. This yard can be made so cheaply, and easily that the ducklings may be attended to almost within reach of the dwelling-house. Simply fasten four boards, one foot wide and eight feet long, together at the ends, so as to form a square yard, either by hooking the ends together, or by driving small stakes on each side of the boards, and the work is done. Ducklings cannot get over the fence, and it may be easily removed to a new location in a few minutes. A box should be provided for the hen and ducklings at night, and as the hen will not leave the ducklings, no fence will be

needed to confine her. This fence will confine ducklings until they are nearly matured, as it is difficult for an adult duck of the large breeds to escape over a fence one foot high. The boards will also serve as a wind-break when the winds are high and cold.

FROSTED COMBS.

If the combs and wattles of the males are frozen the birds will become unserviceable, and when the combs of the hens are frozen the hens will not lay. The comb is a tender portion of the body, and when frozen, the bird suffers the same intense pain that a person will when the hands, ears or feet are frozen (or frosted, as it is sometimes termed). On very cold days, and especially during windy weather, the birds should be well sheltered, or frosted combs will be the result.

POULTRY MANURE.

When the droppings are frozen they quickly deteriorate in value after they begin to thaw. To save them, keep dry earth or sifted coal ashes under the roost, as an absorbent, and also sprinkle plaster over the dirt. The absorbent material should be cleaned away as often as possible, and before putting the droppings in a barrel, mix them well with the absorbent. If you have a garden plot it will be no disadvantage to spread the droppings on the ground, especially after the ground has been plowed or spaded, early in the season.

GAPES AND FILTH.

Early chicks will have to contend with filthy ground, and as gapes are always present where filth exists, the places selected for chicks should be very clean. It is much easier to prevent gapes than to cure the cases. The best way to do so is to use air-slacked lime freely on the ground, and use it often. It will do no harm to the chicks, and will prevent both gapes and certain diseases.

DRY FOOD IN WINTER.

Ground food may be fed dry. The moist food is liable to become frozen, which renders it useless to the hens, and much of it is also wasted. All mixtures of ground food may be placed in the trough dry, but if the temperature is above the freezing point, it may be slightly moistened. Chicks may also be fed on dry food exclusively.

The \$50.00 Incubator offered as a special Grand Prize for March, on page 19, one of the most successful in the market, is manufactured by The Buckeye Incubator Co., Springfield, Ohio. Their catalogue and "Treatise on Raising Chickens," which they will mail for 2-cent stamp, contains much valuable information and presents a profitable business to persons with small means.

PEACH-TREES IN POULTRY-YARDS.

As soon as the weather opens set bit peach-trees in the poultry-yard. They will not rob the hens of any room, and will assist in providing shade after they grow. The hens will also protect the trees to a certain extent, by keeping down insects, weeds and grass, and the manure from the hens will be washed into the soil for the support of the trees. A poultry-yard can just as well be used for supplying peaches as eggs, and the reason peach-trees are suggested is because they grow rapidly.

INQUIRIES ANSWERED.

Mating Ducks.—Mrs. Q. J., Goshen, Ark., writes: "I have one drake and three ducks. Will the eggs from all the females hatch?"

REPLY:—Yes; a drake may be mated with as many as six ducks.

Turkeys.—C. F. P., Chapman, Kan., writes: 1. "What is the standard weight of White Holland turkeys? 2. Can they be kept in a yard with good results?"

REPLY:—1. The standard weight of a matured gobbler is twenty-six pounds, and of a hen, sixteen pounds. 2. They will not thrive in confinement.

Small Eggs.—T. F. M., Martinez, Cal., writes: "I have some Pekin ducks, one or two of which lay very small eggs. I feed plenty of soft food three times a day. Is this fault a common one, or is it due to feeding or condition?"

REPLY:—It may be due to some of the ducks not being fully matured, though it will occur from overfeeding of adult ducks. It is a very usual occurrence, and is often but temporary, however.

White Wyandottes.—W. S., Amboy, Ohio, writes: "Will some one that has had experience with the White Wyandotte please state whether they are as good layers as the Plymouth Rock, and are they as great sitters? In other words, are they as good a general-purpose fowl as the Plymouth Rock?"

REPLY:—There is but little if any difference between the breeds named as layers and sitters.

Scaly Legs.—J. A., Laconia, Ind., writes: "What ails my fowls? They are mostly Light Brahmas, and they did well until fall, when they began to have rough, scaly legs. What is the cause and cure?"

REPLY:—It is due to the work of minute parasites. Anoint the legs with crude petroleum once a week for a month, and the legs will become clean.

Mites—Overfeeding.—C. L. G. writes: "How can I get rid of mites in the hen-house? My fowls are apparently healthy, with combs bright and red, but they are dying. Their livers are of a light color and enlarged."

REPLY:—Saturate the poultry-house with kerosene (coal-oil), getting it into every crack and crevice.—You have overfed your fowls, and probably not supplied them with grit. Examination will show them to be excessively fat.

Animal Meal or Desiccated Fish.—J. L. S., Arlington, Mass., writes: "Which, in your opinion, is the best feed for laying hens, animal meal or desiccated fish? Would one take the place of the other, or would it be best to feed both?"

REPLY:—The animal meal is usually preferred, but the difference is so little—both being highly nitrogenous and containing lime in the shape of bone—as to make it no advantage which is used, but it is perhaps best to use both, by way of variety.

Miscellaneous.—J. R. G., Brownsville, Tenn., writes: "1. Does parched corn make hens lay? If so, how often should it be given? 2. How can one best dispose of feathers from pickings? 3. What is the best use to make of sifted coal ashes?"

REPLY:—1. It may be fed freely, its use being more as a corrective of the bowel disorders than as a particular food, the parching adding nothing to the corn. 2. We know of no one who buys them. They should be added to the manure heap. 3. Use them in the dust-box, or on the floor under the roosts.

CORRESPONDENCE.

AN EGG RECORD.—I send you my egg record for 1891. January 1st, 1891, I began with thirty-five hens. I sold, during the year, 319 dozens eggs, and received \$44.85. The average price per dozen was fourteen cents. The highest price received was twenty-three cents and the lowest ten cents. The breed was Silver Spangled Hamburgs.

Angola, Ind. MRS. F. D. [Our correspondent should also have sent an account of the expenses, in order to determine the profit.—Ed.]

HOW MUCH FEED PER DAY.—The quantity of food required by an animal is estimated at about three per cent of the live weight daily. This merely supports life; all increase of weight, or any product whatever, must be supplied by an extra allowance; so that twenty hens, weighing 100 pounds, would need three pounds of solid, nutritious food daily to live, and no more. This is equal to three twentieths of a pound for each hen. About one and one half ounces of food is required daily for egg production, in addition to that required to keep the fowl alive. One quart of corn, or other grain, for eight hens is the regular daily allowance, given in at least two meals, and it has been found that a flock of hens, when supplied with a constant provision of grain before them, will consume about this quantity, and no more, in addition to other food in the shape of insects, grass, etc., that they may pick up during the day. One quart, it is said, is the allowance for eight hens one day, divided into two meals, of a pint each. This allowance is about forty-six quarts a year for each hen, or nearly a bushel and a half. Such feeding is too high, and may be reduced. The practice of estimating the food required according to the live weight of the fowl is foolish, and has been exploded long ago. It was once common to estimate in that manner for animals, but it was soon discovered that a small animal would often eat more than one that was larger. The health, appetite, activity, prolificacy and habits of each individual effect the experiment. Science has been brought in to assist, but the "natural depravities" of the creatures were permanent obstacles to demonstrating facts. Berlin, N. J. J. A. H.

EVERY MOTHER
Should Have It in The House.
Dropped on Sugar, Children Love
to take JOHNSON'S ANODYNE LIMENT for Croup, Colds, Sore Throat, Tonsillitis, Colic, Cramps and Pains. Relieves Summer Complaints, Cuts, Bruises like magic.
THINK OF IT.
In use over 40 YEARS in one family.
Dr. I. S. JOHNSON & Co.—It is sixty years since I first learned of your JOHNSON'S ANODYNE LIMENT; for more than forty years I have used it in my family. I regard it as one of the best and safest family remedies that can be found, used internal or external, in all cases. O. H. INGALLS, Deacon 2nd Baptist Church, Bangor, Me.
Every Sufferer From Rheumatism, Sciatica, Neuralgia, Nervous Headache, Diphtheria, Coughs, Catarrh, Bronchitis, Asthma, Cholera Morbus, Diarrhoea, Lameness, Soreness in Body or Limbs, Stiff Joints or Strains, will find in this old Anodyne relief and speedy cure. Pamphlet free. Sold everywhere. Price 3 cts. by mail, 6 bottles, Express paid, \$2. I. S. JOHNSON & CO., BOSTON, MASS.

HATCH CHICKENS BY STEAM.
IMPROVED EXCELSIOR INCUBATOR
WILL DO IT.
Lowest-priced First-class Hatcher made.
Simple, Perfect, Self-Regulating.

Thousands in successful operation. Guaranteed to hatch a larger percentage of fertile eggs at less cost than any other incubator. Send 6c. for illustrated catalogue.
Patented and Sole Manufacturer.
GEO. H. STAHL, Quincy, Ill.
Mention this paper when you write.

INVINCIBLE HATCHER
A Self-Regulating, Simple and Reliable Incubator for \$15.00. Guaranteed by the makers of the Celebrated BUCKEYE, as good a hatcher as the most costly Incubator sold. Send 2-cent stamp for No. 1 catalogue to
BUCKEYE INCUBATOR CO., SPRINGFIELD, O.

EGGS & FOWLS FOR SALE
From 50 Varieties. Largest Range in the West. My fowls won over 800 prizes at 7 State shows last fall. For full description send three one-cent stamps and get the most illustrated catalogue out; size 8x11 inches, 32 pages.
CHAS. GAMMENDINGER, COLUMBUS, O.
Mention this paper when you write.

52 FIRST PREMIUMS
LARGE ILLUSTRATED CATALOGUE FREE
PRAIRIE STATE INCUBATOR CO.
HOMER CITY, PA.

INCUBATORS AND BROODERS.
Brooders only \$5. Best and Latest Invention on raising Poultry. Address Geo. S. Singer, Cardington, O.

EGGS From first-class stock. Prices Away Down. Send three stamps for 40 page Catalogue, finest published, elegant colored plates. C. C. SHOEMAKER, Freeport, Ill.

POULTRY DALBEY BROS. Washington C. H., O., breed 25 kinds. Send 10c for handsomely illustrated poultry book of recipes; how to make a fortune, etc.

Monitor Incubator. Bristol, Conn.

ARE YOU LOOKING FOR A VEHICLE?
WE HAVE IT We Make the Best on Earth.
OUR B-O-E and "VELVET" CARTS. SEND FOR ILLUSTRATED CATALOGUE FREE OF VELVET AND STANDARD VEHICLES.
THE LIPPELMANN CARRIAGE CO., Cincinnati, O.

Just Drive 'Em In and CLINCH 'Em. THEY WILL HOLD ANYTHING.

You can mend your Harness, Halter or any Strap better, quicker, cheaper than any Harness maker can. COST ONLY 25c PER BOX OF ONE GROSS. For Sale at Grocery and Hardware Stores.
NO TOOLS REQUIRED. BUFFALO SPECIALTY MFG. CO., BUFFALO, N. Y.
Mention this paper when you write.

BEFORE YOU BUY A NEW HARNESS
send a 2c. stamp with your address for 72-page illustrated Catalogue of 65 different styles of hand-made PURE OAK LEATHER HARNESS. Single Sets, \$7 up; Double Sets, \$16 up. Every harness Warranted and Shipped subject to approval. It costs only a 2-cent stamp to know what we can do for you. TRY IT. King & Co., Wholesale Mfrs., No. 5 Church St., Owego, N. Y.
Mention Farm and Fireside.

THREE TIMES ONE IS—ONE.
THE IMPROVED Keystone Disc Harrow
with Adjustable Seeder attachment, Does the Work of Three Machines at once—Plows, Sows, Covers. See it!
Ball Bearings save horse flesh and repairs. Double Levers fit hilly ground. Sows any kind of Seed. Saves its cost every year. Once seen—it's Keystones or nothing. Send for Harrow book, "The Reason Why." Free. Mention this paper.
KEYSTONE MFG. CO., Sterling, Ill.
Branches: Kansas City, Mo. St. Louis, Mo. Council Bluffs, Ia. Columbus, O.

Always mention this paper when answering advertisements, as advertisers often have different articles advertised in several papers.

Our Fireside.

NOBODY KNOWS BUT MOTHER.

Nobody knows of the work it makes
To keep the home together;
Nobody knows of the steps it takes,
Nobody knows—but mother.

Nobody listens to childish woes,
Which kisses only smother;
Nobody's pained by naughty blows,
Nobody—only mother.

Nobody knows of the sleepless care
Bestowed on baby brother;
Nobody knows of the tender pray'r,
Nobody—only mother.

Nobody knows of the lessons taught
Of loving one another;
Nobody knows of the patience sought,
Nobody—only mother.

Nobody knows of the anxious fears,
Lest darlings may not weather
The storm of life in after years,
Nobody knows—but mother.

Nobody kneels at the throne above
To thank the Heavenly Father,
For that sweetest gift—a mother's love;
Nobody can—but mother.

A Postponed Courtship.

BY ROBERT BARNES CRAMER.

ATALL, slim and well-dressed young man walked into Grand Central depot in New York City, on a warm day in early summer, and after looking hurriedly about him, inquired of another young man whom he met at the entrance, the way to the ticket office of the N. Y. C. & H. R. railroad. The person addressed turned and replied to the effect that he also was looking for that ticket office and that he was on his way thither, following the directions of a third party, who had told him to go straight down the line until he came to the sign of his road. "I'm trying to find it," he said, shifting a well-worn satchel from his right to his left hand, and using the one thus disengaged to reach behind him for his handkerchief, "but the names of all these railroads look alike. There's the N. Y., N. H. & H., and the H., N. Y. & C., and the N. Y. C. & H., and—"

"Here's the place," the slim young man said, interrupting the other and pointing ahead with his umbrella. "This is the New York Central road, and that goes, I think, to Huntersville."

"Huntersville!" echoed his companion. "Are you going to Huntersville?"

"Yes," answered the slim young man. "Well, that's fortunate. I'm going there too."

They looked curiously at each other when the man with the satchel said this, and the inspection seemed to be mutually satisfactory.

"My name is Parker," the slim young man said, "Homer Parker, and I'll give you my card when we get inside."

The other nodded. "Glad to meet you, sir. My name is William Hunter, but I'm better known as plain Bill at home. I live in Huntersville."

By this time they had reached the ticket office, and Mr. Parker led the way through the brass railing. The train for Huntersville was just ready to leave when they reached it and climbed on board.

"Do you smoke?" asked Mr. Hunter.

Mr. Parker said he did.

"Then we'll go up into the first car. They allow smoking there."

The slim young man acquiesced, and they found seats together. Each drew from his pocket a handful of cigars to offer the other, and they settled down to become better acquainted.

The run from New York to Huntersville occupied a little more than three hours, and in that time Mr. Parker learned that Mr. Hunter was a farmer, and the son of a farmer, whose place was very near to his own destination. Mr. Hunter had come to New York on a semi-annual business and pleasure trip combined, and was then returning. The slim young man was no less communicative. He said that he had seen a Huntersville boarding-house advertisement in one of the New York papers, and that he had closed arrangements with its landlady, by mail, whereby he was to spend several weeks with her. He was by profession the editor of an agricultural paper—the which Mr. Hunter subscribed for—and his hard work during the past ten months had earned for him a long vacation.

He had asked his companion about the boarding-house referred to, and his reply was in every way satisfactory.

"Mrs. Besson," said Mr. Hunter, "owns the place, but Fanny runs it. When her husband died, Fanny took hold and—"

"Who's Fanny?" interrupted Mr. Parker.

"Mrs. Besson's daughter."

"How old is she?"

"Twenty-two," replied the farmer promptly.

The slim young man recrossed his legs and looked reflectively out of the window at the flying scenery. "All right," he said. "Go on."

"When Mr. Besson died, Fauny took hold and helped her mother. The old lady was feeble, and it was necessary for something to be done to support them. So Fanny opened a boarding-house, and as I was coming to New York, she asked me to print some advertise-

ments for her. Mebbe there's a lot of people ou this train going up to her house now."

The thought struck Mr. Hunter forcibly, and he looked about him. No one in the smoking-car seemed to have the appearance, as he judged them, of being prospective guests at the Besson boarding-house, and he turned his head with a look of regret. The presence of Mr. Parker, however, established firmly the efficiency of advertising, and he was pleased to see how quickly the returns were coming in.

"You'll like Fauny," he said. "She isn't exactly handsome, but there's something about her that everybody takes to. Her mother you won't see much of, but the old lady is first-rate company when she's well and about. I've been a friend of the family for some time."

Huntersville proper is not on the line of the railroad, but a station has been established at its nearest point for the few people who traveled to and from it in that way. At the station the two men found, when they alighted from the train, two conveyances awaiting them. Mr. Hunter's younger brother had driven down to meet him, and a comfortable little buggy stood waiting for the slim young man.

"Good-by," Mr. Parker said to his traveling companion. "I'll see you again before I leave, I hope."

Mr. Hunter said he thought it highly probable, and the farm wagon rattled off. Mr. Parker then bestowed his various bundles in the little buggy, and climbed in after them. The single seat was shared with him by a diminutive colored boy, who said he was Mrs. Besson's driver, and asked his passenger if he would take the straight road or go around through the woods. To which the slim young man replied that owing to his ignorance of the geography of the country he was unable to make a choice. "I rather favor the straight road, however," he said, "if that is the nearest. We'll take the woods some other time. Does Mrs. Besson own this horse?"

The boy nodded, evidently to both questions, and chirruped to the horse. During the two-mile drive Mr. Parker labored vainly to open a conversation with his companion. The boy seemed to regard his passenger in the light of a necessary evil, but one with whom social intercourse was not to be encouraged. It turned out later that he had opposed from the first the idea of turning the Besson mansion into a summer resort, both because it would increase his own labors, and through his belief that it somehow reflected on the standing of the family.

It was a pleasant, old-fashioned farm-house at which the young man alighted when the drive was over. It stood some distance back from the main road, and on a hill from which one could look over the surrounding country and down to the quiet Hudson, whose waters lay like a silvery ribbon between the green hills.

At the door Mr. Parker was met by a young lady in a becoming dress of pale blue, the front of which was hidden beneath a long, white apron. She wore a straw hat with a flimsy sort of brim on her graceful head, and in one hand she carried a big tin pail. Evidently she had not expected her boarder so soon, for when she had put away the pail and seated Mr. Parker on the front porch, after a hasty introduction, she went in to summon Mrs. Besson. Returning, the young lady left behind her the white apron and the flimsy-brimmed hat, making an agreeable change in her costume, and one which increased considerably the favorable impression which she had already made upon the slim young man.

"My mother, Mr. Parker," she said, presenting a kindly-faced old lady. "We thought you would drive around through the woods, and weren't quite prepared for you. I was going to—to milk."

"I judged you were," said the young man, "and I hope my presence will not interfere."

For a few minutes the three exchanged pleasant remarks about the weather and the country and each other, and then Mr. Parker was shown to a comfortable, low-ceilinged room on the second floor, which he was told he was to occupy during his stay. In it he arranged his belongings, and changed his gray tweed suit for a flannel one. During this time he had formed various impressions, the most prominent of which concerned Mr. William Hunter's statement that he thought—or pretended to think—that Miss Fanny Besson was not a decidedly pretty girl.

When he was dressed to his own satisfaction, which is saying a good deal, he went downstairs and talked with Mrs. Besson until Miss Fanny came out of the front door to announce that supper was ready.

"You're our first boarder, Mr. Parker," the young lady said, "and if we'll treat you in any way, I hope you will lay it to our inexperience. You see, neither of us know how to run a hotel yet."

"I'm willing to have you practice on me," Mr. Parker said, following her graceful figure into the dining-room, "and perhaps I can give you some advice. I've been living in boarding-houses for half my life."

The supper was enjoyed by everybody. Mr. Parker, however, made the practical calculation that if three such meals were given every day, the amount he had agreed to pay for his board would be wholly inadequate.

He told the two ladies of his having journeyed from New York along with Mr. William Hunter, and asked if the village had derived its name from him or any of his ancestors.

"I don't know," Mrs. Besson replied. "I don't believe it was named after just Bill."

Miss Fanny could throw no light on the subject, but thought it was probable that the village had been named after some Hunter family, and inasmuch as Bill was a descendant of that family, he might have some claim to the honor. The old lady spoke of Mr. Hunter in a depreciatory way, and the slim young man was secretly pleased; he could not tell why.

That evening he went with Miss Fanny to the barn to assist her in gathering eggs. They found only six, so that his assistance did not seem to be needed, but he carried those, with all the fortitude of an agricultural editor, back to the house.

A while later William Hunter came over, and the four sat on the front porch and talked over plans for the summer's campaign. Mrs. Besson thought it was strange that their first boarder should take such an interest in them, but it was very agreeable.

Mr. Parker had, as he confessed, enjoyed a somewhat varied experience in boarding-houses, and his willingness to turn such experience to the account of his hostess was gratefully received.

The day following he assisted Miss Fanny in opening a ledger, and directed her into the mysteries thereof. The reduction of her accounts to figures produced no little astonishment on her part, for it showed her how to conduct her establishment with profit, and convinced her of her own previous ignorance. It also occasioned a raise in rates, which was not altogether to the advantage of Mr. Parker, but he did not mind that.

For the first week of his stay he continued his educational labors, and regretted that the aptness of his pupil rendered them unnecessary after that time.

The days went by very pleasantly, and other boarders came. There was an old Mr. Grouty, with two unmarried daughters and one son, and three young married couples from New York. Also a big family of children, whom Mr. Parker's recommendation had brought to Huntersville, and two young men who came to pay particular attention to the unmarried Misses Grouty.

Miss Fanny and Mr. Parker, however, managed to see a good deal of each other, and certain things were prophesied by certain curious folks in the village, regarding the slim young man and his pretty hostess, before he had been a fortnight at Mrs. Besson's.

"If it wasn't for Mr. Parker," said Miss Fanny to William Hunter one day, "we would never have succeeded in this way. I shall be very sorry to have him go away."

Mr. Hunter was leaning over the picket fence as she spoke, and the careful manner in which

he changed the conversation attracted her attention.

It is not our purpose to record the happenings of the summer, and so we must pass over the eight weeks during which Mr. Parker stayed beneath the roof of Mrs. Besson's hotel. They were happy weeks for him, and it was with a good deal of regret that he packed up his clothes, and put his gun and fishing-rods back into their canvas cases.

"He told Mrs. Besson how sorry he was to be obliged to leave, and there seemed to be a good deal on his mind when he shook hands for the last time with Miss Fauny."

"I'll try to run up to see you again, this fall," he said. "If there is anything I can do for you in the meantime, you need not hesitate to write."

And then he went back to New York, and unlocked his desk in the office of the agricultural weekly. But he did not at once settle down to work.

Mr. Parker was a young man with a perfectly exact mind, and he never did anything thoughtlessly. Before he left Huntersville he had carefully and coldly weighed all the facts in the case, and he had arrived at the conclusion that he was not in love with Miss Fanny Besson. Or, if he was, his love was not sufficiently matured to warrant him in declaring it.

But after the young man had come to this conclusion, his mind was not in the settled state that the decision would ordinarily have produced. He viewed the pleasant weeks of his vacation in his calculating way, but the conclusion he arrived at was not altogether satisfactory.

"I'll wait a month," he said. "Perhaps I will be able then to think more clearly, and I may feel differently."

This probation he went through most heroically. During the time his mind vacillated like a shuttle-cock, and finally surprised him by turning a complete somersault.

"I do love her," he said. "I have always loved her, and I should have married her long ago. I am a fool."

Having reached this more than usually concise opinion of himself, Mr. Parker, with a haste very foreign to his methodical habits, threw some clothes into a grip and himself into a train for Huntersville.

"It is not too late yet," he said, with pleasing self-assurance, "to remedy the error. I wonder what she'll think?"

With all the comfort which these thoughts could bring to him, Mr. Parker cursed the slowness of the train, and fell to wondering how he would be able to get from the station to Mrs. Besson's.

When the train finally stopped at his destination, the young man hastened out, and, as

WHAT COMFORT

Can a person enjoy who is afflicted with Catarrh? Expectorating, hawking, sneezing all the time—



an offence to himself and everyone else. The persistence with which this loathsome and dangerous malady clings to its victim is due to a scrofulous taint in the blood. The remedy is **AYER'S Sarsaparilla**. Those who give this medicine a persevering trial are permanently cured. When you are

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he had expected, not a conveyance of any sort was in sight. On the platform of the little depot stood its agent, an old man named King, whom Mr. Parker was glad to recognize. The agent also knew him, and advanced to meet him.

"How do you do, Mr. Parker?" he asked. "Glad to see you back. Goin' to stay long?" "I guess so," the young man answered. "Can I get any one to drive me over to the village?" "I dunno. Expect to stop with Mrs. Besson?" Mr. Parker nodded.

"I s'pose you know she don't keep a place no more. She giv' up that when Fannie married."

The air turned black in front of Homer Parker's eyes.

"Married!" he exclaimed, with a stagger. "Is she—how—w-when did she get married?"

His evident agitation attracted King's attention.

"Week afore last," he said. "I thought you knowed that."

"No," Mr. Parker responded, feebly, "I didn't know that."

The old man bit a piece out of a stick of black tobacco, which he held in one hand, and took a good look at the young man before he replied:

"Yaas, sbe's married. She an' Bill live out on his place now, au' they're doin' well, folks say."—St. Louis Magazine.

WHAT MIGHT HAVE BEEN.

"There is nothing remarkable about the story, except that it's apropos of this festive season," began Clyde, when asked to amuse the company with a reminiscence. Clyde was a reporter on the Gazette, and one of those unique individuals supposed to possess a highly interesting "past." He went on in this fashion:

"He was a young fellow named Thompson—mawkishly sentimental, and egotistical as an advertisement. When I first met him we were both 'space men' on the Graphic, and deplorably poor. Beyond a doubt, however, the boy had a brilliant imagination—poetic to a degree. Occasionally he brought out some dainty little verses, which the paper printed as a matter of grace, and without emolument to the 'laureate,' as the boys of the local staff called him.

"Well, a little while before Christmas, not so many years ago, Thompson, as all youths of his nature do at times, became morbid and depressed. I guessed the cause at once, and told him he was in love. Yes, he admitted it, and his eyes became moist and bright. The girl's name was Mildred something, I think.

"Yes, I am in love," he said. "I won't bore you with the details of her divine beauty. But say, I wish you'd lend me a V; I'd like to send her a trifle for Christmas."

"I told him I couldn't spare it, but he persisted.

"You'll get it back very soon," he said. "I'll not be a miserable grudge of a space-writer much longer. Can you keep a secret? Well—don't breathe a word of it—I've written a one-act play—a trifle—and it's been taken by a local manager. Keep it mum, will you? It's to see the light and the critics on Christmas night, as a curtain-raiser to a jumble of rot called a farce-comedy. Will you lend me the V on the strength of that?"

"I handed him the money.

"Well, as soon as the boys found that they had an embryo Sardou in their midst—for, of course, I told 'em all—poor Thompson suffered awfully from their gibes and sarcasm. I was really sorry I'd mentioned it. Finally Christmas came, as it has a habit of doing. Thompson hadn't shown up at the office for two days, and it was given out that he was too nervous to work. Well, a clique of us formed and went in a body to the theater, intent on unmercifully guying the show. The house was jammed, as they always are on holidays. Well, the play began. Thompson was down front, pallid as a specter. We began to guy with the first line, but we soon stopped. We became interested in spite of ourselves, and in a few moments we were sitting there absorbed, and with damp eyes. It was a simple little thing—an idyl of Christmastide—redolent with a suggestion of holly and mistletoe. Right in the midst of it Thompson got up and went out. We noticed that he was white and that his lips quivered, and there was a strange gleam in his brilliant eyes. We didn't wait for the afterpiece, but at the end of the curtain-raise, we arose and went out.

"We went to the Graphic office, anticipating that Thompson had preceded us there. Only three or four of the boys were on hand when we got there. We looked for Thompson. There he was at his desk, and his head was bowed and buried in his hands.

"I went up to him and clapped him on the back.

"Well, old boy, good luck! I shouted. 'You got there after all.'

"He made no answer—never moved—and somehow I felt frightened. I turned to one of the boys who had been in the room when our crowd entered, and asked him when Thompson had come in.

"Oh, a little while ago," he answered; 'he came in and took a drink from a bottle of whiskey, told us in a very excited way that his play went all right, and then proceeded to take a nap.'

"Well, he sleeps pretty soundly," I said, and I again struck Thompson on the back, but he remained still.

"Then I lifted him from the desk. He was stone dead. In one hand was clasped a bottle of acouite. In the other was a crumpled piece of paper. I took it and read this:

"Mr. and Mrs. Blank request your presence at the marriage of their daughter, Mildred, to Mr. John Dash."

"It was the girl he loved, and that was her Christmas gift to the poor laureate."

Clyde paused, and one of the company, also a newspaper man, asked:

"Is that all?"

"Ain't it enough?"

"By the way, Clyde, what was the name of that play?"

"It was called, 'What Might Have Been.'"

The other man started up and shouted:

"Why, you confounded romancer, you wrote that!"

Clyde laughed. "Why, yes," he replied, calmly; "I'm Thompson. You asked me to tell you a story; so I did. I told you a story of what might have been if Mildred Blank had n't married me. That crumpled piece of paper was a 'proof' of the invites, just come from the printer's. You'll excuse me if I leave now. I want to get home and help Millie trim the tree."—Albert E. Hunt, in Philadelphia Ledger.

HOW SPOOLS ARE MADE.

Consider that there are fifteen or twenty millions of people in our country who use thread more or less, it is apparent that the making of the spools upon which it is wound must be of itself quite an industry.

These are made of hard wood, birch being preferred, and generally used. The material is first sawn into sticks four or five feet long and seven eighths of an inch to three inches square, according to the size of the spool to be produced. These sticks are thoroughly seasoned. They are sawed into short blocks and dried in a hot-air kiln. At the time they are sawed, holes are bored perpendicularly through each block, which is set on end under a rapidly-revolving, long-shanked auger. Next, one whirl of each little block against some little knives that are turning at lightning speed, fashion it into a spool according to the pattern desired, and that, too, at the rate of one a second for each set of knives. A row of small boys feed the spool-making machines by simply placing the blocks in a spout, selecting the best and throwing out the knotty and defective stock. The machine is automatic, but there are some things which it cannot do; hence, the employment of the small boy above mentioned. After the spools are turned, they are placed in a large drum, and revolved rapidly until they have taken on a fine polish. For some special purposes they are dyed yellow, red or black, according to taste. When one sees a spool of thread marked "200" or "300 yards," it does not signify that the thread has been measured, but that the spool has been gaged, and is supposed to contain that amount of thread.

OUR DISGRACEFUL ROADS.

In spite of the wonderful commercial and industrial progress of the United States, we are still to a large extent using the same soft, dusty, muddy country roads that served for our remote ancestors. No organization has done more to remedy this surprising state of things than the League of American Wheelmen; and its secretary, Mr. Isaac B. Potter, of New York, has a word to say in the November "Forum" about the evil and its cure. He considers that the cost to the farmer of carting his produce over the "roughened streak of soil" that serves us for a highway is no small factor in the existing agricultural depression, and points out that the cost of maintaining proper public wagon-roads, though great, is more than repaid to the community in the enhanced value of adjacent property alone. This position he supports by statistics. It is to be hoped that Mr. Potter and his co-workers will succeed in rousing our rural communities to the disgrace of a condition of things which makes us the laughing-stock of European travelers in this country.

"So dark and yet so light," as the man said when he looked at his new ton of coal.

HAVE YOU CATARRH.

There is one remedy you can try without danger of humbug. Send to H. G. Colman, Chemist, Kalamazoo, Mich., for trial package of his Cure. Postage 4 cents. Test and judge for yourself. Mention this paper.

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IF YOU LOVE CHOICE FLOWERS

and want something really rare that will astonish the natives, try the gorgeous, new Red, White and Blue African Water Lilies. Plants are sold by some florists for \$3 to \$5 each, but they are as easily raised from seeds as Asters. If sown in cups in March they are sure to bloom in any part of the U.S. the first year, in ponds, tubs or pails, incredible as it may seem. They bear fragrant double flowers, 2 to 3 inches across, every day from July to Oct., and all winter if moved to a warm house. The Blue variety varies from light to deep rich blue, and the Red from pink to crimson. A pond at Pansy Park filled with these magnificent lilies was admired by thousands of visitors. Special 50 Days Offer! For only 25 cts. I will send seeds of all varieties—Red, White and Blue—with my Floral Catalogue (which tells all about the culture of these and other rarities); also 2 other packets, 70 varieties Choicest Double Asters, mixed, new Mammoth Double Fringed Poppies. For 85 cts., or eighteen letter stamps, I will send all the above and 4 more packets (amounting to \$1.00, at regular rates); 50 vars. Large German Pansies, mixed, Annet ever offered; New Brazilian Morning Glory, grandest of all vines, climbs 50 feet, leaves a foot across, large clusters of rose-colored flowers; New Mexican Sweet William, 3 feet tall, leaves blotched with scarlet; 42 vars. Improved Sweet Williams. L. W. GOODELL, Seed Grower, Pansy Park, Dwight, MASS. Mention this paper when you write.

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THE STUDENT OUTFIT

Advertisement for 'The Student Outfit' including a camera, tripod, satchel, and other photography equipment. Includes a list of items and a price table.

Advertisement for 'Black Minorcas' featuring an illustration of a rooster and text describing the breed's characteristics and availability.

Advertisement for 'Climax Berry' featuring an illustration of a berry basket and text describing the product and its benefits.

Advertisement for 'Zinc Collar Pads' featuring an illustration of a horse's head and text describing the product's use for treating sore necks.

Advertisement for 'Sylph Cycles' featuring an illustration of a bicycle and text describing the product's features and availability.

Advertisement for 'Burlington Route' featuring the text 'BEST LINE CHICAGO TO DENVER' and '10 DOLLARS PER DAY'.

Advertisement for 'Agents Wanted on Salary' featuring text describing the opportunity and the company 'The Monroe Erases Mfg Co.'.

Advertisement for 'How to Make a Fortune' featuring text describing the opportunity and the company 'The Pinless Clothes Line Co.'.

Our Household.

THE OLD SCISSORS' SOLILOQUY.

I am lying at rest in the sanctum to-night—
The place is deserted and still—
To my right lie exchanges and manuscript
white,
To my left are the ink and the quill—
Yes, the quill, for my master's old-fashioned
and quaint
And refuses to write with a pen;
He insists that old Franklin, the editor saint,
Used a quill, and he'll imitate Ben.

I love the old fellow—together for years
We have managed the *Farmers' Gazette*,
And although I am old I'm his favorite
shears,
And can crowd the compositors yet;
But my duties are rather too heavy, I think,
And I oftentimes envy the quill,
As it lazily leans with its nib in the ink
While I'm slashing away with a will.

But when I was new—I remember it well,
Though a score of long years have gone by—
The heaviest share of the editing fell
On the quill, and I think with a sigh
Of the days when I'd scissor an extract or
two
From a neighboring editor's leader.
Then laugh in my sleeve at the quill as it flew
In behalf of the general reader.

I am being paid off for my merriment then,
For my master is wrinkled and gray,
And seldom lays hold on his primitive pen
Except when he wishes to say,
"We are needing some money to run this ma-
chine,
And subscribers will please to remit;"
Or, "That last load of wood that Jones
brought us was green,
And so knotty it couldn't be split."

He is nervous and deaf and is getting quite
blind
(Though he hates to acknowledge the latter),
And I'm sorry to say it's a puzzle to find
Head or tail to the most of his matter;
The compositors plague him whenever they
see
The result of a luckless endeavor,
But the daring old rascal just lays it to me,
And I make no remonstrance whatever.

Yes, I shoulder the blame—very little I care
For the jolly compositor's fest.
For I think of a head with the silver hair
That will soon, very soon, be at rest.
He has labored full long for the true and the
good,
"Mid the the manifold troubles that irk
us."
His only emolument raiment and food,
And—a pass, now and then, to the circus.

Heigho! from the past comes a memory
bright
Of a lass of the freshness of clover,
Who used me to clip from her tresses one
night,
A memorial lock for her lover.
That dear little lock is still glossy and brown,
But the lass is much older and fatter,
And the youth—he's an editor here in the
town—
I'm employed on the staff of the latter.

I am lying at rest in the sanctum to-night—
The place is deserted and still—
The stars are abroad and the moon is in sight
Through the trees on the brow of the hill.
Clouds hurry along in undignified haste,
And the wind rushes by with a wail—
Hello! there's a whopping big rat in the
paste—
How I'd like to shut down on his tail.
—A. W. Kelly.

HOME TOPICS.

REMOVING INK SPOTS.—Of all the vari-
ous things I have tried for this purpose,
nothing has been so satisfactory, on white
cotton or linen fabrics, as chlorinated soda.



BALL PINCUSHION.

On the stain, rub it between
til the ink disappears, or at
tint yellow stain remains.
ent immediately and the
oved without the least

One day last summer Mamie came
home with an ink spot on her blue gingham
dress. With the aid of a lemon, am-
monia and benzine it was removed with-
out affecting the color in the least. First,
I put the lemon juice on, then ammonia
and lastly sponged it off well with ben-
zine and the stain was gone. A garret
flannel dress, which appeared to be ruined
by a bottle of ink being spilled over it,
was made to look as good as new by
washing it first in warm milk and then,
after the ink was out, in water; but on the
gingham dress milk had no effect. I do
not know whether this was owing to the
difference in the ink or in the fabric.
Chlorinated soda must not be used on col-
ored goods nor on silk or wool.

IMPROVE THE HOME SURROUNDINGS.—
It is true that a good farmer is a busy
man, but he ought never to be too busy
with other work to keep the immediate
vicinity of his home neat and tidy, and
every year make some improvements.
There is no part of his farm more impor-
tant than that just about the house.

In the first place, if you are building a
new house, as many will be do-
ing this spring, do not put it too
near the road, but leave space
enough for a good, generous lawn
in front. It will not be ground
wasted, as whatever adds to the
beauty of a place also adds to its
value.

When planting trees and
shrubs in the front of the house,
do not forget to put some near
the kitchen, too; and nothing
makes so good a screen to hide
outhouses and unsightly objects
from the house and highway, as
a hedge of some low, branching
evergreen. If planted this spring,
in four or five years a wall of
green will prove a most effectual
screen.

Perhaps the thing most often
neglected about the farmer's
home is good, dry walks. Too
often, if a good walk is made
from the road to the front door,
that is thought to be sufficient,
and for about half the year you must wade
through mud to reach the barn, chicken-
house, coal-house, etc. Well-laid brick
walks are perhaps the best, but it requires
some skill to lay them properly, and they
are quite expensive. If you live near gravel
pits, walks of gravel can be made with
little expense, but if the ground is low
and water is apt to stand on it, make a
drain first. The space for the walk should
be dug at least a foot deep and filled
nearly full of small stones, rounding them
up in the center, and then put on the
gravel.

If neither bricks nor gravel are practi-
cable, board walks are much better than
nothing, and I have seen very respect-
able walks made of coal ashes by cutting
a space a few inches deep, putting the
clinkers at the bottom, a row of bricks,
set on edge along each side to come a little
above the ground on each side of the
walk, and then filling in with coal ashes
and packing them down as much as possi-
ble. If one is fully determined to have
walks, something can be found to answer
the purpose, and when they are once
made you will wonder how you ever did
without them. They not only save the
unpleasantness of wading through mud,
but the danger of colds from wet feet, and
much of the work of keeping the house
clean.
MAIDA McL.

HOME CHAT.

CHRISTIE IRVING.

Don't say "grippe" to me; I don't want
it, and haven't time for it, and besides, I
haven't a pretty wrapper to wear while
I'm convalescent; but I saw one to-day
I'd like to have, so here it is: I should
choose a soft, dark-red twill of some kind,
and I should want all the waist and
sleeve parts lined with eider-down flannel,
no stiff, cold silesia or drilling, but soft
and warm. This shape is comfortable—
and I should want it loose, if I could pre-
vail on my dressmaker to make it so. I
wish you could see the last one that I've
done three years penance in. Chokes me
round the neck, too tight across the bust,
and the sleeves! Oh, how many times
I've threatened to cut them off at the
elbows! But I still keep on wearing it,
and presume I will as long as I have it.

You've all heard of the man who went

into a store that professed to keep every-
thing, and asked for a second-hand pulpit?
Well, you've probably laughed at the very
idea of such a thing. But a second-hand
pulpit made me a very pretty toilet-table.
It was made by hauds long since at rest,
for "the little church around the corner,"
which grew and grew, and finally got to a
point where they wanted modern things,
new things, and the question was what to
do with the old pulpit, so they came to
me to decide. "I will take it," I said. I had
a glass door put on the back, laid away
the sloping reading-desk, had it nicely
varnished and put into my bedroom
under an old-fashioned glass in a gilt
frame—and with the pretty accessories on
top, I wouldn't change it for anything
else.

Combing my hair I can lose all sight of
myself and journey away into the visions
of the past, and can hear again the ser-
mons and prayers going up from the pul-
pit, and I can see the dear hands fashion-
ing every part of its construction.

Behind its sheltering arms two good
men learned to pray in public, who from



BACK OF
MORNING
WRAPPER.

MORNING WRAPPER—PRINCESS SHAPE.

reserve thought they never would be able
to do so. There are sermons still from it.

PINCUSHION.—In these days they must
be small and unique. This one, made in
sections of plush like a child's ball, of
various colors, will be liked. Line them
with calico or flannel, and stuff with wool.
The trimmings are of gold braid and the
tassels of silk. It can be hung, or not, as
you choose. It is very useful to hold the
little stick-pins so much worn now.

HEART BOOK.—In our illustration we
give a very neat little book for preserving
autographs of dear friends, birthday
dates and many little keepsakes.

The inside is covered with black silk
and brought well over the edges. The
outside is dropped thick with sealing-wax
and impressions of signet rings made in
it, or family seals or initials, the inter-
vening space indented in any kind of
regular forms with a large-sized knitting-
needle. For the leaves use a good quality
of thin writing-paper, folding the shape
together so as to make two leaves serve as
one layer, then having the spaces on each
one to write on. Confine with a ribbon.

KEEPSAKE JARS.—Somewhere I have
read of jars in quaint form of a heavy
base with a long neck, which lifts off near
the middle of the base, leaving a cup-
shaped receptacle for them. Well, per-
haps this would do, but I always feel
safer with those kind of things under
lock and key, and a box one can lock up
is to my mind better. The prettily lined
cases that spoons come in are nice for
these things.

A NOVEL DUSTER.—Marion C. Ellis, in
Housekeeper's Weekly, gives the follow-
ing directions for a novel duster: A
feather duster for *bric-a-brac*, etc., that
was not made of feathers, attracted my

eye at a bazaar the other day. It was made
of three pieces of perfectly new rope,
about a yard long. They were plaited
together, then the plait was doubled in
half and tied together about half way
down, with a broad, blue satin ribbon in a
pretty bow. Then the ends which were
left free were immediately unplaited, and
spreading out made a lovely, soft duster,
the doubled braid making the handle.
They were just of a size to be easily man-
aged, and the soft blue of the ribbon and
the light straw color of the rope blended
prettily.

HOUSEHOLD HINTS.

All wooden articles, such as bake
boards, wooden dishes, butter prints,
etc., would last much longer if they were
thoroughly rubbed over with linseed-oil
and dried before using—this treatment
defies any cracking in the wood.

If the wringer is placed on the top of
the clothes for a few minutes before use,
it would prevent the rubber from giving
way, especially in cold weather.

Arcadia, Neb.

MRS. S. P. C.

JELLY PIES.—One cupful of blackberry
jelly, one cupful of eggs, one cupful of
butter, one cupful of sugar, one cupful of
morning's milk. Beat all and bake as a
custard pie.

BUTTERMILK PIES.—One pint of butter-
milk, four eggs, one cupful of sugar, one
fourth cupful or a little more of butter,
two spoonfuls of flour, well beaten, sea-
son with lemon. Add the buttermilk
last.

RASPBERRY PUDDING.—One half gallon
of new milk, yolks of eight eggs, two
spoonfuls of sugar, two pints or more of
bread crumbs, lump of butter the size of
walnut, and some nutmeg. Bake in pud-
ding-pan until custard sets, then add one
half gallon of raspberries, some sugar,
and have the whites of eggs and a little
sugar beaten to a froth, spread over all
and grate nutmeg over top, return to
the stove and let get a light brown.
Eaten hot or cold. If canned berries are
used, drain off all the juice. A quart can
is enough, as that is one half gallon of
fresh berries.

CUCUMBER PICKLES.—Vinegar, some
water and alum, let come to a boil, put in
cucumbers and let simmer until hard and
green, take out cucumbers and wash
kettle. Make sirup; one pint of vinegar,
one half pound of sugar to three pounds
of cucumbers, season with cloves or cin-
namon or allspice, let boil and pour over
cucumbers. Ready for use as soon as
cold.
ZAIDA FAY.

LEMON EXTRACT.

In these days of adulterated food, ex-
tracts seem to come in for their share of
doctoring; at least they seem to be greatly
diminished in strength. We prefer to
make our own lemon extract. Whenever
you use a lemon, pare off the thin yellow
part and put in a glass quart can con-
taining a pint or more of alcohol. Do not
use too much of white peel, as that is apt
to be bitter; but pare deep enough to get
all the oil that lies next the yellow skin.
Keep on adding the peel until the can is
full, always keeping plenty of alcohol in,
to cover the lemon skins.

Let it stand a week or two after filling,
and then drain and squeeze out the juice,
and let run through a filter paper, which
can be bought of any druggist. The ex-
tract is now ready for use, and should be
bottled and kept in a cool place. I think
those who try this recipe will be very
much pleased with the result. I think
orange, pineapple or banana flavoring
could be made in the same way. We
never tried it, but are sure it could be done
that way.
GYPSY.

WHAT CHEAPENS BUTTER.

Many a dairyman does not get the price he
should for his butter, owing to the fact that he
has churnings of different colors in one tub.

The "trier" tells the tale, but in butter where
Wells, Richardson & Co's Improved Butter
Color is used, the "trier" shows the same rich
color all the way through. There is nothing
equal to this preparation for giving a golden
June yellow of the same shade the year round.
It possesses peculiar properties which pre-
vent making a reddish shade even when too
much is used. As this color is superior in
strength, it is the most economical of all color-
ing preparations. It will win converts to the
wisdom of coloring butter, and will fill with
gold coin the pockets of dairymen and cream-
erymen who use it.

INVALID COOKERY.

RICE JELLY.—Mix one tablespoonful of rice flour in cold water, put it in a pint of boiling water and sweeten, break in while boiling, one stick of cinnamon. Pour in molds and set on ice.

BLAC MANGE.—Dissolve one tablespoonful of moss farine in a quart of new milk. Sweeten and flavor, stir in a beater egg.

OATMEAL PORRIDGE.—Put a quart of water in a saucepan, let boil, stir in meal to thicken, with a pinch of salt, let boil slowly half an hour, add a little more boiling water, and let simmer one hour. Serve with sugar and cream.

PANADA.—Lay six or eight crackers in a bowl, sprinkle with powdered sugar, add a pinch of salt and a teaspoonful of fresh butter. Pour over a teacupful of boiling water, let stand near the fire an hour; add a teaspoonful of wine or brandy, grate nutmeg over the top.

ARROWROOT CUSTARD.—Take one tablespoonful of arrowroot, mix smooth in a little cold milk, and stir into a pint of boiling milk with half a teacupful of sugar and two beaten eggs. Let boil, and flavor with cinnamon. Set in a cool place until very cold.

TAPIoca JELLY.—Soak half a pint of tapioca several hours, put on to boil in a quart of water; sweeten and flavor with lemon juice, boil one hour, put in molds and set on ice. Eat with sugar and cream.

BUTTERMILK STEW.—Boil one pint of buttermilk, sweeten, and stir in a tablespoonful of butter; flavor with extract of ginger.

MULLED BUTTERMILK.—Put a pint of buttermilk on to boil; add a well-beaten egg; let boil up once.

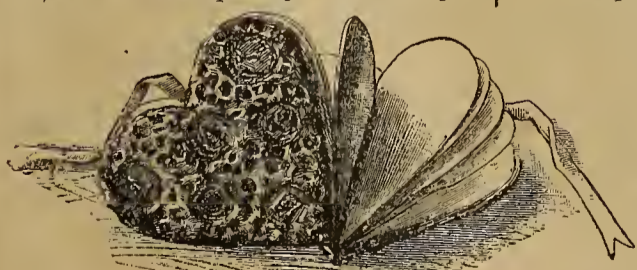
KUMISS.—Fill a quart bottle with fresh milk up to the neck, add two tablespoonfuls of sugar dissolved in warm water; when lukewarm, three tablespoonfuls of yeast; set in a warm place, shake often until it begins to sparkle. Then cork tightly and set on ice for six hours. The virtue of kumiss as a diet for the sick is that it refreshes and stimulates with no after-reaction from its effects.

ELIZA R. PARKER.

BUCKWHEAT CAKES.

To make good buckwheat griddle-cakes, it is necessary to know that buckwheat flour raises at a much lower temperature than wheat flour; at the same heat necessary to make wheat flour light, buckwheat flour will sour. Buckwheat batter must not only be kept cold, but it may be frozen and the cakes will be all the lighter and sweeter. Take a little more than one quart of water (I use that from the filter, about 65° F.), a little salt and one yeast cake that has been set to soak in a little tepid water, and as much buckwheat flour as will make a thick batter. The first time mix at noon and let stand in a moderately warm room (by that I mean in the kitchen, where it will not freeze) to raise until morning.

In the morning add a small teaspoonful of soda or saleratus dissolved in a little cold water, and stir thoroughly, care being taken not to get in too much soda, and pour all but about a teacupful of the batter in another pitcher; then add a scant tablespoonful of sirup to make them brown, and enough water to make them as thin as required, and then bake on the griddle, greasing it with a piece of sweetsalt pork; and while baking them, if possible, do not keep the pitcher of batter too near the fire, as it sours so quickly. The teacupful



HEART SCRAP-BOOK.

of batter and any that may be left over, after baking, set in a cold place until evening, when bring in the house, and if it is frozen, wait until it thaws, then mix with as much water, salt and buckwheat flour as before, and let stand in a moderately warm place until morning, when proceed as before. If these directions are followed, one cannot help but have the lightest and sweetest buckwheat cakes.—*Good Housekeeping.*

A CORN-MEAL CHAPTER.

As different arrangements of corn-meal are very nutritious through the cold weather, we give below some very good and tried recipes:

STEAMED CORN BREAD.—

- 4 cupfuls of corn-meal,
- 2 cupfuls of flour,
- 2 cupfuls of sweet milk,
- 2 cupfuls of sour milk,
- 1 cupful of molasses,
- 1 teaspoonful of soda,
- 1 teaspoonful of salt.

Steam three hours and a half, or longer. To be eaten hot. MRS. E. B. B.

DELICATE CORN BREAD.—

- 1 pint of sour or sweet milk,
- 1 teaspoonful of soda or baking-powder,
- 1 tablespoonful of lard,
- A pinch of salt.

Stir in white meal enough to make a batter the consistency of sponge-cake. Bake half an hour, or twenty minutes, by a quick fire. MRS. W. B. R.

NEW ORLEANS CORN BREAD.—

- 1½ pints of corn-meal,
- ½ pint of flour,
- 1 tablespoonful of sugar,
- 1 teaspoonful of salt,
- 2 heaping teaspoonfuls of baking-powder,
- 1 tablespoonful of lard,
- 1¼ pints of milk,
- 2 eggs.

Sift together corn-meal, flour, sugar, salt and powder; rub in lard, cold, add eggs (beaten) and the milk; mix into a moderately stiff batter; pour from bowl into a shallow cake-pan. Bake in rather hot oven thirty minutes.

SARATOGA JOHNNYCAKE.—

- 1 cupful of sour milk,
- 1 cupful of sweet milk,
- 1 egg,
- 2 tablespoonfuls of sugar,
- 2 tablespoonfuls of butter,
- ½ teaspoonful of soda,
- 1½ cupfuls of corn-meal.

Bake one half hour.

CORN-MEAL GEMS.—Pour boiling water

over one pint of meal to make a stiff dough. When cool, add one egg, a pinch of salt and sweet milk enough to drop from the spoon. Fry in as little hot lard as possible, and when nicely browned, take them up and serve. MRS. W. B. R.

ST. CHARLES CORN MUFFINS.—

- 2 teacupfuls of white corn-meal,
- 1 cupful of boiling water,
- 1 cupful of sweet milk,
- 2 eggs,
- ½ teaspoonful of salt,
- 1 teaspoonful of baking-powder,
- 1 heaping teaspoonful of butter.

Pour the boiling water over the meal and stir, that all may be wet and scalded. Add the melted butter, salt and milk, then the beaten eggs. Put the iron gem-pans into the oven to heat, putting into each mold a small piece of butter or lard. Add the baking-powder to the batter, and beat up thoroughly; then pour into the hot mold. Bake carefully about twenty or twenty-five minutes. This batter, when ready, will be very thin.

CORN-MEAL MUFFINS.—

- 1 coffee-cupful of corn flour,
- ½ coffee-cupful of flour,
- 2 eggs, beaten separately,
- 1½ coffee-cupfuls of sweet milk,
- 1 teaspoonful of lard,
- 1 tablespoonful of white sugar,
- 1 teaspoonful of baking-powder,
- 1 teaspoonful of salt.

The last two sifted into the flour dry, and sifted again and added last before going into the oven—the beaten whites having been beaten in just before. Bake in rings or gem-irons.

CORN-MEAL SCONES.—

- 1 quart of corn-meal,
- 1 teaspoonful of sugar,
- ½ teaspoonful of salt,
- 2 teaspoonfuls of baking-powder,
- 1 large teaspoonful of lard,
- 2 eggs,
- Nearly 1 pint of milk.

Sift together flour, sugar, salt and powder; rub in lard, cold; add beaten eggs and milk; mix into dough, smooth and just consistent enough to handle. Flour the board, turn out the dough, give it one or two quick kneadings to complete its smoothness; roll it out with a rolling-pin

to an eighth of an inch in thickness, cut with a sharp knife into squares larger than soda crackers, fold each in half to form three-cornered pieces. Bake on a hot griddle eight or ten minutes; brown on both sides.

CORN MUFFINS.—

- 1 quart of milk,
- 3 eggs, well beaten,



OUTSIDE OF COVER FOR HEART SCRAP-BOOK.

- 1 teaspoonful of salt,
 - 1 tablespoonful of melted lard,
 - 1 pint of corn-meal,
 - 1 teaspoonful of baking-powder.
- Bake in gem-irons.

A great many people think the use of Indian corn is confined to the United States, but all through Hungary, in Serbia, in Bulgaria and in Roumania, are more extensive plantations of Indian corn than ever in our country.

The Italians also use it extensively under the name of polenta, when cooked.

Signor Morrello, of Twenty-ninth street, N. Y., says the N. Y. Sun, employs both wheaten flour and corn-meal in making polenta; and this is the way:

The meal should be of the yellow kind. Put the wheaten flour into boiling water, stirring it thoroughly, and then put in an equal quantity of yellow corn-meal. Care must be taken to prevent lumps from forming. The polenta should be thick and fairly firm. A sauce frequently made for it is of finely-chopped onions boiled in olive-oil. Tomato sauce may also be used. In serving game, and especially birds, slices of polenta soaked in gravy are sometimes employed instead of toast as a garnish. Polenta may also be fried in slices, like hominy.

The Italians, though, have other recipes resembling very much our mush, and other things.

A PROGRESSIVE DICTIONARY.

This game is deservedly popular. Every guest is furnished with a pad of paper and pencil. At the head of each page the word selected for the evening's game is either printed or written. The pads for the ladies may be distinguished from those for the gentlemen by ribbons of different colors. They must also be numbered with the numbers of his table and couple. For instance, the gentleman holding the pad numbered table one, couple one, finds the lady with the corresponding number, and, of course, a second couple plays at the same table. Suppose the word "thoroughfare" has been selected. The object of the game is to see how many words can be made from the letters in that word. No letter can be repeated in any word oftener than it occurs in the selected word, and no proper nouns or plurals are allowed. The guests take their places at the tables, and when the leader—some one who is not playing—rings a bell, all try to make as many words as possible, beginning with the letter "t." In three or four minutes the bell is again rung, and each player passes his pad to his left-hand neighbor, who corrects and crosses out any misspelled words, and counts the number of words, writing the number on the bottom of the page. The pads are then returned to their owners, and the lady and gentleman having the



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greatest number of words progress to the next table. The letter next used is "h," and the game is continued until all the letters in the word are used, which makes nine progressions, for the "h," "o" and "t" are repeated, and need be used only once. At the end of the game, before the guests leave the tables, five minutes is given, during which each guest is expected to write a poem or witty paragraph containing the selected word.

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Miss Grace Dodge dresses more plainly than many of the members of the working-girls' clubs over which she presides. At her regular receptions during the past two months she has worn the same gown—a simple and inexpensive cashmere, dark green in color, with a little white vest in the velvet-trimmed waist. On the street her toilet is invariably of one color throughout, hat, gloves and gown simply fashioned, but of good material, and the costume does service for church and shopping, for the working-girls' reunion and the afternoon call.

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Our Household.

LELIA'S RAGGED CONSCIENCE.

HERE are my keys, Lelia, do you know? You had them getting a piece of cake at lunch time."

"I think I put them in your basket, mother; I am not sure."

But the keys were not in the basket, and the busy mother lost some time, and had her threadbare patience tried sorely, while Lelia hunted, and not very good-humoredly, either, for the missing keys.

It was Cousin Max who found them at last, shut up in the Course of Higher English, which Lelia had laid down when she ran out to take a "little turn" in the swing. "Sure enough," cried the little girl; "I put them in to mark my place, because I hadn't quite finished learning my lesson."

"You had better 'quite finish' it right away, then," said Cousin Max, significantly, "or something else will be lost."

"What?" asked Lelia, curiously.

"A good mark, for one thing; Miss Maggie's temper for another, and, I should think, your respect for my little cousin."

Lelia laughed. "What a big matter you make of a little thing, Cousin Max."

"It isn't I that make big things of little ones, Sweetbrier; that is God Almighty's law all the world over. But, I tell you what it is, I am afraid you are busy making a little thing of a big one."

"What?" again asked Lelia, with more curiosity than before.

"I don't think I can tell you yet; maybe I am mistaken. Wait till I see you break off another piece."

"Will you tell me then?"

"I don't make rash promises, and I don't know that you will be pleased, little Eve, when I do satisfy your curiosity."

Lelia was too busy a little girl to think much about this little mystery, but it was not long before she was reminded of it.

"Oh, Lelia, come back and shut the door," cried her older sister, as the little school-girl ran out, leaving the damp wind blowing in, tossing papers and letters about in confusion.

Lelia came back and shut the door with an ungentle bang and an exclamation that sounded very much like "bother." Fifteen minutes later she ran back to the sitting-room for the tennis-ball she had dropped, and out again, leaving the door wider than before.

"Sweetbrier," cried Cousin Max, "you've broken another piece off."

"Piece of what?" asked the flushed ball-player.

"That big thing I told you you were making small."

"Oh! what in the world is it?" she asked; but Cousin Max had already taken his merry face away from the window.

"I can't think what he means," said Lelia to herself; "it must be something about my carelessness, 'cause that's the time Cousin Max speaks about it; but what am I making small?"

"Daughter, did you ask Mr. North for the milk bill as you came home?" asked Lelia's father at the supper-table.

"No, sir; I forgot it," answered his little daughter, carelessly.

"Tut, tut!" he said, vexed and disappointed.

Cousin Max looked at Lelia. No, her face was not red, there were no tears in her eyes; she went on calmly eating her third muffin with undisturbed enjoyment. Cousin Max thought the time had come to tell her.

"Once I had a little friend," he began, crossing his arms on the table and looking intently at Lelia, "who had a beautiful garment given her. It was intended for every-day wear; indeed, strange to say, that was the only way to keep it beautiful. But my little friend kept it for great occasions only; it was too much trouble, she thought, to wear it every day. If you asked her about it she said she held it dear, yet every day of her life she gave it a little tear or snip, until at last it got to be so ragged and full of holes it was worthless."

"Mother, what does he mean?" asked Lelia, somewhat troubled now, for her cousin's tone was grave, and he looked at her with a grave expression.

"Think of your cousin's conscience," said Cousin Max, "and you will think conscience

is only meant to keep you from lying and stealing and committing murder? Don't you know it is meant to make you thoughtful of mother's comfort, so that you will not lose her keys; of Kate's, so that you will not leave doors open on her; of the busy father's, that you may make the day's work easier for him? And every time you leave these duties undone you tear and rend your conscience till it becomes tattered and worthless. There! I told you my little fable would not be pleasant."

But from the bright drops that hung on Lelia's dark lashes we may hope that Cousin Max's fable was useful.—Banner and Herald.

POPULAR GAMES.

"Bring a clay pipe," was the startling addition to an invitation to a reception the other evening. Nobody could decide what it meant. They could scarcely believe the exquisitely refined young hostess had fallen a victim to the smoking craze and wanted all her friends to join her; but what else could it mean? The mystery was solved when the guests entered the pretty white and gold parlor and saw on a round table in the center of the room, half a dozen punch-bowls, in rose and blue glass and Japanese ware, filled with flaky soap-suds. Each guest was entitled to blow three bubbles, and a hammered silver hand-glass was the prize for the lady who blew the largest bubble, and a meerschaum pipe for the gentleman's prize. Three judges had a trying time in deciding the winner of the prizes. Amateur blowers were allowed to practice in the corner, out of range of the prize bubble blowers.

"Bring your thimble," is a rather odd request to make of a young society fellow, but Mrs. James Hude Beekman, who is the jolliest and prettiest young hostess in New York, said that if she would put it on the girls' invitations she would favor the gentlemen in the same way.

When they reached the house on Tuesday evening they found what the thimbles were wanted for: There were 16 guests, and on each chair was placed 16 little mousseline de soie aprons, with the hems carefully basted.

Miss Carrie Hoe got the ladies' prize for the best hemmed apron, and Amory S. Carhart got the gentlemen's prize. Harry Cannon got the booby for the largest stitches, and Russel Hoadley never got his needle threaded until the hour for sewing was over. Afterward they had an informal dance, with music by the Hungarian band.

"Walking," not for a cake, but for a pair of hammered silver shoe-buckles, was the original entertainment provided by Miss Louise Spone, of Madison avenue, New York, for the guests of her party. The way the head and shoulders were carried, as well as the manner of walking, was considered by the judges. Eighteen couples, in full evening dress, marched and countermarched to the "Darkey's Dream," "Golden Slippers," and other popular plantation melodies as discouraged by Lander's band. The only difficulty about the walking business is that of deciding to whom the prize belongs. At this entertainment there were four prize winners, and three more buckles had to be ordered.

If you want a mirth-proving game, send one person out of the room and tell him he is to guess the name of the game from the actions of the guests. Let him in, and when he sits down they sit; if he walks to the corner of the room they accompany him; where he looks they look; what he says they repeat. Sometimes it takes a really smart person a quarter of an hour to guess that the name of the game is "Imitation."

"Bring a lemon," is another puzzling addition to an invitation which is usually printed on lemon-colored paper. After all the guests have piled up their golden fruit, the lemons are cut and the seeds counted, and the owner of the lemon containing the largest number of seeds is the prize winner, while the luckless individual whose lemon is seedless or nearly so, gets a large tin or leather medal.

A game which is very popular with young people is played with all of the guests in a line. The first whispers to the second a long sentence, she repeats it in a whisper and very rapidly to the third, and so on until the end man repeats what he heard aloud and the one who gave the sentence repeats it as he gave it. Never do the two sentences bear the slightest resemblance to each other, and the fun comes in comparing them and seeing how far the last given sentence misses the mark.—Toronto Globe.

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FOUND in Galveston, T. A. old coin worth \$5,000. A Boston Baker paid 149 old coins \$13,389. We can prove that others have done nearly as well. Coin Collecting Pays Big. If you have any Old Coins or proofs coined before 1876, save them, as they might be worth a fortune. Illustrated circulars on rare coins free at office or mailed for two stamps. AGENTS WANTED. Numismatic Bank, Court St., Boston, Mass.

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Our Sunday Afternoon.

HIS MOTHER'S SONG.

BENEATH the hot midsummer sun The men had marched all day; And now beside a rippling stream Upon the grass they lay. Tiring of games and idle jest, As swept the hours along, They cried to one who mused apart, "Come, friend, give us a song."

FOOD FOR SOUL AND BODY.

AMONG the laws laid down for the self-treatment of the sick in some of our large sanitariums is one ordering that they shall think only healthful thoughts. Simple as this seems, its effect, both upon the physical and the moral system, is thought to be very valuable.

One might not at first suppose it to be a possible thing to think only in a certain manner or upon certain lines, and that the more one is forbidden to think in any direction, the more one's thoughts would naturally turn that way, if only in wondering as to the reason why.

Yet it is evident that if one is already ailing, to allow the mind to dwell, for instance, upon the possibilities of one's own illness, or upon any of the features of physical disease in general, is to weaken the action of the heart, to lower the vitality, to put one's system in sympathy with such possibilities, to make one's self an easier prey to the attack of disease, to invite its approach.

But, on the other hand, to think of recovery is, in the mysterious power of the nerves upon the rest of the body, to put one's self into the attitude of recovery, and is to brighten and freshen the whole condition of things. A daring speaker once said that if he had made the world he would have made health catching instead of disease; he did not pause to reflect that health is already catching; that to be in the close neighborhood of healthy people is to absorb some portion of their health and cheer, is to make the sapping and mining of disease more difficult, is to provide an atmosphere of health, and that it has been plainly proved that health is often engendered by—that is to say, caught from—a healthy habit of thought.

And the same is even more strikingly true in relation to the moral system. To think only healthy thoughts is to keep a pure mind, an honest purpose, a brave endeavor, is to build a wall between the whole being and sin. They who do not suffer themselves to imagine anything about the taste of forbidden fruit are not going to hanker after it, are most probably never going to taste it, and so injure themselves by it beyond repair. They who do not look too longingly on the bounties and luxuries beyond their reach are not going to compass those luxuries by any dishonest thieves' grasp at last. Those who do not cherish a

gloat over the opportunity of pride are not going to portunities for by spitefulness, by debase themselves, by cruelty. Those littleness, but unwisely the joys that who do not they are going to turn fate has and their strength into chance they can attain greater happiness. Those who think only healthy pin, hats will have no room in their minds th any other. To think only healthy bughts is, after all, then, not difficult or impossible; it is simply refusing entrance to the other sort—refusing place to envy, to repining, to sensuality, to cruelty; and so, by feeding the soul only upon what is best, to attain the normal stature of spiritual growth.

"SOCIALISTS, NOT ANARCHISTS."

The socialists of Chicago have passed a red-hot resolution denying that their own theories bear any resemblance to the destructive proposition advanced by the anarchists. They denounce the anarchists with great bitterness and announce that they are prepared to assist the state in suppressing anarchy and its followers. Although they are frequently confounded, socialism and anarchy represent two diametrically opposite tendencies of society. Socialism aims at construction. Anarchy aims at destruction. The socialist advocates a change in government which will center industrial and legislative control directly in the state. In an ideal socialism the individual man would be a minute portion of a great mechanism which would be supposedly run in the interests of the community as a whole. Anarchy, on the other hand, means the overthrow of governmental machinery of every kind. Man is to be hampered by no restraints or restrictions of any kind, and may comfort himself as suits his own sweet will. Theory aside, this means a return to a howling state of barbarism. It is no wonder that the socialist, who wishes to have the government control railroads and industrial machinery, objects to being placed in the same category with the anarchist, who advocates the overthrow of government and the use of bombs. Socialism appears to be undesirable because it would crush the individual and make him the creature of tyranny. Yet it contains many germs of good, and many of its theories may be applied with excellent results. Anarchy, on the other hand, is a desolate, destructive creed, and has not in it a single element of good.—The Minneapolis Tribune.

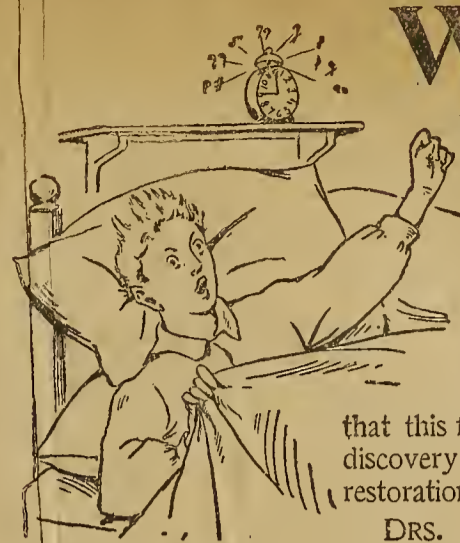
QUIET LIVES.

They make no fuss about it—the stars set like lamps in the skies, but they shine on steadily, quietly. We always know where to find them, and what to count on. They are illustrations of the quiet lives, set out here and there along the dark sea of life's voyage; making no noise or ado, asking no puff or recognition, they work on day by day, year in and year out, with a beautiful self-abnegation and thoughtful devotion to the world's leavening. Into the quiet havens where they dwell run the weary and heavy laden for soothing and healing. Every neighborhood has them, and its barren wastes and dusty ways; they are like the unpretentious blossoms, whose white faces and sweet fragrance make the world bright and beautiful.

It is good for us to have been so much and so constantly with the Master, as to have come to his place of gentle ministry and self-giving service, where the unheralded bit of service for the troubled and needy is sweeter to us than any applause or fame the world can give to its heroes.

ENVY IS A POISON.

The greatest flood has the soonest ebb; the sorest tempest the most sudden calm; the hottest love the coldest end; and from the deepest desire oftentimes ensues the deadliest hate. A wise man had rather be envied for providence than pitied for prodigality. Revenge harketh only at the stars, and spite spurns at that she cannot reach. An envious man waxeth lean with the fatness of his neighbors. Envy is the daughter of pride, the author of murder and revenge, the beginner of secret seditions and the perpetual tormentor of virtue. Envy is the filthy sediment of the soul; a venom, a poison or quicksilver which consumeth the flesh and drieth up the marrow of the bones.



Wake Up!

Every one wakes up sooner or later. Its the element of time that gives the act interest—in time, or behind time is the question. Particularly is this true of those in poor health. To such, time is life as well as money.

Every one knows that the recuperative power of nature is very great. But not every one knows that this fact is the foundation for the greatest discovery of modern science for the relief and restoration of suffering humanity.

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Queries.

READ THIS NOTICE.

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

Hair Rope Wanted.—T. K., Springfield, O., wants to purchase hair rope, such as is used for making lariats. Address this office, stating price and size.

To Kill Willows.—A. G. S., Anchor, Ill. Cut them in midsummer and destroy the young sprouts as fast as they appear. Application of brine may help.

Weeds in the Garden.—R. H. R., Acme, Pa. Thorough cultivation will, in time, clean out the foulest garden. After the summer crops are raised do not let your garden grow up in weeds. Keep cultivating till late in the fall.

Alfalfa in Iowa.—S. R. P., Oskaloosa, Iowa. There is some doubt about alfalfa being hardy enough for your climate. You can sow it broadcast or in drills, twenty pounds per acre. Would advise you to try it on a small scale at first.

Carp.—F. O., Clyde, Mich. You should get a book on carp culture. Get A B C of Carp Culture, price 50 cents, published by L. B. Logan, Youngstown, O. It is not illegal to explode dynamite in your own pond for the purpose of destroying the fish and turtles that are now in it.

Oats and Wheat for Cow Feed.—G. H. D., Salmon Falls, Idaho, writes: "Will you please answer, through the columns of your valuable paper, if whole oats and wheat mixed in the proportion of three parts oats to one part wheat will make good feed for milk cows?"

REPLY:—Oats and corn mixed, two parts of oats to one of corn, are much better, but your mixture is a good one.

Corn-cobs for Manure.—E. S. E., Nokomis, Ill., writes: "I can get fresh corn-cobs delivered on my ground for about one cent per bushel. Each cob is broken into about three pieces. Would it pay to use them for manure?"

REPLY:—We cannot say whether it would pay you or not. They should be composted with stable manure, if you wish quick returns. Applied fresh to heavy clay land they would have a good mechanical effect.

Rice Corn—Station Bulletins.—B. E., Red Wing, Dakota, writes: "Is rice corn, so-called, a variety of sweet corn? Will it grow in southern Minnesota?"—How can a person obtain an experiment station bulletin from another state's station?"

REPLY:—We are at a loss to know whether you refer to a variety of sorghum sometimes called rice corn or to a variety of pop-corn. It is not a variety of sweet corn. Either of the foregoing will grow in southern Minnesota. —Bulletins from the agricultural experiment stations of other states than your own can usually be obtained by forwarding the postage.

Celery in Winter.—E. J. F., Collins Centre, N. Y., asks: "What celery is best for winter use? We keep our celery in a very damp cellar. It keeps well for a time, but after a while it begins to decay from the outside until it is all soft."

REPLY BY JOSEPH:—The trouble is less with the celery than with the cellar. All varieties will rot when stored in a damp cellar. The foliage needs some ventilation and roots only should be kept damp continuously. If you will provide the ventilation, I think your celery will not be likely to rot in the way described. I like New Rose and Giant Pascal best for later use. Perhaps Golden Heart will keep better than the Giant Pascal.

Stone Drains.—A. L. M., Frenchville, Pa., writes: "Which is the best mode of draining land with stones? A slow-running stream runs across it in wet seasons. The land is very low but a good fall can be obtained. The land is heavy, compact clay. How should the stones be laid, and will it pay? There are stones in abundance."

REPLY:—Drain tiling is better, and also cheaper, unless the stones are handy and suitable and labor is cheap with you. Pick out the flat stones, place two lines of them on edge four or six inches apart against the sides of the ditch. Cover these with broad, flat stones. Fill over these with the smaller stones. A drain can be made with stones, but it is not nearly as good as one made with tile. Better than a stone drain is a wide, open ditch with long sloping banks. Would advise you to permanently improve your piece of wet ground with a good tile drain.

Bean Raising.—A. E. R., Fairpoint, Ohio, asks about the cultivation of beans, time and manner of sowing, amount of seed required per acre, etc.

REPLY BY JOSEPH:—Try the Burlingame Medium, if you can get seed cheap enough, otherwise the Marrowfat, or any other that is in demand in your market. Plant about June 1st. It will take from one and a half to three bushels of seed, according to variety and width of planting. You can plant by hand, hand-planter or regular drill. Have rows about two and a half feet apart and the plants at least six inches apart in the row. Cultivate and keep clean from weeds. Yes, I believe there is considerable room for an expansion of the bean business in the United States. At least, at usual prices for both products, beans are much more profitable than wheat or other grains. As there seems to be considerable interest in the subject, I will give more detailed information about it in one of the next numbers of FARM AND FIELDSIDE.

Poisoning Wolves.—G. P. S., Rancho del Santa Helma, Arizona, writes: "I would like to know how to poison wolves so as to secure their scalps. What is the best poison to use, and what would be the proper dose? I wish to kill them so quickly that they cannot get far away. The wolves are as large as a St. Bernard dog, and destroy a great many calves."

REPLY:—You can easily poison them with strychnine. Slash small pieces of meat and insert a few grains of the poison in each. Distribute them where the wolves prowl. Or kill a lamb or scrub sheep, cut it open, tie a rope to it, get on your horse and drag it around quite a large circuit of the territory visited by the wolves, and up to the locality where you have distributed the poisoned meat. This blood-scented trail will lead them to the bait. Strychnine will kill the wolves before they can get very far away. And, if you have placed the bait in an open prairie, you can easily find all of them afterward. They may be trapped alive. Build a

square pen of strong poles or rails. Make it twelve feet square at the bottom, and gradually taper it to an opening three or four feet square at the top. Place in it the sheep you have used for making the trail. If the pen is properly constructed the wolves can easily climb up on the outside and get in, but once in, cannot get out.

VETERINARY.

Conducted by Dr. H. J. Detmers, Professor of Veterinary Surgery in Ohio State University.

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

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 under any circumstances. This time half a dozen anonymous inquiries found repose in the wastebasket.

Periodical Ophthalmia.—The eye disease of your mare appears to be periodical ophthalmia, a disease which almost invariably leads to blindness. If, notwithstanding, you desire to apply treatment, consult recent numbers of this paper.

Is Stiff and Rubs Himself.—J. C., Iron, Ill., writes: "I have a six-year-old horse that is stiff in his hind legs, and rubs himself behind."

ANSWER:—I cannot tell you, because it does not appear from your inquiry, what ails your horse, or what causes the stiffness, and what induces the animal to rub itself.

Dysentery—Impaction in Third Stomach.—L. E., Rail, Mo. Your horse, it seems, died of enteritis, resulting shortly before death in dysentery. The sheep you inquire about may have been affected with impaction of third stomach. You seem to reverse things, and apply heroic treatment before you know what ails the animal. This is a good deal like chasing rats and mice in a china store, with clubs and brick-bats, in the dark. My method is first to secure the diagnosis, and then to devise a treatment.

Bog-spavin and Periodical Ophthalmia.—J. W. G. H., Lutesville, Mo., writes: "I have a two-year-old filly which has a large swelling in each hock-joint. The lumps are very soft. I also have a three-year-old that has had eyes. They have had spells every full moon, and they grow worse every time."

ANSWER:—Please read the rules at the head of the veterinary columns, and make no unreasonable request, which will not and cannot be complied with. The ailments of your animals are bog-spavin and periodical ophthalmia, respectively, diseases about which you will find the desired information in recent numbers of this paper.

Warbles.—J. A., Buena Vista, O. The lumps you complain of are so-called warbles, swellings which contain the larvae of a fly known as *Oestrus bovis*. If you look close, you will find a small opening in each swelling, and if you press the swelling with thumb and finger from the bottom upward, you will be able to press out the larvae. If not, you may enlarge the openings a little with a pen-knife. Kill every larva that you press out by immediately crushing it with the foot; otherwise it will burrow into the ground, develop into a pupa, and finally into a fly. After the larvae has been pressed out, the hoil will soon heal.

Very Lame.—L. K. M., Dodge, Neb., writes: "My mare has been lame in hind leg since last September. She is unable to lift her foot; is much worse in the morning. She has had absolute rest for five months, but gets no better. The stifle is somewhat enlarged."

ANSWER:—If the stifle (knee-pan or patella) is enlarged, the seat of the lameness, very likely, is in the knee-joint, and in that case I hardly think that anything can be done. Time, possibly, may effect some improvement. Have you taken the trouble to ascertain whether or not there was a fracture, either in the lower end of the femur, in the upper end of the tibia or in the patella itself?

Eats the Bedding.—M. E. I., Smith's-Enfield, Mass., writes: "I have a horse that eats his bedding, let it be whatever it is; sometimes I use straw, then again shavings or dry leaves, but he eats them all. I feed him plenty of good hay and grain, sometimes oats and cracked corn, and he will gnaw the side of the stall."

ANSWER:—Use good, sweet bay for bedding, at least in the front part of the stall, or as far back as the horse can reach and get it, and no damage will be done. If at the same time the feed-hox is kept supplied with oats, the voracious appetite of the horse ought to be appeased.

Abscess.—W. H. P., Pawnee Rock, Kan. Such an abscess has to be treated like any other abscess. First, it must be probed; then, if there is any place from which the pus cannot be freely discharged, a proper opening has to be provided, either by enlarging the existing one or by making a new one. This done, the abscess should be dressed twice a day with a good antiseptic (for instance, a four or five-per-cent solution of carbolic acid), and at the same time be kept scrupulously clean. If the opening is not too small, the carbolic acid is best applied by filling the whole cavity with absorbent cotton saturated with the carbolic acid solution.

Fluke-worms.—A. B. P., Ceunin, Col., writes: "Please tell me how long it takes fluke-worms to come to maturity in sheep, and if sheep can get worm brood in running spring water?"

ANSWER:—The whole cycle of development requires a year. The worm brood is taken up in the summer and fall in low and wet places. The disease can be prevented if sheep are kept away from such places, and if food (hay) that has grown in such places, and which possibly may contain the cercaria brood, by which the embryos of the fluke-worm (*Distoma hepaticum* and *Dist. lanceolatum*) are introduced, is not fed. Dr. M. Francis, professor in the A. and M. college, of Texas, has discovered a gigantic fluke-worm, heretofore new to science, which he calls *Distoma Texanicum*; but it does not seem to occur in sheep, and only in Texas cattle.

In Misery and Stiff.—C. B. D., Moscow, Iowa, writes: "I have a horse that is in misery and is stiff. About four weeks ago I went to the barn in the morning, and he was wet all over and seemed to be in great misery. I sent for a veterinarian, who pronounced it inflammation of the kidneys, and prescribed for him. He got better, but is stiff. His urine is white."

ANSWER:—How can you expect me to make a diagnosis without any knowledge of your



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animal except that the same is in misery and stiff. I will cheerfully answer your inquiries, if the cases inquired about are sufficiently described, but misery and stiffness may be associated in a good many diseases. Hence, as you actually make no other statement outside of some irrelevant remarks, I have no means of knowing whether your horse is crippled, has founder, tetanus or some other disease.

Worms and Bots.—S. N. M., Sodaville, Oregon, writes: "My mare is thin in flesh and eats little except grass. She also passed bots. What kind of worms are the enclosed, and what shall I do for them?"

ANSWER:—I cannot tell you what kind of worms; what you sent me wrapped up in a piece of paper arrived all shriveled up and could not be identified. For the worms, you may make injections of raw linseed-oil into the rectum, and at the same time, give good, wholesome food, especially good oats. Concerning the bots, you cannot do anything.

Abdominal Hernia.—J. E., Newport, Ky., writes: "I have a young mare two years old, which, when a year old, was gored by a cow on the left side near the stifle, rather under the belly, which caused the intestines to protrude. It was found necessary to cut a little in order to get the intestines back before stitching up. After it was apparently well a lump began to form there, which now is the size of a goose egg."

ANSWER:—The abdominal hernia of your filly, due to the fact that only the skin and not the opening in the wall of the abdominal cavity was healed, is not incurable, but an operation, which can be properly performed only by a skilled veterinary surgeon, will be required to effect a cure.

Thrush.—E. D., Westfield, N. Y. First, pare away with a sharp hoof-knife all born that is loose and rotten; then, while lifting up the horse's foot and holding it in such a position that the sole is nearly but not quite horizontal and the toe a little lower than the heel, pour on the diseased parts some pure (95 per cent) carbolic acid. Keep the foot in the above position for a few minutes, so as to enable the carbolic acid to come in thorough contact with all that is diseased, and then keep the horse on a dry and clean floor. Very often one application is sufficient; if not, another one may be made a few days later. Care must be taken not to bring the carbolic acid in contact with the skin; if it should happen, sweet-oil must be applied at once.

Probably Pyæmia.—E. C. R., St. Mary's, W. Va. What you describe seems to be a case of pyæmia. Unless abscesses are developing in interior organs, your cow, under proper treatment, will recover. Whenever an abscess is forming, it must be lanced at the lowest possible spot, so that the pus can be discharged; but to make sure of it, it also should be carefully probed, and if it is found that the bottom of the abscess in some part is deeper than the opening, either the latter must be enlarged, or a new opening must be made. This done, the abscess or abscesses should be dressed twice a day, filling the same with absorbent cotton saturated with a five-per-cent solution of carbolic acid, until nothing more can be introduced. Cleanliness is very essential to a healing.

Chronic Diarrhœa.—D. H. R., Prattsville, N. Y., writes: "My Jersey cow has the chronic diarrhœa, and has had it three or four months. Is there anything I can do for her? Please answer by letter."

ANSWER:—First, I wish to draw your attention to the note at the head of the veterinary column, and then you will see why your request to answer by letter is not complied with. As to your cow, chronic diarrhœa is, under all circumstances, a very serious affection, and often incurable. When a cure is possible, the treatment depends upon the cause or causes, but principally whether the latter can be removed or not. As you are silent even about the probable cause or causes, I can only advise you to try a thorough change of food, or to employ a competent veterinarian to inquire into the causes, and to treat the animal.

Said to be Lame in the Shoulder.—T. J. S., Greenville, S. C., writes: "I have a mule that is lame in the right shoulder. I first noticed it three or four months ago, and rubbed the shoulder with a mixture of tallow, kerosene and turpentine. After a rest of two or three days she seemed all right, until I worked her steadily for a week or so, when she got lame again. Her feet seemed to be in good condition."

ANSWER:—I would like to oblige you and give you the desired information, but, unfortunately, neither the seat nor the cause of the lameness can be ascertained from your description. In the first place, shoulder lameness is a comparatively rare occurrence, and secondly, every chronic lameness, no matter where situated, causes shrieking of the muscles in the shoulder. Examine the foot and the flexor tendons, and you may find that the lameness has its seat in a place different from what you supposed. If not, and if no competent veterinarian is available, the best you can do, probably, is to remove the shoes, if the mule is shod, and to give the animal rest or only voluntary exercise for at least a month or two. Abstain from all treatment as long as you do not know the nature and the seat of the ailment.

Ulcerating Hock-joint.—A. L., Smith's Creek, Mich., writes: "My father has a horse lame in the hock-joint. She has stood on three legs for the last six weeks. For several months the joint has been swollen, and six weeks ago she took very lame and has not put her weight on it since. It has festered and broken on both sides of the joint. The sore on the outside of the joint has healed, but the one on the inside still discharges much pus. The joint is swollen very large."

ANSWER:—Your case, possibly, is a desperate one, and a restoration of the animal to usefulness may be impossible. The best you can do will be to employ a competent veterinarian to examine, and if he sees his way clear, to treat the case. If you prefer to treat the animal yourself, you first will have to make a careful examination of the sore,

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abscess or ulcer, in order to learn whether the pus or secretions can be freely discharged or not; also, whether or not any of the joints of the hock are opened. If you find that the upper joint is opened, the case must be considered hopeless, and if the pus or secretions cannot be freely discharged, some cutting in a downward direction will be necessary. If the result of the examination is a favorable one, the whole sore should be thoroughly cleaned with warm water, or a warm solution of corrosive sublimate in water, 1 to 1,000, and then the sore or abscess may be dressed, twice a day, with iodoform and absorbent cotton. This dressing is best kept in place by a bandage, but the bandaging invariably must be commenced at the hoof. The bandage, if properly applied, will not only protect the sore, but will also reduce the swelling.

So-called Ear-worm.—B. J. C., Friendship, N. Y., writes: "I have a pet dog which has had several attacks of cankers in the ears, which I have relieved by care and medicine, but now he seems to have an abscess in one ear, as pus gathers. He shakes his head, digs at it with his toes, and seems distressed. The points of the flaps of both ears are scaly and sore under the hair. I have used dog-soap as a wash, and various other remedies. He is very fat, is five years old, and has long, thick hair. Last summer and fall he was afflicted with mange, and I spent time, work and money on him. He was very bad with it, but I only find an occasional scurfy, itching spot on him now. He is a great pet in the family, as he is very docile and intelligent, and we hate to see him suffer."

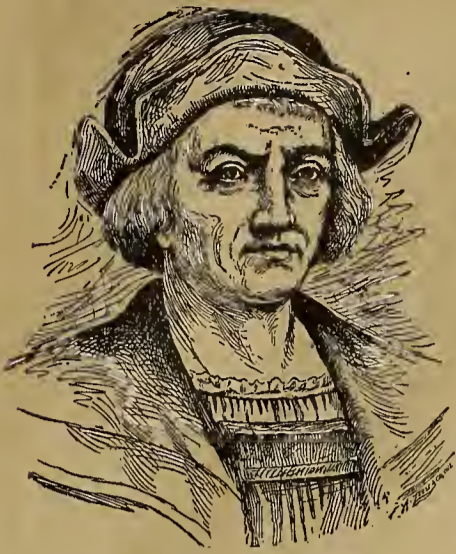
ANSWER:—If you do not object to its rather unpleasant smell, you may dress the sores of the ears with iodoform; or else, twice a day, with a mixture of subacetate of lead, one part, and olive-oil, three parts; but you will hardly succeed in effecting a cure unless you have a cap made for the dog, which must contain two pockets fitted for the ears, and be so arranged that by means of them the ears can be tied and kept above the head. The object is to prevent any scratching and shaking of the ears, and thus make a healing possible. In regard to what you call mange, I have a slight suspicion that it is nothing more nor less than a consequence of too rich food and too good living. You say the dog is a pet, and that very often explains a good deal.

LAND-SEEKERS.

It will be of interest to those contemplating settling in the Northwest, to know that the choicest farming and timber lands in Wisconsin are tributary to the Wisconsin Central Lines. Settlers on these lands have all the advantages of healthful climate, good market facilities, abundance of fuel and building material, pure and sparkling drinking water, and other important benefits which cannot be enjoyed on the prairies of the West. No droughts, no cyclones, no grasshopper plague and no fever and ague. Now is the time to select choice lands at low prices. Wisconsin is considered one of the most prosperous states in the union. Located directly on the Wisconsin Central Lines in this state are the thriving cities of Burlington, Waukesha, Fond du Lac, Osbosh, Neenah, Menasha, Waupaca, Stevens Point, Marshfield, Chippewa Falls, Eau Claire, New Richmond and Ashland. For tickets, time tables, maps and full information apply to J. J. FERRY, D. P. A., Wis. Cen., Cincinnati, Ohio, or to JAS. C. POND, General Passenger and Ticket Agent, Chicago, Illinois.

In addition to the usual weekly Grand Prizes of Sewing Machines, Gold Watches, Dinner Sets, etc., we offer as a special Grand Prize for the largest number of subscribers sent us in March, a \$50.00 Incubator. See offers on page 19.

Our Miscellany.



CHRISTOPHER COLUMBUS.

A SAILOR BRAVE.

WHAT ONE MAN'S PERSEVERANCE AND ONE WOMAN'S FAITH DID FOR THE ADVANCEMENT OF SCIENCE AND THE WEAL OF MANKIND. THE HERO OF 1492.

BY J. W. J.

Four hundred and fifty-seven years ago, in the grim little town of Cogoletto, in the republic of Genoa, Italy, there was born a little boy. The circumstances surrounding his birth were not unusual. His parents were not distinguished by birth, talents or attainments beyond their neighbors. There was nothing in their lives to draw the attention of the public to their child; yet this boy, when he had grown to man's estate, was destined, notwithstanding the obscurity of his birth, to become one of the most celebrated characters in history—to establish a fame which shall endure long after the restless waves of oceans have pounded away islands and changed the form of continents.

Christopher Columbus, the discoverer of America, was the eldest son of Dominico Columbus, a maker of woolen stuffs, and Susanna Fontanarossa. At a tender age he evinced a strong liking for the sciences, particularly mathematics, and made rapid progress in learning the Latin language. He took especial interest in reading the productions of cosmographic writers. Happily, his progress in learning was not hampered by the hard-headed obstinacy of deluded parents bent on forcing a square boy into a round hole. Having early shown a strong tendency for the sea, his father gave especial care to the directing of his studies so as to fit him for a maritime life. At the age of fourteen he returned from the university of Pavia, where he had been sent to study astronomy, geometry, geography, trigonometry and navigation, and for a time assisted his father in wool-combing.

He made his first voyage with a relative, who was a Goenese admiral, at fourteen years of age, and is reported to have served in the naval expedition fitted out by the Duke of Calabria in 1459 for the conquest of Naples.

His absorbing passion seems to have been a desire to explore unknown seas and lands. He learned navigation, voyaged on the seas to the full limit that other navigators had ventured, and then longed to sail his vessel over the dread expanse of water, which the superstition of the Goenese mariners peopled with dragons, and made the abode of every evil thing. He explored the Northern ocean more than a hundred leagues beyond the point where navigation was supposed to have reached its utmost limits. At every landing he endeavored to open trade with the natives, and thus acquire information of other lands. In this manner he constantly added to his fund of knowledge.

Possessing great knowledge of geography and astronomy, and being an able hand in delineating maps, in 1470 he went to Lisbon and opened a shop for the making of maps and charts. There he married Dona Felipa, daughter of Bartolommeo de Prestrello, a distinguished navigator, by whom he had one son, Diego, born while Columbus was living on the island of Porto Santo. It was here that the slumbering fire of Columbus' genius was first fanned into the fiercest flames by the discovery of some pieces of wood, driven on the island by western winds, and which appeared to have been worked without the use of iron. To the far reaching mind of Columbus this meant unknown countries lying beyond the vast stretch of mysterious waters, and waiting for some bold mariner to discover them and open their secrets to the astonished world. Two dead bodies, with features entirely unlike those of any known race of men, had been found on the island of Floes, and at various times canes of tropical growth and uncommon size had drifted onto the shores of the Madeiras.

These facts, coupled with the undeniable western winds, which sometimes continued howling for several days, strengthened a belief in Columbus' mind that there were other countries toward the west, and not so far away as to be inaccessible. The fact that they had never been discovered did not disturb him or shake his faith in their existence,

as he knew that no one had ventured into the unknown regions one hundred leagues to the westward.

In 1474 Columbus broached the subject of a possible western passage to India, and began corresponding with one, Paulo Toscanelli, a leading cosmographer residing at Florence, who greatly strengthened Columbus' theory of the existence of such a passage by declaring his belief in the certainty of its ultimate discovery. He sent Columbus a map, exhibiting the distribution of land and sea, according to the description in part of Marco Polo and in part of Ptolemy. This was the map by which Columbus sailed on his first voyage of discovery, and as on this map Asia was described as lying directly west of Africa and Europe, with Cipango and other islands between them. It accounts for many of the misconceptions and blunders of Columbus in his subsequent expeditions. Unfortunately, this map has been lost. What absorbing interest it would possess now for the visitors at the World's Columbian Exposition at Chicago, in 1893.

In 1483 Columbus made his first application for royal patronage to John II, King of Portugal. His plan was to seek a passage to the continent of India by sailing to the west. The Portuguese monarch seemed to think favorably of the scheme; but with a keenness worthy of a modern operator on Wall street, he secretly dispatched a caravel, with instructions to pursue the route planned by Columbus.

We can well imagine with what just indignation Columbus' heart was filled when he learned of this act of meanness on the part of the Portuguese King, and we accord him our approbation for the prompt manner in which he broke off his negotiations with that monarch, and shook the dust of Portugal from his feet.

Columbus was now in financial straits, his wife had lately died, and he determined to go to Spain. This he did secretly, as some say, to escape his creditors, but more probably to prevent King John from taking any steps to delay his departure. He was accompanied by his son Diego.

We next find him appealing to Venice, and later to his native state of Genoa for ships with which to explore the boundless ocean in search of other lands, but without receiving any encouragement.

In 1485 he succeeded in interesting the Duke of Medina Celi in his enterprise. The latter brought the matter to the attention of Ferdinand and Isabella. At the request of the queen, Columbus was granted an interview at court, which was then being held at Cordova. The Spanish sovereigns listened to his arguments and plans with great attention, and as he went on with his description of the great benefits that would result to the Spanish crown by reason of the discoveries that would surely follow such an expedition, they became seriously impressed with the feasibility of the hold navigator's plans. The most learned cosmographers of the kingdom were accordingly assembled in a body at Salamauca, to consult upon the subject.

It is edifying and amusing now, four hundred years after this meeting took place, to consider some of the objections that these learned men brought against the carrying out of an enterprise, the importance of which they were incapable of grasping. One argued that as the sea was ascending, as soon as a vessel reached the highest point and began to go down on the other side, its momentum would be greatly increased, no one could tell where it would stop, and that, in all probability it would never be able to climb the hill of waters and find its way back. Another cited the attention of his wise conferees to the fact that the oldest mariners had not been able to discover these western countries promised by Columbus, and how would a new mariner accomplish what they had failed to do with their vast experience and knowledge of navigation. A third flatly denied the existence of the Antipodes (this man must have been an ancestor of the one who, according to Sydney Smith, spoke disrespectfully of the equator), and gave no less a person than St. Augustine as his authority.

All this must have been excessively wearying and exasperating to the giant mind of Columbus. To be disappointed by kings was bad enough; but to see his cherished enterprise turned over to a lot of puffed-up, conceited men, devoid of any practical knowledge, to be ridiculed by them in their ignorance, was indeed humiliating.

The learned body reported adversely to the whole scheme, and the king, wearied by Columbus' importunities, and annoyed by the cares and expense involved in prosecuting the conquest of Granada, declared himself unable to engage in any new ventures.

Columbus strove hard to gain another audience with the royal pair; but, failing in this, he appealed to some wealthy noblemen who were abundantly able to father such an undertaking, but with no better success. Studying the Scriptures, he became impressed with the idea that the time had come for the gospel to be preached to every nation, and that he was the chosen instrument in the hands of God for preparing the way to such an end. Some writers say this gave a strong bias to his mind, and characterized it as a "delusion;" but who can say?

[Continued in our next.]

If you can't start a screw, pour kerosene on it, and five minutes later sprinkle the head with sharp sand before applying the screw-driver.

RICE hoiled long is watery and soggy. After washing, put over the fire in water that is actually boiling and salted. Boil fast for twelve minutes, then drain off the water, place the saucepan containing it either in the oven, with the door open, or on a brick on the back of the stove, and let it steam ten minutes longer, or until as tender as desirable. Every grain will be distinct and free from moisture.

To our many Swedish readers who may wish to secure a newspaper printed in their own language, and edited by one of their own nationality, we can heartily recommend the *Swedish Tribune* as being one of the progressive publications of the kind, giving as it does the news and events of the day, and treating political questions from a liberal standpoint. It is published weekly, by The Swedish Pub. Co., Room 22, Uhlick Block, Chicago, Ill. They will be pleased to receive your request for a free sample copy.

In the spring of the year wherever frost has existed, inequalities in the grass will occasionally appear, and all good managers of lawns, therefore, like to have a light roller go over it as soon as the danger of frost is over. If there are bare patches not covered by grass, the soil may be slightly raked and new grass-seed sprinkled before rolling. In like manner, in places where weeds have been taken out or from any other cause, considerable inequalities of the surface may exist, earth may be sprinkled in before rolling and the grass-seed sown. With this little care lawns are considerably improved in beauty. If the grass seems to be impoverished, a dressing of any kind of fertilizer is of great advantage. This may also be applied before rolling.—*Meehan's Monthly*.

THOMAS MEEHAN says that striking variations in plants occur at times suddenly by bud variation as well as by seeds. The curled-leaved weeping willow suddenly assumed this character on a tree of the ordinary kind; the red sweet potato is also a bud variation from the ordinary white variety; the double-flow-

ered tuberose is believed to have originated by bud variation; most of the many beautiful forms of *Bouvardia* cultured by florists have had a similar origin. Numbers of popular florists' flowers have been propagated from branches that have been cut from plants on which they had taken their sudden and remarkable departure from the normal forms. This is especially the case with roses, a number of those in general cultivation having originated in this way.

A CHEAP BATTERY.

If any of our boys want an electric battery strong enough to do light work, here is the way to make it:

Take four common drinking-tumblers; fill them three quarters full with water. Into each put a tablespoonful of sulphuric acid; then cut four pieces of wood about half an inch square, and long enough to rest upon the edges of the tumblers. Get four strips of sheet copper and zinc, and cut them just large enough to stand vertically in the tumblers, nearly touching the sides.

Tack the zincs to one side of each piece of wood, and the coppers to the other side. In doing this, take care that the points of the tacks do not pass entirely through the wood and touch the metal on the opposite side. If this were to happen, the cell would be what is technically termed "short-circuited," and a very small amount of electricity could be obtained from it.

Pry up a corner of each of the metals, and crowd between it and the wood an end, from which the insulation has been carefully scraped, of a small, copper wire. The wire should be in good contact with the metals, and a better way would be to solder them together. Twist the outer ends of the wires from zinc in No. 1 and copper No. 2 together. Do the same with zinc No. 2 and copper No. 3, and so on. The wires from copper No. 1 and zinc No. 4 are connected with the bell or other piece of apparatus. After being used, the metals should be removed from the salt water, washed and dried.—*Youth's Companion*.

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NEW YORK.—(Cornell University Station, Ithaca) Bulletin No. 34, November, 1891. The dewberries. Bulletin No. 35, December, 1891. Combinations of fungicides and insecticides, and more new fungicides. Bulletin No. 36, December 1891. On the effect of a grain ration for cows at pasture.

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SOUTH DAKOTA.—(Brookings) Bulletin No. 26, July, 1891. Strawberry, sand cherry and orchard notes.

SOUTH CAROLINA.—(Fort Hill) Bulletin No. 3, October, 1891. Analyses of fertilizers. Bulletin No. 4, December, 1891. Fertilizer tests with wheat. Varieties of wheat and oats.

TENNESSEE.—(Knoxville) Annual report for 1891.

U. S. DEPARTMENT OF AGRICULTURE.—(Washington, D. C.) Bulletin No. 1. Division of vegetable pathology. Additional evidence on the communicability of peach yellows and peach rosette. Office of experiment station, Experiment Station Record, Vol. III, No. 5, December, 1891.

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All stamped ready to be worked. These elegant tidies are made of the finest quality of embroidery felt, 14 by 18 inches in size, and come in various colors. They are all stamped ready to be worked. The designs are pretty and tasty, and a finished tidy makes an ornament in any room, as well as being very serviceable.

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Given as a premium for 1 new yearly subscriber, and the new subscriber is also entitled to one of the free presents offered on this page.

Price, including one year's subscription, 65 cents. We offer it for sale for 25 cents. Postage paid by us in each case.



Sachet Perfumes.

Premium No. 135.

Six Packages of Delicious Perfume

Given Free with this Paper one Year for 50 cents. For sale for 25 cents.

This premium consists of six sachets of the most pleasing and popular perfumes that are now in the market. The selection has been made with the view of pleasing the ladies, and the following odors comprise the list: **FEDORA, HELIOTROPE, VIOLET, LILY-OF-THE-VALLEY, NEW MOWN HAY and WHITE ROSE.** The advantages of perfumes prepared in this manner are well known. When laid in among handkerchiefs, gloves or clothing, they in a short time acquire and retain the delicate perfume of the sachet, and the whole dresser is soon filled with the delicious fragrance. They retain their strength for a long time, and can be carried in the pocket or about the person with no inconvenience whatever. These sachets have been prepared especially for us, and we think will become justly popular with our readers.

In order to secure many additional subscriptions at this time, this whole list of six perfumes will, during March, be mailed FREE to any one paying 50 cents for one year's subscription to this paper. If you are already a subscriber you can have your subscription advanced one year by accepting this offer.

Given as a premium for 1 new yearly subscriber, and the new subscriber is also entitled to a choice of one of the free presents offered on this page. See "Who is a new subscriber?" below.

We offer them for sale for 25 cents. Postage paid by us in each case.

Our 1892 Stamping Outfit.

Owing to the satisfaction this Outfit is giving we continue to offer it Free with this paper one year for 50 cents. For sale for 30 cents.

Premium No. 421.



A stamping outfit complete, with a variety of beautiful and artistic designs suitable for using on those tasty articles of adornment that should beautify every home and give so much pleasure in the making. The outfit contains 40 correctly drawn designs, with two complete alphabets that will be especially appreciated, they being both capital and small letters, box of stamping powder, pad and sheet of instructions. We name here only a few of the designs, to show the great variety of subjects they cover:

Spray of Wild Roses, Bunch of Plums, Cup and Saucer, Owl on Branch, Butterfly, Decorated Fan, Bird Flying, Horse-shoe, Spider-web, Braid Designs, Edgings, etc., etc.

The paper used is a good, strong bond paper that will not tear easily and will last a long time. Equal in every respect to many high-priced outfits.

During March this outfit will be mailed FREE to any one paying 50 cents for one year's subscription to this paper. If you are already a subscriber you can have your subscription advanced one year by accepting this offer.

Given as a premium for 1 new yearly subscriber, and the new subscriber is also entitled to a choice of one of the free presents. See "Who is a new subscriber?" below.

We offer it for sale for 30 cents. Postage paid by us in each case.

Premium No. 836.

NEEDLES AND HOOKS

AND WHAT IS MADE WITH THEM.

Given Free with this paper one year for 50 cents. For sale for 25 cents.

128 Pages and 46 Beautiful Engravings.

A copy of this book should be on every lady's work-table. Every article has been tested, and the directions are reliable. The fact that it is compiled by Mrs. Marcia Watson is in itself a guarantee of the correctness and beauty of the designs, a great number of which are entirely original. It is printed on the best of paper, with artistic covers, and has a complete index of contents.

Contains directions for making many other articles besides those mentioned here. Lack of room forbids naming them all. Block Insertion, Edging to match Block Insertion, Knitted Edge, Knitted Mechlin Lace, Braid Lace, Wide Diamond Lace, Crocheted Edge and Insertion, very handsome Baby's Sock, Pin-wheel Lace, Geneva Knitted Lace, Baby's Knitted Jacket, Baby's Socks, Table Mats, Crocheted Medallion, Knitted Shoulder Cape for lady, Wheat-head Lace, Shell Point Edging, Baby's Crocheted Jacket, Bar Lace, Crazy Pattern Edging, Crocheted Spider-web Tidy, Bettie Lace, Work-bag, Marguerite Edging, Knitted Fan Lace, Insertion Crocheted, Knitted Boots for Invalids, Easy Knitted Lace, Crocheted Edging, Crocheted Lace, Baby's Socks, Knitted Polish Boots, Knitted Ball, City Point Edging, Block Lace, Crocheted Diamond Edging, Marlboro Lace, Baby's Crocheted Shirt, Saw Tooth, Leaf Lace, Crocheted Oak-leaf Edging, Leaf and Trellis Pattern, Square Point Lace, Knitted Dress, Crocheted Fan O'Shauner Cap, Crocheted Lace, Medallion Lace, Crocheted Edging, Beautiful Edging, Crocheted Purse, Crocheted Lace, Knitted Baby's Shirt, Silk Railroad Stockings, Knitted Braided Stitch, Wheel Lace, Infant's Knitted Bootie, Crocheted Edging, Lady's Knitted Undervest, Lace for Pillow-cases, Sheets, etc., Knitted Bodyspread, Victoria Opera Hood, Fancy Pattern for Back of Mitten, Crocheted Lamp-mat, Crocheted Lace, Bath Mittens, Tatting Lace, The Little Strawberry, Knitted Skirt, Honeycomb Pattern, Knitted Cape Caps, White Crocheted Toboggan, Lady's or Gent's Mitts, Shell Edging.

During March this Book will be mailed FREE to any one paying 50 cents for one year's subscription to this paper. If you are already a subscriber you can have your subscription advanced one year by accepting this offer.

Given as a premium for 1 new yearly subscriber to this paper, and the new subscriber is also entitled to a choice of one of the free presents. See "Who is a new subscriber?" at foot of this page.

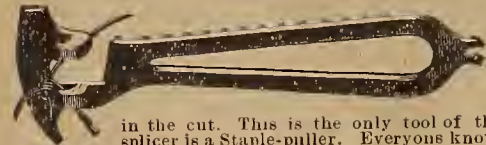
We offer it for sale for only 25 cents. Postage paid by us in each case.



Given as a premium for 1 new yearly subscriber to this paper, and the new subscriber is also entitled to a choice of one of the free presents. See "Who is a new subscriber?" at foot of this page.

WIRE-SPLICER AND STAPLE-PULLER. Premium No. 489.

No Man who has Wire Fences can afford to be without it.



With the Wire-splicer two pieces of wire can be spliced as neatly and strongly as it is done at the factory, one wire being wrapped tightly around the other, as shown in the cut. This is the only tool of the kind on the market. In combination with the Wire-splicer is a Staple-puller. Every one knows how hard it is to get the staples out of a fence post. With this little tool and a hammer they can be taken out as fast as the puller can be placed in position. The same tool also has a claw for drawing light nails or tacks, a hammer head for driving tacks, and the handle is in shape to use for a light wrench; the hook is very useful for handling barbed wire and protecting the hands from injury. Thus, there is combined in this one tool half a dozen that would cost separately one or two dollars. Directions for use go with each tool.

During March this Wire-splicer will be mailed Free to any one paying 50 cents for one year's subscription to this paper. If you are already a subscriber you can have your subscription advanced one year by accepting this offer.

Given as a premium for 1 new yearly subscriber, and the new subscriber is also entitled to a choice of one of the free presents.

We offer it for sale for 25 cents. Postage paid by us in each case.

SILVER PLATED BUTTER KNIFE AND SUGAR SHELL,

Both, together with this paper one year, only 50 cents, during March.

These useful articles are made in an elegant, neat and stylish pattern by a leading manufacturer. They are first nicked and then plated with silver. With reasonable care they will last for years, and give satisfaction wherever they are used. During March, both will be mailed Free to any one paying 50 cents for one year's subscription to this paper. If you are already a subscriber you can have your subscription advanced one year by accepting this offer.

Both given as a premium to any one sending one new yearly subscriber to this paper, and the new subscriber is also entitled to a choice of one of the free presents offered on this page. See "Who is a new subscriber?" at foot of this page.

We offer either one for sale for 20 cents, or both for 35 cents. Postage paid by us in each case.



Premium No. 325.



Our New Pattern.

A GOOD FOUNTAIN-PEN FOR EVERYBODY. Premium No. 324.



Always Ready for Use. Complete. Useful. Convenient. Because of its great convenience, everybody should carry a Fountain-pen, and the only excuse for not doing so has heretofore been the cost of a good one. Now there is no excuse as the excellent pen we offer is placed within the reach of everybody. This perfect Fountain-pen is a triumph of ingenuity, combining the good features of old styles with new improvements. With this pen in your pocket you are always prepared with pen and ink, at all times and places, and yet it is but little larger than a lead-pencil, and just as convenient for carrying in the pocket. The holder contains a supply of ink that will last the average writer several weeks, and may be refilled with ink in a moment.

During March this Pen will be mailed Free to any one paying 50 cents for one year's subscription to this paper. If you are already a subscriber you can have your subscription advanced one year by accepting this offer.

Given as a premium for 1 new yearly subscriber, and the new subscriber is also entitled to a choice of one of the free presents offered on this page.

We offer it for sale for 25 cents. Postage paid by us in each case.

The Widdler Doodles' Courtship

By "JOSIAH ALLEN'S WIFE."

Premium No. 726.

No other writer hits off the every-day occurrences of life in the keen, witty and laughable style of "Josiah Allen's Wife."

The book is a collection of fifteen sketches.



This cut, illustrating one of the sketches, "The Surprise Party," shows the laughable side of a surprise on both sides.

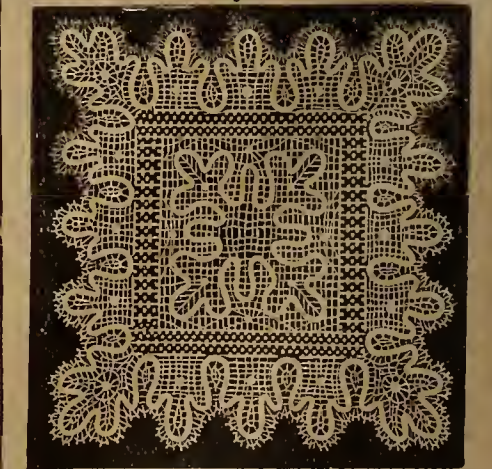
There is many a hearty laugh in store for the reader. Get it and "laugh and grow fat."

During March this book will be mailed Free to any one paying 50 cents for one year's subscription to this paper. If you are already a subscriber you can have your subscription advanced one year by accepting this offer.

Given as a premium for 1 new yearly subscriber, and the new subscriber is also entitled to a choice of one of the free presents offered on this page.

We offer it for sale for 25 cents. Postage paid by us in each case.

Russian Lace Tidy. Premium No. 709.



The same pretty design as shown in cut. An article of household adornment that will please the ladies and aid in beautifying the home.

During the next 30 days this Tidy will be mailed FREE to any one paying 50 cents for one year's subscription to this paper. If you are already a subscriber you can have your subscription advanced one year by accepting this offer.

Given as a premium to any one sending one new yearly subscriber to this paper, and the new subscriber is also entitled to a choice of one of the Free Presents offered on this page.

See "Who is a new subscriber?" at foot of this page.

Who is a NEW Subscriber? The above offers are made to increase our subscription list, therefore a change from one member of a family to another is not securing a new subscriber. A new subscriber must be a person who is not now on our subscription list, and one whom you have sought out and solicited to take the paper. Sending your own subscription, or the name of your wife, husband or any other member of your own family, is not sending a new subscriber in the sense we intend it, and will not entitle you to an additional premium. You may count your own name, or the renewal of any former subscriber, towards a premium when three or four names besides your own are sent, as this shows you have actually done some work, and been out among the people telling them of the merits of our paper.

For any article on this page, order by the Premium Numbers and address all letters to

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

VALUABLE PREMIUMS

Given to subscribers and agents, and the same subscribers for which we give these premiums will be counted toward BOTH the Weekly Grand Prize and Special Grand Prize.

SET OF SIX TEASPOONS.



Premium No. 400.

STERLING SILVER PLATE.

TO ANY ONE PAYING ONLY \$1 WE WILL SEND BOTH THE FARM AND FIRESIDE AND THE LADIES HOME COMPANION FOR ONE YEAR AND GIVE THIS BEAUTIFUL SET OF SPOONS

FREE

These spoons are made in the best style, fully finished, regular size, genuine Sterling Silver Plate, perfect goods in every way, the same quality being carried in stock by regular jewelry houses.

THIS OFFER IS OPEN TO EVERYBODY.

We will send this set free to any person paying \$1 for both the Farm and Fireside and Ladies Home Companion one year. If you are now a subscriber to either of these papers we will extend your subscription to that paper one year and send the other one year. Or, we will send the set free to any person paying \$1 for Farm and Fireside for two years. Or, to any person paying \$1 for Ladies Home Companion for two years. Or, the set will be given as a premium for two subscribers to either the Farm and Fireside or Ladies Home Companion, and each subscriber will receive one of the free presents on opposite page.

Notice.—The regular subscription price of either of the papers is 50 cents a year. We add nothing to this price to pay for the spoons. You simply become a subscriber to the papers on the above terms and we give them to you, postage prepaid.

GRAND PRIZES AWARDED EACH WEEK

To Agents Sending the Largest Clubs.

FIRST GRAND PRIZES.

The choice of either a Singer Sewing-machine, a Gents' Gold Watch, or Ladies' Gold Watch, will be awarded each week to the person sending the largest club. The watches are Genuine American Jeweled Movements in Gold Filled Cases, handsomely engraved and warranted by the manufacturers for fifteen years.

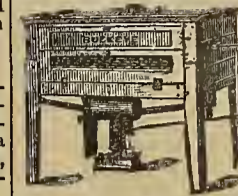
SECOND GRAND PRIZES.

The choice of either a Set of Rogers Table-ware, consisting of 6 Knives, 6 Forks, 6 Tablespoons, 6 Teaspoons, 1 Sugar-shell, 1 Butter-knife; a Decorated China Dinner and Tea Set, or Webster's International Dictionary, will be awarded each week to the person sending the second largest club.

The names of the winners of prizes for the weeks ending March 5th and 12th will be announced in our issue of April 1st.

SPECIAL GRAND PRIZE.

A \$50.00 Buckeye Incubator will be awarded, in addition to all other premiums and prizes, to the person sending the largest number of subscribers during March, 1892.



This incubator has a capacity of 300 eggs, is heated by a circulation of hot water, controlled by a thermostat or regulator, and is perfectly reliable. For a two-cent stamp the manufacturers, The Buckeye Incubator Co., Springfield, Ohio, will send you their catalogue and treatise containing complete description, cuts, etc., of their incubators and brooders.

NAMES OF PRIZE WINNERS.

For the Week Ending February 6, 1892.

John D. Johnston, Griswold, Iowa, was awarded the First Grand Prize, a Gold Watch, for sending 19 subscribers, the largest club received during the week.

J. B. Templeton, Swanton, Ohio, secured the Second Grand Prize, a set of Buggy Harness, for sending the second largest club, 18 subscribers.

For the Week Ending February 13, 1892.

M. E. Hitchcock, Bethany, Conn., was awarded the First Grand Prize, a Singer Sewing-machine, for sending 21 subscribers, the largest club received during the week.

Ezra Minnick, Post Oak, Mo., secured the Second Grand Prize, an American Washing-machine, for sending the second largest club, 20 subscribers.

The PEERLESS ATLAS FOR 1892.

Premium No. 831.

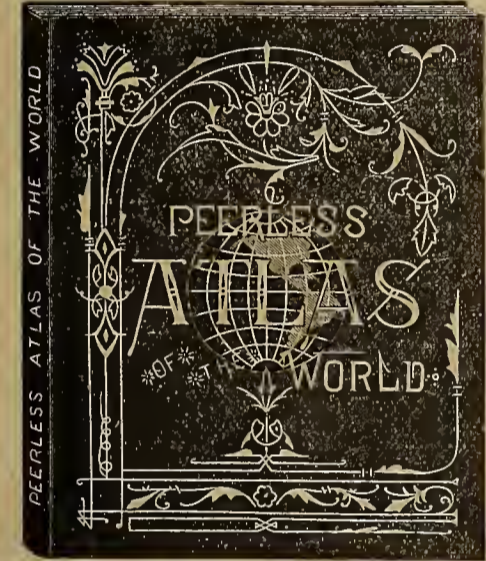
Sent free as a premium to any one sending 3 yearly subscribers to this paper, and each subscriber will be entitled to one of the presents offered on opposite page.

Or, the Atlas, together with this paper one year, will be mailed to any address for only \$1.

It Gives the Population, by the Census of 1890,

Of each State and Territory, of all counties of the United States, and of American Cities with over 8,000 inhabitants.

The Peerless Atlas meets the wants of the people more completely than any similar publication ever published. For the price, it stands "Peerless" in every sense of the word. The edition for 1892 contains new maps of southern states never before published, while accurate and timely information, statistical and otherwise, is brought down to the latest date. As an atlas and general reference book it is broad and comprehensive, valuable alike to the merchant, the farmer, the professional man, in fact, everybody. It is equal to any \$10.00 Atlas. To keep pace with the progress of the age, to understand comprehensively and intelligently the current happenings daily telegraphed from all parts of the earth, you must have at hand the latest edition of the "Peerless Atlas of the World."



Size, Open, 14 by 22 Inches; Closed, 14 by 11 Inches.

LARGE AND MAGNIFICENT ILLUSTRATIONS embellish nearly every page of the descriptive matter, and faithfully depict scenes in almost every part of the world. They are intensely interesting and constitute an art collection which will be viewed with pleasure and admiration for years to come. Among these are included illustrations of 10 of the principal buildings to be erected for the World's Fair, at Chicago, in 1893.

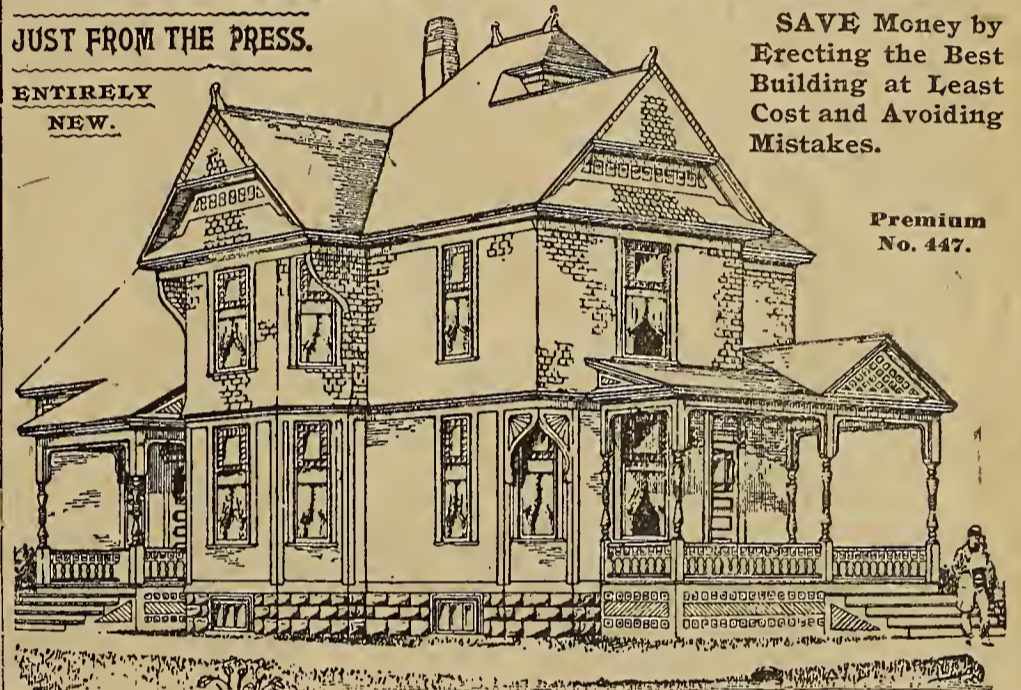
The Peerless Atlas has as Large and Fine Maps as are found in \$5.00 and \$10.00 Atlases.

BUILDING PLANS.

JUST FROM THE PRESS.

ENTIRELY NEW.

SAVE Money by Erecting the Best Building at Least Cost and Avoiding Mistakes.



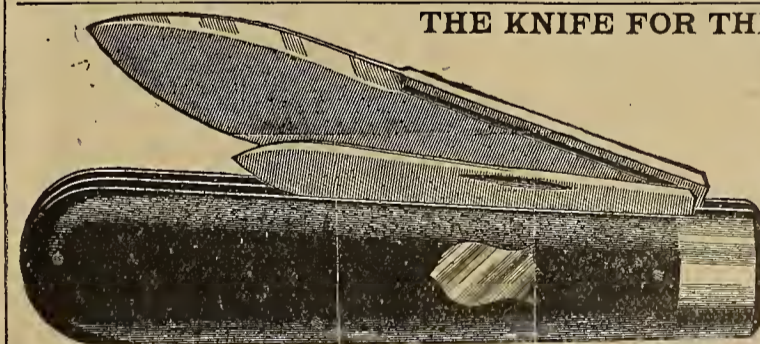
Premium No. 447.

A \$2,000 DWELLING.

It has been our wish, for several seasons, to offer our readers a book of plans that would give them the benefit or the skill and knowledge of an experienced architect, in a collection of plans for modern dwellings, stables, barns, etc. The expense of producing new plans and drawings is enormous, and such books as are offered for sale usually contain only old-fashioned, discarded plans. We have, however, by contracting for a very large number of copies, secured an entirely new work by one of the foremost architects of the day. The work contains Views, Floor Plans and Estimates for fifty-six dwellings and four stables, besides a number of new plans, prepared especially for our subscribers, of Barns, Poultry-houses, Ice-houses, Well-curbs and Buildings especially adapted to farm and suburban residents. This feature will add greatly to its value and must commend itself to our readers. Views and Floor Plans of each design are shown and careful estimates given of the cost of each, based upon cost of material in the locality where the building is erected. The buildings range in cost from \$650 up—the greatest number being houses of medium cost—from \$1,200 to \$3,000—this class of buildings being most in demand. Every device known to the profession has been employed in the designing of these dwellings to produce, at a low cost, convenient and tasteful houses, and any one contemplating building can get many new and valuable ideas, and make a great saving in cost by a careful study of these plans and estimates. The book is printed upon heavy plate paper and is a beautiful specimen of the printer's art.

We offer the complete book and this paper one year for only \$1, only a very small part of the cost of making one of the plans; or give it as a premium for five yearly subscribers to this paper, and each subscriber is entitled to one of the presents on opposite page.

THE KNIFE FOR THE MILLION.



Given as a premium to any one sending two yearly subscribers to this paper, and each subscriber is entitled to one of the presents on opposite page.

Premium No. 677.

Everyone using a knife appreciates having a really good one, and we offer this knife as one that will "fill the bill"

in every way. It is of American manufacture, made by a well-known and reliable firm, celebrated for their fine cutlery, from superior stock and of a pattern that will be found the most useful to the majority. It is our aim to offer the best knife possible for the money.

Given as a premium for two yearly subscribers, and each subscriber will be entitled to one of the free presents offered on opposite page. Price, including one year's subscription, 70 cents. We offer it for sale for 40 cents. Postage paid by us in each case.

Prof. Moody's Perfecting Tailor System of Dress Cutting.

Given free to any one sending only 3 yearly subscribers to this paper, and each of the subscribers will be entitled to a choice of any of the presents on opposite page.

Premium No. 549.

The Moody System of Dress Cutting Is Indispensable for Home Dressmaking.

By it you can cut every style of dress or other garment by the common square, and by following the instructions, cut a complete dress from neck to floor, without making a single calculation. Full directions for taking measurements are given. With this system and the book on dressmaking which goes with it, any lady of ordinary intelligence can take a fashion-plate from any fashion magazine and cut a dress or any other garment in the same style and be certain of a perfect fit without trying on. With hook and diagrams you will know how much goods to buy for any style of garment, how to fashion waist, how to fit stout or thin ladies, how to fit round or hollow shoulders, how to remedy or conceal defects in the form; in short, all valuable secrets connected with dress-making.

Given as a premium for 3 yearly subscribers and each subscriber entitled to one of the presents on opposite page. Price of the complete System, including one year's subscription to this paper, \$1.50.



IMPROVED CYCLONE CORN-SHELLER. Premium No. 611.



The Cyclone Sheller has been greatly improved and is now the most perfect and effective sheller ever placed on the market. The manufacturers have succeeded in overcoming the frequent clogging and choking which is the constant objection to all other machines. Every part is strong enough to stand all strains likely to be required of it, and with proper usage it is warranted for five years. This improved machine is one of our most useful premiums, especially to our farmer friends. It is a little marvel in the simplicity of its construction, while in operation it is, as its name implies, a perfect cyclone in the rapidity with which it strips a "spike of maize" of its corn, dropping the corn into the box or basket and throwing the "spike," or cob, off at the back. The sheller is small, but it "gets there" ahead of many a larger machine. Its shelling capacity is one bushel of ears inside of 4 minutes. By a new contrivance the corn is all dropped into the box or basket arranged for it, the grains not being scattered about the machine, as with other shellers. We are enabled to offer the sheller, together with a year's subscription to this journal, at a very low price, considering its value and improvements. Must be sent by express, receiver to pay charges, which will be light. Name your express office, if different from your post-office.

This Improved Sheller given as a premium for 20 yearly subscribers, and each subscriber will be entitled to one of the free presents on opposite page. Price, including one year's subscription, \$3.

A \$4.00 Book One Year for Only 70 Cents

YOUMAN'S DICTIONARY OF EVERY-DAY WANTS

Contains 20,000 Receipts. 530 Large Pages. The publisher's regular price is \$4.00. Prem. No. 720.

It is one of the most remarkable books of the day, containing, as it does, a reference to every conceivable subject under the sun. In itself it is a complete and practical library, so arranged as to be invaluable in the household, on the farm, in the counting-room or work-shop. It contains 20,000 tried and approved receipts. All trades, professions and occupations are represented, and valuable receipts are given for each, large sums being paid for some of the trade secrets, now published for the first time, and which will make fortunes for the wise. The following names some of the different occupations to which this book is invaluable:

- Miners, Opticians, Whitewashers, Soapmakers, Trappers, Tinsmiths, Cabinet Makers, Lumber Dealers, Engineers, Flour Dealers, Glass Workers, Hair Dressers, Hatters, Ink Makers, Housekeepers, Bankers, Barbers, Inspectors, Bookbinders, Printers, Gilders, Coopers, Copper-smiths, Machinists, Carriers, Doctors, Egg Dealers, Electrotypers, Engravers, Furriers, Glaziers, Grocers, Hotel Keepers, Iron Workers, Authors, Paper Hangers, Dentists, Plasterers, Scourers, Tailors, Taxidermists, Bee-keepers, Nurses, Perfumers, Roofers, Stereotypers, Tanners, Varnishers, Cooks, Clerks, Book-keepers, Farmers, Stock-raisers, Gardeners, Florists, Railroaders, Builders, Dairy-men, Druggists, Carpenters, Carvers, Jewelers.

LARGE FORTUNES have been made in the manufacture and sale of some of the receipts given. As stated above, the publisher's regular price for this remarkable book is \$4.00, but in order to largely increase our circulation we now offer it for only 70 cents, including this journal one year. Or, the book will be given as a premium to any one sending two yearly subscribers to this paper, and each subscriber will be entitled to any one of the presents on opposite page. In either case the book and papers are sent by mail, all postage paid by us.

Any one may get up Clubs for this Paper and compete for the Grand Prizes.

Even if you do not secure one of the Grand Prizes, you are sure of valuable premiums for your trouble, as the Grand Prizes are given in addition to the premiums offered to those who get up clubs. See opposite page.

For any article on this page, order by the premium numbers and address letters to FARM AND FIRESIDE, Philadelphia, Pa., or Springfield, Ohio.

3,000 JOB LOT BICYCLES
 20 to 50% Off.
 And lowest prices on all '92 makes & 2d. *Easy payments.* We sell everywhere.
 '91 Cushman \$35 Jno. balls \$65 40 in. \$37 Victor Jr. balls \$17
 '90 Crescent ('91 make) \$50 '91 \$185 Rambler \$30
 '91 \$145 Cushman High Grade \$90 And 20 other styles as cheap.
 Largest stock and oldest dealers in U.S. Agts. wanted.
 Cash, free. **Rouse, Hazard & Co.,** 32 E. St., Peoria, Ill.

CHAMPION WASHING MACHINE.
 Best in the World. Entirely new principle. Will wash 1,000 pieces per day. No steaming the ceiling, or slopping the floor. Will sell at wholesale price where we have no agent. Add.
THE CHAMPION SHELF MFG. CO., SPRINGFIELD, OHIO.

AUTOMATIC ENGINES.
 3 to 15 H. P. on base plate or mounted on four-wheel truck, suited for all kinds of work. We also manufacture Separators, Sweep Powers, 1, 2 & 3 horse tread powers with governor, either level or regular tread, hand and power Corn Shellers, hand and power Feed Cutters with or without crusher, Feed Mills, Steel Land Rollers, Chilled Plows all sizes, Steel Cultivators, Empire Mowers, Hay Rakes, Wood Saws, &c.
S. S. MESSINGER & SON, Tatamy, Pa.

SPRING CURRY COMB
 Patented in United States, July 16, 1889, and in Ten Foreign Countries.
 A comb that combines the strength of metal with the elasticity of a brush. Efficient, humane, convenient and durable. Descriptive circulars on application. Send 50c for sample by mail, if not sold by your dealer.
SPRING CURRY COMB CO., South Bend, Ind.

MEND YOUR OWN HARNESS WITH THOMSON'S SLOTTED CLINCH RIVETS.
 No tools required. Only a hammer needed to drive and clinch them easily and quickly; leaving the clinch absolutely smooth. Requiring no hole to be made in the leather nor burr for the Rivets. They are STRONG, TOUGH and DURABLE. Millions now in use. All lengths, uniform or assorted, put up in boxes. Ask your dealer for them, or send 40c. in stamps for a box of 100; assorted sizes.
 MANUFACTURED BY
JUDSON L. THOMSON MFG. CO., Waltham, Mass.

Before you buy a **CIDER PRESS**, write the **HYDRAULIC PRESS MFG. CO.** of Mt. Gilead, O., for catalogue, which will be mailed free on application.
HYDRAULIC
 Presses for all purposes; also general cider makers' supplies.

Best Fences and Gates for all purposes. Free catalogue giving particulars and prices. Write
THE SEDGWICK BROS. CO., RICHMOND, IND.
 Mention Farm and Fireside.

IDEAL JUNIOR WIND MILL
 "Money makes the mare go," and a little breeze operates the Ideal Junior—a little money buys it. Ask for catalogue free.
STOVER MFG. CO., 507 River Street, FREEPORT, ILL.
 Mention this paper when you write.

MAST, FOOS & CO., SPRINGFIELD, O. Manufacturers of
BUCKEYE WIND ENGINES
 Strong and Durable; handsome; Simple in construction; and will be sold as cheap or cheaper than any other first-class Engine. The
BUCKEYE FORCE PUMP
 Works easily and throws a constant stream. Has Porcelain Lined and Brass Cylinders. Is easily set. Is the BEST FORCE PUMP IN THE WORLD for Deep or Shallow Wells. Never Freezes in winter. Also manufacturers of the Iron Turbine Wind Engine, Buckeye Force Pump, Buckeye, Globe & Champion Lawn Mowers, Buckeye Wrought Iron Fenest. Creating, &c. Write for circulars and prices.

SEYMOUR'S SOLID DIAMOND SENT BY MAIL.
 TEEL EDGES WARRANTED PATENTED HEARS
 4 1/2, 5, 5 1/2 Inch, \$1.00.
 6 " 1.15.
 7 " 1.25.
C. S. BURCH & CO., 180 Michigan St., Chicago

FARMERS Saw and Grist Mill. 4 H.P. and larger. Catalogue free.
DELOACH MILL CO., Atlanta, Ga.
FENCING GALVANIZED WOVEN WIRE WIRE ROPE SELVAGE.
McMULLEN'S
 RABBIT & POULTRY FENCING.
 Freight Paid. **McMULLEN WOVEN WIRE FENCE CO.,** CHICAGO

Champion Evaporator.
 For MAPLE, SORGHUM, CIDER, AND FRUIT JELLIES.
 Corrugated pan over firebox, doubling boiling capacity. Small interchangeable strup pans (connected by siphons), easily handled for cleaning and storing, and a Perfect Automatic Regulator. The Champion is as great an improvement over the Cook Pan as the latter was over the old iron kettle, hung on a fence rail.
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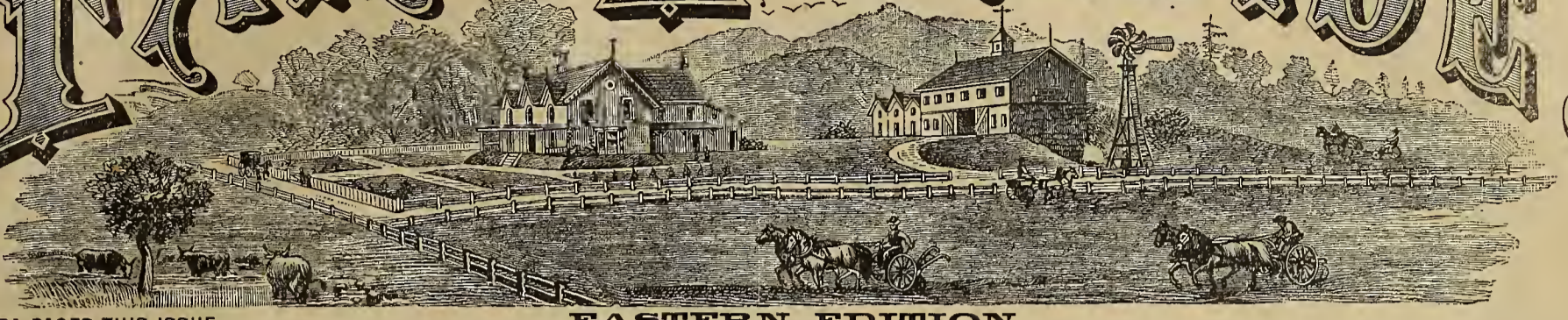
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FARM AND FIRESIDE



FOUR EXTRA PAGES THIS ISSUE.

EASTERN EDITION.

VOL. XV. NO. 12.

PHILADELPHIA, PA., and SPRINGFIELD, OHIO, MARCH 15, 1892.

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Farm and Fireside has More Actual
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Journal in the World.

Current Comment.

THE Springer wool and woollens bill has been given the right of way in Congress. This bill provides for the admission of wools free of duty, but retains duties on woollens. The schedule of the latter has been revised and some reductions made. Woolen cloths and knit goods are to pay 40 per cent duty; dress goods, yarn, etc., 35 per cent; carpets, 30 per cent; and blankets, 25 to 35 per cent. The majority of this ways and means committee evidently is of the opinion that the "robber barons," who are the greatest beneficiaries of the "robber tariff," are the farmers who raise wool, and not the "mill bosses" who manufacture it. And some people are wondering why this bill makes relatively greater reductions on wool manufactures used by the rich than on those used by the poor.

The bill is accompanied by lengthy reports from the majority and minority of the ways and means committee. The majority says that the McKinley law imposes enormous duties, many of them prohibitory, and all of them unreasonably high; that the history of protective tariffs on wool and woollens show disastrous effects on growers, manufacturers and consumers; that the consumers are not benefited; that more shoddy than wool is used, and that growers of wool and manufacturers of woollens have a restricted market. The majority report concludes:

"It is not unreasonable to assume that lower duties upon these articles, as well as a reduction of more than half upon all woolen goods, would cause some increase of importations; for the reduction of duties would cheapen the price to consumers, and thus largely increase consumption. Increased consumption would call for increased home manufacture, as well as, temporarily at least, enlarged importations. But it is impossible to estimate accurately the effect upon revenues of changes in tariff duties."

The minority says that wool-growers and manufacturers unanimously protest against the repeal of the present law, and replies in detail to the arguments of the majority report:

"Within the year that has passed since the present law was enacted, the flocks of the United States have increased more than 1,500,000 sheep, and under any assurance of its permanence, this increase will continue rapidly. The number of woolen mills in the country has also increased; a great amount of idle machinery has been started up to supply the new market created by the curtailment of \$22,500,000 in the imports of foreign woolen goods; old mills, long idle, have been re-equipped; large numbers of operatives have been given employment, and new industries,

never before successfully undertaken in the United States, have been inaugurated.

"Not only are wool-growers and wool-manufacturers encouraged and benefited by the law, but the great body of the people, the consumers, have shared in these benefits. The people of the United States find themselves able to secure all the woollens they require at a smaller cost than ever before in their experience. If cheapness is the one thing to be desired, it has certainly been achieved under a tariff which enables a dollar to purchase a larger and better quality of woollen goods than was possible under any previous tariff.

"There is a widespread popular recognition of the fact that constant tariff changes are a menace to stable business conditions. They unsettle values, even when they do not reduce prices, and they breed uncertainty, which means paralysis to business enterprise. The nation has just adjusted its business to a new tariff, carefully framed in accordance with the instructions of the voters to the Congress which effected that revision. That revision has already vindicated itself by greatly enlarging our field for industrial enterprise, and has already disproved every prediction of higher prices and universal disaster which greeted its enactment. It has been in operation but little more than a year. Its friends are not afraid of the test of a fair trial for it. Its enemies, apparently, dare not trust themselves to the event of such a trial.

"The committee's bill proposes to deprive the wool-growing industry in the United States, at one blow, of the entire tariff protection it has enjoyed under every tariff act since 1816. It can have but one effect—the complete and final abandonment of the effort to produce in the United States the supply of wool needed for the clothing of our people. A knowledge of the peculiar condition of the wool-growing industry throughout the world in the last few years fully demonstrates this truth. Fifty years ago Europe produced ninety-four per cent of the wool she consumed, and Australia, Cape Colony and South America, which produce more than one million pounds in a total production of two million pounds, were not reckoned as factors in the supply.

"This abnormal development has produced a glut in the supply, under which prices have rapidly fallen. American wools have necessarily sympathized with this universal decline in prices, but a careful comparison of prices show that the wool tariff has kept the price of domestic wool above the level of foreign wool by nearly the full amount of the duty, and it has been potent in protecting our own clip from the unrestricted influx of the surplus of the foreign supply. But for that barrier the promising sheep ranches of our western states would long since have disappeared, and the sheep industry of the United States have fallen back into a purely mutton supply. The moment that barrier is removed the extinction of our flocks will follow with startling rapidity.

"It does not mean cheaper wool for the masses, but it does mean the wiping out of great properties, the curtailment of our industrial resources, and is a savage blow aimed at our agriculturalists, without the prospect of compensating benefits in any quarter. Something is due from Congress to agriculture. It is entitled to at least as good treatment as is accorded our manufacturing and commercial interests.

"The protective policy of the United States is now followed, to a greater or less degree, by every important nation, Great Britain alone excepted. The proposed abandonment of this policy in the United States in the face of its continuance and extension everywhere would afford to Great Britain the outlet for her surplus woolen products, which she cannot otherwise obtain.

"Those who would deliberately shape our fiscal legislation to this end have a purblind vision of the present industrial situation of the world. England, France, Germany and the United States are engaged in a tremendous struggle for industrial supremacy.

"Under the fiscal policy we defend, our advance to the front rank in this great struggle

for industrial supremacy has been the phenomena of civilization. We have been rapidly gaining on Great Britain during the thirty years of the unbroken continuance of this policy. No industry so well demonstrates this progress as the wool manufactures, which has grown in thirty years 375 per cent in the United States to 57 per cent in Great Britain.

"A single additional year under the tariff law of 1890 will place us in the van as the greatest wool-manufacturing people on the globe. At this very moment, with the goal already in sight, the majority of the committee asks Congress to pause, to turn back, to abandon the field."

IMPORTANT information has been given out from Washington that an agreement for an international monetary conference has practically been made. The United States, England, France and Germany are to join in a conference on the bimetallic currency question.

If these four great nations should agree on and establish an international ratio between gold and silver, the silver coinage problem would be solved. The credit of these nations would keep good the paper issued on silver, even if its bullion value declined farther than it has done.

The fault of bimetalism is the difficulty with which it can be maintained. The bullion values of gold and silver, following the law of supply and demand, part company; the more valuable metal is withdrawn from circulation and hoarded or used in the arts; the cheaper metal remains in circulation, and monometalism is established. For a period of time in the history of this country the bullion value of the silver dollar was a little greater than the bullion value of the gold dollar, and the silver dollar, for that reason, was not in circulation. If we now had unlimited free silver coinage, with the bullion value of the silver dollar thirty per cent less than the bullion value of the gold dollar, gold would disappear from circulation and silver monometalism be established. What honest, intelligent people want is gold and silver, and paper based on them, and all at par. This they can have, either under limited coinage like that of France or the United States, or under unlimited coinage at an established international ratio.

Governor McKinley has issued the following proclamation to the people of Ohio, appealing for aid to the starving Russian peasants:

"It has been brought to the notice of the executive that there is a widespread famine in the empire of Russia, the territory embraced being fourteen provinces, and the sufferers numbering over twenty millions. No other country in the world is enjoying such prosperity as the United States, and no state is more blessed than is Ohio; and the cry of humanity for bread should have a most generous response.

"As governor of the state, I hereby officially call attention to the great calamity and to the organized efforts inaugurated to relieve the starving Russian peasants, confident that the citizens of this commonwealth will bountifully contribute. I appeal to the various mercantile bodies, religious and benevolent and charitable associations, and to the people of Ohio generally, and in their individual capacity, to put themselves in communication with the Russian Famine Relief Committee, No. 732 Fourteenth street, Washington, D. C., which organization is

working in harmony with the American National Red Cross, in the collection, transportation and distribution of supplies."

THE United States Senate shows a ready willingness to act in favor of providing for the election of senators by the direct vote of the people. The senate committee, to whom the matter was referred, promptly agreed upon the following amendment to the constitution:

"That the Senate of the United States shall be composed of two senators from each state, who shall be chosen by a direct vote of the people of the several states for six years; and the electors in each state shall have the qualifications requisite for electors of the most numerous branch of the state legislature, and each senator shall have one vote. If vacancies happen, by resignation or otherwise, the executive thereof may make temporary appointments until the next general election in such state for members of the House of Representatives in Congress, when such vacancies shall be filled by a direct vote of the people, as aforesaid."

After the amendment has been proposed by Congress by a two thirds vote, it must be ratified by the legislatures of three fourths of the states. This will necessarily take some time, but as there is already a strong public sentiment in favor of the amendment, it may be an accomplished fact within a year.

THE department of state recently issued a six-hundred-page pamphlet that contains much valuable information on a subject that is now under general discussion.

It is entitled "Streets and Highways in Foreign Countries." It is a compilation of reports from the consuls of the United States on streets and highways in their several districts, in answer to a circular from the department of state.

Wise people profit by the experience of others. In this pamphlet is given the experience of centuries in road-making. The descriptions and numerous illustrations tell how the best roads in the world were made. The report also tells what is equally important; that is, how the funds are raised for the construction and maintenance of the streets and highways.

Requests for "Streets and Highways" should be addressed to the Secretary of State, Washington, D. C.

AN Illinois subscriber, writing in favor of the continued agitation of the road improvement question, indorses the following plan for providing at once the necessary ways and means for the construction of good roads:

Issue and sell county bonds, to run twenty years, interest payable annually. Let a certain amount of the bonds fall due every year. This would provide for good roads at once, and distribute the burden over twenty years.

THE supreme court of Ohio has decided that the trust agreements between the Standard Oil Company of Ohio and the oil companies of other states are illegal. This decision is one of the most important events in the history of trusts. For years the Standard Oil Trust has been extending its sway without let or hindrance, until it has become the greatest monopoly in the country. But at last this Goliath has been fatally struck by a stone from the sling of tardy justice.

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Our Farm.

WESTERN NEW YORK HORTICULTURAL MEETING.

[CONTINUED.]

PROFESSORS from both Cornell and Geneva were in attendance, and several valuable papers were read bearing on the scientific side of horticulture. Mr. Corbitt, of Cornell, read an interesting paper on

PROGRESS IN VEGETABLE GARDENING.

As the result of experiments at Columbus, Ohio, it had been ascertained that the male plants of asparagus gave 33½ per cent more of cut product than the female plants. Cauliflower seed was now grown in the state of Washington cheaper and of better quality than that from Europe. The moist climate of that region is exactly adapted to its growth.

Success with egg-plants consisted in starting plants early, in rich soil, and transplanting to a warm exposure late, after soil and air had become thoroughly warm. The new system of onion culture, by transplanting, was likely everywhere to supersede old ways. By this process the onions got an early start, while the weather was cool and moist. Transplanting cost no more than the first two weedings, which it dispensed with.

THE TRENCH,

Or Rural New-Yorker method of growing potatoes, put the manure where it did the most good, and the level culture retained the moisture. Prof. D. G. Fairchild, assistant pathologist, department of agriculture, said various theories had been advanced to account for the potato scab, but it had been definitely determined that it was caused by a minute fungus growing on the surface of the potato. The only remedy was to plant seed free from scab. Soils full of vegetable matter were favorable to the fungous growth. Grubs or other insects might eat the diseased potatoes, but they are not the cause.

Prof. A. N. Prentiss, Cornell University, reported on a year's progress in botany in its relation to horticulture.

BOTANY

Was making more rapid progress than ever before. There were many reasons why the horticulturist should be a botanist. Both dealt with plants and plant life. Horticulture throws a great light on botany. The works of Charles Darwin were a great addition to botanical literature. Horticultural botanists at the present time were chiefly engaged in studying plant diseases. Environment had much to do with plant diseases. Poor soil, stagnant water, uncongential climate or any cause that produced an unthrifty growth, rendered it more susceptible to

disease. Where plants become diseased, in spite of good culture and thrifty growth, then other remedies must be searched out, and considerable progress had been made in this direction. The number of plants that are edible, or of other economical value, is quite small, compared with the whole number known. There are now one hundred thousand flowering plants known to botanists. When we reflect on this great difference, it seems more than probable that there are many plants yet undiscovered of as great economic value as those we now have.

Prof. S. A. Beach, of Geneva Experiment Station, read a paper on some

FUNGOUS DISEASES

Of the apple, with a few remarks on the black-knot of the plum and cherry. This disease is doing serious damage in New York state, threatening the extinction of the plum orchards in some localities. Turpentine had been used by some in the early stages of the disease, but it was not very effective, and the only sure remedy was to cut off the knots by severing the limb; or if the tree was badly effected, destroy the whole tree. The society voted to work energetically for a stringent law compelling orchardists to stamp out the disease. Dr. Collier, director of the Geneva Experiment Station, thought that the spores of fungus might be carried around the world under favorable circumstances. Birch pollen had been carried ten miles from the Adirondack mountains and dropped upon the deck of a steamer on Lake Champlain.

Mr. Wiley, in his report from Cayuga county, said that the abundant crop of fruit had taught growers that it was not all of the battle to grow the fruit. In a year of scarcity everything passed; but in a season like the last, only that that was nicely graded and properly packed found a ready sale. It was not the number of barrels shipped that counted, but the price per barrel. It was the fashion to decay varieties that were slow to come into bearing, but he found such kinds made up for lost time afterwards. Such trees were generally strong, thrifty growers, and when they finally bore, turned out enormous crops of fruit. The Anjou pear and Spy apple were examples. The E. P. Roe strawberry promised well. The Triumph gooseberry does so well he shall plant extensively of it. It is a little larger than the Industry. W. C. Barry said the Triumph is as large as the Industry, of better quality, and will bear extensive planting. It undoubtedly had foreign blood in it. Irving D. Cook, of Genesee county, reported that a member had gathered one hundred barrels of Spy apples from trees planted along the roadside. One Duchess pear orchard, of six acres, had produced \$1,700 worth of fruit the past season. The orchard was heavily manured and mulched. Another orchard, of two and three quarter acres, produced \$600. This one had never been plowed, but was annually cultivated with a one-horse cultivator, manured, and planted to some hoed crop, generally beans.

A discussion on the use of

PARIS GREEN

On plum trees for the destruction of curculio brought out the fact that as generally applied, it seriously injured the foliage. Mr. G. T. Powell had used it as weak as one pound to three hundred gallons of water, and believed that one pound to four hundred gallons would do if the spraying was done carefully. Peach leaves were much more easily injured than plum.

The subject of

FORESTRY

Was brought up by the secretary of the Western New York Forestry Association, and a circular read urging attention to the matter. The circular suggested that one of the first duties was to cut from timber land only those trees that have reached their prime, while preserving the undergrowth from browsing animals by fencing forest tracts.

Second growth should be guarded, and not thinned so much as to prevent a proper development of trunks for economical use as timber. Natural planting should be encouraged in the vicinity of forests containing desirable species. Such planting may be encouraged by fencing in cleared areas about forests, and keeping cattle out. Waste lands on hillsides or rocky places, or on the borders of

swamps, should be planted to valuable forest trees suitable to the locations. A beginning may be made by planting closely in groups, so the trees may protect each other with their foliage. If properly protected from animals, such trees will thrive, and form a nucleus for more extended planting. Planting in groups will insure good timber, especially from the trees most shaded. Experimental planting of groups on waste land will bring valuable experience in tree culture, and is to be recommended at first, rather than extensive operations, which may lead to failure from lack of experience. Success in

REFORESTING

Depends greatly upon careful observation of nature and nature's methods. No one of experience would plant black walnut on marshy ground or black ash on a hillside. Pine and cedar flourish in swamps and hillsides alike, and the same is true of hemlock. White ash and black cherry flourish best on dry ground. Swamp white oak, a valuable timber tree, loves moist ground. Hard maple is sometimes found in swamps, but it does not flourish there as well as on uplands. Elm loves moisture.

The planting of trees foreign to the soil should be undertaken with caution. Indigenous species are the best, unless careful experiment has demonstrated that certain valuable foreign trees can be successfully grown.

Trees usually found growing together in forests should be planted together. Trees of one species are rarely found alone, and there is a belief, probably well founded, that a variety of species in a forest is most conducive to strong and healthy growth.

Mr. Main said black walnut and cherry were about exhausted, and oak, white pine and ash were rapidly following suit.

Prof. Roberts would have timber land withdrawn from market, and safeguards and restrictions thrown around the use of private timber lands.

L. B. Pierce thought it would be very difficult to make the owner of arable land believe that there was money in timber growing, or policy in keeping the mature forests as they were. The portable saw-mills were really doing a good work in saving the large trees from total waste, it being a fact that about half the mature trees were already far gone on the road to decay. Land that would grow farm crops could not be profitably devoted to timber culture until prices became much higher than now.

Mr. Vandeman said congress had already passed an act that enabled the president to withdraw from sale lands around the headwaters of rivers, and some reservations had already been made.

Mr. Darrow, of Ontario county, mentioned Sutton's Beauty, Longfield and McIntosh as showy apples of good quality and productive.

The question was asked why the Gaertner grape, which is large, handsome and of good quality, was not more generally grown. A grape grower replied, for the same reason that the other Rogers' are not grown. They will not produce a large and certain crop every year, like Concord, and consumers are not willing to pay the extra cost of growing them. In other words, quality does not count for much in the general market.

Mr. Willard thought highly of Sutton's Beauty, and Mr. Powell considered it the finest grained of all apples, and very desirable for hotels and fruit-stands. Yellow Transparent is the best new early apple, and McIntosh a valuable winter sort.

Prof. Vandeman held up a beautiful, large, yellow apple, with a bright, red cheek, called

YORK IMPERIAL,

Which originated in southern Pennsylvania, and was doing well on the same parallels clear to California. It was of good size and of better quality than Ben Davis.

On the planting and care of orchards, Prof. Roberts recommended very thorough plowing, to begin with (not less than four times in heavy ground), and manuring with such mineral manures as the soil lacked. Young orchards should be cultivated in hoed crops, and cultivation should cease by midsummer, to permit ripening of the wood. In a bearing orchard of ten acres, he would put one hundred

sheep, giving them three quarters of a pound of oil-meal and bran mixed, daily. Mr. Woodward found sheep the best insecticide for an apple orchard. In order to make them eat the windfall apples readily, it was necessary to feed some nitrogenous food daily.

The only complete remedy for peach-borer was cutting out with a knife, or following the run with a wire.

A Rochester commission merchant addressed the convention on

POINTS IN SHIPPING.

He thought that if growers would sort each one hundred barrels down to seventy-five, they would receive just as much money, and save the extra barrels and freight. If fruit was properly packed, the commission merchants could make more ready sales, and there would be less growling at both ends of the line. The European market would absorb all our surplus apples if they were of good quality and properly packed. In Europe, quality counted for more than color.

Mr. G. T. Powell considered

COLD STORAGE

A necessity with fall fruits. It enabled growers to hold such popular fruits as Bartlett pears and Maiden Blush apples for three or four weeks, and sell them as the market demanded. Thirty-six or thirty-seven degrees was low enough for summer or fall fruit. A lower temperature spoiled the flavor, and the apples would not keep after taking out. Mr. Powell is director of the New York institute work, also a practical dairyman and orchardist, and did considerable practical talking. He said there was too much second and third class fruit put upon the market. Such fruit brought low prices and was unprofitable. The remedy was to give such care as would produce only the best, and such as would bring fancy prices.

The soil in which our apple orchards are planted has been sown to wheat, oats and other farm crops for forty or fifty years; \$400 worth of fertilizers have been taken off the soil in this manner, as stated by Prof. Roberts in this connection. After this great drain upon the soil has taken place, we plant our apple orchards, expecting great yields, which do not come. Had the orchards been planted on virgin soil, they would produce liberally. Is it not evident they need manuring? Spraying, next to good culture and fertility, gave choice fruit; it not only killed the codlin-moth, but killed insects that preyed upon the foliage. Good fruit could not be produced if the foliage was imperfect.

For best six plums for market he would plant Gueii, Bradshaw, Hudson River, Purple Egg, Quackenboss, Reine Claude and Shropshire Damson. These were all large plums, and sold for the highest prices. Lombard was a great producer, but did not bring the highest prices. Coe's Golden Drop was an excellent plum for family use. Copper was a fine late plum, but the tree was a poor grower.

Mr. S. D. Willard said markets varied, as did soils and localities; it is therefore impossible to give a list that will suit all localities. Peters Yellow Gage and Damson did well around Rochester and Geneva.

Summit county, Ohio. L. B. PIERCE.

COMMENTS ON CURRENT AGRICULTURAL LITERATURE.

BY JOSEPH (T. GREINER.)

THE POTATO SCAB.—Column after column, and paragraph after paragraph has been published on this subject in the agricultural press. For a long time the true nature of the scab remained a mystery too deep for the keen eye of the closest observer, the reasoning power of the theorist, and even the microscope of the scientist. Then it was generally supposed that wireworms were the cause of all the trouble, and that the corky growth of the affected tubers was merely the consequence of the injury to the skin. Now, it seems a settled fact that potato scab is caused by a fungous or parasitic organism. Very little, however, is yet known about its real character, except that it readily propagates itself by spores, as well as by the smallest possible portions of its filaments, and that consequently the disease is highly contagious.

Bulletin No. 14, of the Rhode Island Experiment Station (Kingston; Washington county), reports some experiments made last summer for the purpose of

discovering ways and means of fighting the disease. Some of the characteristics generally assigned to the disease areas follows: Scab is usually most prolific in soils containing general rubbish, garbage, etc. Scab is usually profuse in soils rich in vegetable matter. The disease is greatly promoted by moisture. Stable manure facilitates its development. The application of lime or ashes tends to increase the evils arising from the disease. The continual raising of potatoes upon the same fields favors a scabby product. A light, sandy soil usually gives a smooth product.

The station comes to the following conclusions: (1) The product from potatoes planted on recently plowed sward land, without fertilizer, is not necessarily exempt from scab. (2) The disease may exist in a mild form and not seriously injure the crop. (3) Fresh or partially decomposed sea-weed, when scattered in the furrows at the time of planting, does not tend to increase the disease. (4) When the sea-weed is brought directly in contact with a large part of the surface of the seed potatoes, by scattering it over them after they are dropped in the furrows, it slightly checks the development of the disease. (5) Stable manure, scattered in the furrows at the time of planting, is favorable to the development of the disease. (6) Stable manure, scattered over the seed potatoes after they are dropped, tends to largely increase the development of the scab.

I am somewhat skeptical concerning the favorable effect of sea-weed; in fact, believe that we will have to learn a great deal more about the character of the fungus before we can hope to fight it intelligently. At present we are all groping in the dark. The attacks often come in a way we cannot yet account for. A few years ago I applied muriate of potash, at the rate of six hundred pounds per acre, to sandy loam. This application almost killed all plant growth; but the tubers that were grown on the few surviving plants were a complete mass of scab, and entirely worthless. This also proved to be the case the next season, potatoes being again planted on the same land.

The station also tried the Bordeaux mixture as a preventive of scab. Spraying the vines during their growing season seemed to slightly check the development of scab; spraying the seed potatoes and the soil about them after they are dropped in the furrows, however, was much more effective, especially when the field was not previously contaminated with the disease.

In regard to this matter, my friends should bear in mind, (1) that the scab is quite contagious; (2) that the fungus can live not only on the potatoes, but also on vegetable matter in the soil; (3) that some kinds of potatoes seem to be much more subject to the attacks of the disease than others.

To raise potatoes free from scab, therefore, we must, first of all, select soil that is as yet free from the disease, especially new soil, which has not been recently manured with excessive doses of coarse manure. Next, select varieties that are least subject to scab; and lastly, use seed tubers only that are perfectly clean. If signs of scab are found on the seed, perhaps we may yet be able to kill the infection by applications of fungicides, such as solutions of copper or sulphate of iron, etc. This is a matter for further tests. I have often grown perfectly clean potatoes on mucky soil, although the latter is mostly vegetable matter, and we need not fear to plant on such soil any more than on sandy soil, so long as we use clean seed.

SOME FERTILIZER MATTERS.—I have for years advised farmers to test their soils, and find out what special elements they may need, by a simple series of experiments with various kinds of fertilizers and chemicals. The obstacle in the way of carrying out this undertaking was the difficulty of obtaining these fertilizing substances in the small quantities required, at least at a reasonable cost. A few years ago Mr. Mapes (Mapes Formula and Peruvian Guano Co., N. Y.), to whom I appealed for the purpose of inducing him to offer test lots to farmers, wrote me that he put up test lots for the experiment stations on order; but that there was so much difference of opinion among the stations concerning the material to be used in these tests, he did not feel encouraged to offer any special set to farmers.

Now, I still hold that no farmer can select and apply manurial substances intelligently, and especially economically, unless he knows what his soils and crops need. If his soil is deficient in phosphoric acid, but has plenty of nitrogen and potash, it would simply be a waste of good material and good money to buy and apply manurial substances rich in nitrogen and potash. A simple superphosphate, costing less than \$20 a ton, would answer all purposes, instead of a complete manure costing \$40 or more per ton.

In the "A. B. C. of Agriculture" (W. S. Powell & Co., Baltimore, Md., and by the way, a most useful pamphlet of more than one hundred and twenty pages, full of valuable information on all sorts of agricultural topics, with full treatise on fungicides and insecticides), the following plan for making such tests is recommended: "Lay off one quarter of an acre, which is a piece of land 145 feet long by 75 feet wide. Select this land from the general run of the field, divide it in eight beds, each 46 feet long by 29 feet wide, by simply running a furrow between the subdivisions, each of which will represent one thirty-second of an acre. Then to one bed apply only ammonia (nitrogen); to another, ammonia and potash; to another, ammonia, phosphoric acid and potash; to another, only potash; to another, phosphoric acid and potash; to another, only phosphoric acid; to another, nothing; to another, ten bushels of well-rotted stable manure. A record kept of these experiments, covering the early growth, the power for withstanding drouths, excessive heat or cold and the crop at maturity, will teach you as near as science can what kind of plant food is needed for that field when next cropped, not only with the same crop, but with any other."

The Powells have been offering these test lots—enough for six beds of one thirty-second of an acre each, with full directions for using, for \$4. A few days ago I saw Mr. Powell in Baltimore, and was informed that not more than fifty farmers had availed themselves of that offer the past season. This, indeed, is a discouraging outcome. Making these home tests might be the means of saving thousands of dollars which farmers now waste in injudicious purchase and application of fertilizers. Why this neglect and indifference in a matter affecting your purse so directly and immediately?

ERRORS OF JUDGMENT IN AMERICAN AGRICULTURE.

BY E. M. THOMAN.

I had occasion to mention, some time ago, in an article on wheat speculation, that the farmer was not receiving increased profits in proportion to this year's increased demand; that haste in marketing his wheat had cost him approximately, up to November 15, 1891, \$8,000,000.

Think of it! Eight million dollars

PRACTICALLY WASTED,

And the demand but slightly more than half supplied. It would not be exaggerating the facts to say that the farmer will lose, on his wheat alone, between twelve and sixteen million dollars. While the individual loss may not be astoundingly fabulous, it is evidence, however, of a disregard of business principles that perpetuates incumbrances upon our American homes, causes the fields to become arenas of discontent, and the firesides places where the family gather to mutually console with each other and to take a pessimistic view of Providence.

With all due respect, allow me to observe that the summers have always been *too hot*, the winters *too cold*, and even the rain *too wet* for our artists of the soil. Financial disasters, when meteorological and economical conditions were favorable to remunerative returns, have with too frequent regularity been charged to Providence when the cause should properly have been charged to those who sustained the loss.

While it cannot be denied that we have experienced years of greatly reduced production, caused by untoward conditions that could not be overcome or controlled by human effort, it is equally undeniable that we have experienced years whose production was so adjusted to the demand that the husbandman could have reasonably expected to have been enabled, on account of increased profits, to cancel a mortgage, beautify and add comforts to

his home; yet this glimpse of the millennium in farm prices has never been afforded. There are reasons for this, and to be candid, I will say that the most prominent one is

BAD JUDGMENT.

I have before me a press dispatch in which the secretary of the Kansas State Board of Agriculture estimates the wheat crop of 1891 to have been fifty-eight million bushels in his state, and adds that "there will be, possibly, an increase in the winter wheat area of 25 per cent." Now this, to my mind, is a very serious mistake. Let us see why it is a mistake. I will not, through confidence in your good sense and judgment, assume that the area has been universally increased by such surprising figures; but, for example, we will assume that the wheat area throughout the United States has been increased 5 per cent, or, in other words, that the area devoted to wheat will be 41,000,000 acres; and, presupposing that an average yield would be secured, the crop of 1892 would aggregate, in round numbers, 540,000,000 bushels. The past year established a

NEW RECORD

In wheat production—610,000,000 bushels—and I have no doubt that there will have been established by the end of the current fiscal year, a new record in wheat exports. We must not, however, lose sight of this fact: Even though the exports amount to 200,000,000 bushels—nearly 20,000,000 more than were ever exported in any one year before—there will be remaining on hand on the first day of July, 1892, between 40,000,000 and 55,000,000 bushels—over half enough to seed the area usually given to this crop. Add to this my prophesied production of 540,000,000 bushels (barring, of course, any accidents caused by that capricious Providence of which I have already spoken), and you will discover that we will have on hand, when the crop of 1892 will have been harvested, 580,000,000 to 595,000,000 bushels. After deducting what will be necessary for seed and home consumption there will be a surplus of 225,000,000 bushels. Assuming that foreign countries will produce this year their usual yields (at present the outlook is favorable to that end), and that they will call upon us to make up the deficiency in their supply, we will then have an assured market for 120,000,000 bushels—at least, that amount represents the annual average export for ten years prior to 1891—but for the sale of the

REMAINING 125,000,000 BUSHELS

I fear we would be compelled to imitate dry goods merchants who sometimes, through error of judgment, overstock certain lines of goods, thereby glutting the market, and are forced to start a bargain counter to save part, rather than lose all of their investment. Even if the area of the coming crop has not been increased by a single acre, and allowing the average yield, as compared with 1891, to be two and one half bushels less, you still will have produced a crop in excess of demand, under normal conditions, of 70,000,000 bushels. Is it not quite evident that a vast area is being worse than wasted? Proof is not lacking to show that this is not a practice of recent origin, but an error of judgment that has been universally committed for years. Cultivation is

TOO MUCH CONCENTRATED

On corn, wheat and oats. Ninety-five per cent of the total area devoted to cereal production is usually given up to these three crops, and by including potatoes, hay, tobacco and cotton, sixty-seven per cent represents the proportion.

Do not be led by pseudo statisticians into the belief that by 1904, or any other year, we will not produce what breadstuffs we consume, or that more diversity in agriculture will hasten this result.

INTENSIVE CULTIVATION,

With greater diversity in production, will materially increase the prosperity of the farmer. Millions of acres are being wasted on account of indifferent cultivation. Your efforts should be to increase your yields. Make an acre produce more; economize your area, so that greater diversity be possible, thereby increasing your chances of profit. Demand is ever changing, and it is self-evident that production must change with it. The world is not a boarding-house, in which the

dietary can be forecast. Compare it rather to a fashionable hotel, the guests of which make demands which you, as proprietors, are expected to cater to. We are great wheat-bread consumers; but even so, do not imagine that we fail to enjoy occasionally a piece of good beef or a leg of mutton.

There is hardly a crop raised in any part of the United States that has climatic limitation. It is a deplorable fact that there is little or no attention being paid to some crops that could be produced with profit, notably

BARLEY.

It is, or at least should be, surprising to everyone that we are compelled to import any breadstuffs; yet our imports last year, of barley alone, amounted to 5,100,000 bushels, at a cost of \$3,200,000. We raise but 64,000,000 bushels of this crop on 3,000,000 acres. There are reasons why the production should be greatly increased. The first is, we do not produce enough for home consumption; the second and more important is, there is no cereal raised that has such a

LARGE CASH VALUE

Per acre—\$12.57. None nearly approach it, wheat ranking next with an average cash value per acre of \$10.32.

There is no industry in which greater skill and good judgment are required to attain success than in yours. It is therefore of vital importance that you

BECOME SKILLED AND SCIENTIFIC,

And that you make brain subordinate to brain. If you have hopes of ever reaching a position above mediocrity, bear in mind that brain and muscle are inseparable companions. The former is the workshop in which plans are formulated, and the latter the means by which these plans are executed.

GOSSIP ABOUT PIGS.

A CORRECTION.

EDITOR FARM AND FIRESIDE:—In my article about pigs in February 15th issue, in second column, about three inches from top, the printer makes me say, "the pigs ate eleven bushels of corn per day," when I wrote one half a bushel. Please correct the ridiculous blunder at your earliest convenience.

The other day I was over in Portage county and a man came running out of a door-yard and inquired what breed of pigs I had, that ate eleven bushels of corn per day.

The mails bring me postal cards inquiring about it, and one man asks: "If two pigs eat eleven bushels of corn per day, how many boot-jacks will it take to fill a Saratoga trunk?" Yours truly,

L. B. PIERCE.



Miss Etta Hilbert of Lawrence, Mass.

Her Parents in Despair

But She Was Brought Into Healthy Girlhood by

Hood's Sarsaparilla

The way in which Hood's Sarsaparilla gives life and strength to weak children is marvellous. Read this from Mr. Edward Hilbert, of Lawrence, Mass.:

"Ten years ago our child was born. Having lost six children we were naturally anxious as to the health of this one. What was our dismay and sorrow to find that she was apparently doomed to the same fate as the others. She had little strength as a baby, and did not improve as she grew older. When about 2½ years old she began to have

Fainting Spells,

dropping wherever she happened to be. At these times she would turn black and appeared at the point of death. Doctors told us she was in a very bad way from

Heart Trouble.

Nothing that we gave her did any good until, in utter desperation, we began giving her Hood's Sarsaparilla. She gradually improved, the fainting fits became less and less frequent and finally ceased entirely. Her general health continued to gain while taking Hood's Sarsaparilla, until now she is as

Healthy and Rugged

a child as you will find anywhere and has never had any return of the heart difficulty."

Hood's Pills Cure Liver Ills

Our Farm.

GARDEN NOTES.

BY JOSEPH.

The MOLE.—Like all other creatures, the mole has his friends and his enemies. Some people befriend and protect him on account of the grubs and worms he devours; and these are a great many. Others claim that he eats corn and vegetables as well as grubs, etc., and they do not like him so well. But if you want to see people that are real stark raving mad at him, go among New Jersey gardeners.

And I think they have all reason to be mad. I have lived in New Jersey long enough to get fully acquainted with the animal. My garden used to be perfectly honeycombed with mole runs. The special delight of the little creatures seemed to be to follow the rows of sweet corn where fertilizers were strewn along, making the ground rich and attracting worms, etc., to the young plants. The moles running along under the plants lifted them up, and made many of them perish. I had to make it my regular daily chore to press these runs along the rows down with the foot, thus firming the plants again and trying to save them. All this, although annoying, could have been borne gracefully, simply because it could not be helped, and the damage after all was not so very serious.

But what terrible work a few of these rascals will do in hotbeds and cold-frames! They ruin hundreds and thousands of plants in short order, and worry the life of the poor gardener right out of him. He may set traps and catch some of the intruders, but others come to take their places, and they give him no rest. My old neighbor in New Jersey, a market gardener, tells me that he repeatedly found half-grown lettuce pulled right down into the mole runs, and partly eaten. First he was inclined to lay the blame on meadow mice following in the mole runs; but he could never succeed in catching one with any kind of trap. At last a mole was caught right in the act of pulling a plant down, and another was caught a few days later in the same way. So it seems that even the mole may need or like a little succulent food from time to time, as a change from the usual worm diet. It is a pity that the stomachs of the animals caught were not examined to settle the question beyond dispute. But all this does not help us solve the problem, how to get rid of the mole in beds and greenhouses, and thus put a stop to the destruction of plants. What can be done?

SOWING FINE SEEDS.—It is not always an easy task to start some of the fine seeds of the more tender flowers, begonias, ferns, or of some of the herbs. The soil dries out, and we are placed before the alternative to let the tiny germs die from want of moisture, or to drown them out if we attempt to water from overhead. Most people use the very finest of soil, leaf-mold, etc., in which to plant these seeds, and thus make failure doubly sure. A novel way of meeting the difficulty was recently given to the *American Gardening* by an Indiana man. He gets a quantity of the yellowest and stiffest of clay, which, when thoroughly wet, retains moisture for a long time. This clay is thoroughly dried, then pulverized, mixed with water and worked into stiff mud. It is then placed in a shallow box or seed-pan about three or four inches deep, and spread and pressed over the bottom in a layer about two and a half inches deep. The surface is smoothed off, and shallow indentations are made with the finger or the handle of a trowel. A very thin layer of fine mold is then sifted over it. The whole is sprinkled with water, and the seeds are sown on the still wet surface. The box is then set away under a bench in the greenhouse, where in winter it will need no covering, or if on the bench (or in a sunny window), it should be covered with a glass and shaded on bright days. The seeds have here a uniform moisture, and will require no watering until pricked out, or able to bear sprinkling. This is a most excellent and safe method, and my friends who may not be experts enough to succeed in starting plants from any kind of fine seed, may follow these directions with entire confidence.

Have You Seen The Latest Fashions in Pansies?

Probably not, for the remarkable improvements are very recent and several are now offered for the first time, while new strains of the past few years have been perfected. Pansies are doubtless the most popular of all flowers raised from seed, and in order to give a new impetus to their culture, by acquainting all with the wondrous beauty of the LATEST NOVELTIES, we have decided to make the following

Special Offer For 25 Cts. we will mail one packet each of all the following: For 1892, only.

PEACOCK PANSY. A grand fancy flower, petals edged with a thin white line, within which is a space of purplish crimson, passing into a rich central blotch of deep blue shading to black. The coloring is truly delicious.

ROSY MORN PANSY. This is a really beautiful rosy red color with a distinct white edge around each petal, while the three lower petals are blotched with a deep purplish red. The flowers are of perfect form and good size.

BURPEE'S DEFIANCE GIANT FANCY PANSIES. The flowers measure from two-and-one-half to four inches across; the ground colors are of all shades and they are both three-spotted and five-spotted, distinctly marked with the large blotches.

We have a beautiful plate, painted in nine colors, of the three distinct new Pansies named above, which we will mail enclosed flat with our FARM ANNUAL for 1892.

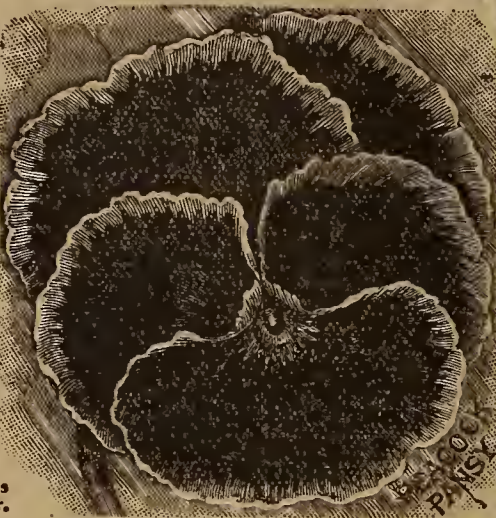
IMPROVED GIANT TRIMARDEAU. Greatly improved in the enormous size of flowers, fine form, and increased variety of colors.

IMPERIAL GERMAN, Splendid Mxd. Seed of over fifty colors, saved from the finest flowers by the German specialist, whose gardens we repeatedly inspected during the past Summer.

ALL FIVE of the above grand Novelties in PANSIES, one packet of each with instructions how to raise the largest Pansies, will be mailed to any address on receipt of 25 cts., or five complete Collections for \$1.00. No such offer was ever made before, and we hope to greatly extend the culture of Pansies by thus popularizing the finest strains of this beautiful flower. Will you not take this opportunity of becoming acquainted with their wondrous beauty? Our word for it, you cannot invest twenty-five cents in any other seeds that will give such satisfaction and delight.

ORDER NOW, and ask for **Burpee's Farm Annual for 1892,** the most complete Seed Catalogue of the year. With honest descriptions, truthful illustrations, and colored plates painted from nature, it tells all about the BEST SEEDS, including Rare Novelties in Vegetables and Flowers, which cannot be had elsewhere.

W. Atlee Burpee & Co., Philadelphia, Pa. (Please mention this paper.)



Viburnum Plicatum



New Double White Japan Snowball. This is one of the most superb and desirable flowering shrubs known. Our own propagation. We have ample stock now for the first time. Entirely Hardy, it is very ornamental at all times; but becomes the center of attraction in June—when covered and laden with great compact balls of pure white flowers. It never fails to please. Fine plants 30 cts. each: 4 for \$1.

Some people like to select from a bill of fare, others prefer to have something good set before them. Here are six

POPULAR COLLECTIONS.

- 16 Ever-blooming Roses, labeled, - \$1.00
- 3 Special Introduction Roses - .25
- 6 Double Excelsior Pearl Tuberoses - .25
- 6 Choice Chrysanthemums - .50
- 12 Extra Fine Mixed Gladiolus - .25
- Our Star Collection—10 varieties—Flower Seeds - .25

FOR \$2.50 We will send postpaid to any Post Office (safe arrival guaranteed), everything named above: the White Japan Snowball, the Six Popular Collections, and our new Floral Monthly—"Success with Flowers" (subscription price 25 cts.), for 1 year. We believe you will think **Our NEW GUIDE for '92.** handsome, honest, and helpful. It describes and illustrates upwards of 2,000 varieties of Roses, Hardy Plants, Bulbs and Seeds, and places our quarter of a century's special experience at the service of every lover of flowers. Sent free on request.

The DINGEE & CONARD CO. Rose Growers & Seedsmen, West Grove, Pa.

Mention this paper when you write.

A Sample Letter.

Binghamton, Feb. 9, 1892.

Messrs. W. W. RAWSON & CO.:

We sowed some of your Danvas Yellow Globe Onion seed last year by the side of that purchased of nine other growers, and yours proved to be the most careful selection of seed stock.

Yours truly, HENRY HASKINS.

The reason for this is that all of our seeds are thoroughly tested and we know they will not only GROW but will produce what we represent. We have 100 ACRES under cultivation which affords us the BEST OF FACILITIES for finding out WHAT TO PLANT AND WHAT NOT TO PLANT.

Our 1892 Illustrated Catalogue with colored plates tells the whole story. It is sent free to all who mention this paper



1838.—FIFTY-FOUR YEARS. 300 ACRES.—1892. Parry's Giant and Pedigree Japan mammoth Chestnuts; Japan, French, and Persian Walnuts; Almonds, Filberts, Pecans, &c. Japan Golden Russet, Idaho, Lincoln Coreless, Wilder, Fitzwater, Vermont Beauty, Bessemerka, in Eleagans Longpipes, Buffalo Berries, Juneberries, Hardy Oranges and other valuable Novelties. Immense stock of GRAPE VINES and all Small Fruit Plants, Fruit, Shade and Nut Trees, ORNAMENTAL SHRUBS, VINES, &c. Illus. Descriptive Catalogue free. Wm. Parry, POMONA NURSERIES, Parry, New Jersey. Mention this paper when you write.



SPRAY YOUR FRUIT TREES AND VINES Wormy Fruit and Leaf Blight of Apples, Pears, Cherries, Excelsior SPRAYING Grape and Potato Rot, Plum Curculio prevented by using EXCELSIOR OUTFITS. PERFECT FRUIT ALWAYS SELLS AT GOOD PRICES. Catalogue showing all injurious insects to Fruits mailed free. Large stock of Fruit Trees, Vines, and Berry Plants at Bottom Prices. Address W.M. STALL, Quincy, Ill.

POTATO SEED.—I am under obligation to a number of readers of the FARM AND FIRESIDE for potato seed. I have now all I can use, and more. Now, all you who are interested in potato culture, and have some seed from seed balls, should at least raise a few dozen or a few hundred plants, by sowing seed now in hotbeds or cold-frames; say a single row across the bed, which will give quite a number of plants. The seeds germinate as readily as tomato seed. Keep them from frost, and after a few weeks transplant in small pots, or in flats two or three inches apart each way, and when danger from late frosts is past, set in open ground in rows two or three feet apart, having plants at least one foot apart in the row. The greatest trouble, however, is yet to come, if potato-bugs should be plenty that season. The plants are so small and tender and the old beetles so hungry when they first come out of their winter quarters, that there would soon be nothing left of the plants but mere stubs, unless pains are taken to protect them. I usually save them by placing a bottomless flower-pot over each plant. Mosquito netting may be placed, tent-like, over the whole row of plants. Of course, if the bugs are not plentiful, we may be able to keep them in check by hand-picking, and later on by spraying with Paris green water. In this vicinity I imagine we shall see very few bugs this season; and if so, we will have an easy time raising potato seedlings.

THE FREE MAIL DELIVERY.—My presentation of "the other side" of the question, in a former issue of the paper, has brought me some protests and also some rather strong endorsements. The reader, of course, should not hold the editors of the paper responsible for my individual views. On the other hand, I can assure you that I have only the best interests of the farming classes at heart. There can be no objection to the extension of the free mail delivery system to all the places where it will not saddle a heavy expense upon the treasury; in other words, where the system will be self-supporting. The cry, however, is for an indiscriminate extension, at the government's (people's) expense. Here is the weak point. Such extension beyond the self-supporting limit can at best reach only the more populous districts, where the free mail delivery could be most easily dispensed with, and not the thinly settled portions of the country, where it would be most needed. It will benefit the few at the expense of the many. The principle is wrong.

I believe that a reduction on parcel postage, say to one cent for each four ounces, with an extension of the weight limit to ten pounds, would be a much greater boon to the farming classes than even the most wholesale extension of the free mail delivery system. It would remove the heavy and oppressive shackles now placed upon trade, especially in small supplies needed by the farmer. The express companies have put an almost prohibitive tariff on this trade. They bleed us most unmercifully, and we are entirely in their power. They will take every advantage of our necessities, unless the postoffice department comes to our aid by giving us cheaper facilities for sending small packages. This is far more necessary, and would be a much greater benefit to all of us alike, than the unequal and costly distribution of the free mail delivery system. Now, is this not so? You may be sure we will not get both favors very soon. If you prefer the free delivery, you will have to do without the greater blessing for a long time. Why not reach out for the more valuable thing first?

Sent for a Cent.

Send your address on a postal card to THE BUCK-THORN FENCE CO., Trenton, N. J., and they will send you samples of their fencing, and a circular with many valuable hints on Fence Building. The BUCK-THORN is the Strongest, most Slightly, and Handsomest Barb Fence made. If not sold in your neighborhood you can order it direct from the mill, all freight paid.

What Mr. Lowe Says:

The BUCK-THORN has given me excellent satisfaction and I have always been well pleased in dealing with your house. Geo. A. Lowe, Salt Lake City.

Our Farm.

Orchard and Small Fruits.
CONDUCTED BY SAMUEL B. GREEN.

PRUNING.

William Saunders, in United States Department Agricultural Bulletin: Pruning is an operation of vast importance in the management of trees, and the principles upon which it is founded must be clearly understood before the complete success in fruit culture can be attained.

The time of pruning, whether during the summer or during the winter, will de-



LOVETT'S BEST.

pend upon the object to be attained; a brief consideration of plant growth will assist us in determining this question.

When a seed is deposited in a suitable germinating medium, its first effort is to send a root downward in the earth, and then push a shoot upward in the air. The seed contains within itself all the nutriment necessary for this purpose; but as soon as the young plant is so far formed its mode of existence is changed, and it becomes dependent upon the soil and atmosphere for future support.

The elementary substances absorbed by the roots undergo decomposition through the influence of the leaves, and the material is thus prepared for further root growth and extension, but are dependent upon the health and action of the foliage; and although in germination the roots are first formed, their growth is due to the action of the foliage of the plant that produced the seed from which they were emitted.

It is, therefore, apparent that the increase in size of the plant, the quality and quantity of its secretions and the extension of its roots, are all dependent upon the healthy action of the leaves.

When it is considered how essential the foliage is to the healthy development of the plant, we may well pause before infringing upon the reciprocal action nature has established between the roots and the branches, for it is evident that every branch or leaf removed has an effect either for good or for evil upon the plant. The correlative action between the leaves and roots being so intimately connected, it follows that any diminution of leaf growth during the period of active vegetation must retard root development. Hence, it is an axiom, now becoming recognized, that summer pruning weakens growth, while winter pruning produces a contrary effect.

Summer pruning can be useful where wood growth is to be checked, and it will be repressed in proportion to the severity of the removal of the foliage. Fruit-trees, when planted in a generous soil, frequently attain a luxuriance incompatible with a fruitful habit, and their flowering may be somewhat hastened by judicious pruning or pinching, so as to retard wood growth; but care must be exercised, and much observation and experience are requisite before the object can be safely attained.

Winter pruning invigorates wood growth. When a portion of the branches of a tree is removed after the fall of the leaves, the balance of growth is destroyed and the roots have the preponderance; the remaining buds will now shoot forth with increased vigor—an important consideration with trees or vines that have become weakened from overbearing or any other cause—imparting new vigor to weak and sickly plants.

The time for winter pruning may be regulated by the condition of the plant; if

pruned immediately after the leaves fall or ripen, the shoots will be stronger the succeeding season than they would be if the operation had been delayed until spring. This arises from the fact that during the winter the plant still continues to absorb food by its roots, which is distributed over its branches, and as the principal flow of sap is always directed to the extreme points or shoots, the highest buds are most fully developed. If, therefore, pruning is delayed till spring, this accumulation is cut and thrown away, and to that extent the plant is weakened. Early winter pruning is eminently advantageous to native grapes.

As the retained buds become charged with sap during the winter they start and advance rapidly—a matter of much moment where the summers are rather short for ripening the fruit and wood of these plants.

There is a tendency in many varieties of trees to form strong central growth at the expense of the side branches, more especially while the plants are young. Pruning these strong shoots in winter only increased the evil, unless summer pruning is attended to by pinching out the ends of every shoot before it gains sufficient headway to injure the growth of the lower branches. Strong growths should be pruned in summer and weak ones in winter. In the management of hedges, where uniformity of growth is all-important, this rule should constantly be kept in view.

When the size of a tree is the only object sought, summer pruning should not be practiced. But it may be said that pruning of any kind is a negative operation, and probably it is within the limits of possibility that trees may be trained to any form and maintained in a fruitful condition without any instrumental pruning whatever, unless to remedy disease and casualties. It is much easier, for instance, to rub off a bud in May than it is to cut out a branch in December; and if a judicious system of disbudding and pinching was strictly followed, there would be no occasion for winter pruning; or, were it possible to place a tree in such a soil, and under such conditions that it would only make a moderate growth of well-matured wood, little, if any, pruning would be required. But as all of these conditions are difficult to realize in the happy combination, we have to resort to pruning, and a knowledge of the principles involved will materially assist the operator.

TRAPPING THE CODLING-MOTH.

Very recently I have been asked to publish a certain article, which is going the rounds of the agricultural press on this subject. The text of the article is that by putting bottles partly filled with sweetened water and a little vinegar in our apple-trees in the spring, the codling-moths would be entrapped. It is very true that under such conditions the bottles will be filled in the morning with moths, but I have it on the authority of the eminent entomologist, Dr. Otto Suger, who has made many repeated experiments on a large scale where several thousand traps were used, that the codling-moths cannot be caught in this way. The bottles will be found with many night-flying moths in them, but they are largely the moths of the cutworms. The codling-moth does not eat at all during its existence. In fact, the female is little else than winged ovaries. Neither will a light attract them. In fact, the only successful way to combat this apple pest is by the use of the spray pump and poisons.

NEW BLACKBERRY.

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INQUIRIES ANSWERED

BY SAMUEL B. GREEN.

Rose-bug.—S. V. G., Huntsville, Utah. You are probably troubled with the rose-bug so common in the East. The simplest way for you to do if you are growing roses on a small scale is to cover the plants, when in bud and flower, with mosquito netting. This insect is a very difficult one to fight on a large scale.

Seedling Plums.—J. S. M., Madelia, Ohio, writes: "1. Will sprouts from a seedling plum be like the tree from which it comes? 2. Will plums from seed bear fruit like the tree it came from?"

REPLY:—1. The sprouts from roots of a seedling plum will be like the original tree in all its characteristics. Such trees may be readily increased by cutting the small roots, at a considerable distance from the tree, with a spade or other tool early in the spring or in autumn. Such treatment induces the formation of sprouts from the injured roots. In removing sprouts from a plum-tree, care should be taken not to pull up the sprout, but to dig down to where the sprout comes from the root, and to take at least six inches of it on each side of the sprout. If dug in this way the sprouts, are valuable but if pulled they have so very little root they are liable to fail.

2. Not at all; plums from seed are very variable. However, the seed of good plums generally produces fruit of fair quality, but it may be better or worse than the fruit the seed came from. There are a few cases where certain varieties of plums come nearly true from seed.

The Beder Wood Strawberry.—F. J. D., Greenfield, Tenn. It can be bought through most of the nurserymen at about six dollars per thousand. The best way for you to find out their value is by trying them on a small scale. It is a promising kind, but may totally fail in your section. If Michel's Early or some other variety does fairly well, don't discard it until you are sure you can do better. Much money is often lost by too hastily making new friends.

Fertilizer for Peach-Trees.—F. W. S., Hamonton, N. J. Probably in light sandy soil fruiting peach-trees would need some kind of manure each year; you will have to note the growth made and be governed accordingly. I should use about two hundred and fifty pounds of bone meal and thirty bushels of unleached wood ashes. One hundred (100) pounds of high-grade muriate of potash would take the place of the wood ashes.

Lincoln Apple—Elberta Peach.—M., Illinois. 1. The Red Astrachan has sometimes been called the A. Lincoln, but I presume some new variety must be referred to that I know nothing about. Better not plant much of it until it is better known. 2. The Elberta peach is a new variety that has been tested on a large scale in the South, and immense plantations will be made there of it the coming year. It has also proven very valuable in many localities at the North. I think it a very promising variety.

Muck Around Peach-trees.—F. D. B., Derry Station, Pa., writes: "What benefit is muck to peach-trees? Would it do to put it around the roots when setting the trees? The soil is a chestnut, sandy soil, rather thin."

REPLY:—I think that a little good muck would be an advantage to such a soil as you describe. If the muck has been exposed to the air for a few months and is not fresh dug, it would be all right to use it against the roots. But if fresh dug it might be injurious close to the roots. In the latter case I would put it on the land around the trees after they are set.

Orchard Culture.—O. F. H., New Castle, Pa., writes: "I have bought an orchard of apple and cherry trees that has not had the least care for the past five years. Before that time it had the best of care. The trees were planted ten or twelve years ago. What should be done with a place of this kind, in the way of pruning and manuring?"

REPLY:—Your questions are so very general that I cannot fully answer them within the limits of these columns. You had better equip yourself with Maynard's "The Practical Fruit Culture" (25 cents), published by the Phelps Publishing Co., Springfield, Mass. It will give you in a condensed form the essentials of fruit growing. Do not prune much. Confine your pruning to taking off interlocking or dead limbs and sprouts and to keeping the trees symmetrical, except in the case of peach-trees, which should be severely pruned on the new wood. If the land is in sod it should be broken up, lightly manured and planted to some crop that does not necessitate the working of the land in autumn. Good stable manure is as good as any in this case, and should be used at the rate of about six cords per acre. It would be a good plan to lightly scrape off the loose bark from the trees with a dull hoe and then wash them with a weak solution of lye or soft soap.

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Our Farm.

CULTURE OF POTATOES.

The experiment station of the Virginia Agricultural and Mechanical College, in a bulletin regarding the above subject, discusses several points of interest. Regarding the size of seed, which question hinges upon the tendency of varieties to deterioration or not, and whether selection of seed tends to mitigate such tendency, the claim is made that the fact of variety deterioration is clearly established and needs no argument. This, we believe, depends to a considerable degree upon the variety and the treatment it has received in propagation. It is to be observed that those varieties that have come into existence and notoriety with a sudden and unexpected movement have generally been disseminated by even portions of eyes or sprouts broken from the same for the purpose of a great increase; where this has been done, deterioration has followed and soon the varieties have almost passed out of existence. This was not so with old and steadfast varieties that were propagated by the use of large pieces of the tuber for seed. It is recommended to select tubers that conform as nearly as possible to the type of the variety, and those that are perfectly sound and well matured and of medium size. Objection is made to small tubers, upon the ground that they furnish less substance to the bud when starting.

Upon that point we are not entirely clear. In experiments of our own in that particular line, we had the best success with small potatoes uncut; the product was not quite as large in the aggregate, but in tubers of merchantable size gave the best results. Regarding the cutting of these, these points are stated: If economy of seed becomes an object, it should be cut if of medium size, but small seed may be planted whole, unless in a well-prepared soil, when it may be halved. For early maturity, medium-sized seed, halved crosswise, is recommended. The last suggestion is one new to us, and regarding the truth of earliness we are a little skeptical, for the reason that we are unable to conceive of any influence that can be exerted by cutting crosswise instead of lengthwise, or in fact in any other manner. But if that is so it becomes quite an important matter where growing for an early market is concerned. Unfortunately the bulletin contained no tables showing comparative results of different modes of cutting as relates to earliness of maturity.

Further upon the point of cutting it is recommended that with good, healthy, average-size tubers, better results will be secured by cutting to pieces two eyes; and where larger cutting than two eyes, it is just as well to cut the tuber crosswise, in which the different parts of the tuber show about equal vitality under similar conditions. This idea of crosswise cutting is something new, so far as we remember. But notwithstanding what is said regarding the various methods of cutting, as a final summary it is stated that there is but one proper method of cutting seed potatoes, and is described and illustrated and almost universally recommended by potato growers.

Regarding the manner of planting, the trench system is advocated for these reasons: First, it is the easiest method, because it admits of covering by horsepower. Second, it places the plants down in the soil where they are more secure from drought. Third, it obviates the necessity of hilling up and admits of level culture. Fourth, the crop will be larger and of better quality. This we can subscribe to; in the cultivation of this crop we have secured better results when planted in trenches than upon the surface, and in a dry season the benefits are very marked. We call to mind a season that was very dry; with surface planting the potato crop was a failure, while with our trench planting we secured an unusually large crop of large tubers, in contrast with the few and very small tubers of our neighbors.

We might state further that we have found horse-manure one of the best kinds of fertilizer for potatoes, taking into account all the conditions of soil, climate, etc., that we have ever used, and by its use we have hardly ever been troubled by rot or scab, the tubers coming from the soil as dry and smooth as could be wished for. Last season this was true of our crop, while others using different kinds of fertilizers were troubled with scab.

WM. H. YEOMANS.

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EXTRACTS FROM CORRESPONDENCE.

FROM MINNESOTA.—We have as fine a summer climate here as there is in any country, but the winters are long and cold. The mercury has ranged from ten to forty-three below zero, but the atmosphere is so dry that people never stop work. It is very healthful here. This is a great country for all root crops, and wheat and oats. Strawberries, blueberries and cranberries grow in profusion, providing they can get edged in between the frosts. We have some heavy frosts as late as June, and some early frosts the latter part of August. This is no place for fruit. Motley, Minn. I. B.

FROM PENNSYLVANIA.—Winter was favorable for grain and grass fields. Stock of all kinds are doing well. Farmers' institutes are all the go here. Farmers are learning how to improve their opportunities. Better farming and better crops are the watchwords. Farmers are coming to the front, and their power and influence are being recognized by all classes. This state is fast becoming the leading manufacturing state in the Union. Here we find a ready sale for all the farmers can produce. Stauffer, Pa. D. H. P.

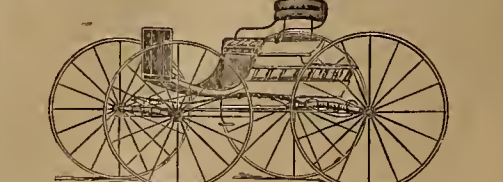
FROM NEBRASKA.—PHELPS county is in the ninth tier running north and south from the Missouri river, and the second tier running east and west from the south line of the state. This county lies on the divide between the Republican and Platte rivers. The surface is what we would call level. You can see for miles in every direction. The soil is very productive; it produces immense crops of corn, wheat, oats, rye, flax, broom-corn, sorghum, millet, barley, etc. Wheat yielded the past season from 15 to 32 bushels an acre; oats, as high as 90; corn, 70. The county has two lines of railway. Land varies in price from \$15 to \$30 an acre for improved farms. Land rents for the one third put in the crib, the renter furnishing everything. Wheat at the present time is worth 53 cents a bushel; corn, 23, and oats, 28. Horses and cattle are cheap. This part of the world is like every other part—it has its faults. Fuel is high-priced, as we have no coal and but little timber. Lumber is high. Grain generally brings a low price. Health is generally good. I will suggest to correspondents to speak of the disadvantages as well as advantages of their country; also, on what terms farms can be rented. J. L. S. Atlanta, Neb.

FROM KANSAS.—Ellis county is situated in the west-central part of the state. The thriving town, Hays City, is the county seat. The county is well known for its large crops of wheat, corn, oats and barley. Wheat has never been a total failure, and it is the main crop. The county is thickly settled with energetic people. Land is selling at a good price. Good, improved farms can be had now at from \$10 to \$25 an acre; unimproved farms, \$5 to \$10 an acre. Now is the time to invest here, as this county will soon be the best in the great West. The old Fort Hays reservation joins the city limits on the south. It was abandoned about three years ago by the United States government soldiers. It is a beautiful strip of land, consisting of several thousand acres. A bill has passed the United States senate granting to the state two and one half sections of land, including the fort buildings; for a soldiers' home, and the land including timber for a state park. The remainder of the reservation is to be thrown open to homesteaders. The bill is now in the hands of the house committee on public lands, and there is no doubt but that it will become a law. Hays City, Kan. U. G. B.

FROM WASHINGTON.—Our climate is mild, both in winter and summer. This section of the country is adapted to raising wheat, oats, potatoes, hay, cabbage and all kinds of roots. Apples, pears, prunes, plums, peaches, cherries, currants, gooseberries, strawberries, blackberries, raspberries and other fruits may be grown here. Elma, Wash. M. B. R.

ALL THE RAGE. THE SPINDLE BODY ROAD WAGON IS THE COMING VEHICLE FOR ROAD USE AND GENERAL PLEASURE DRIVING.

The cut here illustrates the "Murray" spindle-body road wagon. This vehicle has come into general favor. It is light, stylish and very convenient, and the cost being only \$47.00 it is within the reach of all. This is only one of



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Our Farm.

THE POULTRY YARD.

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

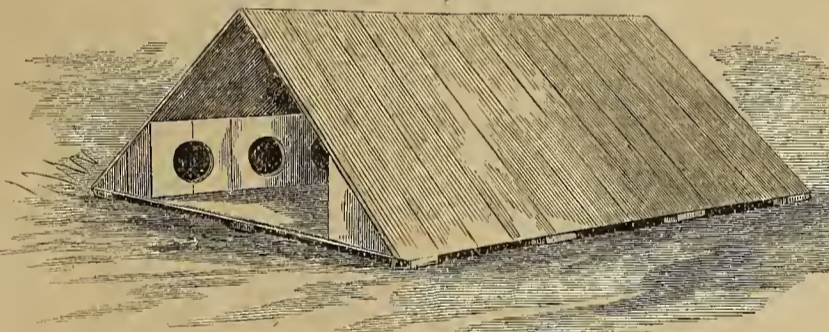
FUMIGATING FOR LICE.

SULPHUR destroys everything that contains life. No living creature can exist in the presence of the sulphurous acid gas if in a closed room. It is useless to fumigate, however, unless all the cracks in the poultry-house are closed, and the fumes of the sulphur are confined.

The gas is much heavier than the air, and though it rises when warm, finally sinks, and penetrates into every hole in the floor; hence, there is no escape for lice or rats. Vermen live during the winter by seeking the places that protect them; hence, when attempting to rid a house of lice the fact must be kept in view that something must be done to reach those parts not on the surface of the walls. To fumigate a house, melt some sulphur and draw a lamp-wick through the melted sulphur (first saturating the wick with coal-oil.) Then light the wick, and the sulphur will burn. The reason sulphur ceases to burn is that it melts and smothers the flame. A better plan is to sprinkle half a pound of sulphur on red hot sheet-iron (supported on bricks), with an oil lamp under the iron; but one must get outside quickly, or the result may be fatal. The large lice may be destroyed by greasing the heads and necks of the hens with melted lard.

HOUSE FOR LAYING DUCKS.

The design is intended for a cheap and easily constructed house for ducks that are laying, and may be used for the entire flock also. There being no roosts, the object is to secure floor space. The roof also serves for the sides, and any kind of water-proof paper, or tarred felt, may be used as a covering on the boards, to prevent leaking. The floor is kept covered with cut straw or hay. The nests are simply boarded off at the lower sides, and need not be partitioned, having only en-



HOUSE FOR LAYING DUCKS.

trance holes. The sills may rest on bricks or stones, so as to raise them from the ground. The house may be made of any length, width, or height preferred, as we aim only to show the plan. The cost of such a house is very little.

YOUNG DUCKS.

Young ducks will soon succumb to dampness. A damp floor, or confinement in filthy yards will cause them to die suddenly. If the drinking water is too cold they will have cramps, and they must have a board floor at night with straw for bedding. Bear in mind that, contrary to supposition, a pond will prove fatal to young ducks, as the down is no protection. They should not be allowed on water until well feathered.

NO EGGS.

We are often asked why the hens that are in perfect health and well fed do not lay. The reason is that, in a majority of cases, the hens are too well fed. They are kept up to a fat condition, fed perhaps three times a day, and their reproductive organs deranged. When the hens have giddiness, suddenly die, have soft livers when examined after death, and are very fat, the indications are that they do not have sufficient exercise and are fed too liberally for profit.

CHICKEN CHOLERA.

The best symptom of cholera is intense thirst. Indigestion is often supposed to be cholera. Cholera kills quickly, but indigestion destroys only slowly. The best remedy for cholera (there is no sure

cure) is a teaspoonful of liquid carbolic acid in a quart of drinking water. For indigestion, cease feeding for twenty-four hours, and then give only one meal a day—a light one—and pound some crockery or old china for the hens. It is only when hens are overfed, and are not compelled to work and scratch, that they have indigestion.

BROWN LEGHORNS.

A Brown Leghorn male should have a single comb, with five or six (five preferred) points, yellow bill and legs, black breast and reddish-bay hackle and saddle, each feather having a dark stripe down the center. There must not be a speck of white on a Brown Leghorn except at the base of the tail, the tail being black. White ear lobes are a feature, also. The plumage of the hen is dark brown, penciled with golden brown, the breast being salmon color.

CHICKS THAT ARE FEATHERING.

When little chicks (about two weeks or more old) are feathering, they need very nourishing food, or they will droop, as the growth of feathers enfeebles them. That is the reason so many chicks die at two or three weeks of age instead of younger. Keep them warm, especially at night, and feed meat and ground bone, with a varied food, about four times a day. Dampness must be guarded against, as it will prove fatal to the chicks.

CORRESPONDENCE.

A RECORD OF FORTY-FIVE HENS.—I began, from November, 1890, and ended November, 1891, with 45 hens, valued at \$18.22; gathered eggs, valued at \$66.86; sold manure, \$2.50; fowls consumed, \$17.91. Total, \$105.49. Expenses were for oats, buckwheat, corn and bran, \$16.99; beef scraps, \$2.24; wheat, \$5.70; shells, \$1.13; corn, hominy and cracked corn, \$16.59; condition powders, \$1.61; 45 fowls on hand, \$17.91. Total, \$62.26. Total on \$18.22 invested in fowls, and sum invested in feed, as profit, \$43.23, or nearly a dollar per hen. A. S. B.

Pine Plains, N. Y.

WHAT THIRTY HENS DID.—I have been a subscriber of your paper for a number of years, and have found a great deal of information on its pages, especially on poultry. I will tell you what thirty hens did. I began February 1, 1891, with thirty hens, and reduced the flock July 1st to twenty. Fifteen pullets

began laying in November. I received from my flock, in the year ending February 1, 1892, 3,946 eggs, or about 329 dozen. They brought me \$92.97, an average of 28 cents per dozen, retail price. This includes forty dozen used at home, besides I used and sold \$15.75 worth of poultry, making a total of \$108.72. My expenses were \$25.00, leaving me a profit of \$83.72. My hens are mixed breeds; mostly White Leghorns. I have twenty-nine now. W. M. R. New Jersey.

PLYMOUTH ROCKS AND LEGHORNS.—I have two yards of poultry, one of thirteen Leghorns and mixed breed, and another of five Leghorn pullets and nine White Plymouth Rock pullets, which pullets were hatched in April, 1891. Of these twenty-seven, my whole stock, I received 275 eggs for January, or thirty-one days. Of the nine White Plymouth Rock pullets I got about 60 per cent of these, and balance from Leghorn pullets and hens. The hens moulted very late, and some do not lay yet. I have been very successful in raising chicks. Last season, out of a total of 33 chicks I have not lost one. I attribute my success largely to your valued paper, the FARM AND FIRESIDE, from which I received good points, which saved me more than many times its price per year. A. S. P. Pottsville, Pa.

WOMEN AND POULTRY RAISING.—I wish to write a few words of encouragement to the farmers' wives, in regard to poultry raising. In the "Poultry Yard," of FARM AND FIRESIDE we find many good hints, and I always read it as soon as I read "The Household." The farmer is often urged to look after the hens, their profit, etc., but nothing is said to the farmer's wife. Now, I have been in a good many places in south-western Ohio, and the farmer's wife (intelligent ladies they are, too) considers the poultry her especial property, and the farmer who would not allow his wife all she can make from her poultry and

the few cows they keep, would be considered small indeed. One correspondent says that the women have enough to do indoors, and so they may have, but how much more life-giving and wholesome is the outdoor caring for the hens and chicks than being cooped up in the house all the time. Give the useless fancy work and carpet-rag-cutting to some one who follows that for a living, and spend more of your time in the open air. Begin with a few hens at first, and you will soon learn how to manage more with profit. I know plenty of women who clothe themselves and daughters, keep their houses well furnished, etc., and some of them lay up money besides. There is a real pleasure, too, in spending the money you have earned yourself. Now for some facts in regard to my own experience. I started with about 50 hens last year. I have a family of five to do for, and had from one to six hired hands to cook for, and part of the time we were building a new house, so I did not give my poultry any extra time or care; still I sold eggs to the amount of \$50, lacking a few cents, and young chickens and hens to the amount of \$25. I used 300 eggs to set, and we had all the young chicks we wanted for the table. My hens are a cross between Plymouth Rock and Brown Leghorn, and they had the free range of the farm. I did not feed them any during the summer, but of course I fed the young and growing chicks. We do not live very close to market, and of course the prices and the profit would be much better if we were living close to a good market. Eggs were 12 cents in the summer, once as low as 10 cents. Young chicks were 16 1/2 cents per pound in June, and fell as low as 7 1/2 cents in October. Old hens were 6 cents per pound. Now, dear sisters, try what you can do and let us hear from you through FARM AND FIRESIDE. A FARMER'S WIFE.

INQUIRIES ANSWERED.

Turtles in Duck Ponds.—G. H. H., Brazilton, Kan., writes: "The turtles catch my young ducks on the ponds and draw them under. Is there any remedy?"
REPLY:—We know of no method that will prevent the difficulty except to keep the ducklings from the pond.

Porcelain Nest Eggs.—Mrs. E. C. B., Burnett, Texas, writes: "Where can I get porcelain nest eggs?"
REPLY:—From glass merchants, seedsmen, or poultry supply stores.

A Cross.—A. S. P., writes: "Will a cross of White Plymouth Rock and White Wyandotte prove a good one?"
REPLY:—It will. Use Wyandotte male and Plymouth Rock females.

Chicken Cholera.—K. N., Dorchester, Md., writes: "Please give a remedy for chicken cholera?"
REPLY:—There is no "sure cure," but one of the best remedies is a teaspoonful of liquid carbolic acid in one quart of water, allowing no other water to drink.

Roup or Canker.—W. C. W., Sibley, Iowa, writes: "My hens began dying two months ago. The trouble commences in the throat, with white pimples, and they choke and sneeze, and become blind."
REPLY:—Due to exposure to dampness and draughts. Give ten drops of a mixture of one part spirits turpentine and three parts sweet-oil, and also anoint head and face. Add a tablespoonful of chlorate potash to each quart of the drinking water.

Poultry-houses.—Subscriber writes: "1. Should a poultry-house have a board floor, or is the ground warmer? 2. How many fowls should be kept in a house 10x20 feet? 3. Should laying hens be fed three times a day? 4. Can hens have all the sour milk they desire? 5. If hens are large, should the male be small? 6. Is a Plymouth Rock male suitable with Langshan hens? 7. Are potatoes fattening? 8. Should hens lay in a poultry-house kept at 30° above zero?"
REPLY:—1. Board floor is better. 2. About twenty-five. 3. No. 4. Yes. 5. Yes. 6. Yes. 7. Yes, but they are largely composed of water, and not as concentrated as grain. 8. The temperature is rather low; it should be above the freezing point.

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For 30 days, in order to introduce our CRAYON PORTRAITS in your vicinity, and thus create a demand for our work, we make you the following bonafide offer: Send us a good photograph, or a tintype, or a daguerreotype of yourself, or any member of your family, living or dead, and we will make you one of our finest CRAYON PORTRAITS free of charge, and use your influence in securing us future orders. Cut this out and return it to us with your photograph, with your name and address back of photos, so we can ship your portrait accordingly. Tanqueray Portrait Society, 741 De Kalb Av., Brooklyn, N. Y.
REFERENCES: Rev. T. DEWITT TALMAGE, D. D., and Commercial Agency of R. DUN & CO.

Our Fireside.

LONELINESS.

To miss the smile, the voice, the glance,
The face that did thy heart entrance,
To hear no more the footstep dear,
That erst was music to thine ear;
To look in every room in vain
For one whose absence is thy pain;
With arms outstretched to seek to clasp
The form that now eludes thy grasp;
To feel amidst the happiest throng
Like prisoner bound with cruel thong;
To know that joy from earth has fled;
To wish at morn the day were sped;
At night to long for morn's first beam;
For life to seem a fitful dream,
Within, without, dread fears, fierce doubts,
That strive with might thy faith to rout;
This is the depth of loneliness.
God succor all in such distress!

—St. Louis Magazine.

SURVIVALS OF THE PAST—THE EFFIGY BUILDERS OF WISCONSIN—THEIR HABITS AND SUPERSTITIONS.

INTERESTING COMPARISONS DRAWN WITH THE MOUND BUILDERS OF OHIO—THE WAKAU DANCE AND ITS SIGNIFICANCE—INDIAN CUSTOMS REVIEWED.

"Pre-Historic America, Vol. II, Emblematic Mounds," by S. D. Peet, Ph. D., Meriden, Ill., published at the office of *American Antiquarians*, 175 Wabash avenue, Chicago. \$3.50.

This is a work of surpassing attraction to antiquarians, and especially to those concerned in researches into Indian mythology and pre-historic Indian life. The following, by Prof. Williamson, son of a former missionary, will be found interesting:

Even school-boys know something of what occurred in Persia, Egypt, Greece and Rome

thousands of years ago. How few of us know anything of the history of America more than three hundred years back! Why this ignorance? Is it because there are no writings? Are written words the only kind of history? To the modern reader, writings of the ancient historians convey faint, inadequate, and often misleading impressions. To understand the ancients, we must study their monuments. So, in America, the ancient races are to be understood by their monuments. The work before us gives us a vivid idea of some features of the character of one class of monuments; namely, the effigy, or emblematic mounds.

Much more may yet be learned by the further study of other mounds and their contents. In future times the ruthless destruction of mounds, without preserving a description of them, will be regarded the same as the destruction of the library of Alexandria in Egypt. Those who heard it cannot forget the author's eloquent plea for the preservation of the mounds, at the Minneapolis meeting of the American Association for the Advancement of Science, a plea which first brought prominently before the scientific world the importance of the mounds as historic records. In this book the author avails himself of all materials; yet a large proportion of the facts have been gathered by his own labor.

The mounds of the Ohio valley are larger and more conspicuous than those of Wisconsin, and much more has been written concerning them. Yet we have in the present work a more satisfactory description of the mounds than it is possible to find concerning those of Ohio. While the purposes for which the Ohio mounds were built are still to a considerable degree a mystery, the present work gives in the main a satisfactory solution in the case of Wisconsin.

Interesting as is the reading matter, the most valuable feature is its copious illustration by hundreds of appropriate cuts. The effigies include the animals and birds found in Wisconsin; also serpents, turtles, fishes, human beings, or gods in human form, and other objects. The animals and birds are instinct with expression, all the various attitudes which are natural being represented in the effigies. Most of them are decidedly unlike the conventional attitudes by which our artists usually represent the same birds and animals.

To select illustrations from a volume in which all are equally interesting, and in which all derive their chief value from combination, is to bring a brick as a sample of a palace, but we venture to cull a few illustrations from the book. We find in Fig. 1, the moose, formerly situated near the Wisconsin river; Fig. 2, a horned owl in Grant county; Fig. 3, turtle, near Beloit; Fig. 4, a frog; Fig. 5, a fox, near Horicon; Fig. 6, a wolf, near Waukesha. The so-called elephant mound, the author thinks, represents a buffalo, as he has evidence that the proboscis was the result

of washing, and not attached by the mound builders.

We must not imagine that the mounds were built for mere amusement. Even with our tools, their construction would be a work of great labor. It is evident that the mound builders were natural worshippers. It is further evident that the particular type of nature worship of the effigy builders remarkably resembled that of the Winnebagos, Omahas, Iowas, Mandans and Dakotas, formerly inhabiting Minnesota. The religion of the Dakotas proper serves best as an illustration, both because it is better known, and because some part of the Dakotas preserve it without material change. The so-called ghost-dance of the Dakotas, of the Pine Ridge agency, in 1890, perpetuates one of its old forms—an old craze under a new name. In my boyhood I often witnessed this dance, usually called the medicine dance, although in particular forms it was called the sun dance. The ghost is only another name for the latter form.

In some of these dances the dancers actually became, for the time, by transmigration of souls, the very animals they worshiped, and involuntarily and necessarily they imitated them; they acted, not like men, but as these animals, while under the spell. The buffalo and deer ate grass; panthers, wolves, bears and foxes raced and quarreled over the small animals and fishes brought into the enclosure for the purpose, tearing them with their teeth and eating them raw. At another time some malignant spirit, it was supposed, took possession of the one to be initiated, and he must be exorcised and destroyed; so the dancers, with guns and bows and arrows, were ready to shoot the evil spirit as soon as the signal was given.

Whatever the object worshiped, whether animal or bird, tree or stone, they were always careful to state that it was not the object itself, but the Wakau, the god that is accustomed to haunt the object, which they worshiped. They also spoke of particular localities in which they fancied a natural resemblance to some object, either animal or other form, and therefore in an especial sense the seat of the god or spirit of that animal. In Hudson, Wis., was the home of the Fish God, on account of the fish bar; a place near Big Stone lake was the home of the Thunder God; a place on Hawk creek, about three miles from its mouth, in Reville county, the home of the Hawk God. The same resemblance and superstitions are recognized in the effigies. Effigies frequently are placed on cliffs or near streams, which resemble animals, birds or serpents. In one case, at Prairie du Chein, the swallow, which was the clan totem of the region, is found on the edge of a cliff, which in its shape resembles on a large scale, the same bird, with its wings spread.

The Dakotas also worshiped gods not representing any physical object. Heyoka, their chief divinity, possessed all the leading attributes of the Scandinavian Loki—evil spirit. Even artificial implements, and especially the war clubs, were supposed to be the habitations of gods, and were therefore worshiped. The leading feature of this worship was the totem system, a special animal god for each clan. In many tribes the clan corresponded to bands, or sub-tribes, each band having its own territory, though this is not the case in Minnesota. In this volume the author has shown that their worship was of a similar kind. It was nature worship. This was the all-pervading element in the construction of the mounds. To illustrate, the man with two heads, near Muscoda, strikingly resembles Heyoka in one of his shapes, though he is in most cases pictured with one head. If the religion of the mound builders had been exactly like that of the Dakotas as it was forty years ago, nothing could be more natural. If the god would dwell in a little pictograph, how much more potentially might he be expected to present himself in an immense effigy. In the days of the full sway of the superstition, not only the members of the Wakau society, but the whole people were under the domination of the leaders, ready to do anything that might be demanded, and all that was necessary was for some leader of the Wakau to command the people to build the effigies, and they were sure to be erected.

We trust that the publication of this volume, and the favorable reception it receives from scientific men, will greatly stimulate investigations. No one interested in American archeology can afford to be without it. Many who have never dreamed of the interest and value of the study would become deeply interested by a perusal of its pages.

A. W. WILLIAMSON.



FIG. 4.—FROG. The so-called ghost-dance of the Dakotas, of the Pine Ridge agency, in 1890, perpetuates one of its old forms—an old craze under a new name. In my boyhood I often witnessed this dance, usually called the medicine dance, although in particular forms it was called the sun dance. The ghost is only another name for the latter form.



FIG. 5.—FOX.



FIG. 6.—WOLF.

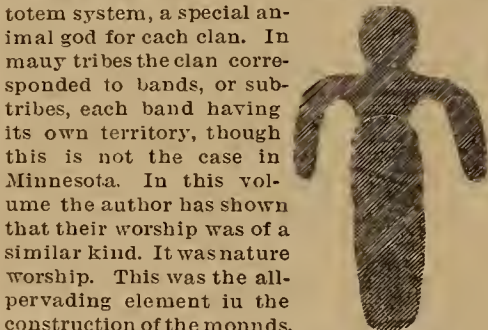


FIG. 7.—WOMAN.

AN OLD LOVE AFFAIR.

BY EMILY LENNOX.

A good many circumstances combined to make Lydia feel that she was growing old at twenty-eight.

She had been four years abroad as Mrs. Grosvenor's companion; she had done a great many things—her duty noticeably—and yet her life held no sort of fruition.

She grew very sad when she reflected. She had often wondered why it was; but now she had come to the conclusion that it must be her own fault—all owing to her own weakness. The truth had been forced upon her by a certain episode. Dr. Severance had asked her to marry him, and he seemed both surprised and angry when she told him she was already engaged—had been so for over six years.

"What are you waiting for?" he had asked, brusquely.

"We are both poor," Lydia answered, bravely. "He has his mother to support and two sisters to educate, and it is very difficult for a young lawyer to make any headway."

"In that case, I should give it up," said the doctor, bluntly. "Are you going to waste your youth in waiting for this man, Miss Dayton? Don't you think it would be much more sensible for you both to dissolve such a relationship? I am not speaking now as a lover, but as a friend. You are both old enough and reasonable enough to take the matter philosophically. If you were free, you might marry some man who could make your life sweet and pleasant; and—perhaps he might find some rich girl who would help him out of his difficulties."

These words had sunk deep into Lydia's mind; she thought of them for months. It was not that she cared to marry Dr. Severance; she knew she could never do that under any circumstances, and he knew it, too. He had given up all hope of making her his wife, and gradually they were drifting into a friendly and confidential intercourse which suited them much better. Still, the doctor's suggestion had lingered in Lydia's memory. She felt the force of what he had said, and was trying to come to a conclusion. Of course, she must have ceased to care for Henry Osborne as she once had, or she could not have argued the matter as she did. But she was still very fond of him, and when she had made up her mind to break off her engagement, the resolution cost her many a bitter pang.

She was a long time in writing the letter which explained the motives of her action; but she sent it off at last, together with the little plain gold ring, now somewhat worn away on the edges, and a great many letters signed in a bold hand: "Yours faithfully, Henry."

She felt as though she had been to a funeral when she came back from the post-office; and in the sorrowful fullness of her heart, she told Dr. Severance what she had done.

"I think you have acted wisely, Lydia," he said, in the friendly fashion which had grown natural between them.

"I think so, doctor," she replied, "but if I could only be perfectly sure!"

"Nobody ever does any important thing without doubts," he said, kindly; "nobody can tell about the issue of anything. But that ought not to concern us. What we have to deal with is the principle, and I think you are right there."

"I don't know," Lydia answered, her eyes filling up with tears. "It seems very false and treacherous when I think of throwing him over just because he is too poor to marry me."

"If he is a man of sense," said the doctor, warmly, "he will see it as you do. It certainly is not right for either of you to prolong such an affair forever. What does an engagement mean, if not marriage? Yours was nothing but a mockery, Lydia. It absorbed your thoughts and energies without any return. It was bad for both of you."

"Perhaps it was," said Lydia, with a wan smile. "I don't suppose happiness is worth calculating."

"There is a blessedness that is higher than happiness," quoted the doctor. "Don't you remember, Lydia? I was in love with you once, and yet I have come down to a commonplace friendship, which is a great comfort to me."

"Yes," said Lydia, with a faint sigh. "But I fancy you were not so very much in love with me, after all."

Womanlike, she was not without some vague regret that in gaining a friend she had lost a lover.

It was several days after this that Lydia received a letter from Henry Osborne. It was dated a week before, but owing to a slight mistake in the address, or rather an illegibility due to hasty writing, it had made a roundabout tour and reached her much belated. When she received it, she fancied it was an answer to her own letter; but the moment she opened it she knew it was written before hers; the two, of vastly different tenor, had passed each other on the way.

"My darling," it began, "I cannot tell you with what strong feeling I write you this morning. I am so beside myself with joy that I fear I cannot give you a very intelligent account of what has changed the whole aspect of my life—our lives, I mean to say. Years ago—you remember, I told you—my uncle left me several small lots in a little town in western Pennsylvania. I was only a boy at the time, and no account was made of the

legacy—for the property was worth only a few hundred dollars, and it has lain idle ever since. But now it has suddenly become valuable. The discovery of a large oil well on the adjoining lands has made my poor lots worth an enormous sum. To-day I have sold them to a New York syndicate for a large sum. I am a rich man, dearest, and you know what that implies! I am coming to you at once! After all these years of waiting, I have suddenly grown impatient; I want to be married immediately. There is no reason why we should wait any longer. We have lost so much time that we cannot afford to lose any more. Oh, my darling! I am so proud and happy when I remember how faithfully you have waited for me all these years of poverty and separation. My heart glows when I think of it, and I thank God heartily for the blessing of your love! I shall be with you in a week. I am settling up my business with a view to taking you abroad for several years. Till I see you, then, my darling, and through all time to come,

Yours faithfully,
HENRY.

Poor Lydia! Every word was a dagger in her breast. She knew, as she read it, that her own letter had by this time reached its destination; that Henry had read it, and that he would not come to her now. She laid her head down and wept bitterly.

Lydia was not a mercenary woman. It did not affect her that she had just ruined her chance of marrying a rich man; but she had a passionate thirst for happiness, a wish to make the best out of her life and its possibilities. She had always known that, as Henry Osborne's wife, she would find that sweet content which would make her always appear the best her nature would allow. She had not given up this hope without a struggle; and now—oh, how his generous praise of her fidelity lacerated her very soul! But she was not too proud to write to him—such a letter! It must have moved Henry Osborne to forgiveness, so full was it of remorse and reawakened love, of passionate entreaty and desperate fears; but he did not receive it. Her first epistle had reached him on the very day when he was starting to come to her. Overwhelmed with anguish and bitterness, he had not deferred his journey; he went on in the same hot impatience, but he went in another direction—whither, no one knew—and Lydia's second message was returned to her unopened.

Lydia did not mention this to Dr. Severance. Her own pride would have kept her from it, even if she had been less considerate of her friend's feelings; but both reasons influenced her to silence. It was a curious thing that Henry Osborne's name had never been mentioned between them. There was no occasion for it, however. When Lydia had told the doctor of her engagement, it had been in general terms. So the matter was quietly dropped between them, and the doctor made a poor guess at what ailed Lydia, who grew very pale and sad, as time went on.

It was two years afterward that he called for her one morning in his carriage.

"I have some news for you," he said, shaking her hand very warmly. "I have succeeded at last in finding somebody who will marry me!"

"I congratulate you," said Lydia, smiling. "When is it to be?"

"As soon as possible," the doctor replied, briskly. "Put on your hat and coat. I have come to take you to call on her. I am sure you will like her, Lydia. She is one of my patients. I have cured her of a spinal affection, and she means to repay me by becoming my wife."

"I don't call that such a heavy bill," said Lydia, thoughtlessly.

"If you had to pay it, you would," said the doctor, laughing. "Come, Lydia, I want you to go with me."

This was how she happened to drive with the doctor to an elegant house on Fairbank avenue, where they were ushered into a large room, dusky with draperies and rich furniture. From somewhere out of the shadows came a slight, girlish figure.

"Why, Frank," she cried, joyously, and then stopped, at the sight of Lydia, to recover her shy dignity. A gentleman who was seated on the piano-stool rose hastily, and turned around.

"Edith," said the doctor, taking the hand of his fiancée and holding it quietly, "this is my friend, Miss Dayton. Lydia, this is my future wife, Miss Osborne."

"I—if I am not mistaken," Edith said, with great embarrassment, "we have met before."

She held out her hand awkwardly, but Lydia did not seem to see it. Back of Edith stood Henry Osborne, looking at her with a proud, cold face.

"We have met before," Lydia faltered. "Dr.

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and for
the cure of all
scrofulous diseases,
the best
remedy is

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Cures others, will cure you

Severance did not tell me it was Miss Osborne—

"My brother Henry," Edith said, breaking through the stiffness of their meeting. "Henry, I—I think you remember Miss Dayton."

"Quite well," he said, coming forward, with a smile which struck a chill to Lydia's heart. "I hope you are well, Miss Dayton."

Dr. Severance looked puzzled; but before long, Henry was chatting volubly with Lydia about his foreign travels, and Edith was uttering gracious things which only heightened Lydia's embarrassment. At last she got away; but the doctor was astounded when she burst into tears the moment they were out of the house.

"You might have told me!" she cried, passionately. "I'd have died sooner than go there!"

"Told you what?" the doctor asked, with considerable annoyance. "I didn't know that you were acquainted with the Osbornes. You never said so."

"You never mentioned their names, and I—I told you I was engaged to Henry."

"Good heavens!" ejaculated the doctor, on whom the first ray of light was dawning. "Lydia, you never mentioned Henry Osborne's name to me. How was I to know to whom you were engaged?"

"What will they think of me, going there after—after— Oh," she added, fiercely, "I never want you to mention their names again!"

"I am sorry," the doctor said, with genuine chagrin. "I had hoped you and Edith would be good friends. Henry is a strange fellow—very quiet and exclusive. Edith said he had been disappointed in a love affair, and took it very hard; but—upon my word! See here, Lydia, I believe you are fond of that man yet!"

"I am not!" she exclaimed, angrily. "You are an old friend, Doctor Severance, but you are going too far."

"Well, well, I beg your pardon. We won't say anything more about it."

He set Lydia down at Mrs. Grosvenor's door, and drove away in a quandary.

"If those two people are not in love with each other still," he mused, "I'm a quack."

Nevertheless, when the doctor and Edith were married, Lydia did not go to the wedding, a fact which he canvassed thoroughly some time afterward in conversation with his wife; but nothing came of the conversation.

The doctor's brother-in-law was taken ill soon after the wedding. It was a bad fever of a remittent type, which left him intervals of deep despondency. Doctor Severance attended him. One day, when he had his finger on the patient's pulse, Henry opened his eyes and looked fixedly in his face.

"You need not be afraid to tell me," he said, weakly. "I know I am going to die."

Doctor Severance started to say something, but Henry stopped him.

"You needn't attempt to deceive me," he said. "I see my verdict in your face. I am very well satisfied that it should be so, but—I have one request to make of you, doctor. I know I cannot live many days. Will you—will you ask Miss Dayton to come and see me before I die?"

The doctor's eyes brightened.

"I will do anything I can for you, Henry," he said, kindly. "I am glad you are so resigned. It is best to be always ready, for no man knows when his hour is nigh."

"I don't think she will mind coming, under the circumstances, do you?"

"I think she will come," the doctor rejoined, confidently. And he was right, for when to Lydia he said: "Henry Osborne wants to see you before he dies," she went at once.

They were quite alone in that eventful meeting. Henry, pale and weak, lay back on the pillows and greeted her with a smile.

"It was good of you to come," he said, softly, holding out one hand, which she clasped, and, falling on her knees, wet with her tears. "I blamed you at first, Lydia; but you had a perfect right to break our engagement if you chose. I don't feel hardly toward you now."

"I was not right," she sobbed. "I knew it afterward, when I wrote again; but you sent back my letter unopened. I suppose you thought that the money had influenced me; but it didn't. I would not have written you from any such motive."

"What are you saying?" he asked, in bewilderment. "I never received any letter, much less sent it back, except the one in which you asked me to release you."

"You never opened it. It came back to me with the seal unbroken."

"It came from the Dead Letter office, then, or—some one sent it who knew your writing. I never saw it. Lydia, I loved you too well to refuse my happiness at your hands, no matter how it came to me."

"And I have never ceased to love you, Henry," she faltered. "Afterward—I don't know why, but it seemed like a retribution—I loved you more than ever."

"And now?" he asked, feverishly.

"I love you still!"

She raised her head, and he put his arms about her.

"I believe you," he whispered. "You could not deceive a dying man. Kiss me, dear. It is such a long, long time, and I have been so lonely."

When Doctor Severance came in, he started out again, but came back with a merry twinkle in his eyes.

"Well," he said, clearing his throat by way of warning, "how is the dying man?"

Lydia did not attempt to withdraw herself from her lover's embrace. Henry's head was resting on her shoulder; but neither replied to his ghostly question, and the doctor broke into a low, chuckling laugh.

"You think you are going to die, do you?" he said, touching Henry's arm. "Well, you're not going to do anything of the sort! We'll have you out of this in a couple of weeks, if Lydia will only help us nurse you."

"Do you mean he is not going to die?" she gasped.

"Not a bit of it."

"But you said—"

"I said what Henry said. Sick men get unaccountable notions into their heads sometimes. He made up his mind he was going to die, and I humored him because—well, he'd never have sent for you, Lydia, if he hadn't believed his last hour had come; would you, Henry?"

"No," he replied, but all his resentment was swallowed up in his new-found happiness.

"Don't be cross with me, Lydia," said the doctor. "I had a hand in breaking your engagement, and I took it upon myself to mend it."

"I am afraid I have lost the power of being vexed," Lydia said, with a joyous smile. "I am too glad and thankful to mind a deception which has brought about such happiness."
—Peterson's.

A FAMILY TREE.

A pretty custom which was at one time common in some parts of New England, was the setting apart of a "family tree." This tree was not of a dry, genealogical kind, but was always one of the finest in the orchard, selected with a view to its apple-bearing abilities and its beauty.

In one little village, many of the orchards have trees of this description, and the older inhabitants can refresh their memories as to the number of children in the families which have occupied farms at different times, provided the period of occupancy was long enough to make the setting up of a family tree worth while.

On one farm there is a large old tree which bears seven different varieties of apples: Baldwins, Jeremiahs, summer Sweetings, winter Pippins, Astrakhans, Russets and Gillyflowers. The grafts on this tree were made, not one at the birth of each child of the household, as was sometimes the custom, but when each boy or girl grew old enough to choose his or her special favorite among apples.

The tree is now more than sixty years old, and its present owner shows it with great pride, and gives samples of its fruit to the children of the neighborhood with a free hand.—*Youth's Companion*.

SPEAKING TO HORSES.

The horse is possessed of as good hearing as his owner, usually, and can be made to heed words of command given in moderate tone as well as those hurled at him with all the strength of the driver's lungs. Some have gotten in the habit of yelling at their horses as if they were half a mile away, and seem to think it is the only way to get along with a team. It may be, if the horses have been educated in that way, but there is no need of teaching them in the first place.

I notice that the horses of such men don't mind as well as those of their milder spoken neighbors; they seem to have become used to the racket, and found that nothing less than a terrific howl (and maybe a clod or cut of the whip) means much. It is noticeable that children constantly scolded pay least attention to rebukes, and the same holds good with dogs and horses in obeying orders. I believe as a rule it is best to speak to horses in a tone somewhat above the ordinary, always taking care to make the command distinct.

Never give a word of command unless it is meant. Some men say "whoa" when they don't mean for the horse to stop at all; result is, when they say whoa and mean it, the horse doesn't always stop. Another thing is necessary; when certain a horse has heard, always make him obey. Some horses are like men; they hear, but don't heed, and it is necessary to wake them up every now and then. I have never seen a man yet that didn't sometimes get rattled and yell at his team with all his power, nor a team that wouldn't make most any man lose his temper occasionally; but there is no need for either man or team making a habit of it.—*National Stockman Farmer*.

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Use this color in your dairy, and satisfy yourself in regard to the truth of Mr. Jackson's statement. If your experience is similar, and there is no reason why it should not be, you will find a gain in quality and price of your butter.

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A SANITARY HOUSE AND ITS FURNISHINGS.

It will stand facing the sun on a dry soil, in a wide, clean, amply-sewered, substantially-paved streets, over a deep, thoroughly ventilated and lighted cellar. The floor of the cellar will be cemented, the walls and ceiling plastered and thickly whitewashed with lime every year, that the house may not act as a chimney to draw up into its chambers micro-organisms from the earth. Doors and windows, some of which extend from floor to ceiling, will be as abundant as circumstances permit, and will be adjusted to secure as much as may be through currents of air. The outside walls, if of wood or brick, will be kept thickly painted, not to shut out penetrating air, but for the sake of dryness. All inside walls will be plastered smooth, painted and, however unæsthetic, varnished. Mantels will be of marble, slate, iron, or of wood, plain, and whether natural, painted or stained will be varnished. Interior woodwork, including floors, will all show plain surfaces, and be likewise treated. Movable rugs, which can be shaken daily in the open air—not at doors or out of windows, where the dust is blown back into the rooms—will cover the floors. White linen shades, which will soon show the necessity of washing, will protect the windows. All furniture will be plain, with cane seats, perhaps, but without upholstery. Mattresses will be covered with oiled silk; blankets, sheets and spreads, no comforts or quilts, will constitute the bedding. Of plumbing there shall be as little as is necessary, and all there is shall be exposed, as is the practice now. The inhabited rooms shall be heated only with open fires, the cellar and hall by radiated heat, or, better, by hot-air furnace, which shall take its fresh air from above the top of the house, and not from the cellar itself or the surface of the earth, where micro-organisms most abound. There will be "house cleaning" twice a year. Put into this house industrious, intelligent and well-informed men and women—absolutely essential conditions—and as much will be done as at present may be done to prevent the dissemination from it of contagious disease when an inmate brings it home from a septic house, hospital, sleeping-car, school-room, theater, church, etc.

EVENTS THAT OCCURRED ON FRIDAY.

- Declaration of Independence was signed on Friday.
- Washington was born on Friday.
- Queen Victoria was married on Friday.
- Napoleon Bonaparte was born on Friday.
- Battle of Bunker's Hill was fought on Friday.
- America was discovered on Friday.
- Mayflower landed on Friday.
- Joan of Arc was burned at the stake on Friday.
- Battle of Waterloo was fought on Friday.
- Bastille was burned on Friday.
- Battle of Marengo was fought on Friday.
- Julius Cæsar was assassinated on Friday.
- Moscow was burned on Friday.
- Shakespeare was born on Friday.
- King Charles I was beheaded on Friday.
- Battle of New Orleans was fought on Friday.
- Lincoln was assassinated on Friday.

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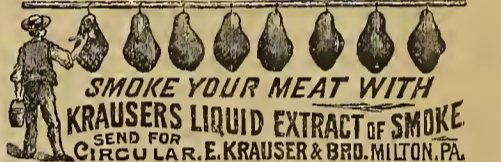
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| The Old Homestead, Atlanta, Ga. | 1.00 | 1.00 |
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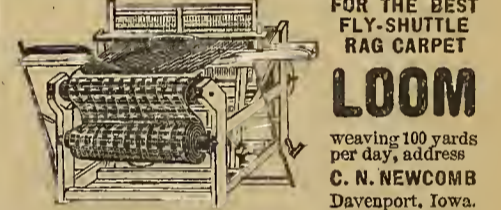
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It is pleasing to note that the winners of the Grand Prizes, given each week for the largest clubs, are not confined to any particular section of the country, but that all, no matter in what state they may live, have the prospect of success before them in working for one of the prizes. These offers will be continued during March and April.

Our Household.

Go on, my friend; speak freely, pray;
Don't stop till you have had your say;
But after you are tired to death,
And pause to take a little breath,
I'll name a dish I think is one
To which no justice can be done.

It isn't pastry, old and rich,
Nor onions, garlic, chives and sich;
Not cheese that moves with lively pace;
It isn't even *Sveitzer-Kase*;
It isn't ham that's old and strong,
Nor sausage kept a month too long;
It isn't beefsteak fried in lard,
Nor boiled potatoes when they're hard.
(All food unfit for Goth or Celt!)
It isn't fit when they're smelt.
It ain't what Chinamen call nice,
Altho' they dote on rats and mice;
For, speaking honestly and truly,
I wouldn't give it to a coolie!
I wouldn't vally even a pup
If he could stoop to eat it up,
Nor give my enemy a bit,
Altho' he sot and cried for it.

Recall all pizen food and slop
At stations where the rail-cars stop;
It's more than each and all of these
By just about sixteen degrees.
It has no nutriment; it's trash!
It's meaner than the meanest hash,
And sourer, twenty thousand times,
Than lemons, vinegar and limes;
It's what I hate the man who eats!
It's poor, cold, cussed pickled beets.

—Phoebe Cary.

"Listen, housemaids, to my song;
Send the joyful news along.
Lift your troubled hearts from care,
Wave your dusters in the air;
No more hard-earned wages clipped
To repay for treasures chipped.
Sing and dance, and laugh and shout—
Bric-a-brac is going out!"

—Ella Wheeler Wilcox.

So people say, and yet there seems to be
plenty of people who still keep on fashioning
articles of bric-a-brac. However, a house looks
strangely empty without the many little adornments
that deft fingers can fashion out of bits of ribbon,
lace and silk.

WALL-POCKET.—This pretty article is fashioned
out of flat gold braid, used awhile for trimming,
but now, being a little out, can be gotten very
cheap, and when woven as our pattern describes
is very pretty. Three of the corners are brought
together and fastened, and then finished with
cord and balls of any color preferred.

BAGS.—These have become useful for so many
things that now they are being fashioned very
ornamental. This one is



made of pink crape, plaited very full, over a lining of pink silk, and finished by white ribbon, with gilt thread ornamentations up the sides.

LAMP-SHADES.—These are in high favor now for the lamp in the best room. A wire frame is used as a foundation, which is covered with plaitings of yellow silk and cascades of lace, and a bow of wide ribbon. The lace can be bought in beautiful quality for thirty-five cents a yard.

TATTING.—This old-fashioned trimming for muslin is being revived, and for evening work there is nothing prettier. It doesn't totally engross one's attention, and leaves one's thoughts free for conver-

sation and company. If there is some older lady among you who can teach it to you, learn it, as it will be very useful. The method of simply dropping the shuttle through the fingers is the newest way to do it, and is quite difficult to acquire.

A COZY CORNER AND A DOOR-SHELF.—An old, ungainly lounge that is ready to be cast away can be used for this. Take off the end and back and recover the lounge with cretonne, chintz, plush or canton flannel, running a valance or drapery around the sides, slightly full and falling almost to the floor. Then push your lounge into a corner and pile up at its back and sides as many pretty cushions



FRAME WITH PLAIT-WORK FOR WALL-POCKET.

as you can command. On the two walls above the lounge have a carpenter fasten two rows of book-shelves. The top shelf should be furnished at each end with a sort of bracket decoration to take away the plain look. Underneath the lower shelf tack "A Yard of Roses," or any other floral pictures that have come with the holiday papers. When the shelves are set out with books, photographs and bits of bric-a-brac the effect is very charming and the cushioned lounge underneath becomes in very truth a cozy corner. It is a very great pity that handy carpenters for indoor work are so hard to get hold of. Not long since a lady called in a man to make four pine shelves, five feet long. His bill was \$9. It is strange that some young men connected with the industrial arts at colleges do not undertake such work and advertise for it in the city papers. They would find more than enough to do. One of the prettiest shelves that can be put up by a carpenter is the over-the-door shelf. It should be on a line with the lintel, and rest at the sides on pretty brackets. The shelf should be about seven or eight inches wide, and near the edge have a beading to keep the things on it from falling off. This is very pretty over a folding door, and is an ideal place for pottery, jugs, jars and vases which are not to be handled, and whose cracked or broken sides can thus be safely turned to the wall.

FURNITURE DRAPERIES.—Everybody is thankful to know that furniture millinery is very much out of date. Scarfs and curtains, and sashes and ribbons no longer hang on picture-frames and from the corners of mantel-shelves or pianos, or on chair-backs. Quite the correct thing for a mantel is to have a scarf just as long as the shelf and about two inches wider, and to frill it on the shelf with nothing hanging over, and on this to place the pretty articles of "bigotry and virtue." The same treatment applies to the piano. A lovely scarf is of yellow silk, just the piano length and twice its width, stiffly embroidered, haphazard, in yellow and green crescent moons. Crumple this lengthwise on the piano, and place on it what you please of bric-a-brac, always including a green plant growing in a yellow jar. If the back of the piano shows, cover it with sage-green silk, frilled on lengthwise, and drape over this, caught up at one side, a drapery of yellow. Nothing could be prettier than a piano-back so treated. The fashion of the moment is to have white dotted Swiss sash-curtains in all except the parlor windows. These should be edged with a dainty little white-ball fringe, and tied back with yellow, green or white ribbons. Last year yellow was all the fashion; this year it is green. Everything in the way of household decoration is green, and even old chairs done up in enamel paints, to look like

new, are made green. Even curtain-poles are painted green nowadays, and an artistic window has a sash-curtain of apple-green China silk, a shade of green linen, a pole painted green and draped with three yards of green sateen to match the sash-curtain. The effect, it must be said, is singularly bright and pretty. On tables as scarfs, and for book-shelf curtains, the correct thing is corduroy velveteen, very simply finished with a ball-fringe matching in color.

CHRISTIE IRVING.

HOME TOPICS.

THE FARMER'S GARDEN.—Farmers are apt to think that they have no time to work a garden. It is true that in some busy seasons the garden is apt to suffer, or be an extra expense if the necessary care is taken of it. In spite of these difficulties, if the garden is fairly good it is surprising how much it adds to the table, and if the market price of vegetables and fruits is reckoned up through the season, it will be seen that the garden pays

better than the same amount of land in any farm crop. The fact is, however, that if garden fruit and vegetables are not raised on the farm, the family does without them, and lack just that much comfort.

I have heard farmers say, "I cannot put-ter with a garden; I would rather buy the garden truck." But does he do it? Not as far as my observation goes.

If the garden were laid out in long rows, so that the cultivation could be mainly done with horse-power, it could be much easier cared for, and with less expense. There is no reason why the farmer's table should not be supplied with all kinds of garden vegetables, each in its season. He has the land, the manure for enriching it, and the time necessary to plant and cultivate a garden cannot be spent to better advantage.

Besides vegetables, every farmer ought to raise his own fruit. Strawberries, raspberries, blackberries and grapes, with cherries, pears and apples, will give a succession of fresh fruits and supply the table with not only a luxury, but with a necessity to good, healthful living. To the above list I would add peaches and plums, where they can be raised.

Plenty of fresh fruit for the farmer's table enables the family to dispense with cake and pie, thus saving an immense amount of work, besides being much more healthful. If anybody's table should be supplied with all the delicacies of the season it is the farmer's, and the sooner he sets about bringing this result the better for the health and happiness of himself and his family.

EARACHE.—The cold winds of March are apt to cause this painful malady, to which children are especially susceptible. The ear is a much more delicate organ than most people suppose. The greatest care should be exercised in washing the ears of young children, and never should a hair-pin or any other hard substance be put into the ear. If anything gets into the ear, syringe it out carefully with warm water. In the case of an insect, a light held close to the ear will often cause it to come out of itself.

A simple remedy for earache is to take a little cotton, wrap it in a piece of very thin linen (a piece of an old linen handkerchief will do), dip it in warm sweet-oil and put it into the ear. A piece of warm flannel laid over the ear and that side of the head will assist in easing the pain by keeping the ear warm. If the pain is very severe, a drop or two of laudanum added to the hot sweet-oil is sometimes needed, and a hot-water bag applied to the side of the face is also a good thing. If earache is not relieved by this treatment it is best to consult a physician, an ear specialist, if possible, as the ear may be diseased, and unless properly treated deafness be the result.

FIREWOOD.—Have you secured your supply of firewood for the summer, and got it where it will be well seasoned and dry? If not, this should be attended to immediately. The supply of wood ought to be prepared a year ahead, and kept in a wood-house convenient to the kitchen. I do not wonder that the woman who must cook for a family with green wood, split up a few sticks at a time, is often cross and out of humor. In fact, it would be a miracle if she were not cross. I am sure no man would have the patience to put up with it. I have known women who never had more than wood enough for one day at a time, and that often so wet and green that they must keep the oven full of wood drying, and then burn that up to dry more, not daring to let the fire go down, because it would besomuch trouble to kindle it again; and if they did not watch and speak about it, they would often be left in the morning without any wood for the day, unless they split it themselves. I sincerely hope no FARM AND FIRESIDE farmer would treat his wife so badly.

MAIDA McL.

SPONGING OUT A HEADACHE.

In case of the ordinary nervous headache from which women suffer so much, says an authority, remove the dress waist, knot the hair high upon the head, out of the way, and, while leaning over the basin, place a sponge soaked in hot water, as hot as can be borne, on the back of the neck. Repeat this many times, also applying the sponge behind the ears, and if the assertion of the writer is not a mistaken one, in many cases the strained muscles and nerves that have caused so much misery will be felt to relax and soothe themselves out deliciously, and very frequently the pain promptly vanishes in consequence.

Every woman knows the aching face and neck generally brought home from a hard day's shopping and from a long round of calls and afternoon teas. She regards with intense dissatisfaction the heavy lines drawn around her eyes and mouth by the long strain on the facial muscles, and when she must carry that worn countenance to some dinner party or evening's amusement, it robs her of all the pleasure to be had in it. Cosmetics are not the cure, nor bromides or the many nerve sedatives to be had at the drug shop. Here again the sponge and hot water are advised by the writer quoted, bathing the face in water as hot as it can possibly be borne; apply the sponge over and over again to the temples, throat and behind the ears, where most of the nerves and muscles of the head center, and then bathe the face in water running cold from the faucet. Color and smoothness of outline return to the face, an astonishing freshness and comfort results, and if followed by a nap of ten minutes, all trace of fatigue vanishes.—*Health and Home.*

IRONING.

"No, I don't get very tired when I iron," said an experienced laundress to a



WALL-POCKET FOR DUSTERS.

lady who was expressing sympathy at her hard work. "At least, it's only my arms and shoulders that get tired. I don't mind standing if I can have things my own way. I always have a cushion for my feet when I stand at the ironing-board. It is made of a dozen thicknesses of old carpet lining, covered with drugget. The lining is cut in squares and very

loosely tacked together with long stitches. The drugget is cut of the required size, the edges are turned in and overhanded, then strong stitches are sewed through about every two inches over the surface of the cover. I have a little loop on two corners of the rug and hang it up by both loops. In this way it does not curl up and get out of shape, as it would if it were hung by one corner. I have another rug in front of my dish-washing table—indeed, there are a number of them around the house; and when I have any work that requires standing, one of them invariably comes onto the floor under my feet.

"If housekeepers realized how much of their strength could be saved by a few of these simple devices, they would not fail to provide them. I can stand at my table as long again without feeling weariness if I have one of these cushions or pads to stand on. I think they might be a profitable article of trade. I have used them for years, and I can't see why they have not been generally introduced. They seem as necessary to me as holders and stove-brushes."

MANY PRETTY BED COVERINGS.

There are, and probably always will be, many who prefer the all-white bed, and for these many pretty bed coverings are provided. Linen shams, with borders of elaborate drawn work, are used with plain white Marseilles spreads. Antique lace of firm, fine texture is always suitable and makes a dressy bed, used either over white or some delicate color. The figured China and India silks used during the last year or two are also still in favor for bed and bolster coverings, but a newer material for this purpose is the Hollywood sheeting, a fancy double-width material of soft, cream-white cotton, whose rough surface is exceedingly effective when wrought with the simple, showy patterns employed for this work.

A very handsome one designed for a white and gold guest-chamber has a conventional pattern scattered over it, worked in shades of yellow and brown. The pattern is first outlined with a long chain-stitch, the leaves and shadings marked, then the intervening spaces filled with a simple filling stitch, which is very rapidly done and is yet exceedingly showy. The spread extends over the pillows, and a band of colored ribbon, matching one of the lightest shades of silk, is passed across the bed just below the pillows and tied in a handsome bow.—*Chicago Herald.*

HOW TO HANG A PICTURE.

Never put a somber-colored picture in the shade. Put it where the light will fall upon it, says the *Ladies' Home Journal*. Between two windows place



LAMP SHADE.

pictures with light background that will stand out the more prominent by reason of their dark surroundings. Hang the big pictures first, in suitable positions, and group with smaller ones in two rows in between. Be careful that the pictures do not conflict in color. Use your own taste in this. It is impossible to give any brief rule on the subject. Hang the pictures on a level with the eye, unless they

be, as some are, pictures which should be looked up to. Place small pictures in corners and alcoves. Over doors place large and unimportant canvasses, anything that looks well. Water-colors may be hung on the same wall with oils when framed in white. White margins on etchings and engravings don't go well with oils. The main light should be on the picture.

CROCHET TRIMMING.

The heading of this trimming is worked shortwise, the edge lengthwise.

Make a chain of 15 stitches.

First row—Pass over 8 stitches, 1 treble into each of the 2 next stitches, 2 chain, pass over 2 stitches, 1 treble into each of 2 next, turn.

Second row—3 chain, 1 treble into 2d treble, 2 chain, 1 treble into each of 2 next stitches, 2 chain, 1 treble into 6th of 8 chain, turn.

Third row—6 chain, 1 treble into each of 2 next trebles, 2 chain, 1 treble into each of 2 next trebles, turn.

Fourth row—3 chain, 1 treble into 2d treble, 2 chain, 1 treble into center of 6 chain, 3 chain, 2 trebles separated by 4 chain under next stitch, 4 chain, 1 single into the same stitch the treble at turn of last row was worked into, draw through next stitch, and turn.

Fifth row—4 doubles under 3 chain, 9 under 4 chain, and 4 under next 3 chain, 1 single into end of next treble, 5 chain, 1 treble into each of 2 trebles, 2 chain, 1 treble into each of 2 trebles.

Sixth row—3 chain, 1 treble into 2d treble, 2 chain, 1 treble into each of 2 trebles, 2 chain, 1 treble into center chain at end of row.

Seventh row—5 chain, 1 treble into each of 2 trebles, 2 chain, 1 treble into each of 2 trebles.

Eighth row—Like sixth row.

Ninth row—Like seventh row.

Tenth row—Like sixth row, then repeat from the third row for the required length.

For the edge:

First row—Work 10 trebles, each separated by 2 chain over the doubles of the scallop, 2 chain, pass over 1 treble of heading, 1 double into the next, 3 chain, 1 double into next treble, 2 chain, repeat from the beginning of the row.

Second row—1 double into first 2 chain, * 3 chain, 2 trebles separated by 3 chain under next 2 chain, 3 chain, * 1 double under next 2 chain, repeat from * 4 times more, 1 single into each of 3 chain, repeat from the beginning of the row.

WHAT IS A FARM WITHOUT A BOY?

"I agree with Charles Dudley Warner that a farm without a boy would quickly come to grief," said Peter J. Millsdon at the Lindell. "Just stop and consider for a moment what a boy on a farm is required to do. It is understood, in the first place, that he is to do all the errands, to go to the store, to the post-office, and to carry all sorts of messages. If he had as many legs as the centipede, it is my private opinion that every one of them would be thoroughly tired out by night. He is the one who spreads the grass

when the men cut it; he stows it in the barn, rides the horse to cultivate the corn up and down the hot, weary rows; he picks up the potatoes when they are dug; he is the one who totes all the wood and water, and tires his back out splitting kindling. No matter where he is, in the house or out of it, there is always work for him to do. Before he goes to school in the winter he shovels the paths, and in summer turns the grindstone. Yet the farm boy has a happy life in spite of all, and he is the stuff great men are made of. If it were not for the fresh, young blood of the country I am afraid the city would run to seed."—*St. Louis Star-Sayings.*

To prevent mold in ink, infuse a piece of salt the size of a hazelnut in each quart.

REMOVING GREASE SPOTS.

On using naphtha and benzine to remove grease spots from fabrics, often a circle or outline of the spot is left so clearly defined that the effect is but little better than that of the grease spot itself; it is, in fact, the grease spot itself spread out thinly over a larger surface. To remove the spot entirely, the best way is to lay the affected part between brown paper or blotting-paper, and to press thoroughly with a warm iron. Then if any grease remains, rub the spot gently with a sponge moistened in benzine, rubbing from the edge towards the center. Lay a piece of blotting-paper over the spot once more, to absorb as much of the grease as possible,



CROCHET TRIMMING.

then wash out the spot in cold water without soap, and press it on the wrong side with a warm iron until it is dry. Ammonia should be used with caution in removing spots, as it sometimes changes the color of the fabrics as well. In other cases a very weak solution of household ammonia has been known to restore color perfectly. For this reason it is best to first apply it on an extra piece of the goods, or in some place hidden from sight.

RUBBER FOOT FEVER.

If a man has a corn, says the *India Rubber World*, it can be removed, but if he is suffering from rubber foot fever, no chiropodist can help him, and the only thing to prescribe is liberal bathing of the feet and removal of the cause. Rubbers should only be worn to keep wet out, and they should be removed the moment the wearer gets indoors. Failure to note this gives a man wet feet in a far worse sense than if he had waded through mud ankle deep. It was the trouble resulting from forcing the perspiration to soak the stockings and keep the feet perpetually damp that drove rubber-soled boots out of the market. Even loose rubbers are a source of danger and the cause of many more serious colds than they avert.

DANGER IN VACANT HOUSES.

So long as the house is unoccupied, there is no danger; but when new occupants take possession of it, they will do well to take the precaution to have it thoroughly aired for nine days previous, have the cellar cleaned, the drain-pipes examined, the closets and attics cleaned and disinfected, and a general overhauling effected. More or less refuse is always left by the last occupants of a house, and as these undergo putrefaction, while the windows and doors are tightly closed, the whole house becomes infected. This explains why fevers and other germ diseases so often arise soon after the occupation of a new house.—*Good Health.*

EARTHENWARE IN COOKING.

The flavor of food baked or boiled in earthenware is said by those who have made the experiment to be far superior to that of vegetable or animal food cooked in the same way in iron vessels, for the reason that iron is a conductor of heat, while earthenware is a non-conductor; consequently, food cooked in the latter is rarely ever burned, the degree of heat not varying perceptibly during the process of cooking, thus preserving the flavor of what is cooked, as well as uniformity throughout the substance of the meat, vegetables or grain, until the process of cooking is completed. So earthenware takes the premium, as it deserves to, and those who have found out how much better they can do their cooking in these vessels than in ironware, give pots and kettles a cold shoulder often.

OUR CLUB RAISERS.

Those of our readers who will use their leisure moments in showing this paper to their friends and taking their subscriptions can easily secure clubs large enough to obtain one or more of the grand prizes which we award each week for the largest clubs. During the months of March and April each winner is offered the choice of a number of articles, thus enabling them to select that which will be most desirable. Look up these offers on another page.

A SUMMER GARDEN.

If you have any idea of having a few flowers next summer, now is your time to start them. Old pans can be utilized to start them in, if you have not the proper boxes, for house culture. Tomato plants can also be gotten under way, so that fine plants can be had to set out at the proper time. Pinks, pansies, phlox, verbenas and other annuals must be started now if success is wanted the first year. By the first of May they will be of good size and ready to bloom all the season. Do not think you will have plenty of flowers if you leave it till June to plant your seeds, as our seasons are too short to bring them to perfect maturity.

POPULARITY OF THE ORANGE.

An orange fad is among the possibilities. Free consumption of the fruit is said to be good for the complexion, and many American ladies are testing the claim. The value of the orange in other ways has long been recognized. It is reported that at some inebriate asylums oranges have proved an efficient substitute for alcohol, patients sucking the juice of them abundantly every time the thirst for liquor comes upon them. This fact is so well recognized that often at temperance coffee stands piles of luscious oranges are also kept.

The latest departure in clubdom is the formation of the "Annie Lynch Botta Conversation Club," a purely social organization of literary and artistic men and women, founded in memory of Mrs. Botta's famous Sunday evenings. The topic for the evening's conversation is known only to one person, who selects it, but does not announce it until after the company has assembled, which precludes all possibility of preparation and secures the charm of spontaneity to the talk. The person who selects the topic is called the "director," and leads the conversation. This office is not held by the same person on consecutive evenings. Membership to the club is obtained only through the medium of friendship with those already admitted to its privileges.

Mrs. May French Sheldon, a granddaughter of Sir Isaac Newton, and of American birth, has started for Africa to study the primitive life of the interior tribes for material for a new book.

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WE have been appointed sole selling agents for the earth for the **World's Fair Official Pictures**, in 22 Colors (by Chas. Graham, Artist with Harper Bros.) First plates cost over \$50,000.00. Grand Birds-Eye view entire buildings and grounds, size 31x44, as they will appear in '93. Sent prepaid \$1.00, or \$1.25 C. O. D. Refer by permission to Hon. Geo. R. Davis, Director General.

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Our Household.

He didn't read the papers, for they hadn't any news; At least, they didn't coincide with his especial views. And when he came to town one day, with criticism ripe, He climbed to an electric lamp to light his ancient pipe. He hadn't read the papers—but he knew just what was best; He simply touched the wires and—the fluid did the rest.

—Weekly Journalist.

SOME MEXICAN DISHES.

This spring I boarded with a Mexican family, and I had a good opportunity to see some of their housekeeping. Mexican women keep house altogether different from American women. Some dishes they cook I like very much. The best home-made vinegar I ever saw was made by the Mexican woman where I boarded. For the benefit of the sisters I give the following:

Fill a five-gallon keg two thirds full of water, and sweeten with sugar. I think sirup or sorghum would do quite as well as sugar. Make just sweet enough to taste. Shell, parch and crack (or grind, not too fine) one large ear of corn and put in the keg; make two small sacks out of white muslin; in one put a handful of cloves, in the other a piece of sour dough, two thirds the size of an egg. In a few days it is quite a pleasant drink. The corn and cloves give it an excellent flavor. When almost too sour to drink, remove the little sacks and corn. Itsours quickly, and has every appearance of cider vinegar. I never saw this vinegar used for pickling, but it is excellent for table use.

The principal diet of the Mexican is jerky and tortilla (torteer). Jerky is beef cut in thin slices, sprinkled with salt and dried on ropes in the sun. When hard or dry it is pounded fine with a hammer on a flat rock, and is then fried in hot lard, seasoned with onions and herbs. After frying a few minutes, boiling water is poured over it. Let it simmer a few minutes longer and serve.

Tortilla is the bread of the Mexican. It is made of flour, lard and water. The dough requires considerable kneading, and is then made into biscuits with the hands. One biscuit is taken at a time, spatted and worked between greased hands until almost the thickness of tissue-paper. It is then laid on top of the stove to bake. While baking, the tortilla require close attention; they must be turned constantly, or they will burn. If a person of a bilious temperament or one troubled with dyspepsia were to eat tortilla for six months I think they would be dead. They lay heavy on the stomach, and it is quite impossible for some to digest them.

I like the way Mexican women cook beans. They boil them in water with a little salt until done, then fry them in hot lard; while frying, wash them with a spoon. Sometimes bits of cheese are added.

Mexican women use butter, lard or some kind of grease for almost everything they cook. That is why Mexicans are called "Greasers." They speak a Mexican-Spanish, not pure Castilian.

The house of the Mexican seldom has a window or floor. Frames are put in the wall, and slats of wood take the place of glass. They keep their dirt floors hard by wetting every morning; after wetting a few minutes they are swept so clean there is not a particle of loose dirt left. A gentleman remarked that they were "almost clean enough to eat on."

Arizona. Mrs. R. C.

CASH IN HAND.

Truth to say, there are too many empty pocket-books in the possession of farmers' wives and daughters, a condition whose existence is decidedly inconvenient and oftentimes very embarrassing. Doubtless more has already been written than will be read upon the subject of the division of pocket-books and a monthly allowance. Granted that some arrangement should be made whereby the wife or daughter may be saved the too-often humiliating act of asking for the money so faithfully earned (for no matter how kindly given, to many women the asking for it is an unpleasant necessity), let us see what she can do to provide herself with cash in hand.

If she chooses to add to her pocket-book, what can she do? Chickens? Yes, but they are "dreadfully uncertain." Vegetables or flowers for market? Yes, if she has capital to invest or time to devote, which is seldom the case, to a specialty. Does she make the best use of the capital already in hand? Of course, on every farm are found cows, some poultry, and in their seasons, usually vegetables and fruit, all of which are in demand for home use. Let us consider these her capital. Usually, the surplus butter and eggs are taken to the grocery, where groceries are given in exchange. A good butter-maker may, with a little extra trouble, engage her butter to some family in town who will pay a price in advance of that received at the grocery. This same family, if it appreciates good butter, will be glad to secure fresh eggs. Many a city housewife will prefer to engage butter, eggs, chickens and even vegetables from her country neighbor rather than depend upon the market for them. Unless the country woman is making a specialty of marketing, she will not enjoy peddling from house to house, and this she need not do if she secures two or three customers to whom she may deliver supplies on stated days. Why could she not engage to supply provision for an entire dinner to a family who depend entirely upon the market? With very little inconvenience to herself she could arrange to do this once a week. The menu could vary with the seasons. One week the main substance might consist of baked beans, a loaf of brown bread, corned beef and pickles or a potato salad. Of course, the vegetables could not be prepared per arrangement. They might be furnished in quantities large enough to last for several dinners. The next week an entirely different bill of fare could be provided. When berries and the early vegetables "come on" the country housewife will find that her home garden, while not large enough to admit of general marketing, will furnish a surplus ample for her work of marketing.

Success will depend largely upon ability to cook well and the way in which the provisions are served to consumers. Neatness and attractiveness will form helpful features. "Lots of trouble?" Yes, but "whatever is worth doing at all is worth doing well."

Of course, while our "business woman" is looking out for the welfare of other tables she will not neglect her own, and thereby lose more than the money gain. I heard some one say: "If I were a country housekeeper and had a great deal of fat pork to dispose of, I should make it into lard, sell it and use the proceeds for a meat bill, and thereby vary the fare of pork with other meats." Good idea, isn't it?

MARY D. SIBLEY.

NEW USES FOR OLD HOSE.

There are some things which, when worn out, are regarded as practically worthless. They cannot be worked into rag carpet, so their ultimate end is the paper-factory. Men's old cotton hose have usually been regarded as belonging to this class of objects, while the woolen hose may be dyed and worked into pretty and durable rugs. The tops of two or three pairs of men's cotton hose sewed together make the most satisfactory floor-cloths. Being rather loosely knit, they absorb the water very quickly, and they are so soft that even if one's wrists are weak, one can wring them very easily. Another thing one can use these old hose for, is a lining for holders to be used in handling cooking utensils while hot. A covering may be made of denim or cheviot. Yet another use to which they may be put is dusters for furniture or for stoves. In either capacity they are unsurpassed; not even the much-praised cheese-cloth duster can surpass them for gathering dust from about the cook-stove, and the cheese-cloth cannot be cleaned as easily as the hose duster.

ELZA RENAN.

A rich, black, ottoman silk dress has a coat bodice and umbrella skirt, the latter (made with a dip at the back) bordered with black coq feathers. A long boa of the same and a big hat of black velvet and jet and coq aigrette make this an effective visiting toilette.

A recent edict in Norway declares that no girl shall be eligible for marriage unless she is proficient in spinning, knitting and baking.

Fac-Simile of Letter from
Mrs. Henry Ward Beecher.

40 Orange Street,
Brooklyn, N. Y., Feb. 11, 1890.

"I have used Allcock's Porous Plasters for some years for myself and family and, as far as able, for the many sufferers who come to us for assistance, and have found them a genuine relief for most of the aches and pains which flesh is heir to. I have used Allcock's Porous Plasters for all kind of lameness and acute pain and, by frequent experiments, find that they can control many cases not noticed in your circulars."

The above is the only testimonial I have ever given in favor of any plaster, and if my name has been used to recommend any other it is without my authority or sanction.

Mrs. Henry Ward Beecher

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Our Sunday Afternoon.

AT SUNSET.

MARGARET E. SANGSTER.

It isn't the thing you do, dear,
It's the thing you've left undone,
Which gives you a bit of heartache
At the setting of the sun.

The tender word forgotten,
The letter you did not write,
The flower you might have sent, dear,
Are your haunting ghosts to-night.

The stone you might have lifted
Out of a brother's way,
The bit of heartsome counsel
You were hurried too much to say.

The loving touch of the hand, dear,
The gentle and winsome tone
That you had no time or thought for,
With troubles enough of your own.

The little act of kindness,
So easily out of mind;
Those chances to be angels
Which every mortal finds—

They come in night and silence—
Each ehill, reproachful wrath—
When hope is faint and flagging,
And a blight has dropped on faith.

For life is all too short, dear,
And sorrow is all too great,
To suffer our slow compassion
That tarries until too late.

And it's not the thing you do, dear,
It's the thing you leave undone,
Which gives you the bit of heartache
At the setting of the sun.

—Boston Globe.

THE COLD-AIR CURE.

GOOD many people are afraid of cold air, especially at night, shutting themselves in close bedrooms, where their systems are poisoned and their constitutions gradually undermined by breathing the bad air.

Cold is an antiseptic and a powerful digestive stimulant. Dyspepsia, catarrh and fevers of all kinds can be frozen out of the system, not by letting the patient shiver in the snow-bank, but by giving extra allowance of warm bed-clothing, with the additional luxury of breathing cold air, which, under such circumstances, becomes as preferable to hot miasma as cold spring water to warm ditch water.

SANITARY PRECAUTIONS.

"Have you cleared out your cellar this fall?" asked a physician of a lady to whose house he was called professionally. The lady's face flushed a little as she replied: "Why, yes, of course; that is, we clean the cellar every week. I—I don't understand you, doctor."

of disease germs, and many a life is sacrificed to carelessness in this respect. "The heat of furnaces, steam-pipes and other like appliances is almost certain to hasten the decay of all sorts of vegetables, and the poisoned atmosphere arising from a cellar containing such articles cannot fail to produce unpleasant if not positively dangerous results."

MOLDING CHARACTER.

We may make our future what we will by the attitude we sustain toward the present. The question is therefore a very important one: "What is your life? How are you using the life which God has given you?" The purpose of that life is a grand one. You have walked along the seashore when the tide was out, and you have noticed here and there what seemed to be little pieces of jelly. They seemed to be useless, and perhaps you wonder what they were.

Well may we pause and ask: "Why are we here?" And another of equal importance is this: "What are we doing now that we are here?" You have entered the shop of the marble worker, and have seen him take the rough block of stone which seemed almost useless, and by patient toil, chipping skillfully here and there, have seen that rough, uncouth block grow under his hand into a thing of beauty.

SOWING AND REAPING.

"It is a law of the harvest that we reap more than we sow." Then how careful ought we to be of the seed we are sowing day by day, if we would reap a rich harvest of golden grain for the Master. Very much depends upon the manner in which the seed is sown, and the fertility of the soil to receive the seed, that it may take deep root and spring up and remain productive. In nature, like produces like, often in tenfold ratio. In grace, the seed sown sprang up and brought forth some thirty, some sixty, and some an hundred fold.

MICHIGAN WOMEN WHO VOTE.

The Michigan school election returns report much activity on the part of women voters and indicate that women are more desirous of the ballot and would more generally avail themselves of its privileges than has been conceded by the opposers of the movement. One thousand voted in Battle Creek and succeeded in electing two women as school trustees. In Jackson, too, the women worked successfully in helping elect two women on the school board, which has been composed entirely of men.

Home; or ?

A seasonable and a serious question for many. The "cold" of the autumn has developed into disease. Business or society—the winter's confinement, or its weather, has made them weak and depressed. The family physician looks grave, and finally says a change of air is "the only thing."

To any such, reluctant to go away, we would say, investigate what science and skill can do for you right where you are. The Home Treatment of Drs. STARKEY & PALEN will give you a change of air in your own room.

We invite the fullest investigation from all. Twenty-three years of success grounds our confidence. We offer a book of explanation and of the most convincing proof. Before you leave home, remember that if a change of air will benefit you, it can be had where you are; if relief and ease is only possible, you can get it at home, where it will be relief indeed.

Drs. STARKEY & PALEN, 1529 Arch St., Philadelphia. 120 Sutter St., San Francisco, Cal. 66 Church St., Toronto, Canada.

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IT WILL COST YOU NOTHING. SEND US YOUR ADDRESS on a postal and you will receive THE FINEST CATALOGUE OF PIANOS AND ORGANS IN THE WORLD. It will show you how to SAVE \$100 Satisfaction guaranteed before you pay. CUT THIS OUT and mail it to us. You will be surprised at the result. But you must do it NOW. Write to CORNISH & CO., (Established) WASHINGTON, New Jersey.

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Queries.

READ THIS NOTICE.

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

Bugs on Melon Vines.—R. P. Landess, Ind., writes: "Please give me some information how to keep bugs off my melon vines."

REPLY BY JOSEPH:—Keep your plants well covered with tobacco dust, or a mixture of tobacco dust and bone meal, or boue meal alone, and you will not see much of the bugs.

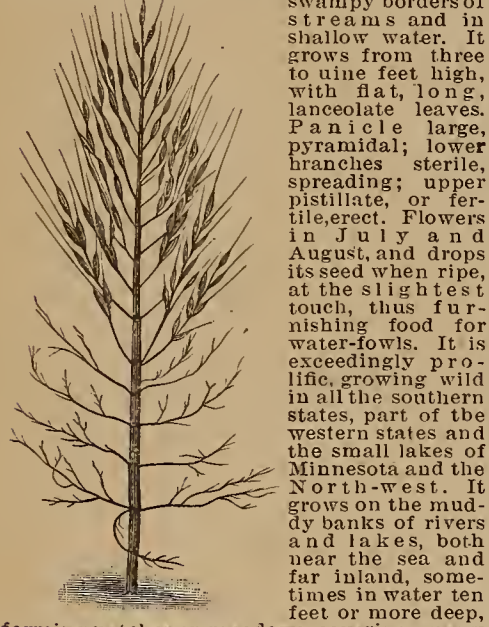
Summer Pasture for Swine.—M. C. S., Cedar Rapids, Iowa, writes: "I shall be short of pasture for hogs next summer, and would like to know the best thing to plant as a substitute for grass until corn is fit to feed green. Would field peas be a good thing to plant for green food early in the summer?"

REPLY:—Field peas. Sow broadcast, two bushels an acre, on thoroughly prepared ground, early in the season. For first cutting of corn, plant a patch of sweet corn, which will be ready before field corn.

Muck.—R. H. G., Newport, Ohio, writes: "I have a bog, the soil of which is a sandy muck. The bog is full of springs, and cannot be drained. It grows up with weeds and coarse grass every year, from two to four feet high, and falls down, and the surface for about six inches deep is composed mostly of this peat still undecayed. Now, about how much per ton would this muck be worth after being piled up and dried out?"

REPLY:—The amount of nitrogen in peat and muck varies so much that it will require a chemical analysis to determine the value of that in your swamp. Send a sample to a good chemist. One deposit may be worth several times as much as another. Send a fair, average sample to the experiment station. Before using, it should be properly composted to render the plant food it contains available.

Wild Rice.—L. T. M., Peoria, Ill. The following from an exchange answers your questions: "Wild rice, *Zizania aquatica*, is common in swampy borders of streams and in shallow water. It grows from three to nine feet high, with flat, long, lanceolate leaves. Panicle large, pyramidal; lower branches sterile, spreading; upper pistillate, or fertile, erect. Flowers in July and August, and drops its seed when ripe, at the slightest touch, thus furnishing food for water-fowls. It is exceedingly prolific, growing wild in all the southern states, part of the western states and the small lakes of Minnesota and the North-west. It grows on the muddy banks of rivers and lakes, both near the sea and far inland, sometimes in water ten feet or more deep, forming patches or meadows covering many acres, extending for miles. In the form of hay it is said to be relished by stock of every kind, and is eagerly eaten when green. Wild rice is not adapted to culture on any ordinary farming land, as it will live only in the presence of water, or soil deeply impregnated therewith. No fears need be entertained about its spreading to dry land beyond its territory.



Fertilizers Wanted for Nebraska.—F. J., Malmo, Neb., writes: "As our ground out here, has been under cultivation now for some twenty years, and as our barn manure is but a mere trifle, it will not raise either corn or small grain. Do you know of any method of enriching the ground? Could any fertilizer be used?"

REPLY:—Change your system of farming. Rotate your crops. Sow clover. Make and use more barn-yard manure. You can buy some commercial fertilizer, but your main dependence should be on the other. Your land has probably been too long in grain. Get it back in grass and adopt a good system of crop rotation.

Melon Growing.—W. B., Walker, Mo., asks: "Will soil that is black and rich, about two feet deep, but containing very little or no sand, produce good melons? Will it pay to haul sand three miles to mix with the manure? What varieties are best for market? Would it pay to buy seed every year? What firm sells the best seed? For what are coal ashes most useful?"

REPLY BY JOSEPH:—Try the melons on a small scale. I would haul very little sand three miles except for special purposes; for instance, mixing soil for potting and raising plants in boxes, etc. The varieties your market calls for are the best to grow for market. If you grow only one variety, and use other melons or cucumbers near, you can save your seed. Any reliable seed firm will give you good seeds. Coal ashes may be used as absorbents in poultry-houses and privies, and to make solid walks, or for mulching trees and shrubs.

Remedy for Squash-bugs—Onion Rot.—D. M. R., Mo., writes: "Can you tell me a remedy for the large squash-bug that ruins our squash crop here every season?—My transplanted onions did fine last season until time for them to mature; then the tops began to decay, and the onions rotted right down. Can you tell me the cause and remedy?"

REPLY BY JOSEPH:—I am not aware that a single reliable remedy exists for the large, black squash-bug, except hand-picking. This task seems much more formidable than it really is. Look your vines over every day for a week or more, or at longer intervals after the bugs have been pretty well whipped. It will not tax your ingenuity very much to construct a pair of bug-tongues or tweezers, of wood or band-steel, and with these you can catch the slow creatures and mash them. Quite young boys are well suitable for this work, and a patch could be kept clear of bugs at little expense.—In regard to the onions rotting, I have had little experience, but think the crop should have been pulled and quickly cured at the first sign of the trouble.

Potatoes on Timothy Sod.—H. K., Central, Mo., writes: "I have a piece of old meadow that has been in grass for ten years. It was chiefly red-top, timothy, cheat and weeds. I plowed it last fall, but it was not very soddy. Now, I would like to plant potatoes in this ground. My neighbors said timothy sod will not bring good potatoes. The ground is rolling, well drained and naturally fertile."

REPLY:—If your ground is fertile and well drained, it ought to bring a good crop of potatoes. As you plowed the sod last fall, it will be necessary to put it into good condition this spring with the harrow and cultivator, probably.

Raising Sweet Potato Plants.—E. B., Hudson, Mich., writes: "Please give directions for raising sweet potato plants, when to start them and when to set them out."

REPLY BY JOSEPH:—In fore part of April make a good hotbed. Put a thin layer of sand upon the manure; then place a layer of halved sweet potatoes, cut side down upon the sand, so close together that they almost touch. Then cover with three or four inches of clear sand, and put on the sashes. Water and ventilate as you would tomato plants. About June 1st carefully pull the plants, and set them out on ridges in rows four feet apart and about two feet apart in the row. To prepare the ridges, mark out the ground four feet apart, spread a good portion of compost along each mark, and plow a furrow over it from each side, smoothing the ridge off with the hoe.

Grubs and Cutworms.—A. E. M., Burket, Ind., writes: "I have twelve acres of timothy sod, plowed last fall. Ground was badly infested with grubs and cutworms. I propose to make a mixture about as follows: One ton hen droppings, one or two tons ashes from sawmill, five hundred pounds land-plaster, one hundred pounds salt, five hundred pounds of phosphate. Dose, one big handful to the hill when the corn is planted. Will this be good?"

REPLY BY JOSEPH:—You cannot drive away or kill the grubs and cut-worms by applying the proposed mixture, or any other to the hills. Fall plowing was a good move, and probably destroyed many of the grubs and worms. There is nothing you can do now to clear the land from white grubs. You can clear it of cutworms, to some extent, by baiting them just before corn-planting time, with poisoned pieces of green sod, etc. The worms will take quite greedily to any bit of green stuff you may provide for them. On the whole, I do not believe in bill manuring for corn. This gives the plants a start, but does not help the production of grain. Still, there is no objection, if the land is in good condition otherwise.

The Cheapest Fertilizer.—E. K. M., Arcola, Ind., asks: "What is the cheapest fertilizer for all purposes next to barn-yard manure and ashes? How would ashes and bone-dust do, or would land-plaster and ashes be valuable for small fruits, potatoes, etc.? How about kainite, and cotton-seed hull ashes? How much should be used per acre, and what is the cost?"

REPLY BY JOSEPH:—In a general way, that fertilizer is cheapest which represents the exact needs of the crop. That, of course, depends on circumstances. I can safely say, however, that buyers of bone-dust get as much for their money as buyers of any kind of commercial fertilizers. It is one of the cheapest forms in which phosphoric acid, with some nitrogen, may be bought. Bone-dust and ashes, at the rate of a few hundred pounds of the former and forty or fifty bushels of the latter per acre, make a most excellent fertilizer for fruit, potatoes and general garden crops, when barn-yard manure is not available. In the absence of wood ashes, cotton-seed hull ashes may be used, say at the rate of a few hundred pounds per acre, or if cotton-seed hull ashes are not to be had, kainite or other potash salts may be sown broadcast in the fall, at the rate of several hundred pounds per acre.

Growing Tomatoes for Canning Factories.—C. C., Logan, Ind., writes: "We are offered twenty cents a bushel for tomatoes. Will it pay us to raise them for that price? Is superphosphate a good fertilizer to use on them? What is the value of wheat straw per ton for mulching purposes?"

REPLY BY JOSEPH:—The price usually paid by canning factories for tomatoes is about \$7 per ton, or a little above twenty cents per bushel. Where the season is long enough that the whole crop may be brought to maturity without the necessity of taking an unreasonably large amount of pains in forwarding the plants, the tomato crop, even at this seemingly small price, pays much better than wheat or corn. As in the case of all crops, the degree of profitability depends on management. If you raise only five or six tons of tomatoes per acre, you will not make much money out of them. But with good management it should not be beyond reach to raise fifteen or even twenty tons per acre. Don't be afraid to feed the crop, in the mistaken notion that tomatoes fruit only on poor soil. Superphosphate and ashes are excellent manures for this purpose. I would not pay out money for wheat straw to mulch tomatoes.

Fertilizer Questions.—W. S. G., East Union, Ohio, asks: "(1) Is chlorine, found in potash salts, injurious to land? (2) Does corn require a different fertilizer, as do other cereals? (3) How much acid phosphate can be applied to the land without injurious effect? (4) What fertilizer should be used for oats? (5) What is our cheapest source of potash and phosphoric acid?"

REPLY BY JOSEPH:—(1) Chlorine may do considerable injury if potash salts containing it, such as muriate or kainite, are applied in overdoses. Apply these salts in the fall, and not in excessive quantities then. (2) and (3) The fertilizing ingredients that corn and oats require depend to a great extent on the land. On some soils, phosphoric acid alone will do; then apply acid phosphate. If potash is lacking, this also should be supplied, which can be done in ashes, tobacco refuse or potash salts; or a prepared fertilizer having eight or ten per cent phosphoric acid and two to four per cent potash may be used. Bone-dust may do good service. This is a cheap source of phosphoric acid, although this is not exactly soluble, and contains considerable nitrogen also. (3) You are not liable to spoil the land by the application of all the acid phosphate that you may feel inclined to apply. (5) The cheapest source of potash depends on whatever potash fertilizers are to be had in your market. It may be unleached wood ashes, or cotton-seed hull ashes, tannery ashes, tobacco dust or potash salts. Usually, potash in the muriate form can be had cheaper than in that of other potash salts, and often cheaper than in ashes.

IDAHO STOCK FARM.

Messrs. Hale & Son, Independence, Iowa, write, "Some time ago we had a colt that hurt his hind leg. It was swollen almost the size of your head. We sent for Quinn's Ointment, used one bottle and to-day he is smooth as ever." For Curbs, Splints, Spavins, Windblows and Bunches use this marvelous remedy. Trial box 25 cents, silver or stamps. Regular size \$1.50 delivered. Address W. B. Eddy & Co., Whitehall, N. Y.

VETERINARY.

Conducted by Dr. H. J. Detmers, Professor of Veterinary Surgery in Ohio State University.

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

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 under any circumstances. This time half a dozen anonymous inquiries found repose in the wastebasket.

A Callous Swelling.—S. S. B., Stovertown, Ohio. Such a callous swelling or tumor as you write about is best removed by a surgical operation. Employ a veterinarian to do it.

Ringbone.—A. W. T., South Germantown, Ky. Ringbone and sidebone are terms applied to the same disease. For treatment, consult FARM AND FIRESIDE of November 15, 1891.

A Hard Swelling.—J. C. S., Floris, Iowa. If the swelling you describe is a fibrous tumor, its removal will require a surgical operation; at least, it cannot be effected by external applications. It is always best to let traveling veterinarians travel on as fast as they can.

Scrotal Hernia.—J. H. W., Franklin, O. What you describe is a scrotal hernia, which will be removed if the animal is castrated with covered testicle. Any veterinarian knows, or at least ought to know, how to perform the operation; hence, a description will be superfluous.

Diseased Lungs.—R. L., Union Bridge, Mo. It cannot be definitely determined from your description whether your cow died of tuberculosis or pleuro-pneumonia. You ought to have notified your state veterinarian. If you had sent the piece of lung tissue you speak of, the diagnosis would have been easy enough. It could have been sent by express.

Prolapsus of the Rectum.—H. A. B., Sweetwater, Neb., writes: "I have a mare that was found lying in a furrow on her back. The rectum protruded from six to ten inches and was much inflamed."

ANSWER:—Your horse, by this time, is either dead or has recovered. The prolapsed rectum should have been gently manipulated and kneaded with the hands, and, at the same time, an abundance of warm water should have been poured over it so as to reduce the swelling and to restore the circulation, and then a reposition should have been effected. There was no medical course to take. The prolapsus, probably was caused by the vain efforts of the animal to get out of its awkward and perilous position.

A Cannibal Sow.—C. G. P., Laurens, Iowa, writes: "I have a yearling sow that killed one of the pigs that had always been with her, and ate his ear off. A few days ago she killed a breeding hog. She don't fatten, but keeps lean and growing."

ANSWER:—The best you can do with your sow is to keep her alone, in a pen by herself, to fatten her as much and as soon as you can, and then send her to the butcher's. The primary cause of the vitiated appetite, or cannibalistic propensities, probably consists in improper food, or food lacking essential constituents. It is also possible that some affection of the central organs of the nervous system is at the bottom of it. It will never do to use her for breeding.

Chronic Catarrhal Endometritis—Scratches.—F. M. R., Jamesport, Mo., writes: "Two years ago my mare foaled a dead colt, and with some difficulty. She has been gaunt ever since. I have bred her five times, but she is not with foal yet, and she is continually in season. She seems to be afflicted with vaginal catarrh. Her hair is rough, appetite normal, and she is lively and works well.—What would you recommend for scratches in horses?"

ANSWER:—Concerning your mare, I refer you to the answer given to an inquiry under the same heading in this present issue.—As to scratches, a cure will be effected by liberal applications, twice a day, of a mixture of liquid subacetate of lead, one part, and olive-oil, three parts; provided the animal is kept on a dry and clean floor, and the feet kept clean, if possible, without using water. If afterwards some swelling remains, the same is best removed by judicious bandaging with baudages of woolen flannel.

A Peculiar Case.—J. G., Clairville, Ind., writes: "I have a five-year-old horse. When I bought him two years ago, he was badly sweened. His shoulder, breast, leg and hoof were shrunken. I treated him for atrophy. His shoulder filled out almost to its natural size; but when put to work his shoulder shrank. I gave him a month's rest and treatment. His shoulder filled out again. I put him to work, with same result as before. So he has continued filling out when at rest and shrinking when put to hard work. It is very seldom that he goes lame. There is an unevenness in his gait, which is more apparent when he trots. He steps very lightly and quickly with his lame leg and stumbles frequently. In turning in that direction he has to take a circle; he can't turn short. When running he seems to depend mostly upon his sound limbs (the muscles of which are abnormally developed). The lame hoof is smaller than the sound one. It is black; doesn't seem to grow any; is very hard; there is considerable dead horn on the sole; the frog does not appear to be diseased. The sound hoof grows rapidly; is partly white and is soft. About two months ago I poulticed the hoof with mush, then applied fish-oil, at regular intervals, for about three weeks. The hoof became softer and a ridge appeared around the coronet, as though a new growth was beginning. Since then I haven't been able to do anything in the way of treatment. He has been at rest for two months. At present his shoulder is not shrunken much. There is not as much flesh on the affected leg as on the other."

ANSWER:—I would advise to stop your treatment, and, provided you feel inclined to give the animal another chance, and to feed and keep the same for eight months or a year without any reasonable assurance of a return, to give the animal for that time named complete rest, or at least exemption from any kind of work whatever. The trouble, probably, is caused by an obliteration of an important artery; maybe, of the axillaris itself.

Acute Paraplegia.—M. E. G., Sulphur Springs, Ark. Your description indicates a rather mild attack of acute paraplegia, sometimes also called rheumatic paraplegia, and also azoturia. It is an infectious disease, of which probably more cases will occur in your neighborhood. If your horse is made comfortable, has strict rest, is fed with good food, easy of digestion, and is not irritated and excited any more than is absolutely necessary, there is hardly any doubt concerning his recovery. Severe attacks, such in which the

animal is almost perfectly paralyzed for several days, usually have a fatal termination. Horses in good condition and accustomed to steady work, but kept idle for several days and then put to work again, seem to possess special predisposition.

A Chronic Disorder.—J. M. F., DeSoto, Mo., writes: "Please let me know what is the matter with my mare. She is six years old, has a good appetite, eats well and has all she can eat, but is always poor. Her hide is tight to her body, and when she eats corn or oats, she coughs and it comes out of her nose. She was sick last winter, and since that time the feed comes out of her nose."

ANSWER:—Your mare suffers from chronic and, probably, permanent morbid changes in the respiratory organs, left behind by her disease—very like influenza—from which she suffered last winter. On close and thorough examination you will probably find that these morbid changes consist in a degeneration of the mucous membranes of the respiratory passages—larynx, trachea, bronchial tubes—and, maybe, more or less hepatization of the lungs, and possibly also an adhesion between the pleura of the lungs and the pleura of the chest. Not much can be done. A run at pasture, when the new grass makes its appearance, may possibly effect some improvement. If you desire to subject her to medical treatment, the latter, if it is to do any good at all, must be conducted by a competent veterinarian, near enough to be able to make repeated examinations of the animal.

An Interesting Case of Pyæmic Arthritis.—A. B., Gibson, Mich., writes: "Last spring our mare had a fine colt, which did very well until it was three weeks old, when it began to act dumpy and stiff in its hind legs. The stiffness seemed to settle in the left leg, and it dragged its toe. This lasted four weeks, when I wrote to you describing the symptoms. As soon as I had written, it began to swell on its hind quarter and also on the inside of the stifle-joint. Its upper quarter swelled to twice its normal size, and the swelling on its stifle grew until it was as big as my two fists. This lasted for three or four weeks, when the larger swelling came to a head and broke, and discharged a large quantity of matter. In a few days the other swelling followed suit. The first swelling came to a head close beside the anus, and kept running more or less for six or eight weeks. Aside from this, the colt now seemed all right for about two weeks, when one morning I found him all covered with blood, his bed saturated, and so weak he could hardly stand. Just as he was recovering from this attack, he was taken again; this time he began to swell again on his hock, stifle, croup, etc. About this time your answer to my letter appeared. You said the colt had rheumatic arthritis, and said to use, if not too late, equal parts tincture cantharides and iodine. I began using it at once. However, it came to a head twice, about six inches below the anus, and finally dried up the first opening. By the time I had used a two-ounce bottle of the tinctures, the swellings had gone, and did not return. At first I was much puzzled to know where the blood came from, but I finally found that he passed it instead of water. I have seen him pass dark, thick clots of blood as large as my finger. The discharge seemed to be real blood, not merely bloody water. He was subject to these attacks at intervals of ten days or two weeks, until after he was weaned. The discharge of blood did not usually last more than one day, but would take off as much flesh as he could put on in two weeks. Most of the time we had to help him up. As soon as he could eat, we fed him damp middlings, green clover and oats. After going through all this, the colt looked like a little old plug, all skin and bones. He grew a little all the time; at present he is as tall but not as heavy as the average colt of his age. His growth is mainly bones thus far. He seems well and eats heartily, but is thin, and has hardly any meat on him."

ANSWER:—The arthritis (usually called rheumatic arthritis) of your colt, as is often, or as some observers claim, is always the case, had a pyæmic origin; that is, was caused by pyæmia-producing bacteria, which very likely found an entrance through the open navel. To prevent this, it will be advisable to wash the navel of a new-born colt with a good antiseptic; for instance, a two-per-cent solution of carbolic acid, or a one-permille solution of corrosive sublimate, immediately when the colt is born, and also to apply a ligature around the umbilical cord, close to the body of the young animal. I believe the above, at least indirectly, will answer your questions. That the mare should be kept on proper diet, and in clean and well-ventilated quarters when her time comes and immediately afterward, may not need my mentioning. It is almost a miracle that your colt did not succumb. Good care and good food constitute the best treatment you can bestow upon it, and if no more abscesses develop in interior organs, the same may yet outgrow its troubles and become a good horse.



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Our Miscellany.

A SAILOR BRAVE.

WHAT ONE MAN'S PERSEVERANCE AND ONE WOMAN'S FAITH DID FOR THE ADVANCEMENT OF SCIENCE AND THE WEAL OF MANKIND. THE HERO OF 1492.

[No. 2.]

BY J. W. J.

Columbus now prepared to leave Cordova and went to Rabida, where his warm friend and staunch adherent, Father Perez, resided. This priest, who seems to have possessed a degree of scientific knowledge that would have done credit to the shallow counselors of the king, persuaded him to defer his departure for a few days, promising to present the matter to the queen from a missionary as well as a political standpoint.

On the arrival of Columbus at Santa Fe, negotiations were begun again. Encouraged and flattered by Cardinal Mendoza, the first minister of the crown, Columbus demanded that in the event of his undertaking the expedition, he should be given the title of Admiral and Viceroy with the authority belonging to both.

Thus matters stood when Columbus, chafing under neglect, and bitter with the reflection that he had lost seven years in Spain, again prepared to leave the country. He set out for Cordova in January, 1492.

He had progressed two leagues on his journey when a messenger overtook him with the request to return at once to Santa Fe and repair to the presence of the queen. St. Angel, the receiver of the ecclesiastical revenues of Aragon, had, after the departure of Columbus, besought the queen to reconsider her decision, representing that he "was greatly surprised to find her who was ever regarded as the protectress and support of great undertakings, wanting in courage to put in execution a plan that would bring in immense wealth, tend to propagate the Christian religion among barbarous nations, resound to the glory of the crown and add other countries to the royal dominion."

St. Angel then came forward with his gracious offer to advance the funds on behalf of the crown of Castile, 17,000 florins being advanced by Ferdinand.

All this money was of course furnished by Isabella, and afterwards charged up to the crown of Castile, so that to her is due the credit of coming to the aid of Columbus at a time when his enterprise was languishing and ready to fail for lack of funds to carry it out.

When Columbus entered the royal presence on his return, he had but to sign the agreement with Ferdinand and Isabella on his own terms.

The document was signed April 17, 1492, and provided (1) that the title of Admiral should forever belong to Columbus and his male heirs with jurisdiction over all lands that he might discover; (2) that he should be viceroy and governor; (3) that one tenth of the net value of all pearls, precious stones, gold, silver, spices and all merchandise obtained within his jurisdiction, should belong to him; (4) that he should be sole judge in any dispute arising between his jurisdiction and Spain; (5) that by advancing one eighth in any venture he was to receive a proportionate share of the profits.

Once pledged for the undertaking, Ferdinand and Isabella left nothing undone to hurry matters forward. Three vessels were gotten ready with the utmost dispatch. The Santa Maria, the ship on which Columbus hoisted his flag as Admiral, was a four-master, of ninety feet keel, decked from stem to stern with a twenty-six foot poop, beneath which was her armament of heavy guns. Her crew consisted of sixty-six seamen, and she was provided with eight anchors. The other two vessels were smaller in size. They were the Pinta, commanded by Martin Alonso Pinzon, and the Nina, in charge of his brother Vincente Yancz Pinzon.

Having confessed to Father Perez and received sacrament, on Friday morning, August 3, 1492, the little band of daring adventurers embarked in the name of God, to begin a voyage from which many of them were destined never to return, and which, for grave and momentous consequences to mankind, stands unequalled in the history of the human race.

Living as we do, at a time when the modern steamship, with its luxurious tables, handsome saloons, delightful music, cool shade, ample sleeping accommodations and perfect system of electric lighting robs an ocean voyage of all the tedium and discomfort attendant on a journey by water four hundred years ago, it is difficult for us to realize the sublime courage possessed by Columbus and his followers in embarking on their memorable voyage.

This space-annihilating steamship, accomplishing in six days a journey that Columbus's caravel would have required nearly as many months to perform, brings the continent of Europe so near to us that we are apt to regard lightly the perils of the first voyage from Palos to San Salvador. If we had been on board the Santa Maria on the 6th of September, 1492, at sunset, after she left the Canary Islands, and had seen the tears roll down the cheeks of the rugged sailors, as they watched the land disappear from view and turned to look with sinking hearts and troubled eyes across the vast expanse of mysterious waters that stretched away toward the west, realizing for the first time the full measure of their hardihood, we should perhaps have known something of the feeling of uncertainty that unnerved their hearts and filled their souls with dread.

As the land faded out of sight, sobs and groans were heard in every part of the ship. Most of the men gave up all hope of ever seeing their homes again. Here the genius of Columbus showed itself. He assembled the sailors and delivered an encouraging address, picturing to them in glowing colors the glory to be gained by the discovery of new lands beyond the sea. He also appealed to their cupidity and avarice, holding out rich promises of gain, and drawing wonderful pictures of the lands to be discovered, the gorgeousness of his description being limited only by the bounds of his most daring imagination.

Knowing that as the voyage proceeded the fears and despondency of his crew would increase, Columbus took the precaution to keep two log-books, or journals, in one of which, for the benefit of his men, he made it appear that the rate of progress made by the ship was very slow; this record was open to inspection. The other, in which he kept an accurate record of their progress, was carefully kept out of sight. What a sensation there would have been on board the Santa Maria had the crew known that every league recorded on the public record meant two leagues farther away from the shores of sunny Spain!

Two hundred leagues off the Isle of Ferro, Columbus was surprised to find that the needle no longer pointed to the north, but declined to the north-west. This phenomenon filled the minds of the captains and pilots with terror. If the compass could not be relied on, how could they expect anything but trouble and disaster to come from their fool-hardiness in venturing on such an expedition? With characteristic ingenuity, Columbus invented a plausible explanation of the trouble, attributing the needle's variation to the diurnal revolution of the pole star around the pole. This satisfied his followers, and all went well until a fiery meteor descended into the sea near them, when they began to fear that the demons of the air, as well as sea, were conspiring to accomplish their destruction.

They now entered the region of the trade winds, and the steady breeze in one direction raised a fear in the minds of the sailors that the wind forever blew from that quarter, and that it would be impossible to return. Next, a terrific storm arose, and Columbus's ever-fearful followers begged him to tempt Providence no further. But the storm passed away, and the wind changed. This in a measure restored their spirits; but they were ready to give way to despondency on the slightest occasion.

(Concluded next issue.)

In addition to the usual weekly Grand Prizes of Sewing Machines, Gold Watches, Dinner Sets, etc., we offer as a special Grand Prize for the largest number of subscribers sent us in March, a \$50.00 Incubator. See offers on page 18.

TARIFF PICTURES.

Since the McKinley tariff law went into effect there have been notable reductions in the price of staple jokes of general consumption.

Where the witticism about the slow messenger boy formerly brought 25 cents, it can now be obtained for 15 cents.

The goat and the circus-poster jest once brought 50 cents per jestlet. Now it goes begging at 50 cents per dozen.

Witticisms about the expansiveness of the Chicago girl's foot once fetched as high as 75 cents in the joke market. Now no publisher will pay more than 13 cents.

Mother-in-law jokes, once in great demand at \$1, are now practically unsalable. We quote 3 cents per dozen as the price.

The merry piece of wit about the paterfamilias who sets the dog on his daughter's young man occasionally brought as high as \$2.50. Now the joke constructor is lucky if he gets 25 cents for it.

Plumber jokes, and those about the ice man, once commanded a brisk sale at 50 cents each. Now 25 cents is the maximum price.

These things show the inestimable value of the new tariff law.—Brooklyn Life.

HARD ON PA.

He—"Then you love me?" She—"I do." He—"And I may speak to your pa?" She—"No; speak to ma. Pa aint' auybody in this house."—Boston Courier.

LARGE BARN.

Your correspondent tells of large barns. There are many here that beat his. One at Hebron, N. D., is 100x190 feet, and is 22 feet high. It is made of stone. The horse barn on the writer's ranch in Montana is a round one, 800 feet in circumference. On another ranch the main barn is 34x225 feet inside, and is 16 feet high. The building is of stone. I could tell of several others as large. A. I. C. Dickinson, N. D.

WOMEN AND THE FAIR.

In an address delivered by Mrs. Potter Palmer before the recent convention of state boards she said, in regard to the exhibition of woman's work at the forthcoming Columbian Exposition, that no attempt would be made to separate women's work from that of men. But in the woman's building, in the central gallery, will be grouped the most brilliant achievements of women from every country, and in every line of work. Exhibits will be admitted only by invitation, which will be considered the equivalent of a prize. No sentimental sympathy for women will cause the admission of second-rate objects, as the highest standard of excellence is to be strictly maintained.

"Yes, Bill, I'm engaged to Miranda. But do you know, she is most excessively timid?" "When you are married to her, Joe, much of that timidity will wear off. You'll be taking off your boots in the lower ball at night inside of six months."—Philadelphia Call.

The hottest place in this country is Death Valley, in the Colorado desert. An officer of the United States mineral survey says: "The heat there is intense. A man cannot go an hour without water without becoming insane. While we were surveying there, we had the wooden-cased thermometer that is used by the signal service. It was hung in the shade on the side of our shed, with the only stream in the country flowing directly under it, and it repeatedly registered 130°; and for forty-eight hours in 1883, when I was surveying there, the thermometer never once went below 104°."

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Smiles.

BENJ. F. JOHNSON ON SKATES.

Owned a pair o' skates one't!—traded Fer 'em. Stopped 'em on and waded Up and down the crick, a-waitin' Tel she'd freeze up fit fer skatin'.

A STUDY IN SYNONYMS.

I was asked by my sweetheart to mizzle, to budge, To cut sticks, to make tracks, and to tramp To evaporate, paddle, skedaddle, and trudge,

REMINISCENCES OF A SNAP SHOT.

Small boy of twelve. Small, saved-off muzzle-loader of unknown caliber, weight 'steen pounds. Dime's worth of powder, pound of shot, an old newspaper for wads, and Saturday when school kept not, and pocket full of caps at five cents a box.

HER EQUALS IN RANK.

Not long ago two young girls were traveling "out West," says a writer in the New York World. As the train stopped, at a station two ladies entered and took seats directly in front of them.

would like that seat. I am Mrs. President R— of this road." The girls stared at her an instant and then one of them drawled:

HAD HIM ANYHOW.

She grabbed the letter with the ferocity of a tiger. She found it in her husband's overcoat pocket, addressed in a fine female hand.

"AS SHE IS SPOKE."

The possibilities of the English language are past finding out. Our mother tongue is fearfully and wonderfully made, at least so it appears to foreigners.

FALLEN FROM HIS HIGH ESTATE.

"Will you please give me some dinner, ma'am?" begged a tramp. "I guess so," was the reply. "Will you have a plate of soup?"

A PATRIOTIC MEXICAN, THIS.

There is one man of good taste in Mexico, to say the least. Not long ago two unprincipled Americans opened a beer shop in Monterey, and put a picture of George Washington on their sign.

AN AMBIGUOUS EXPRESSION.

"I don't think I shall call on Miss Nippings again," he said reflectively. "Why?"

GOOD ADVICE.

Captain—"My man, I wouldn't ship on this voyage if I were you." Sailor—"Why not? Ain't I all right?"

AMONG THE COMING EVENTS.

Seedy wanderer—"Needing any showers in this part of the country?" Farmer—"Of course not. Can't you see everything's drowned out?"

A LONG-HEADED FATHER.

"You weren't mad, then, when your daughter eloped?" "Not much."

QUICK AT REPARTEE.

He—"You know, they have a fine idea in China; they kill all the girl-babies and give them to the hogs."

There is more Catarrh in this section of the country than all other diseases put together, and until the last few years was supposed to be incurable.

JUVENILE LIFE IN CHICAGO. Scene—Lawyer's office. Enter little girl, sobbing bitterly. Lawyer—"Why, little one, what's wrong?"

Mrs. Muslin—"Dolly, hand me some writing-paper." Dolly—"How many sheets, mamma?" Mrs. Muslin—"Sheets! Give me the whole box. I'm writing to my dressmaker."

"LITTLE BOYS SHOULD BE SEEN, AND NOT HEARD." Mamma-in-law—"So, Harold, your papa said he hoped my trip would be of benefit to me?"

"Your husband," said the caller, sympathizingly, "was a man of many excellent qualities." "Yes," sighed the widow. "He was a good man. Everybody says so. I wasn't much acquainted with him myself. He belonged to six lodges."

"He has a marvelously pure voice." "I presume he gives it a bath every time he gets into high 'C.'"

He—"A penny for your thoughts." She (coin-collector)—"What's the date?"—Puck.

Ethel—"I don't believe you love me any more. You haven't kissed me to-night." George—"You wouldn't want to be treated like a beefsteak, would you?"

What do you think of a man who, at the table, will tell the Lord he is thankful for the things before him, but as soon as he says, "Amen," will begin storming about the cooking?

Don't run the risk of your cold getting well of itself—you may thereby drift into a condition favorable to the development of some latent tendency, which may give you years of trouble.

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ECONOMY IS WEALTH Canvassers wanted to sell the "New Model Hall Typewriter." Why will people buy a \$100 machine when \$30 will purchase a better one?

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CATALOGUES.

Park's Floral Guide. Geo. W. Park, Libonia, Pa.

Seed Annual for 1892. D. M. Ferry & Co., Detroit, Mich.

Lovett's Guide to Horticulture. J. T. Lovett, Little Silver, N. J.

Smith's small fruits and price-list of plants. B. F. Smith, Lawrence, Kan.

Secrets of success in the growing of small fruits. I. A. Wool, Elsie, Mich.

Descriptive catalogue of rare seeds, plants and bulbs. Pitcher Manda, Short Hills, N. Y.

Illustrated catalogue of Buckeye harvesting machines. Aultman, Miller & Co., Akron, O.

Illustrated catalogue of Percheron and French coach-horses. A. C. Farnum, Grosse Ile, Mich.

Fruits and fruit-trees—practical points for tree-planters. Stark Bros' Nurseries, Louisiana, Mo.

Descriptive circular of the Leavitt improved dehorning clipper. Dr. H. W. Leavitt, Hammond, Ill.

Seed annual of the celebrated Livingston's true blue seeds. A. W. Livingston's Sons, Columbus, O.

Catalogue of vegetable and flower seeds, small fruits and nursery stock. Joel Horner & Son, Delair, N. J.

Our wild flowers and ferns, bulbs, hardy ornamentals, native shrubs, etc. Edward Gillett, Southwick, Mass.

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Descriptive catalogue of the Heilmann Plow Co., manufacturers of the Vulcan chilled plow, steel plows, double-shovels, etc., Evansville, Ind.

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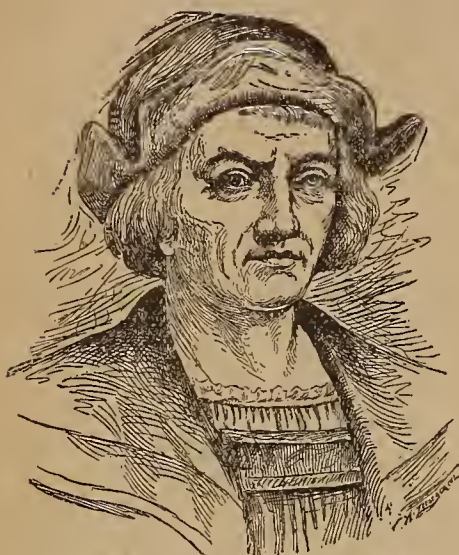
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CHRISTOPHER COLUMBUS.

The supreme moment in the life of Christopher Columbus as he stands before King Ferdinand and Queen Isabella, in the Royal Court of Spain, has been made the subject of a

Wonderfully Beautiful and Expressive Painting

By the famous Artist, M. BROZIK.

It occupies a space 25 feet long and proportionately high, in the Metropolitan Art Museum, in New York City, having been presented to that institution by Mr. Maurice K. Jessup, a wealthy resident of New York.

A LARGE FORTUNE

would not represent its present value, and its artistic merit makes it one of the greatest attractions in this gallery, which is the largest and most celebrated in our land.

DESCRIPTION OF THE PICTURE.

It is impossible to convey in words an adequate impression of the grandeur and beauty of the picture. The royal court of Spain, with King Ferdinand and Queen Isabella robed in the gorgeous apparel suitable to their high station, and surrounded by the Lords and Ladies attendant upon the court, all attired in the picturesque dress of that day, listening with rapt attention and breathless interest to the impassioned appeal by Columbus, for their influence and aid to enable him to accomplish the one controlling passion of his life.

Columbus, of course, is the principal figure of the painting. In your own mind try to imagine what this moment was to him, after long and fruitless efforts to obtain the necessary aid, to finally find himself in the favor of Kings and Queens, with the desire of his life just within reach. There is reason for the almost oppressive earnestness and confidence he had in the result, that shows in his countenance, and could not be in the least overshadowed by the expressions of wonder and doubt plainly shown in the faces of some of his listeners. After Columbus, the two leading figures are King Ferdinand, who appears as if he hoped but doubted; and the beautiful and queenly Isabella, whose face reflects her faith in the final success of the expedition. These different emotions have been clearly produced in the picture. Such a subject for a painter is rarely found, but when found and treated by such a master of his art as M. Brozik, the result is necessarily world famous. The picture contains 27 figures, every one a study in itself. The execution of every detail is marvelous, even to the lace on the ladies' sleeves, the arabesques on the noble's sword; and the exquisite colors and texture of the costumes are reproduced with startling effectiveness.

The Columbian Exposition, OR WORLD'S FAIR,

celebrating our anniversary of the discovery of America, will awaken great interest in this painting, and has led us to engage the most talented and skilful artists in the world to reproduce this masterpiece of art in its minutest detail, brilliant coloring and wonderful beauty. These artists have promised to give us the pictures May 1st. A correct and perfect oleographic copy, in the 14 original colors, will be secured, regardless of the cost. If only a few hundred pictures were made

THEIR ACTUAL COST WOULD BE \$10.00 OR \$15.00 EACH,

but we have contracted for enough to supply the Many Tens of Thousands of our readers whom we believe will accept this opportunity of securing a valuable work of art (which this picture will certainly be), at a price made possible only by our large orders. The great number of oleographs produced will not detract from their artistic merit, as each and every picture will be perfected in the highest style of the art. The size of our reproduction will be 20 by 29½ inches. To introduce this picture to our readers and extend the circulation of our publications, we will give a copy or reproduction of this

FAMOUS * PAINTING * FREE

In all the original colors, to any one sending us 3 yearly subscribers to this paper, at the regular price, 50 cents a year. Or, to any one sending 3 subscribers who accept any of our premium offers in connection with a year's subscription to this paper.

Price, including one year's subscription to this paper, only \$1.25.

We offer it for sale for only \$1. Postage paid by us in each case.

Orders for the pictures may be sent now, and will be promptly filled upon completion of the work by the artists. First come, first served.

THE ARTIST.

Vacslav Brozik, the artist to whose magic pencil we are indebted for the faithful representation of the first act in American history, is not an old man. He was born at Pilsen, Bohemia, in 1852, and born an artist. In his early childhood pictures had a fascination for him. As soon as he could handle a pencil he began to draw. His evident talent induced his friends and relatives to make him an artist. He studied at the Academy of Art, in Prague, under the foremost living artists, Piloty and Munkacsy. His pictures soon began to attract attention, and brought him great fame and honor. His name was heard in all art circles, and lovers of art made long journeys to study his pictures. Brozik is not unknown in America. Many of his small pictures grace the private collections of American art-lovers. The popularizing of this masterpiece, by reproduction in the highest style of lithographic art, is destined to make his name a household word in American homes.

QUEEN ISABELLA.

Few Americans fully appreciate the credit due this good and beautiful queen for the part she took in the discovery of the American continent. Intelligent and informed beyond the masses of the people of her time, she saw the feasibility of the proposed expedition, and at least partially comprehended the great results likely to accrue therefrom. To Columbus belongs the honor of discovery, yet without means to provide for the expenses of the expedition, he would have been powerless, and could not have led the expedition. While those who had wealth would not risk it thus, the graceful queen mortgaged her precious jewels, and thus provided money to fit out the expedition.

Order this picture by Premium No. 101 and address all orders to

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

GRAND PRIZES FOR LARGEST CLUBS.

Given in addition to the Free Presents to Subscribers and Valuable Premiums or Big Cash Commissions to Agents.

FIRST GRAND PRIZES.

The choice of the following prizes will be awarded each week to the person sending the largest club of subscribers for this paper:

- Singer Sewing Machine, equal to other \$55.00 machines.
- Gents' Gold Watch, genuine American jeweled movement, gold filled hunting-case, warranted for 15 years, or a
- Ladies' Gold Watch, the same make, movement and case as the gents' and of equal value.

Grand Prizes will be awarded each week during April, and you should embrace the opportunity of securing one or more. Remember, you will be given YOUR CHOICE of the list.

The names of the winners of prizes for the weeks ending March 19th and 26th will be given in our issue of April 15th. An earnest effort and a little good work may put your name there.

SECOND GRAND PRIZES.

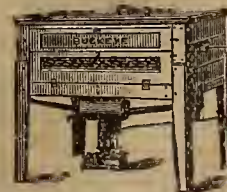
The choice of the following prizes will be awarded each week to the person sending the second largest club of subscribers for this paper:

- Set of Rogers Tableware, 6 knives, 6 forks, 6 tablespoons, 6 teaspoons, 1 sugar shell, 1 butter knife.
- Decorated China Dinner and Tea Set, containing 78 pieces, handsomely decorated.
- Webster's International Dictionary, latest revised edition with patent index, full sheep binding.

Remember, you will be given YOUR CHOICE of the list.

SPECIAL GRAND PRIZE.

A \$50.00 Buckeye Incubator will be awarded, in addition to all other premiums and prizes, to the person sending the largest number of subscribers during March, 1892.



This incubator has a capacity of 300 eggs, is heated by a circulation of hot water, controlled by a thermostat or regulator, and is perfectly reliable. For a two-cent stamp the manufacturers, The Buckeye Incubator Co., Springfield, Ohio, will send you their catalogue and treatise containing complete description, cuts, etc., of their incubators and brooders.

NAMES OF PRIZE WINNERS.

For the Week Ending February 20, 1892.

Amra B. Crabtree, Cove, Ohio, was awarded the First Grand Prize, a Gold Watch, for sending 17 subscribers, the largest club received during the week.

Mrs. Ella Hadden, Patterson, Iowa, secured the Second Grand Prize, a Set of Rogers Silver-plated Tableware, for sending the second largest club, 16 subscribers.

For the Week Ending February 27, 1892.

H. B. Riddle, Lockport Station, Pa., was awarded the First Grand Prize, a Singer Sewing Machine, for sending 28 subscribers, the largest club received during the week.

Libbie Elliott, Smithfield, Ohio, secured the Second Grand Prize, a Decorated-China Dinner and Tea Set, for sending the second largest club, 24 subscribers.

Ornamental Silver-Plated HAIR-PIN.

Prem. No. 444.

This pin is the handsomest design that could be found, and will be universally appreciated by all the ladies. Its appearance is equal in every way to any sterling silver pin that would cost \$2.00 or \$3.00, and with ordinary care will hold its color and wear for years. The points are polished to prevent tearing the hair and the ornamental top finished with a solid silver effect. We buy them in large quantities and give you the jeweler's large profit on such goods.

During the next 30 days this pretty pin will be given as a free present to any one paying 50 cents for one year's subscription to this paper. If you are already a subscriber you can have your subscription advanced one year by accepting this offer.

Given as a premium for 1 new yearly subscriber, and the new subscriber is also entitled to a choice of one of the free presents offered on this page. Postage paid by us in each case. We do not offer it for sale.



The Widder Doodles' Courtship
By "JOSIAH ALLEN'S WIFE."

Premium No. 726.

No other writer hits off the every-day occurrences of life in the keen, witty and laughable style of "Josiah Allen's Wife." The book is a collection of fifteen sketches.



This cut, illustrating one of the sketches, "The Surprise Party," shows the laughable side of a surprise on both sides.

There is many a hearty laugh in store for the reader. Get it and "laugh and grow fat."

During the next 30 days this book will be given as a free present to any one paying 50 cents for one year's subscription to this paper. If you are already a subscriber you can have your subscription advanced one year by accepting this offer.

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THE ORIGINAL Uncle Tom's Cabin The World Famous Work of HARRIET BEECHER STOWE.

Premium No. 837.

Given, together with this paper one year, for only 60 cents.



UNCLE TOM AND EVA.

The fame of this book is so great that it has been printed in twenty-one different languages. It has been read by the high and low, rich and poor the world over, and at the time of its publication created a sentiment among the masses such as very few books ever printed have done; and while it has been read and reread by many, it still retains its hold on popular favor, as it ever will. Its author, Mrs. Harriet Beecher Stowe, lived for many years among the scenes which she so feelingly and graphically describes. The knowledge she there gained of the actual conditions and facts became such a burden upon her heart that she was compelled to tell them to the world. Her story, "Uncle Tom's Cabin," at once attracted the world's attention, and looking back at the system of which "Uncle Tom's Cabin" was at once a picture and a chief means of overbrowning, Northern and Southern writers recognize its truthfulness and vie with each other in praising the book, while its fame abroad is scarcely less than that which it possesses in the United States.

Given as a premium for two yearly subscribers to this paper. Price, including one year's subscription to this paper, 60 cents. We offer it for sale for 25 cents. Postage paid by us in each case.

PLUSH PIECES.

Premium No. 427.

This premium package contains plush pieces of the latest and handsomest colors that are now the style. The pieces are perfect goods, the quality, color and finish is fully equal to whole piece goods, and we are only able to offer them as we do by purchasing the short pieces or ends that accumulate in the factory. It is needless to suggest the endless variety of pretty and useful articles and trimmings that can be made from these pieces. We give in the cut a suggestion for a pretty wall banner. The package contains 8 pieces, 6x6 inches. No two pieces of the same color.

During the next 30 days these pieces will be given as a free present to any one paying 50 cents for one year's subscription to this paper. If you are already a subscriber you can have your subscription advanced one year by accepting this offer.

Given as a premium to any one sending 1 new yearly subscriber to this paper, and the new subscriber is also entitled to a choice of one of the free presents.

We offer them for sale for 20 cents. Postage paid by us in each case. See "Who is a new subscriber?" at foot of this page.

Prem. No. 428 contains 8 pieces, 6x6 inches, all different colors, the same quality of plush as offered above. The large size of these pieces makes them especially valuable, but

We give them as a premium for only 2 yearly subscribers.



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A novelty of this age. Until recently the cost of this new metal excluded it from use. Only within the last year has its manufacture been brought to a practical point, and it is destined to supplant many of the common metals now used. It is remarkable for its lightness, has a specific gravity of about 2.6, is white in color with a bluish cast. We have made it into a most useful and convenient tool, a 3-inch rule, that can be carried in the vest pocket. Wherever shown it attracts immediate attention and causes no end of wonder and comment.

During the next 30 days this rule will be given as a free present to any one paying 50 cents for one year's subscription to this paper. If you are already a subscriber you can have your subscription advanced one year by accepting this offer.

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Premium No. 421.



A stamping outfit complete, with a variety of beautiful and artistic designs suitable for using on those tasty articles of adornment that should beautify every home and give so much pleasure in the making. The outfit contains 40 correctly drawn designs, with two complete alphabets that will be especially appreciated, they being both capital and small letters, box of stamping powder, pad and sheet of instructions. We name here only a few of the designs, to show the great variety of subjects they cover: Spray of Wild Roses, Bunch of Plums, Cup and Saucer, Owl on Branch, Butterfly, Decorated Fan, Bird Flying, Horse-shoe, Spider-web, Braid Designs, Edgings, etc., etc.

The paper used is a good, strong bond paper that will not tear easily and will last a long time. Equal in every respect to many high-priced outfits.

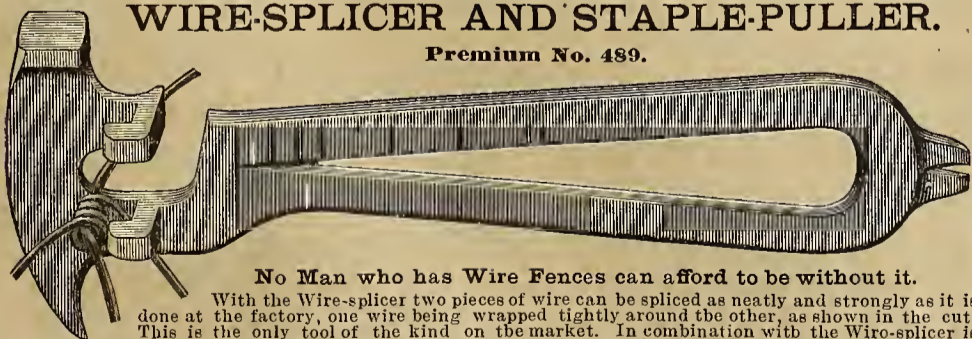
During the next 30 days this outfit will be given as a free present any one paying 50 cents for one year's subscription to this paper. If you are already a subscriber you can have your subscription advanced one year by accepting this offer.

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No Man who has Wire Fences can afford to be without it.

With the Wire-splicer two pieces of wire can be spliced as neatly and strongly as it is done at the factory, one wire being wrapped tightly around the other, as shown in the cut. This is the only tool of the kind on the market. In combination with the Wire-splicer is a Staple-puller. Everyone knows how hard it is to get the staples out of a fence post. With this little tool and a hammer they can be taken out as fast as the puller can be placed in position. The same tool also has a claw for drawing light nails or tacks, a hammer head for driving tacks, and the handle is in shape to use for a light wrench; the hook is very useful for handling barbed wire and protecting the hands from injury. Thus, there is combined in this one tool half a dozen that would cost separately one or two dollars. Directions for use go with each tool.

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SET OF SIX TEASPOONS



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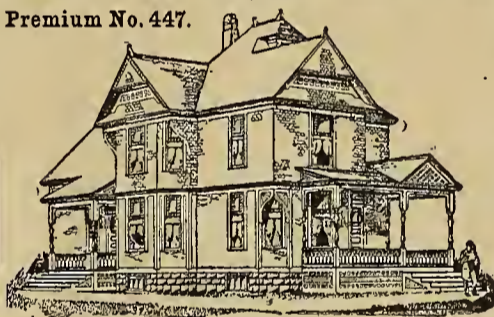
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These spoons are made in the best style, fully finished, regular size, genuine Sterling Silver Plate, perfect goods in every way, the same quality being carried in stock by regular jewelry houses.

To any one paying us \$1 we will send both the Farm and Fireside and Ladies Home Companion for 1 year, or either paper for 2 years. Or, if you are now a subscriber for one of the papers, we will extend your subscription for 1 year and send the other paper 1 year, and during the next 30 days give everyone accepting this offer this set of Beautiful Sterling Silver Plate Teaspoons Free. Or, the set will be given as a premium for two subscribers to either the Farm and Fireside or Ladies Home Companion, and each subscriber will receive one of the free presents offered on this page.

Notice.—The regular subscription price of either of the papers is 50 cents a year. We add nothing to this price to pay for the spoons. You simply become a subscriber to the papers on the above terms and we give them to you, postage prepaid.

Premium No. 447.



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And, in addition, a large number of plans prepared especially for our subscribers, of Barns, Corn-cribs, Grain, Poultry, Ice and Smoke Houses, Well Curbs, Grape Arbors, Summer-houses, Cisterns, etc. A valuable feature of the barn plans are the drawings showing the manner of framing and giving sizes of timbers, etc., thus making the building an easy matter. Much of the trouble and cost of building can be saved by selecting a well-drawn plan, and this book contains the latest and best.

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Note.—This Great Dollar Offer is so liberal that we cannot allow a commission, or the subscriptions to be counted toward a premium or free present, but they will be counted toward the Grand Prizes.

Who is a NEW Subscriber? The above offers are made to increase our subscription list, therefore a change from one member of a family to another is not securing a new subscriber. A new subscriber must be a person who is not now on our subscription list, and one whom you have sought out and solicited to take the paper. Sending your own subscription, or the name of your wife, husband or any other member of your own family, is not sending a new subscriber in the sense we intend it, and will not entitle you to an additional premium. You may count your own name, or the renewal of any former subscriber, towards a premium when three or four names besides your own are sent, as this shows you have actually done some work, and been out among the people telling them of the merits of our paper.

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1st. We commenced in a field in which there had been no improvement for 25 years, and in which there seemed no talent or ambition, and none has yet been shown except in feeble imitation of our inventions.
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