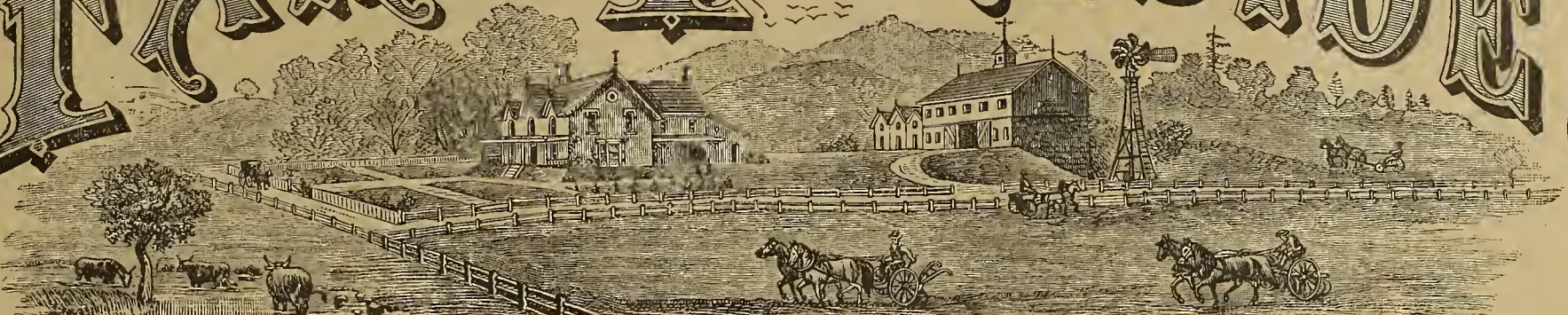


FARM AND FIRESIDE



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INFORMATION FOR ADVERTISERS.

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More Than a Million Readers

Which is far more than any other Agricultural Journal in the World.

SINCE our last issue important changes have been made in the cabinet. By the death of General Gresham, the office of secretary of state was left vacant. President Cleveland at length appointed Richard J. Olney, who has been attorney-general during this administration, to be the new secretary of state. There was a good deal of speculation as to who would succeed Mr. Olney. The people of Ohio were delighted when the announcement was made that Judge Judson Harmon, of Cincinnati, had received the appointment as attorney-general.

Judge Harmon is about fifty years of age, and was born at Newton, Ohio. After going through the public schools, he graduated with honors from Deunison University. His father is a Baptist minister. Judge Harmon is a married man, with an interesting family consisting of a wife and three children. In 1869 he was admitted to the bar. He has been the recipient of numerous official honors during the last twenty years. In 1878 he was elected judge of the Superior Court, and re-elected in 1883. He is a gentleman about whose personality too much can be said in praise.

Originally, Judge Harmon was a Republican. In 1872 he branched off with the Liberal Republican Greeley movement; and after the defeat of Greeley he became a Democrat. The appointment of a man of such high character, and one whose ability is so widely recognized, seems to have met with universal approval.

RICHARD OLNEY, the new secretary of state, was born in Oxford, Mass. The oldest inhabitants of the town in which the lad grew up remember him as a very bright boy, who was especially fine in argument at the debating societies. He is a positive character, careful and painstaking in coming to a decision, but adhering



RICHARD OLNEY.

firmly to his conclusions; which are generally sound. As attorney-general he has made a splendid record. Already as secretary of state he is giving perfect satisfaction, and showing that he has the true American spirit. There will likely be no more dilly-dallying with foreign questions, such as characterized our relations with Great Britain in the Nicaragua and Venezuela affairs. His appointment as secretary of state was probably the result of a determination on the part of the president to conform more closely to public sentiment.

THE eminent statistician, M. G. Mulhall, in the June number of the *North American Review*, says: "If we take a sur-



JUDSON HARMON.

vey of mankind in ancient and modern times as regards the physical, mechanical and intellectual force of nations, we find nothing to compare with the United States in this present year of 1895. At the same time, we see that the wealth of the American people surpasses that of any other nation, past or present.

"Ninety-four per cent of American wealth has been created and accumulated since 1840. The new wealth added during a single generation—that is, in a period of thirty years, between 1860 and 1890—was no less than forty-nine billions of dollars, which sum is one billion over the total wealth of Great Britain.

If we would classify the whole wealth of the Union under two heads, urban and rural, the result at different dates would be as follows:

Years.	Millions			Percentage of total.	
	Urban.	Rural.	Total.	Urban.	Rural.
1850.....	3,169	3,967	7,137	44.4	55.6
1860.....	8,180	7,980	16,160	50.6	49.4
1870.....	15,155	8,900	24,055	63.0	37.0
1880.....	31,538	12,104	43,642	72.2	27.8
1890.....	49,055	15,982	65,037	75.4	24.6

"In the above table rural wealth is the aggregate of the value of lands, cattle and implements at each census; the rest is urban. We find that rural, or agricultural, wealth has only quadrupled in forty years, while urban has multiplied sixteen-fold. This would seem to point to the conclusion that farming has not been so profitable as commerce, manufactures, banking, railways and other pursuits. But it is to be observed that in late years the increase of urban population has been much greater than that of rural, and that the number of hands engaged in agriculture is by no means comparable with that of persons engaged in city or town life.

"The following table shows the increase of wealth per head in the two great classes that make up the American people:

Periods.	Number of workers		
	Urban.	Rural.	Totals.
1851-60.....	11,216,000	3,820,000	15,036,000
1861-70.....	14,162,000	5,133,000	19,295,000
1871-80.....	18,183,000	6,797,000	24,980,000
1881-90.....	23,905,000	8,215,000	32,120,000

Periods.	Yearly accumulation, millions of dollars.			Per worker yearly.	
	Urban.	Rural.	Totals.	Urban.	Rural.
1851-60.....	\$ 501	\$ 401	\$ 902	\$44.70	\$105.00
1861-70.....	698	92	790	48.30	17.90
1871-80.....	1,628	320	1,958	90.00	47.10
1881-90.....	1,752	388	2,140	73.30	47.30

"Before 1860 the accumulation of wealth for each rural worker was much greater than that corresponding to persons of the urban classes. Between 1860 and 1870 the farming interests, especially in the southern states, suffered so severely by reason of the war that the increase per head fell below \$18 yearly; but during the last twenty years the increment of rural wealth has been almost uniform at \$47 per head per annum of the number of rural workers. Looking back to 1870, we find that since that year the accumulation of wealth among urban workers has averaged \$82 per annum, or 73 per cent more than among rural workers, which suffices to explain the influx of population into towns and cities. The increase of urban wealth has been accompanied by a remarkable rise in wages, as we see from census returns.

Years.	Numbers of operatives.	Wages paid.	Per operative.
1860.....	1,311,000	\$ 379,000,000	\$289
1870.....	2,054,000	620,000,000	302
1880.....	2,733,000	943,000,000	347
1890.....	4,713,000	2,283,000,000	485

"The average of wages has risen 60 per cent since 1870, and at the same time the accumulation of urban wealth per head has been 76 per cent more than in the period from 1850 to 1870, which shows that the rise in wealth and the increase of wages go almost hand in hand. But the farmer has nevertheless a corresponding advantage, for his life is a healthier one, the statistics of mortality showing that the death-rate in American cities, especially among children, is greatly in excess of that of rural districts. The farmer may make money more slowly, but he has a safer and less agitated life, and his children grow up around him in affluence and comfort. The census of 1890 showed that the United States had 4,565,000 farmers, the aggregate value of whose farms, cattle and implements summed up \$15,982,000,000, giving to each an average fortune of \$3,505, most of these men having begun on a capital of a couple of hundred dollars. The number of new farms created since 1860 has been 2,520,000, bringing into cultivation 195,000,000 acres, and the greater part of this work has been done by European settlers. In fact, if the United States had no urban population or industries whatever, the advance of agricultural interests would be enough to claim the admiration of mankind, for it has no parallel in history.

"The following table shows the value of all agricultural products at various dates:

Year.	Home use.	Exported.	Total.	Per worker.
1840..	\$ 789,000,000	\$ 93,000,000	\$ 882,000,000	\$346
1860..	1,803,000,000	257,000,000	2,060,000,000	475
1880..	2,686,000,000	686,000,000	3,372,000,000	440
1890..	3,089,000,000	615,000,000	3,704,000,000	408

"The above table shows that the farm products of the Union represent a value of about \$12,000,000 daily, or if we take the working day at ten hours, it is about \$1,200,000 hourly; and as the number of hands engaged is about 9,070,000, the gross product of their labor is equal to thirteen cents an hour per hand, whereas the ordinary wages of the hands engaged in manufactures are fifteen cents an hour."



BEFORE another issue of the FARM AND FIRESIDE is published, in most parts of the country the busy harvest season will be over. How many of our readers will think it worth their endeavor to take some little recreation with their families? Some of us live a lifetime without ever learning how much comes to us from a week's or two weeks' absolute change and rest.

After all, there is no harder work than the work of the farmer during the long, hot days of summer; nor is the lot of the farmer's wife any more fortunate. Extra duties are left to her during the busier seasons. Not only does she have to work quite late at night, but she must be up at least with the dawn. When the step grows somewhat unsteady, and the cheek pales on account of the extra effort which she must put forth at this time, there is nothing which will bring back the color to her cheek and the elasticity to her step like a week or two's rest in some quiet resort.

It is encouraging to know that every year more and more are taking these little vacations. It does not necessarily mean very much outlay financially. Some sort of tent can be improvised without very much expense, and an oil-stove, with a very few simple cooking utensils, may be taken. Beds of straw placed upon the ground will be found very comfortable. One little outing of this sort under favorable circumstances will decide you as to every subsequent summer. Often the new lease of life which one gets from even such a short vacation is felt during the remainder of the year. Take a little vacation, if you cannot go more than ten miles away from home. It will sweeten your temper, and make you more agreeable to those who live in the same house with you.

FARM AND FIRESIDE.

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Postage-stamps will be received in payment for subscriptions in sums less than one dollar, if for every 25 cents in stamps you add one-cent stamp extra, because we must sell postage-stamps at a loss.

The date on the "yellow label" shows the time to which each subscriber has paid. Thus: Jan 95, means that the subscription is paid up to January 1, 1895; 15 Feb 95, to February 15, 1895, and so on.

When money is received the date will be changed, which will answer for a receipt.

When renewing your subscription, do not fail to say it is a renewal. If all our subscribers will do this, a great deal of trouble will be avoided. Also give your name and initials just as now on the yellow address label; don't change it to some other member of the family; if the paper is now coming in your wife's name, sign her name, just as it is on label, to your letter of renewal. Always name your post-office.

FARM AND FIRESIDE,
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.

Peach Carnival. Georgia peach growers will hold a peach carnival at Macon, the center of "peach paradise," from July 1st to 20th, inclusive. This is expected to be the greatest fruit exhibition ever held in the South. Arrangements are being made for excursions at low rates from all points.

It is estimated that three thousand carloads of peaches will be shipped from Georgia this season. The bulk of this wonderful fruit crop will be sent to market during the first, second and third weeks of July.

Bran as a Fertilizer. At the regular annual meeting of the Winter-wheat Millers' League, held May 15th at Louisville, Ky., Mr. Chas. T. Ballard read the following paper:

"We are interested in having our farmer friends raise large crops of fine quality of wheat, and to this end we wish to give them the results of some investigations we have made regarding wheat bran as a fertilizer. Some years ago, Mr. N. Long, now deceased, a prominent miller, banker and farmer of Logan county, Kentucky, used bran as a fertilizer, and the results were astonishing, his yield being fifty-five bushels per acre. Last year, Mr. John Richards, of Hardin county, Kentucky, produced fifty-five and one half bushels per acre of magnificent wheat, and as we learned that he had used bran as a fertilizer, we wrote to him for information as to the method adopted by him, and are in receipt of his reply. He says he has been experimenting with different kinds of fertilizers for twenty-five years in the hope of raising fifty bushels of wheat per acre, and that he has at last succeeded, but that he never did so until he used bran as a fertilizer. The quality of the wheat is also greatly improved, it being very much heavier than any he had ever raised before.

"Rich soil needs less than poor soil, and he says that twelve hundred (1,200) pounds of bran per acre is the proper amount to use on good land, while from fifteen hundred to two thousand pounds on thin land is the correct amount. The bran should be sown broadcast and harrowed in about three weeks before seeding-time; this will give the bran time to decompose and become absorbed by the soil. The bran should never be drilled in with the seed."

The Hay Crop. The June crop report of the United States Department of Agriculture says:

"**CLOVER.**—The area under clover is only 92.5 per cent of that of 1894, the largest reduction being in the northern half of the Mississippi valley from Ohio and Kentucky westward to Nebraska. The general average of condition is only 82.8, a lower figure than any recorded within the last decade. The great drought of 1894 has been a prominent cause of both the reduced area and the low condition. Other causes contributing to the latter are spring frosts, continued cold weather, recent drought and cutworms. The chief complaints as to these last come from Kentucky and Indiana.

"**SPRING PASTURE.**—The general average for the condition of the spring pasture is 88.1, a reduction of 3.9 points as compared with the condition on June 1, 1894. The lowest figures are found in the Mississippi valley, from Ohio westward to Kansas, Nebraska and the territory of Oklahoma. In this region, Minnesota is the only state whose figures (102) rise above 100. Ohio (71), Indiana (73), Kansas (69) and Nebraska (71) are the only states whose averages fall below 80, but the average for Oklahoma is only 60. Drought, frost and in some localities the ravages of worms are among the chief causes of reduced condition."

Timothy meadows are in the same condition, and the outlook for the hay crop is very unfavorable. Prices have already advanced sharply; in some markets choice timothy hay is over \$20 a ton. What there is of the crop should be secured in the best possible condition. On the farm, other forage crops can be substituted for timothy to advantage, leaving it for market.

Sown the middle of August on the writer's experiment plot commenced blooming the first of May and ripened its seed early in



CRIMSON CLOVER.

June. For four weeks the honey-bees hummed joyously over its beautiful blossoms. Wherever it can be grown, crimson clover is a honey-plant of great value. It is the first of all the clovers to bloom. Where the beekeeper has white clover or alsike clover, he can add one month, at least, to the length of the honey harvest by a field of crimson clover.

And How to Kill Them," is the "Weeds; title of Farmers' Bulletin No. 28, published for free distribution by the United States Department of Agriculture, Washington, D. C. This bulletin describes and illustrates the principal noxious weeds now attracting particular attention, and gives the best general and special methods of eradicating them. The immense loss to agriculture from weeds can hardly be appreciated.

Prof. Coville, botanist of the department and author of this bulletin, says: "The value of the principal field crops of the United States for the year 1894, including corn, wheat, oats, rye, barley, buckwheat, tobacco, potatoes and hay, according to official statistical returns, is \$1,630,873,795. This estimate does not cover the minor field crops, garden truck, pasturage, cotton, fruit, or other agricultural products, all of which are of immense commercial importance. The direct loss in crops, the damage to machinery and stock, and the decrease in value of land due to weeds, amount, without question, to tens of millions of dollars each year—a loss sustained almost wholly by the farmers of the nation. This brief bulletin contains simple and valuable directions for weed eradication, and in view of the enormous interests concerned, it is hoped that these methods may early be incorporated in our systems of practical farming."

NOTES ON RURAL AFFAIRS.

Grass Substitutes. Owing to the continued dry weather this spring, the hay crop in this vicinity promises to be short. Possibly, this may also be the case with oats. The hot weather is pushing the corn crop right along, and if nothing unusual interferes, we calculate to get a good yield of fodder from this cereal. I do not raise all the hay that I need to carry my stock, limited as it is, through the winter, and consequently I always resort to all sorts of devices to "patch out" by the use of substitutes. Green rye is my staple feed for early spring. Horses and cattle like it—and eat it—well enough until the heads begin to form, say at the beginning of June. After that, this fodder is too coarse for cattle, and they refuse to eat it unless it is cut up and well mixed with meal or bran. Last year I cut the green rye, while in bloom, for hay, but stock did not seem to relish it during the winter if fed alone. It is liable to get musty, too. The only way I could utilize it for horse and cattle feed was to have it cut up with corn-stalks, hay, etc., all well mixed, moistened, and the meal all scattered through it just before feeding.

Rye for Feed. This year I let my crop of rye get ripe, and will then have it cut and threshed. It stands five to six feet high, and the straw will give a large amount of bedding, the supply of which I have had to buy heretofore. Straw of any kind can seldom be bought here for less than six dollars per ton. This is too expensive for bedding, and it will pay me to raise my own in rye. The grain can be mixed with oats and corn, and ground. With a portion of bran added, it will make a capital winter feed for horses and cows, and to mix with the potatoes which I usually boil for my poultry. Clover and timothy have not come up well, owing to the continued dry weather. I will have to plow the rye patches up, and sow rye again, reseeding with clover in the spring.

Millet Fodder. I have tried the various kinds of millet repeatedly, sometimes with excellent success, and sometimes with very indifferent results. The millets like hot weather and fairly good soil, preferably of a sandy nature. On ordinary, poor or hard farm soil it is a very unreliable crop. To give it a good start, the soil should be well prepared, so that the surface presents a clean, moist, mellow seed-bed.

The Michigan state experiment station has issued a bulletin (No. 117) on "Millet," by A. A. Crozier. A summary is given as follows:

"Millet is used chiefly as a catch crop for hay, since it can be sown in spring whenever it is discovered that a seeding of the permanent grasses has failed, or that a hard winter or insects have destroyed the

clover. It may be sown when too late for corn.

"Millet requires good soil, preferably sandy, and is especially adapted to new land. Sow half a bushel per acre for hay, one peck if for seed.

"Millet hay is usually cured by cocking it up when partially dry and allowing it to stand for several days before being hauled to the barn, as is often done with clover.

"Millet hay is strong feed, and should be used with caution, being alternated, if practicable, with other fodder, especially if fed to horses. It is safer and more palatable if cut before the seed begins to ripen.

"The best variety is German millet, providing the soil is good and it can have the entire season. For late sowing or poor soil, use common millet. Hungarian grass, on fertile soils in a moist season, will give a large yield of excellent fodder."

Here you have pretty near the whole thing in a nutshell. The information may come handy to many readers who are facing the prospect of being short of hay this year.

Millet as Food. I have grown large crops of both the Hungarian grass and the German millet, and my experience in feeding it is about the same as with rye. While the plants are young and tender, horses and cows are very fond of this ration, and eat the whole of it greedily and with apparent benefit. But when the seed begins to form, the stalks become coarse and apparently unpalatable. Cows would not eat Hungarian grass when at a certain state of ripeness. German millet remains longer in good condition for feed. When cured for hay, I also find a great difference between different lots. If you cure either millet well, and have it bright and fresh and free from dust, it makes a very superior hay. When badly cured and dusty, it is an abomination, and unsafe to feed.

Millet Seed for Chicks. I appreciate the millet crop in still another direction. The seeds are an excellent feed for young chicks, and come handy as a first ration, and to lead them gradually to the habit of eating wheat. Whole wheat is still my staple ration for all my poultry, and the little ones, when two or three days old, also begin to eat it. Millet seed answers first-rate as a food during the first few days in the chick's life, and as a change from bread crumbs, soaked bran cakes and other soft materials of this description. It will pay to let a little patch of millet get ripe, and to thresh the seed out just for this purpose. And, by the way, sorghum seed also comes handy as food for young chicks.

Oats and Peas. The next crop to give fodder for my stock, after green rye, is oats and peas. When cut green, this is greatly relished by horses and cows, and the effects of the ration are plainly noticed in the flesh and spirit of the horse, or in the milk-pail. I have usually planted the Canadian field-pea with the oats, but I think it ripens rather too early. Possibly, the Marrowfat pea might answer the purpose much better. For hay, the oats and peas should be cut very green, then cured well to have it bright and green. This year I have sowed mostly clear oats, and if I can avoid it, I will feed very little of it green. Oats have been so high-priced of late, and yet seem to be so necessary for feed during winter to mix with other grains so as to make the resulting meal lighter, that I prefer this year to let the crop get ripe and thresh it in the ordinary manner. Some of the straw may be used for fodder purposes, if hay should be very high-priced, as not unlikely. I think I can pack it in layers with nice, bright, well-cured sweet-corn stalks, all slightly salted, or I will have it cut in the fall and mixed with the cut corn-stalks.

Sweet Corn for Fodder. I never fail to plant a good big patch of Stowell's Evergreen sweet corn. We like good "roasting" or boiling ears, and other people do, too, so that we never have any trouble to find a market for our sweet corn. The nubbins are left on the stalks and cut up with them. If the cut stalks and nubbins are mixed with plenty of nice, dry straw, all of it will keep well and be relished by the stock. It is yet time to plant a patch of Stowell's Evergreen.

GREINER.

Our Farm.

ON ONE ACRE.

INTENSIVE farming is the order of the day everywhere; the more intensive the greater the profit. Throughout New England and in other parts of the country the farmers are reducing the cultivated area and concentrating all labor and fertilizer upon it; and the result is that larger products come to make reward.

The crops referred to below were raised in Massachusetts within fifteen miles of Boston. They were not exceptional crops; the crops of a series of years might be more and they might be less. On one acre were 800 bushels of onions, and were sold for a dollar a bushel. If they had been kept awhile, they might have been sold at \$1.50 a bushel. The cost of the crop was \$155.80, and the profit at one dollar a bushel was \$644.20. Another crop of onions yielded 644 bushels, and were sold for one dollar a bushel; the cost was \$191.50, and the profit \$452.50.

On one acre has been raised 1,600 bushels of potatoes, and a thousand bushels from an acre has been reported often, but such yields are exceptional. They show, however, what can be done (in spite of bugs), when industry, judgment, soil, fertilizer and climate form a practical working combination. One acre produced 328 bushels of potatoes, and they sold for \$1.25 a bushel, or for \$410; the cost of raising was \$160; net profit, \$250. Another crop of potatoes of 502 bushels sold for eighty cents a bushel, or \$401.60; cost of raising, \$119; net gain, \$282.60.

Of carrots, 650 bushels, sold for fifty cents a bushel, or \$325; cost of crop, \$109; profit, \$216. Of parsnips, 590 bushels, sold for a dollar a bushel, or \$590; cost \$133; profit, \$457. Of cabbages, 7,500 heads, averaging six pounds a head, or 45,000 pounds, or 450 barrels, giving one hundred pounds to the barrel. When the cabbages were gathered, the price was one dollar a barrel, or \$450; but they were kept and sold later for three dollars a barrel, or for \$1,350. The cost of the crop was \$102; profit, \$1,248. The cabbage-plants were in rows three feet apart and the plants in the rows eighteen inches apart.

The man who knows how, who has the right kind of soil and uses the right kind of fertilizer, can make every cabbage-plant produce a salable head. A cabbage crop is sure of sale, especially if near the city. On one farm where cabbage is a special crop, the heads are sold sometimes in the field by the row. The Irish part of the population is the great cabbage consumer. A family of five put into the cellar last fall three hundred heads. The Irishwomen go to the farm mentioned, walk up and down the rows of cabbages, feel of every head, and take their choice; and the Irishwoman is usually a closer buyer, or has that opinion of herself, never intending to pay the price asked if haggling will reduce it. And thus in cabbage-time on this farm the field resounds with brogue and with denunciation of the cabbages, which the buyers declare are the worst they ever saw, "The loikes av some av which they wouldn't throw to a daeiut pig."

But the farmer gives no heed, goes about his work and lets them walk up and down and talk all they want to, knowing that they will come to his price at last. The price includes delivery in the city. Some of the buyers are so careful or suspicious that they demand to see the row of cabbages they have selected on the wagon; they hardly dare take their eyes off it till the wagon comes; literally, they sit down upon it and wait for the team. Then the buyers help load. Most of them keep a cow or at least a pig, and hence every loose head, every stray leaf is gleaned, and when the row of cabbages is on the wagon, not a bit of cabbage-leaf an inch square can be found where that row stood.

But the crop of an acre—squashes. In some parts of the country, in New England, anyway, especially the firm flesh, hard-shell kind like the Hubbard, the squash is more and more in favor as an article of food. It is served on aristocratic tables in the city in the shell—half shell—as it grew, without the addition of any spices, condiments or seasoning. Some of the modern cooks proceed to spoil a squash as soon as it is cooked. When it comes to the table no one would know by the taste what it was; the squash flavor has all been knocked out of it; it is not squash; it is something else.

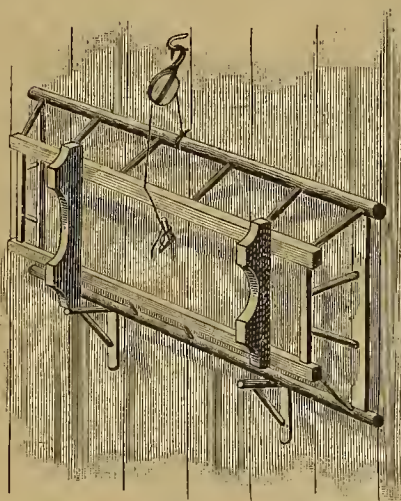
On one acre, 21,410 pounds, or ten tons

and 1,410 pounds, of squashes were raised. The cost of raising was \$34.75. The selling price of squash varies from \$20 to \$80 a ton, according to the season of the year; they are low at \$20 a ton, but usually before the winter is over bring \$80 a ton. The squashes from the acre in question were sold for \$55 a ton. An acre that yielded \$304 worth of early potatoes produced the same season, after the potatoes were dug, 350 bushels of turnips, sold at fifty cents a bushel; the turnips cost \$15.35, and the profit was \$159.65; with the potatoes that acre produced \$463.65.

From an acre came 4,613 boxes of strawberries, sold for \$618.60; cost, \$244; profit, \$374.60. Another strawberry acre produced 4,687 boxes, and sold for \$609; cost, \$244; profit, \$365. Another, 4,844 boxes, sold for \$657; cost, \$259; profit, \$398. An acre of raspberries yielded 3,314 quarts; sold for \$530.20; cost, \$144; profit, \$386.20. Blackberries, 769 quarts; sold for \$76.70; cost, \$18.27; profit, \$58.43. As stated, the crops given are not exceptional; they are obtained year after year in the region where they are specialties. **GEORGE APPLETON.**

HANDY ARRANGEMENT FOR HANGING WAGON-BEDS AND HAY-RIGGINGS.

After a lengthy experience, no system of ropes and pulleys to directly raise a wagon-box or rigging is satisfactory unless the ceiling be sufficiently high to permit the suspension out of reach of the heads of men and horses, and usually of top carriages. A better plan, requiring less tacking, is a pair of heavy brackets on the side of the shed or haymow, with a rope and single pulley in the side wall of barn frame above where the box or rigging will reach when turned on edge upon the bracket. On removing the rigging, etc., drive close beside the brackets and attach the rope to



ARRANGEMENT FOR HANGING WAGON-BEDS AND HAY-RIGGINGS.

its opposite side. Having caught one edge on the brackets, draw up on the pulley and turn the awkward thing up out of the way. A short rope or chain will hold it where it is put. The brackets can be made of two-inch plank, as shown, or natural knees may be cut in the woods and hewed into shape.—*Farm Journal.*

TRYING NEW THINGS.

I am not a farmer, but have a truck-patch and garden, and generally have as good a garden as any of the neighbors. A garden is a great help to a preacher. Once in awhile I send for some new thing to plant, and sometimes it turns out well, and frequently the old varieties are better.

The past winter I answered an advertisement, and sent for a few packages of seeds, including one "Early Fortune" potato. An unexpected freeze ruined it, and another was kindly sent me, which I cut into nine pieces and planted as many hills, March 19, 1895. Each hill came up, and in six weeks potatoes were large enough to eat—as large as ordinary walnuts. The yield is going to be good, and I want to try to save them for fall planting for seed next year.

SACALINE.

The wonderful forage plant offered by many seedsmen, and promising a yield of from fifty to two hundred and fifty tons to the acre, and being very nutritious, stock all fond of it, impressed me favorably, and I sent for a package of seed, which I sowed in a box of rich earth February 27th. The seeds came up without much delay, and have been well cared for until now, two and one half months. From some cause, four fifths of them are dead, and the remaining ones are remarkably small. Nothing that I have ever planted is of as slow growth. I suppose seeds sown this spring are intended to make plants to put out next spring. It is falling far below my expectations.

THE GERMAN COFFEE-BERRY

Has been extensively advertised by seedsmen the past winter, and is planted by numbers of people. Somebody claims that "in traveling in Germany and France it was found on the table as a substitute for Rio coffee, and was as good as the best." I bought a small package from La Crosse, Wisconsin, and soon after receiving the package a friend told me he would give me as many as I wanted, or tell me where I could get them at \$1.50 per bushel. He gave me a quart, and I compared them with my La Crosse berries, and they are exactly alike. They all looked so familiar, I set up a rigid investigation to see where I had met them before, and my honest conviction is that they are the "old Japan pea," later called the "Soja-bean," which I grew years ago and found them not very desirable. If matured, stock must have pretty good teeth to eat them, and it is very difficult to cook them down for table use. The instructions on the package I bought tell how to cultivate the berry and parch it, and then says, "Add a little coffee extract." When I saw that, my faith in the "German coffee-berry" weakened very much. If you will parch the common okra, or a good many other things, and add "coffee extract," you of course give it the flavor of coffee. We have put half beans and half coffee and made a passable drink, but the beans by themselves have so little coffee flavor about them that it will require a cultivated taste to help adopt them as a substitute for coffee.

A stockman near me cuts them before they mature, and cures bush and all for cow feed, and is pleased with the result.

I would not injure the sale of anything helpful to our people, and am willing to admit that it might be well for us to drink less coffee and try a good substitute, but I think any one will be disappointed who expects to find the flavor of genuine coffee in these beans.

You are giving us a good paper, and your premiums are magnificent.

Louisiana. **G. W. HARTSFIELD.**

HOME-MADE FERTILIZERS.

The agricultural experiment stations throughout the country have rendered great service to agriculture, and the farmer begins to appreciate it. Until the station chemists began to analyze fertilizers, the farmer was at the mercy of the dealer and the manufacturer, often spending good money for leather shavings and granite chips, and other stuff of no fertilizing value, losing not only his money, but also his time, labor and the crop.

There are good fertilizers enough, and the manufacturers and dealers in them are above suspicion; and there are, or there were, fertilizers whose absence was more to be desired than their presence, whatever the price paid for them. But the chemical analysis at stations has driven the worthless fertilizers from the market to a great extent, and it has also given the farmer exact information in regard to the fertilizing value of the fertilizer bought.

If the farmer is willing to pay forty dollars a ton for his fertilizer, he has the right; but if he learns that the fertilizer in question is worth only thirty dollars a ton, he is paying the manufacturer ten dollars a ton to prepare his fertilizer for him. It is claimed, and it is true, that the manufacturer can mix chemicals and prepare fertilizers at less cost than the farmer; but if the farmer can save five or ten dollars a ton by mixing his own fertilizers, it is worth saving; and then he will also have the satisfaction of knowing exactly what he is putting into his soil.

A fertilizer has been sold in the market for several years in small lots at the rate of sixty dollars a ton. It was discovered last year that the value of the fertilizer was only \$11.24 a ton, the farmer losing exactly \$48.76 a ton on that investment. The experiment station has the credit of exposing that business. In one state, in 1893, seventy-four brands of fertilizers were sold; the average selling price per ton was \$35.79, and the average commercial valuation at the experiment station was \$23.79, making an average difference of \$12 per ton.

Every man is worthy his hire, and the manufacturers of fertilizers are not exceptions; but the farmer can mix his own fertilizers, as shown by actual experiment, for one dollar to a dollar and a half a ton. If the average value of seventy-four fertilizers is \$23.79, the cost to the farmer, if he mix them himself, would be only \$25.40 a ton at the outside estimate, making a saving of more than \$10 a ton. And this saving may be made if the chemicals be

bought at retail; if he bought in large quantities, the saving would be more.

The progressive farmer in many parts of the country is giving his attention to the mixing of his own fertilizers. At first he shrank from this work, because he thought it required some knowledge of chemistry—"a scientific insight"—which he had not opportunity or inclination to acquire. No scientific knowledge is required to mix fertilizers. Dealers in and manufacturers of chemicals are adapting their business to meet the trade that comes from the farmers. In one state, where the consumption of fertilizers is known, it is estimated that the farmers might have saved \$150,000 if they had mixed their own fertilizers.

GEORGE APPLETON.

SAVING PEA-VINE HAY.

Many farmers complain that they have a great deal of trouble with their hay becoming moldy after it is put up in the barn in bulk.

Saving pea-vine hay is a very easy matter, if done in the right way. Several of the leading farmers in this vicinity have adopted a plan whereby the hay is nicely cured, and another product of the farm that usually goes to waste is the prime agent; namely, wheat straw. I was at Mr. Sam. Burnes' not long since. This subject came up, and he took me up in the barn-loft and explained the way he managed to have such a lot of nice, bright pea-vine hay.

When his wheat was threshed, he had the machine set to convey the straw to the loft. A number of hands were placed in the loft to convey the straw to the opposite end of the barn and pack it in one corner, making a pack along one side of the barn. A sack of salt was also sprinkled through it as it was packed down. When pea-vine harvest came, he put a layer of straw two feet deep on the opposite side of the barn, on a slatted floor. Hay was then put on two feet deep, and so on alternately until all the hay and straw was packed down.

Corn was sown with the peas after wheat harvest, and the corn was also cured nice and bright, which is hard to do ordinarily. His theory is that the wheat straw absorbs the excess of moisture in the pea-vines, keeping them from becoming moldy, and at the same time adding much to the value of the straw for stock feed.

A few years ago, clover was on a boom in this vicinity, and seemed to do well; but of late, spring droughts have cut the crops so short that farmers have abandoned it and turned their attention to pea-vine hay, which is equal, if not superior to clover as stock feed and for soiling, and has the advantage that a crop of wheat can be grown on the land every year, followed by a larger crop of hay than the same land would produce in clover without making the wheat crop. Another great advantage is, peas can be grown as well on sandy land as on stiff soil—the only place clover will thrive.

Georgia.

R. W. J. STEWART.

PICKED POINTS.

C. R. M., Nebraska, writes: "In the issue of January 1st, over the signature of Galen Wilson, is an account of growing vegetables at the rate of \$5,000 an acre. Mr. W. will greatly oblige if he will give full particulars as to what kinds he grew and how he grew them."

REPLY:—Only one kind was grown, and that the early French breakfast radishes. The ground was made rich and firm the fall before, and then plowed and raked as early the next spring as the soil was dry enough to work, and the seed sown in rows seven inches apart and the plants thinned to three inches in the row. As the radishes were pulled for market, another seed was dropped in the place where each was pulled out and the soil pressed down with the foot. They were washed and tied eight in a bunch with narrow, red tape (to look nice), and were retailed at five cents a bunch. From the first of October until the cold weather stopped their growing, they were in greater demand than in spring, because there were none other in the market. There are people who would eat radishes every month in the year if they could get them. **GALEN WILSON.**

Summer Weakness

Is unknown to those whose blood is pure, rich and healthy. It is a symptom of impoverished blood. It is a call for more vitality, which can be supplied only by means of the rich, red blood which always indicates a condition of physical health. Hood's Sarsaparilla cures this weakness because it makes good blood, and

Hood's Sarsaparilla

Is the only true blood purifier prominently in the public eye to-day. \$1; six for \$5.

Hood's Pills act harmoniously with Hood's Sarsaparilla. 25c.

Our Farm.

NOTES FROM GARDEN AND FIELD.

THE OUTLOOK.—Prophesying is pretty poor business. The unexpected only too often happens, leaving the prophet in the lurch. We can talk about probabilities, however. At the present time we are sure that there will be a shortage of fruit in this vicinity, and in many other localities. The question now is, "Will people use all the more vegetables to make up for the fruit they cannot get except at pretty good prices?" In other words, will we be likely to have an increased call for tomatoes, sweet corn, onions, cucumbers, melons, etc.? There are some things we can yet plant to meet any such demand, should there be such. We can yet plant cucumbers, sweet corn (Stowell's Evergreen, where soil and locality are favorable to corn), late tomatoes, celery, cabbages, etc. Possibly we may have a good trade in these crops, with better prices than have been ruling for some time, and if so, we may have yet a prosperous season. Time will tell. Our task is to take the very best care of all our crops, try to raise all we can, and reap the reward should things turn out in our favor.

BETTER CULTIVATION.—Better cultivation than is usual should be given to all our crops, at any rate. The average cultivation is not half thorough enough. It should be doubled and trebled even in an ordinary season. It is especially needed now, when the clouds refuse to furnish the ordinary amount of water. The soil is pretty dry already. Constant stirring of the surface will preserve moisture. Whether it does this by the prevention of evaporation, or by condensation from the atmosphere, makes very little difference in practice. Let scientists have their dispute over this question. We are satisfied to know that constant tillage keeps our crops fresh and growing, while the crops on carelessly tilled land suffer from the effects of drought and perhaps from starvation, for the good effect of thorough tillage is not alone in the preservation of the moisture. It also provides food by furnishing the best possible chances for chemical actions and changes in the soil. In short, better cultivation is needed in any year, and irrespective of the prices we are likely to realize for our products. Better cultivation may pay us better, however, when the crops that receive it sell for an especially good figure. I am keeping cultivators and hoes in almost constant use this season.

GRASS, STRAW, ETC.—Grass is pretty short and thin hereabouts. It cannot be much more than half a crop. We will have to be careful and saving with the hay this year, and try to make use of all sorts of substitutes, as mentioned elsewhere. If rain does not come soon, the straw of



FIG. 1.—SHOWING EFFECT OF SUN-SCALD ON TRUNK.

spring grain will also remain unusually short. All we can do is to hope, now, that the drought will soon be broken, and that we shall have rain more plentifully during the season (July and August) which usually gives us a good deal of dry weather. In that case we are likely to have good crops of corn, potatoes and late vegetables.

A PAYING ASPARAGUS-BED.—I have an inquiry about the best way to start an asparagus plantation. The proper time to set the plants is in early spring or in the fall. You want a warm piece of ground, and as rich as possible. You want

it warm, anyway, and for this reason it should contain plenty of humus, and have the best of drainage. Richness can be given to it in manures, and the applications should be very generous. Don't try to be saving with plant-foods. The crop, if it pays at all, pays well, and deserves full doses of manure. How much? you ask. A few weeks ago I saw an article on asparagus, in one of the agricultural papers. The writer said he would not say how much manure he put on for fear of being laughed at. When he has thus piled on the manure "extremely generously," then he applies six hundred pounds of muriate of potash, and so many hundred pounds (I forget the exact amount) of bone, and perhaps other things. I tell this because it is the proper treatment. Put it on thick. You can't use plant-foods too freely for asparagus, and the more you put on, the more profitable your crops will likely turn out. Then give your plants plenty of room. I have set a bed this spring, making the rows five feet apart, and setting the plants eighteen to twenty inches apart in the rows. This is none too far apart. You want fat stalks. You can't get them if you set the plants close. I do not know whether it is a wise plan to grow some other crop between the asparagus rows the first year, or whether to let the asparagus have all the room. I have planted mangels (Yellow Globe) all over my asparagus-patch this year, and shall gather a big crop of roots for my cattle and poultry, anyway. With plenty of plant-food in the soil, I don't think it will injure the asparagus much, if any.

DOES ASPARAGUS PAY?—This is a local question. In some places asparagus growing seems to be overdone. Of course, the uses of the crop are limited. When the demand is fully satisfied, a little surplus will quickly create a glut. You cannot keep it long. It is not canned to any great extent, although I don't know why it is not. In many places, however, the demand is far greater than the supply; and I imagine that the supply of a really first-class article is not any too large anywhere. If you make the land as rich and set the plants as far apart as I have suggested, you will most likely have the fat stalks that will sell at a good price.

FERTILIZER ANALYSES.—A reader in Virginia writes that he is mixing his own fertilizers, with the assistance of my book on "Farm Chemistry." Some fertilizer firm advertises a fertilizer under the following analysis:

Phosphoric Acid, 7 per cent; Ammonia, 2 per cent; Potash, 5 per cent.

	Per cent.
Ammonia, actual and potential.....	2 to 3
Available Phosphoric Acid.....	7 to 9
Bone Phosphate of Lime.....	20 to 25
Potash (Sulphate).....	10 to 12
Potash (K ₂ O).....	5 to 6

Now, he asks me whether dissolved South Carolina bone contains phosphate of lime in addition to available phosphoric acid, and if so, how much. It is a pity that some fertilizer manufacturers will persist in confusing fertilizer users by giving analyses of this kind. Strike out all except the first line of this analysis and you will have it almost right; namely, "Phosphoric acid, 7 per cent; ammonia, 2 per cent; potash, 5 per cent." But to give all the information that is necessary, and make the whole comprehensible and proper, I would make the following change, and would advise honest fertilizer men to adopt it:

Phosphoric Acid (available)..... 7 per cent.
Nitrogen (about)..... 1 1/2 "
Potash (in sulphate)..... 5 "

Such a fertilizer is worth about \$20 per ton. The best raw South Carolina phosphate rock contains from 40 to 60 per cent of phosphate of lime, half of which is phosphoric acid, of course, insoluble by being tied to the lime. In dissolved rock, part of the lime is turned into sulphate of lime, leaving an excess of phosphoric acid to the remaining lime. Thus the phosphoric acid appears as a superphosphate, and only a small portion of it as simple phosphate of lime. The former is readily soluble in water; the latter is insoluble. Now as to the potash. No matter in what form the potash appears, for the sake of true and uniform valuation it is determined as potassium oxide (K₂O). For some crops I prefer it in the form of a sulphate, and in this form it usually comes a little dearer than in the form of muriate. But 100 pounds of sulphate of potash contain but little more than fifty pounds of actual potash (K₂O). It sounds bigger, in an analysis, to say "potash (sulphate), 10 to 12 per cent," than to say, "potash (as sulphate), 5 per cent." The

commercial value of sulphate of potash is about two and one half cents a pound, while potash, as sulphate, is rated at about five cents per pound.

FERTILIZER VALUATIONS.—Most of our fertilizer firms, in giving their guaranteed analyses, give some range to the percentage of each ingredient—like ammonia, 2 to 3 per cent; available phosphoric acid, 7 to 9 per cent; potash, 5 to 6 per cent. Often there is a good deal of sham about this. Such an analysis only gives a guarantee for the lowest figure in each case, and does not amount to anything above that lowest figure. In the present case, the analysis might as well read, "Ammonia, 2 per cent; phosphoric acid, 7 per cent; potash, 5 per cent." On this basis the value of the fertilizer should be figured out, for it is only in rare cases, nowadays, that a careful analysis will reveal a greater percentage than the lowest one of the guarantee, and if we get that in the fertilizer which we buy, we may be satisfied, for it is all that the manufacturer has agreed to furnish. The latter, however, likes to make a good show by using the largest figures in his analyses that the law allows. Let my friends not be deceived in this.

T. GREINER.

Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

APPLE-TREE SUN-SCALD.

It is probable that more apple-trees that are well located and selected die from sun-scald in this state than from any other cause, and this loss is entirely preventable. By the term sun-scald is meant the trouble that shows itself by the trees becoming rotten in the trunk on the south side, which finally so weakens it that it cannot support its top, and consequently breaks down, very likely when loaded with fruit. It is probable that this trouble is generally caused by a part of the bark on the south—or, more commonly, the southwest—side of the tree starting into growth before the rest of the tree, during some warm period in the latter part of winter or early in the spring. Such warm periods are generally followed by a severe freeze, in which case the newly formed, immature cells are ruptured, or the cell contents injured, which results in the bark on the affected side dying and falling off. Fig. 1 represents a Duchess of Oldenburgh apple-tree, which has been severely injured by sun-scald. One of the three parts of the trunk has so far rotted that it has broken down to the ground, another part still stands, but is badly rotted on the southwest side for a distance of three feet, and will probably break down in a short time; the other part of the trunk is still quite sound.

PREVENTION OF SUN-SCALD.

(1) Sun-scald may be prevented by anything that will shade the trunk and limbs; even a few branches furnish sufficient shade. If the top of the tree is kept inclined to the southwest until it is firmly established, it will shade the trunk sufficiently to prevent sun-scald. There is a tendency in this section for all trees to incline to the northeast, due largely to the fact that the prevailing winds are from the southwest during the growing season and while the ground is soft. Trees that incline to the northeast receive the rays of the sun directly upon the trunk, and are most liable to sun-scald. In order to keep the tops of trees inclined to the southwest, they must be planted with a decided slant in that direction, though not so much so as to disfigure the trees. Even when this is done, the trees will need annual attention to keep them in that position. One large and successful apple grower in this state goes so far as to tie each tree to a small stake to hold it in position. If the trees are planted in quincunx fashion, so that the rows run southwest and northeast, as well as north and south, they will largely shade one another when of bearing size.

(2) Protection by means of a screen of laths and wires woven together and wrapped around the trees is advocated, and has been extensively and successfully used. It is cheaply made and easily applied, but it does not fit the trunk well if the trees are crooked, and it should be supplemented by some material for shading the crotches, which are the weak spots of many kinds of apple-trees. On straight trees it affords excellent protection to the trunks, and it is easily supplemented each autumn by stuffing the crotch with hay.

(3) Thin veneers of wood are manufactured which, when soaked with water,

may be easily wrapped around the trunks and held in place by two wires. These have recently come into use, and are received with considerable favor by apple growers. They are open to the same objection as the lath screen, but are easily supplemented in the same way, and are very desirable.

(4) Wire screen, such as is used for mosquito-netting, has its advocates as protection against sun-scald. It has the merit of being more flexible than those mentioned before, and it easily conforms to the shape of the trunk. It is, however, necessary to supplement it with some material for protecting the crotches.

(5) Flexible materials, such as burlap and building-paper, are excellent for this



FIG. 2.—PROTECTING TRUNK FROM SUN-SCALD.

purpose. They should, however, be taken off in summer, and the burlap, when thus cared for, may be used for several years.

(6) An excellent method of protection is that given by wrapping the trunk of the tree with a hay rope, or by tying corn-stalks on the south half of the tree on the approach of winter. These should extend up far enough to protect the crotches and lower branches as well as the trunk.

(7) The planting of a shrub, such as a barberry-bush, an Artemisia abrotans, or similar hardy plant, on the south side of apple-trees, has been recommended and to some extent practiced for the prevention of sun-scald.

(8) Protection by boards has been followed to a considerable extent. This is effected by standing up a six-inch board on the south side of the tree so as to keep the

THE STUDY

—of the action of medicines, or vegetable compounds, upon the stomach, and tests in many hundreds of cases, long ago convinced Doctor R. V. Pierce, Chief Consulting Physician to the Invalids' Hotel and Surgical Institute, Buffalo, N. Y., that all cases of Indigestion, Dyspepsia and Liver Complaint could be cured permanently if the right treatment were given. In support of his belief that he had discovered an alternative extract which he called "Golden Medical Discovery," that would cure these diseases, he collected from all parts of the country the evidence of those who had used his medicine, and he has asked the public to investigate for themselves, as he would be glad to furnish the names and addresses of thousands of people who have used Dr. Pierce's Golden Medical Discovery. All interested should send for a little medical treatise on Dyspepsia, Chronic Diarrhea, "Liver Complaint," Biliousness, Constipation and Piles, published by the World's Dispensary Medical Association, Buffalo, N. Y., and mailed on receipt of six cents in one-cent stamps. This book also contains the photographs and testimony of many persons who have suffered from diseases of the digestive organs.

INDIGESTION; SEVERE PAIN IN STOMACH.
THOMAS FLETCHER, of Clifton Station, Fairfax Co., Va., writes:

"I suffered the terrible tortures for ten years with what your Dr. Pierce's Common Sense Medical Adviser describes as 'Gastralgia' (pain in stomach). I employed our home-doctor—took 1/2 dozen bottles of sarsaparilla with no benefit; then I took one-half dozen bottles of a celery compound without any benefit; then eight bottles of iron tonic, yet I was no better; this was in 1875. I then took six bottles of Dr. Pierce's Golden Medical Discovery, which made a new man of me. I am now fifty-two years old, and for the past five years I have worked very hard on my farm. It is impossible for me to say too much for the 'Golden Medical Discovery.'"

THOS. FLETCHER, ESQ.

sun's rays off from the trunk. Sometimes two boards are nailed together, so as to partly inclose the trunk. This is an excellent method of protection. An objection to it is that unless the boards are very carefully placed, the bark on the branches may be injured by them.

(9) Protection by boxing the trunks of the trees and filling the boxes with soil (Fig. 2) has come into use within a few years. This is probably the safest and most complete method known. It protects the trunk against sudden changes in temperature, as well as against sun-scald, and the adoption of this method of protection will undoubtedly make it practicable to grow the hardiest apple-trees much farther north than it has been heretofore believed possible. This practice is especially adapted to the purposes of protection of the few trees so desirable in the farmer's garden, and is worthy of very general use under such conditions. The expense for material is very little, and generally the necessary material for use in a small way can be had without any appreciable cost whatever. The question of removing the earth from the boxes in summer has been considerably discussed. At the University farm the boxes filled with earth have been allowed to remain around a large number of the trees for three years, and no harm has resulted from the practice. Judging from this experience, I am of the opinion that no harm can result from the practice of allowing the boxes to remain on all the year round. However, if at any time the boxes were to be dispensed with, I should be very much afraid of removing them on the approach of winter; but if removed in the spring, I do not think that their having been used would increase the susceptibility of the trees to injury from sun-scald. This method of protection, however, does not cover the crotches of the trees, and these should be protected as previously recommended.

The methods of protection suggested here as being such as should be left on all the year round, referred to in paragraphs 2, 3, 4, 5 and 9, protect from all injury from mice, and to a large extent from all injury from rabbits, and on this account alone, in many sections, will be worth all they cost. While all varieties of apples are liable to sun-scald, some are much more subject to this injury than others. The varieties recommended by this experiment station and by the state horticultural society are most desirable for planting in this state. And the selection of other kinds, especially those that are generally grown in more favored locations, leads to disappointment and loss.

The extent of sun-scald is much greater in this section than is commonly thought. Besides the apple, the plum and cherry are occasionally thus injured, while the sun injuries are very common on black walnut and basswood, and occasionally almost any of our deciduous trees are so affected. Newly transplanted basswoods are frequently injured by sun-scald when unprotected, and when used for street trees should always be shielded from the sun's rays, at least until well established and growing freely, after which such injuries are less frequent.—*Bulletin Minnesota Experiment Station.*

KEROSENE EMULSION.

Never before have I had such good success in making kerosene emulsion as this season. The secret seems to lie in the fact that last summer we made a lot of old-fashioned soft soap from the fat of a cow that was killed by our veterinarian. This soap, when used with kerosene and soft water, has given an emulsion that remains permanent. This soap has a large amount of free alkali in it, and takes up rather more kerosene than I have been accustomed to use. I have bought many kinds of cheap soap, but never had any the equal of this for the purpose.

Lice of all sorts are very abundant this year, and those who began to use remedies early will be most successful in combating them.

INQUIRIES ANSWERED

BY SAMUEL B. GREEN.

Effect of the Sun.—A. H. P., Port Walthall, Va. The trouble you refer to is quite probably due to the action of the sun. I think if you will wrap the trunks of the trees with hurlap or other cheap cloth, and keep them so covered until the trees have become well established and have tops large enough to protect the trunks from the sun, that they will stand all right.

Planting Raspberries.—L. F. S., Jerseyville, Ill. Red raspberries and blackberries I prefer to set in the autumn to any other time of the year, but the land should be nicely prepared; the plants set as early as they can be safely moved, and the soil should be firmly packed around the roots. On the approach of

winter, each top should be covered with a spadeful of earth, and a forkful of mulch or manure should be put on top of this. When treated in this way I have always had the best success with fall planting. If the work is to be done with little care, it is better to wait and plant in the spring. Tip layers from black-cap raspberries are very liable to injury if moved in autumn, and are best left in place until spring and then moved; but if grown a season previous they may be safely moved in autumn, if the work is done as described.

Strawberries on Poor Land.—J. M. A., Lovell Center, Me. Poor land can only produce poor strawberries at the best, and you should not expect to raise a profitable crop on such land. It seems to me that your best plan would be to heavily manure a part of your potato land as soon as the crop is gathered, plow it in shallow. Early in spring set it to strawberries. This would give you a smaller area in strawberries, perhaps, than you now intend to plant, but you would probably get a more profitable crop than by the other plan.

Plums Dropping.—W. J. H., Elwood, Ill. The Mincr plum is an unreliable variety at the best in almost all locations that I know of. The trees are hardy enough and flower freely, but frequently fail to set fruit. It is generally believed that this is due to it not receiving congenial pollen. It probably would do better with you if some other varieties of the same family were planted near it, but I should prefer to graft the trees to De Soto, Wyant, Wild Goose or some other good, productive kind. Of course, the fruit would fall if injured by late spring frosts; but I take it, you are sure this is not the cause. Spraying will not help this trouble.

Strawberry Culture.—H. A. K., Rhineland, Wis. For planting in the spring, a strawberry-plant should be the growth from a runner of the preceding year. Such a plant will have white roots, and when moved, starts readily into growth. Old plants have black, rather hard roots, and do not start well unless the conditions are most favorable. These latter should be carefully avoided. The plant from the first runner is generally the strongest, but any other strong, young plants may be safely used. The difference between the pistillate and perfect flower: will be quickly seen if you compare the flowers of the Crescent with those of the Wilson or some other perfect-flowering kind. In the center of each you will see a little, rounded mass which resembles a pin-cushion full of pins. This ripens into the future strawberry. In the Crescent and others that have only the female organs (pistils) well developed, there is a little row of pin-like bodies around the center portion, but they are not tipped with the little pods that tip the same organs in what is called the male plants. In other words, the ring of organs around the center is made up of quite large bodies, while in the pistillate plants they are small and abortive. A little careful examination of the two kinds will show this difference.

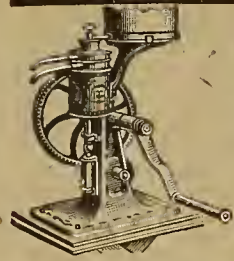
Propagating Apricot, Peach and Pear.—L. C. P., South Bethlehem, Pa. (1) It is doubtful if there is any special noticeable difference between apricots grown on their own roots or those on plum roots. In mild sections, peach roots also are successfully used for this purpose. (2) The Keifer pear is a good, thrifty, strong-growing kind, and seems to be an excellent stock to graft on. (3) The Keifer pear can undoubtedly be layered, but it is an inconvenient and tedious process. Grown in this way, the stocks would be as good as if grown from cuttings, and would make as good or even better trees than if they were budded on some seedling stock. I should prefer Keifer on their own roots, as the latter would be. (4) The peach does best and lives longest when worked on peach if grown in good peach soil and climate. In moist land and heavy soils it does best on plum roots. (5) In order to layer a pear-tree successfully, the branches must be brought onto the ground. In case a tree has been cut off near the ground and a number of sprouts have come up from near the ground, these may easily be bent over and covered with earth. The most practical way, perhaps, is to select young, thrifty trees of small size and bend them to the ground by bending them in the root. This can be done quite easily at almost any time by taking the earth away from the roots on one side. When on the ground the young wood of the preceding year should be bent down and covered, all but their tips, with four or five inches of solid earth. Where the wood is to be covered, a small shaving of bark and wood should be taken off, as the roots start more quickly from such places than from the unbroken bark. This work should be done in May or June. Treated in this way, many of the layers would probably be rooted in one year, while others would require two years to be rooted sufficiently to move. They should be cut off in spring and treated like other tree stocks.

SOUTH ATLANTIC ORCHARD AND FARM NOTES.

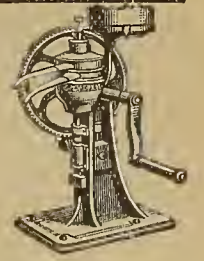
The freeze which occurred in Florida December 28th, was the most disastrous one on record since 1835, and the later one, January 10, 1886. At Jacksonville, the temperature dropped to nineteen degrees above zero. In the north half of the state, not only was the orange crop frozen, but also the young trees, and the oldest trees were badly injured. Those who put their dependence on their orange crop will be much embarrassed financially. The lesson of the freeze is another one in favor of growing a variety of products. Florida is more of a grain-growing state than northerners think. The corn crop of 1894 was a little more than five million bushels. The growing of grain should not be omitted wherever the soil is suitable, even in Florida.

The freeze-up in Florida and along the Gulf coast should not prevent those who had thought of settling there from doing so. Where can so wide a diversity of food crops be grown? Where can so much orchard or field work be done nearly every day in the year? Where can any one go to find a place where one has every month in the year in which to plant, grow and harvest the crops, or where less capital will be required to make a good living and secure a good home? L. C. H., of Lake county, wrote me, November 22d, and said: "Come to Florida and settle near us, and in this delightful climate pass the remainder

HAVE YOU FIVE OR MORE COWS?



If so a "Baby" Cream Separator will earn its cost for you every year. Why continue an inferior system another year at so great a loss? Dairying is now the only profitable feature of Agriculture. Properly conducted it always pays well, and must pay you. You need a Separator, and you need the BEST—the "Baby." All styles and capacities. Prices, \$75. upward. Send for new 1895 Catalogue.



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IRON AND STEEL ROOFING, SIDING, CEILING AND WEATHER BOARDING.

Galvanized Eaves Troughs, Conductor Pipe, Etc. Specially adapted for Farm uses, Stores, Dwellings, Barns, Elevators, etc. Simple, strong, durable, cheap. Any man can put it on. Fire, water and storm proof. Will last a lifetime. Send for factory prices and free catalogue.

PORTER IRON ROOFING CO., FRONT, NEAR VINE STREET, CINCINNATI, OHIO.

of your days in pleasantness. This vicinity is a very desirable trucking section, aside from its immense orange interests."

Now that it is conceded that it is a wise plan to decrease the acreage devoted to cotton culture, it seems to me that, as cotton culture on the nplands has largely diminished the amount of vegetable matter in the soil, that it would be well, for a time at least, to plant such crops for forage, hay or grain as will make the largest growth during the fall, winter and early spring. This is to be done with a view to feeding these crops to stock, so as to return to the fields the fertilizing materials which the cotton crop has persistently taken from them. Or if such nearly matured crops could be plowed under, the yield of both cotton and corn would be increased, and the evil effects of drought would be greatly lessened.

J. W., JR.

ADVERTISING AND FERTILIZING.

The importance of enriching the soil requires no argument. Every farmer knows that he cannot draw money from a bank until he has made a deposit, and also that exhausted land will yield nothing unless it have a deposit of fertilizer to draw upon; again, he does not expect his oxen to serve him at the plow or anywhere else without a liberal ration of grain; if he make the ration less, not only will he plow less, but also the value of his oxen grows less.

But in spite of these self-evident truths, to-day, in this era of progress and enlightenment, there are farmers who attempt to reap where they have not sown; farmers who appear to forget that the earth is like an animal, that must be fed if the owner derive any service or profit from it. Here is a farmer who keeps the year round two horses, twelve cows and several head of swine; he is ambitious and wishes to increase the cultivated area of the farm, bring in a bit of meadow here and add a piece of pasture there, and he does so every year; but his amount of fertilizer is limited by the stock, and to accommodate the increased area, he spreads the manure thinner to accomplish the result.

The plan is fatal to the prosperity at the farm; the earth, like the ox, robbed of its customary ration, shrinks and fails in its work; yearly the farm thus treated grows leaner and produces less. In one case, at least, this method of fertilizing was the direct cause of the abandonment of the farm. The reverse method is the one that leads to success, and is now practiced by all thinking farmers. Let the cultivated area be reduced one half or less, and put all manure on that part. One farmer who had "scratched over" twenty acres suddenly came to his senses, with the help of an institute held in his neighborhood, and reduced his planting area to five acres; then fortune began to smile on him, and he received more from the five acres than from the twenty.

But if the farmer wishes to increase cultivation, he must increase the amount of fertilizer; he must feed the soil. Everyone acquainted with farming, who understands the conditions, must sympathize with the farmer and appreciate his efforts to get on with the least expenditure of money. But there is such a thing as false

DAVIS HAND OR POWER CREAM SEPARATOR

One-third more butter and of higher quality than by other known systems. SAVES MONEY AND LABOR. Sizes from 1 to 1,000 Cows. Pamphlet Mailed Free. Agents Wanted. DAVIS & RANKIN BLDG. AND MFG. CO., Sole Manufacturers, Chicago, Ill.

NO FLIES, VERMIN or SORES on HORSE or COW (1/2 more milk.)

Where **SHOO-FLY** is used. The ORIGINAL STOCK PROTECTOR 1885. Thousands of testimonials from thirty-seven States. BEWARE of followers! Some a greasy paste that gums the hair and clogs the pores, injuring the animal. If your dealer offers a substitute, send 50 cts. and our agent in your State will express one quart. \$1.50 per gallon—i.e. per day. Agent, \$500 month. **SHOO-FLY MFG. CO., PHILADELPHIA.**

THE POOR MAN'S CHANGE

HOMES 100,000 ACRES

Choice Hardwood Farming Lands situated along the line of a new railroad now being constructed in central Wisconsin, and near a through trunk line already constructed, for sale cheap to single purchasers or colonies. Special inducements given to colonies. Long time and low interest. Send for full particulars to NORTHWESTERN LUMBER CO., EAU CLAIRE, WIS.

Mention this paper when you write.

\$100 for a 5-acre farm, covered with wood, in Southern New Jersey; close to railroad; finest markets in the world, especially adapted for small fruits, poultry, vegetables, &c.; high and dry; healthy neighborhood, sold on instalments of \$1 down and \$1 per week, title insured. Send for particulars. D. L. RISLEY, 221 S. 10th St., Philadelphia, Pa.

FARMERS FROM THE NORTH

are getting rich in this fertile county. Why not be among them? For pamphlet write A. J. ROOKS, Sect'y, Somerville, Fayette County, Tenn.

economy; there are farmers who appear to think that putting fertilizer into the soil is like throwing money into the river. They cannot be convinced that an outlay of one hundred dollars in fertilizer may bring not only the hundred dollars back again, but perhaps another hundred with it; they cannot or will not see that fertilizer in the soil is like money in the bank.

To the large and successful merchants of the country must be given the credit of having keen business sense. They count cents, not dollars; and yet they advertise their wares at enormous expense. The outside is incredulous and wonders how such extensive advertising can pay; how a single advertisement costing hundreds of dollars, perhaps a thousand dollars, can yield adequate returns; how a merchant can employ ten or twenty drummers the year round to travel through the country from Dan to Beersheba, and pay them living salaries, and traveling expenses in Pullman cars and in the best hotels.

And what is this drumming and this advertising? Merely fertilizing the business. Without it business would droop and die like a plant deprived of water. In one year one business house spent over \$300,000 in advertising, and this was the fertilizer that made the business jump. Why cannot the farmer copy some of the business methods of the merchant? Let him observe the tobacco grower who may put two hundred dollars' worth of fertilizer into a single acre of land. Does the farmer suppose that the tobacco grower is sowing dollars for fun, just to hear them jingle out of his pocket? If nothing is risked, nothing is gained, is an old saying, but it is true. There is too much farming on the plan of the man who injured his hand just as a field of seed clover was ready to be cut. He could not afford, he said, to hire a man to harvest it, and let it stand and waste. It was easier to lose two dollars than to spend one.

GEORGE APPLETON.

Our Farm.

THE POULTRY YARD.

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

THE PROFIT ON A FLOCK.

THE average profits on large numbers of fowls cannot well be estimated, but if one dollar profit in a year is secured from each hen after paying for all expenses of shelter and food, it will be above the average. Out of this must come the cost of labor, and as it is a very experienced and energetic man who can manage a thousand hens, the labor is a great drawback. It is true that three or four dollars profit per hen is said to be secured with a small flock, but the labor is never charged up in the account, while the table scraps and refuse assist in lessening the cost. With a thousand or more hens the table scraps do not figure very largely, but the labor is constant and must be paid for, to say nothing of the increased risk of loss of fowls by contagious diseases. It is important to have experience. No one should invest too much in poultry who has not before kept fowls in large numbers. To succeed, one should begin with a few hens and gradually increase the number. While so doing there will be an opportunity to study many details, and to learn how to avoid mistakes. Nearly all failures are due to mistakes in the beginning. No one has ever succeeded who began with a very large number. Many large poultry farms have been abandoned because their owners attempted to do business without experience.

FEEDING CHICKS.

Feed chicks at least four times a day, on a clean surface, which may be flat pieces of board or little troughs, and as soon as they seem to be satisfied, remove the surplus. This applies to soft food. Wheat screenings, cracked corn or ground oats may be left where they can have access to them at all times, but not on the ground. The process of feathering and the rapid growth of body demand food suitable for producing bone, muscle and fat. And in thus feeding regularly, bear in mind that bone is composed of lime and phosphoric acid, which form phosphate of lime. Muscle comes from the nitrogenous matter of the food, and the substance (nitrogen) is richest in lean meat, clover and white of eggs and milk (which also contains phosphate). The carbonaceous, or heat-producing, elements are corn, potatoes or other matter rich in starch or oil. Of course, nearly all kinds of food contain, more or less, certain proportions of all these substances, but some contain more of one than of the other, and hence the importance of feeding variety, or the chicks will die and droop of starvation, in the midst of plenty. Always keep fine gravel, pounded (fine) oyster-shells and a few sods of grass for them to pick, when possible.

ONE ACRE IN HENS.

It is a progressive farmer who can succeed in making one acre support a cow, and he is then perfectly satisfied with a profit of \$50 from her. If an acre of land can be made to yield any kind of crop that will pay a profit of \$50, the success attending such a result will be considered worthy of notice. Profit means, of course, all that portion of the gross receipts which remains after the full expenses are paid, and a profit of \$50 an acre is very large. It is easy to figure (on paper) the possibilities of an acre of land, but there are facts abundant to demonstrate that \$50 is but a small sum to derive from one acre of land devoted to poultry. It is rare to find a case where a large flock of poultry has been given the space of one acre that the hens did not pay well, although due credit is not always allowed for the "home" market, which calls for poultry and eggs, accounts not being kept with the family table.

A DISGUSTING PRACTICE.

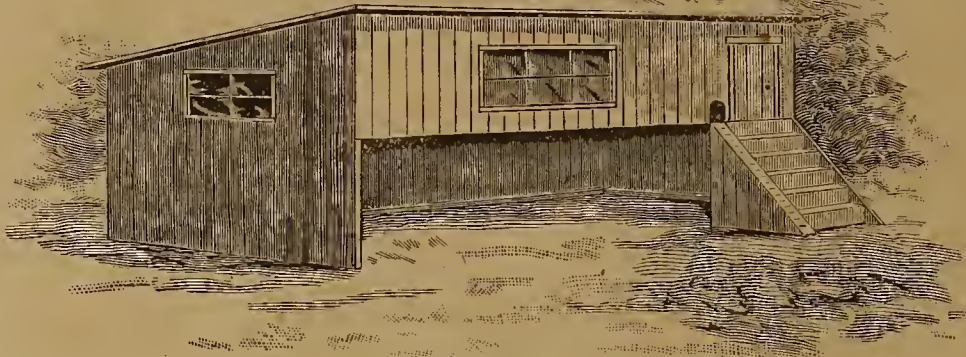
Any one who uses a stale egg for a nest-egg takes a very great risk compared with the advantage gained, if any advantage is known, for the reputation of a very careful person may be damaged for a slight mistake. To sacrifice a reputation for the sake of using a stale egg for the nest, instead of an artificial egg, is mistaken economy. Stale eggs have done more to keep down prices of eggs than all other causes, as they will turn up when least expected in the lot.

LEGHORNS.

The Plymouth Rocks and Wyandottes have yellow legs and skin, are of fair size, and perhaps possess as many good points as any of the breeds, yet they are not equal to some as layers, nor are they the best table fowls. But they are hardy, well adapted to all sections, their combs are not very large, and they have clean legs. The Leghorns have but two strong faults—large combs and small size. The Leghorn is hardy, seems to thrive well in all sections, and though not considered a market fowl, has more breast meat than the Brahmas, Plymouth Rocks or Wyandottes. It is, however, a better table fowl than some breeds of larger size. It lays as many eggs as any other breed, rivaling the Hamburg, and but for the liability of its large comb to freeze, the Leghorn would hold the position of "king of the breeds." It perhaps has more friends, even with the drawbacks mentioned, than any other breed.

A SUMMER AND WINTER HOUSE.

The poultry-house shown has an underneath run, which serves to keep the hens cool in summer and warm in winter, as well as protecting them from sudden storms without the necessity of going into



SUMMER AND WINTER HOUSE.

the roosting-room. In summer the rear of the underneath portion may be of wire, instead of boards, or left open, as required. This house is intended for a flock in confinement, but will answer also for hens on a range, and may be of any size desired, the object here being to give the design only. It will cost a little more than a house that is close to the ground, but its advantages will more than compensate for its cost. The upper portion is intended for roosting and laying, though in summer the hens may lay in boxes in the underneath portion.

DRY EARTH AS A DISINFECTANT.

A good expedient for securing dryness in the coops is the use of dry earth scattered about under the roosts and on the floor. This acts as an absorbent of the moisture, as a disinfectant, and moreover repays all the trouble spent over it by the better preservation of the useful ingredients of the droppings, and the great comfort to the attendant. The utmost cleanliness must be aimed at in order to render this possible, and the buildings must be conveniently arranged for cleaning. If they are too low or cramped, if the perches are badly arranged, and if there are nooks and corners that are difficult to get at, the result will be that the cleaning operation will never be perfectly accomplished, and little heaps of decomposing filth will remain, to the disgust of the attendants and the damage of the health of the fowls. The most powerful aid in preserving cleanliness is the dry earth mentioned above; this should be as often renewed as it becomes well mixed with the droppings. The perches and nests should be whitewashed, and for this purpose they should be movable.

LOW RATES TO COLORADO.

On account of the meeting of the National Educational Association at Denver, Col., July 5th to 12th, 1895, the North-Western Line will sell excursion tickets to Denver, Pueblo, Colorado Springs and Manitou at a rate not to exceed one fare for the round trip (with \$2.00 added for membership fee). The time limit of these tickets will be extremely liberal, and an excellent opportunity will be afforded for a summer sojourn in the "Rockies," or enjoyable side trips to the Black Hills, Yellowstone National Park or the Pacific Coast. For full information apply to agents of connecting lines, or address W. B. Kniskern, General Passenger and Ticket Agent Chicago & North-Western R'y, Chicago, Ill.; C. Traver, T. P. A., Marine National Bank Building, Pittsburg, Pa.; F. M. Snavely, T. P. A., 151 St. Clair street, Cleveland, Ohio; W. H. Guerin, Michigan Passenger Agent, 67 Woodward avenue, Detroit, Mich.; A. H. Waggener, T. P. A., 7 Jackson place, Indianapolis, Ind.

WATER-FOUNTAINS.

Use troughs or fountains that can be easily cleaned. Some troughs become slimy, though the water appears clear. To clean such troughs, use a broom and soap-suds, rinsing with clear water. If this is done once a week, and the troughs filled with fresh water every morning, the hens will be amply supplied with all the fresh water needed. For ducks, the troughs should have slats of lath across the top, to prevent them from making the water filthy.

STIMULANTS IN FOOD.

There is no advantage in stimulating hens to lay, unless the food is of a varied kind. The best stimulant is the food, not the quantity, but the kind. A hen may be well fed and yet lack the materials required to produce eggs. For this reason the food should be as varied as possible, one of the best being plenty of green food, if the hens are not on the range.

BURN THE REFUSE.

Always burn the refuse materials taken from the nests. The real breeding-places for lice are the nests, which are kept at an even temperature by sitting hens, and the hens hatch out more lice than chicks. All

INQUIRIES ANSWERED.

Hatching Brahmas.—A. G. S., Harrisburg, Pa., writes: "Will it be advisable to hatch Light Brahmas as late as July?"

REPLY:—We believe it would not pay to do so, as the large breeds require a long time to mature, and July is too late. If desired for late market chicks, to be sold in November, they may be hatched in July.

Lost the Use of their Legs.—Mrs. A. K., Scotch Ridge, Ohio, writes: "I have some hens that have lost the use of their legs. They eat, look well, and are otherwise thrifty. They are not confined, but range over the farm."

REPLY:—The hens are no doubt in a fat condition. The remedy is to remove the males from the flock, and allow no food other than what they secure on the range.

Duck Eggs, Hatching.—C., Camden Place, Minn., writes: "Will duck eggs hatch if the ducks have no water other than that for drinking purposes? Please answer by mail."

REPLY:—Eggs from ducks that are not within access to ponds hatch as well as when the ducks have liberty on water. You gave no name (only initials), hence answer could not be sent by mail.

Foot Disease.—R. M. R., Robe, Washington, writes: "My hens have some kind of foot disease. The toes swell and get sore, and the birds become very lame."

REPLY:—Probably due to jumping from a high roost, or it may be caused by walking in wood ashes, lime, or some irritating substance. Remove the roosts and keep them on straw at night, anointing the feet with crude petroleum.

Soft-shell Eggs.—C. W. B. N., Brooklyn Corner, N. Y., writes: "I have a pair of Pekin ducks one year old. When the duck first began to lay, the eggs were soft-shelled and badly shaped. Since then, about half of the eggs laid are soft-shelled. The ducks are not confined, but allowed to run at large. Is there any remedy?"

REPLY:—They are overfed, and are too fat. It is always an indication that birds are too fat when eggs have soft shells. The remedy is to reduce the food.

Lice.—Mrs. I. C., Amsterdam, Mo., writes: "How can I rid my hen-house of lice? Have scalded it with concentrated lye, alum-water and salt, whitewashed with carbolic acid, etc., as well as kerosene the roosts two or three times a year. Have been fighting them for four years."

REPLY:—First, close the house tightly, and burn four pounds of sulphur on a red-hot sheet-iron, until dense fumes fill it. Keep the house closed an hour, then drench it thoroughly with kerosene emulsion three times a week. Repeat both every week, and the lice will be destroyed.

Making Tracks

The farmer who comes from the barn, from the field, from the stock-yard, can't help making tracks, and his wife must make the best of it. The way to do this is to wash them away with

GOLD DUST WASHING POWDER.

This famous preparation will make the steps, the porch, and the kitchen floor as white as it was when the house was built. It makes everything clean. The grocer will sell you a large package for 25 cents.

GOLD DUST WASHING POWDER has an additional value to the farmer for destroying insects. Send us your name and address, and we will mail you an important booklet containing recipes for making kerosene emulsions, for spraying crops and trees and livestock.

THE N. K. FAIRBANK COMPANY,
CHICAGO. ST. LOUIS. NEW YORK.
BOSTON. PHILADELPHIA.

J. D. SOUDER, JR., Telford, Montgomery Co., Pa. 28 varieties of high scoring poultry stock for sale. Eggs at \$1.00 per 15. Fine catalogue free.

SUNNYSIDE POULTRY FARM Leghorns, Wyandottes, B. P. Rocks, \$1.00 per 13; Minorcas and Red Caps, \$2.00 per 13. Circular. H. T. ANDERSON & CO., Natrona, Pa.

TRY U. S. We sell your Poultry, Veals, Fruits and all produce at highest prices. DAILY RETURNS. For stencils, prices and references, write F. I. SAGE & SONS, 183 Reade St., N. Y.

MANN'S BONE CUTTER trial. Try it before you pay for it. Nothing on earth will **MAKE HENS LAY** Like Green Cut Bone. Ill. catlg. free if you name this paper. F. W. MANN CO., MILFORD, MASS.



No. 1.—"I'll bet my hat there won't be any chickens stole off that roost to-night with Caesar on guard."

Our Fireside.

A BOY'S BATTLE.

BY WILL ALLEN DROMGOOLE.
CHAPTER IV.
VICTORY.

THE weeks that followed the arrest of Uncle Jack passed like a nightmare to Andrew. The postponing of his confession had made the task such a difficult one that he had quite made up his mind that it was impossible ever to make the confession now. The honest impulse to go at once to his father with the story of the accident would have prevented much anxious regret and suffering. But the result of his silence had been so much more terrible than anything he had imagined could be that his fear had now almost crushed all other feelings in his heart.

Uncle Jack had been in jail a month, and not once had Andrew been to see him. True, he had sent food and other comforts, but he sent them by Mose or some one else.

One afternoon in November, when Mose returned from one of these visits to the prisoner, he beckoned Andrew to come to him out under the leafless mulberries in the farm-yard.

"Unc' Jack sent me ter see you, sah," said Mose; "en he say I wuz ter tell you he uz mighty well en hearty; en' dat he hope you drap in ter see him some dese days. He say he wuz jist p'intedly hongry ter see yo' face, en he say dey ain' notbin' else 'pon top o' 'dis earth worryin' oh him, 'cept jist hongryin' ter see de young marster. He say he jist settin' dar in de jail parlor eatin' ole Mis' good things en laffin' hisse'f mos' ter death. He say dey ain' nothin' trouble him 'tall 'cept de 'possums eatin' all de 'siimons off'n de trees en nobody ter stop hit. Dat's all trouble him, widout it he dat his friends done mostly furgit him, en don't come ter see him none. Dat's all he keers about, aldo de gran' jury done gone indict him, en de trial begins ter-morrer. He say he ain' werryin' about dat none ef so only his ole friends

ud come set wid him a little, en tell him how de 'possums en de coons makin' out while he am in de jail. Dat's what he tol' me ter tell you. I tell him he might know dat nice white boy ain' gwine be comin' dar ter de jail; but he say, 'Git 'long dar, uigger, you duuno what you talkin' 'bout.' Sez he, 'Ain' all de niggers on de place heen here? You reckon de young marster ain' got ez unuch disrespec' fur me ez de field-hands got? You reckon he done furgit all dem traps we-all useter make, en de pa'tridges, we ketched, en de coons en things? You g'long tell de little marster what I say.' So I jist lit out ter come tell you, sah."

It did not occur to Andrew that Mose might have been exercising his imagination somewhat in his elaboration of the simple message that Uncle Jack had intrusted to him.

Neither did it occur to Mose that Andrew read more than a simple desire to see him in that message. What a coward he had been; what a coward he still was. He wondered if Uncle Jack had told Mose; he was almost afraid of Mose now; his conscience had made him suspicious of everyone. Mose had no sooner delivered the message than Andrew turned upon his heel and left him standing there under the naked mulberry-trees, wondering as to the result of the interview.

The result was plain enough the next morning when Andrew saddled his horse and rode off to town before the rest of the family were fairly through with their breakfast.

"I never saw such a change come over anybody as has come over Andrew since this thing occurred," said Mr. Pearson, when Andrew rode down the lane. "It will almost kill him if anything serious comes of the trial."

"Well, you've got Uncle Jack a good lawyer, and that's about all we can do," said his wife, "except to testify as to good character. It does beat my time how he got mixed up in such a mess. He didn't kill Pete; I feel most certain of that."

"And I," said the farmer, "though I doubt the jury will see it as we do. The evidence is damaging, to say the least of it. I don't think Andrew fully realizes the danger to Jack yet. I am glad he has gone to see him. Maybe the visit will do him good; he has been so terribly depressed since Pete's death."

It seemed to Andrew the woods had never been so beautiful as they appeared that morning in November as he rode through them; "Perhaps for the last time," he told himself. For he was again battling with the desire to do that which was right, and just, and manly.

The haze of the Indian summer still lingered upon forest and stream. And where the gray limestone bluffs fell back at the ford, he noticed how the sunlight stretched in a broad, golden path across Stone river, reaching from bank to bank, and disappearing at last in the shadow of the old red "forts" that mark where a great battle was once fought. The wild grapes were goue, but huddled

the farms would be crowding the stores, each with his bag of scaly-barks or walnuts, which they wished to exchange for something in the way of dry-goods—a ribbon, a gay-bordered handkerchief, or a dress pattern of some cheap, bright material. They never grew too old or too poor to lose the sunshine and the bright colors. But Andrew was accustomed to these things,

Hit's more better ter be de coward in de body den it am ter be de coward in de spirit; heaps en heaps mo' better. De braves' solger I see endurin' ob de war wuz afeard o' ghostes."

Andrew had been so positive that Uncle Jack knew all about the shooting that he accepted this as a reproof. He understood well enough what it was the old man was trying in his ignorant way to express. He understood the difference between the moral and the physical coward.

"I knows you ain' no coward;" the words cut him like a lash. But he couldn't tell; he could not face the result of a confession. Still, he could never feel safe while there was a human living being who knew his secret.

"Uncle Jack," he said, after a moment's silence, "do you know who shot Yellow Pete?"

"Who, me?"

"Yes; do you know who it was fired the shot that killed him?"

"Dat killed Pete?"

Andrew nodded; it was useless to attempt to hurry Uncle Jack.

"Well, honey," said he, "I hab been thinkin' 'bout hit some, en I low it might be dis un, en den again it might be some udder one. Dis am de exclusion I allus comes ter. One day I sez ter myse'f hit wuz Mose, maybe; den agin I say 'twant no such a thing; hit wuz des one ob de little nigger chillens projeckin' 'roun' wid a gun, en not aimin' ter hurt nobody."

Andrew breathed more freely; Uncle Jack did not know; he was safe; he need not tell; but he resolved to do everything possible to help clear Uncle Jack.

"I must go uow," said he; "but I'll come again, often."

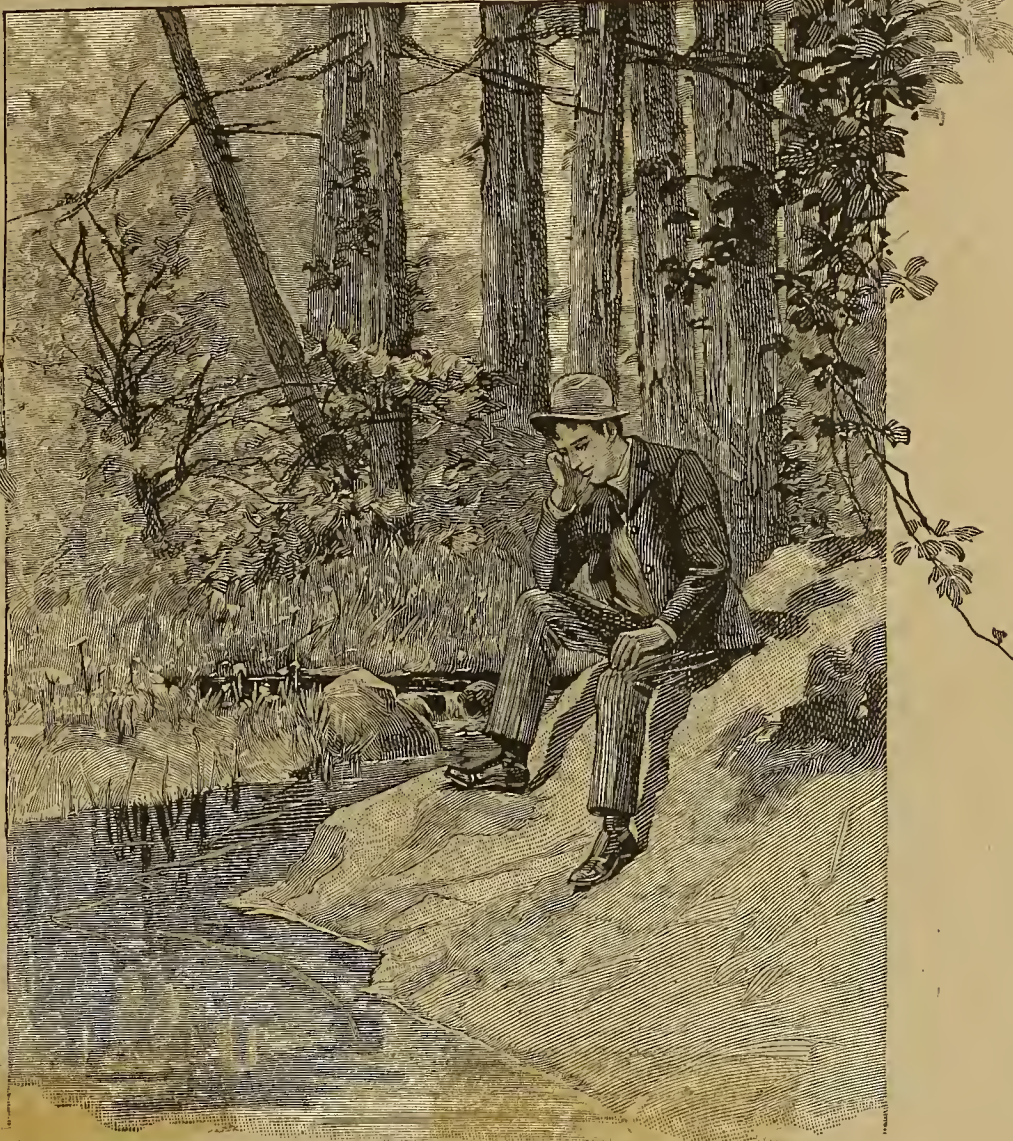
"So do," was the reply; "so do. I knowed you'd come ter-day, beca'se I allus say dat boy ain' feared ter come ter de jail; he's a brave boy, he am. He—"

"Uncle Jack, have you got everything you want?"

"Sholy, sholy. Miss Jiny, she done sent me de conjure-bag, en dis'mawnin' de preacher ob de gospil, he come in here en read me a piece out' de Bible. En hit say, 'In de time 'oh trouble he shall hide me.' Little marster—"

The care-worn face became serious; for the first time Andrew felt that in spite of gay spirits and careless confidence Uncle Jack had suffered.

"De ole nigger kin die if he as ter die. He ain' feard, beca'se de Book say, 'In de time ob trouble he shall hide me.' He's jist gwine long en trust in de Lord ter hide him."



GAVE HIMSELF UP TO MEDITATION.

close to the roots of the trees in the dark, moist places the Indian-pipers were blooming—those little, white ghost-flowers that come when the summer things have perished.

Near the base of a gnarled old oak he saw where a coon had made a hole; at another time he would probably have dismantled, and crumming a handful of leaves into the hole, would have set fire to them and smoked the coon out. But he had no heart for such sport now. He wondered if he should ever care for sport of any kind again. Not unless he confessed that it was he who shot Yellow Pete; he felt sure of that much. And if he did confess, what then? If they did not hang him, or send him to prison—as he felt sure they must—he would be called a coward until the day he died. He saw but little difference in the two punishments. A coward! "I'd rather die," he whispered, and set his teeth in his lips, as if afraid the truth would slip without his knowledge.

Surely, he thought, never boy was called upon to fight so fierce a battle, and alone. He glanced at the red forts, and the bare, sterile old battle-field beyond them; he was fighting a battle such as no soldier upon that once bloody old field had ever fought. Yet there were brave men fell there—men who died for the right. The old Stone river battle-field had recognized no cowards among her peerless dead.

He knew the story by heart, of course; and the place, the time and the circumstances impressed him so forcibly that he dropped his head upon the saddle-bow and hurst into tears.

"I can't," he sobbed. "Oh, I cannot tell; and I cannot be silent! If I had only told at the first; but now—oh! what have I done? What shall I do?"

His eyes were still red and swollen when he rode into the public square and hitched his horse, according to custom, to the iron fence surrounding the court-house. There were only a few horses there yet, but Andrew knew that before the heads of the big four-faced town-clock in the court-house cupola should point to twelve there would not be hitching-room at that fence. For it was "court day," and all the countryside would come to town. The square would be crowded with wagons, and the new, unginced cotton, fresh from the southern fields, would change hands so often that if it could think at all it must be sorely puzzled to know just who its proper owner was when at last it was hauled away to the gin. The negroes from

and so gave little thought to them. He crossed to his uncle's hardware store, but the clerk informed him that Mr. Pearson had not come down town yet, so he mustered his courage to the sticking-place and walked down to the jail and asked to see Uncle Jack.

It was a terrible place, with all those sin-marked faces peering at him through the iron gratings of the cells, as he walked down the hall between them.

Some of them were laughing and passing jokes. Andrew wondered how they could ever laugh again after hearing the great keys turn in the massive locks that held them back from freedom and friends and—worse than all these—from respectability. One of the coarsest, most repulsive of them all, thrust his hand through the little square in the door and called to him as he went by:

"Hello, sonny, does your mama know you're in? What's the kid gone and done to git hisse'f locked up?"

"Locked up!" And he might be—if he told. But he would not tell, never, never, never! He would suffer anything rather than risk being put in there. He was quite determined upon it. The next moment the jailer turned the key in the lock, and he was in Uncle Jack's cell. Then the key turned in the door again, and he was alone with the prisoner.

"Dar now," said the familiar voice, "I wuz jist a-speculatin' you'd git here dis mawnin';" and then, unconscious of any discrepancy between the statements, he added: "I sholy am s'prised ter see you, now; I sholy am."

They had a long talk together, for some time foreign to the crime with which the prisoner stood charged—the woods, the traps they had set the preceding winter, the ripening nuts, and the squirrels that were "jist cetchin' 'bout dis time ter git deys'eves made inter pie."

Among other things, the prisoner was reminded of his own health, and of a dangerous illness through which he had once passed. When he said with sudden emphasis, "You ain' no coward, son," Andrew started and turned pale. But the next words quite reassured him. "I ain' furgit de night you rid seben miles in de dark, en hit a-stormin', ter fetch a doctor fur a po' old sick en no-count nigger. I ain' got much reasonment, but I say ter myse'f, dat little boy ain' no coward. Dat's heen fo' year ago, en you's growed mightily since den; but de brave hit's been a-growin', too, I reckon, all dis time. But dey's two kinds o' brave, son; one's de brave ob de body, en one's de brave ob de spirit.

A HARD-WORKING WOMAN



—sooner or later suffers from backache, nervous, worn-out feelings, or a sense of weight in the abdomen, dragging down sensations and dizziness. It will all come to an end with Dr. Pierce's Favorite Prescription for it's woman's special tonic and nerve; it restores her strength, regulates and pro-

motes all the natural functions and makes a new woman of her: Uterine debility, irregularity and inflammation are most often the cause of the extreme nervousness and irritability of some women—the medicine to cure it is the "Prescription" of Dr. Pierce. All the aches, pains and weaknesses of womanhood vanish where it is faithfully employed. Dr. Pierce's Favorite Prescription is therefore just the medicine for young girls just entering womanhood and for women at the critical "change of life."

DR. PIERCE'S FAVORITE PRESCRIPTION

CURBS THE WORST CASES.

Mr. HOMER CLARK, of No. 208 West 3d Street, Sioux City, Ia., writes: "My wife was troubled with female weakness, and ulcers of the uterus. She had been doctoring with every doctor of any good reputation, and had spent lots of money in hospitals, but to no purpose. She continued to get worse. She was greatly prejudiced against patent medicines, but as a last resort we tried a bottle of Dr. Pierce's Favorite Prescription. We had seen some of your advertisements, and Mr. Cummings, a west-side druggist, advised us to try a bottle. We tried it with the following results: The first bottle did her so much good that we bought another, and have continued until she has been cured."



MRS. CLARK.

"You shall not! You shall not die!" cried Andrew, his tears flowing fast. "This thing shall be stopped. My father will see to it. I am going now to find him at once."

"Dar," said Uncle Jack, "ain' I allus say you warn't no coward? Sholy, sholy."

Andrew went down the jail steps at a bound, into the sunlight and fresh, crisp, free air. He walked briskly away in the direction of the court-house. Suddenly he turned, retracing his steps, passed the jail and walked on to a point where the town creek crossed the outskirts of the corporation, through a line of rugged old trees and gray limestone rocks.

Andrew seated himself upon a flat, jagged rock that projected into the water, and gave himself up to meditation. This was the last struggle he meant to make; he intended to settle the matter then and there forever. He felt, so far as detection was concerned, that he was safe—if it were possible to be safe. Only himself would ever know, unless he chose to tell. Yet—and his face flushed—everybody must know that he was a coward; it would be stamped upon his countenance forever, he fancied. If not upon his face, then surely upon his heart, where the eye of God must forever look upon it.

He was so terribly afraid of that which he had done; it was a fearful thing to take the life of another. Yet the good God knew that he was innocent of any intent to harm poor Pete. He *must* know, surely.

"God knows; God knows; he knows, no matter what may happen," said he softly, and the thought brought him unspeakable peace. Strange he had not thought of God before. But then he had been so frightened, so shocked at first, and after that the dread of being called a coward had driven all other thoughts from his mind.

It was Uncle Jack had reminded him; his simple faith, his quiet resignation when he stated that his trust had passed from man to God, had touched him, appealed to him more than any argument or any false idea of courage could ever have done.

"The truly brave," said he, "is he who dares to do right, when right is hard, and dangerous, and full of pain. And for me it *is* all of these, and might be degrading, only that is something right can never be."

He sat there for two hours, fighting his battle alone. Once the ringing of the court-house bell broke in upon his thoughts; it was the hour set for the trial. He stuffed his fingers into his ears and rested his face upon his palms, his elbows upon his knees.

"It might be me they are going to try if they knew," said he to the gray rocks about him. "And perhaps they may try me yet—if I tell. Perhaps they may hang me."

"You have nothing to do with that," said conscience. "You have only to do right so far as you know *is* right. God will do the rest; results belong to him."

"In the time of trouble he will hide me," Uncle Jack's text, recurred to him. Why could not he do as Uncle Jack had done—make the text his own, and trust in the good Lord to hide him also?

He rose, and turned his face toward the town, where the tall old court-house, facing the four points of the compass, was already crowded with spectators. He could see the cupola, and the hands of the clock pointing to eleven.

"I must," he kept repeating. Because it is right, not because I am afraid it will be found out, for I am no longer afraid of that. But because it is right, just for that reason and no other. They may shame me for a coward, and blame me for keeping silent so long, or they may hang me for a murderer, but I must do right."

Once only he faltered; he was passing at the time a poor little cottage, the door of which opened upon the pavement. It was the home of an obscure, cheap little dress-maker, and through the wide-open door he could see the young seamstress at her machine. Over the door behind her, embroidered upon a perforated cardboard, in gay wools—red, yellow and purple—hung a little motto, "Do right, and fear not."

It seemed to him as though it had been placed there for his own especial help. It never occurred to him that the little cheap sewing-woman had her battles and temptations, too.

"Do right, and fear not." After all, nothing could be worse than living a lie, and allowing another to live in the shadow of it, possibly to die in the shadow of it.

"Do right, and fear not." He repeated the words softly, as he walked on, rapidly now, and he varied the repetition with Uncle Jack's text, "In the time of trouble he will hide me." In his excitement he confounded the two, and caught himself saying, "Fear not in time of trouble; do right, and he will hide me." It wasn't such a sad blunder, after all, so he continued saying it until he reached the court-house fence and began to search among the horses there for his father's bay mare.

He made the entire circuit, but the bay was not there. He was puzzled, annoyed. It could not be possible that his father had failed to attend court, that day of all days. He must find him, though it should be necessary to ride back to the farm in search of him. His fear had left him now entirely, having fully resolved to that which was right, accepting the consequences as bravely as he

might. He was surprised to find his courage come back to him, his burden grow lighter.

He went into the court-house to look for his father there. At the door he met two men coming out. One of them carried a bundle of papers under his arm, and Andrew recognized him as the prosecuting attorney.

"Had a jury in an hour," he was saying to his companion. "It will require very little time to dispose of the case; there is no defense worth mentioning."

Andrew heard the remark, and turning quickly, left the court-house.

"I will find my uncle," said he, softly. "He will help me, and will know what to do as well as father."

When he entered the store there was no one there but the merchant and his bookkeeper. The former was standing by the desk with his hand slowly moving down the open page of the ledger, searching for an entry made some time back.

"Uncle James," said Andrew, "let me speak with you in private a moment."

The merchant replied without looking up from the page:

"In a moment, Andrew; I am busy just now."

Andrew remembered that several times he had been as near confession as this, and had been put aside, and thus the impulse had passed. True, he was acting upon impulse then, and this was strong, sure resolution. Still, he determined to run no risk. He laid his hand upon his uncle's arm.

"I must speak to you at once, *now*, unless you can find my father for me."

The merchant glanced at his nephew's face, and instantly closed the ledger.

"Come in here," said he, and led the way to his private office, closing the door behind them.

In half an hour he came out, alone. His face wore an anxious expression, and his teeth were set tightly into his lower lip, as of one perplexed, lost in thought. He locked the door of the private room, putting the key into his pocket, and taking his hat from the rack, hastily crossed the square to the court-house.

Court had just adjourned for the noon recess. The deputy sheriff was leaving the building with his prisoner by one door when Mr. Pearson entered by another.

Sitting by a table near the witness-stand, gathering his papers together, he found the lawyer his brother had engaged to defend Uncle Jack.

He stepped forward and touched him on the shoulder.

"I want you to come with me, Mr. Lenton," said he, "I have some important testimony hearing upon your case."

A moment later they entered the store together. The merchant opened the door of the private office, and said:

"Go in there. I want that boy to tell his own story, just as he told it to me."

Again the door closed, and Andrew was alone with the attorney.

[To be continued.]

THE DAKOTA HOT SPRINGS.

The Hot Springs of Arkansas have long been deservedly popular, for the reason that there has been no other place that has filled the requirements of both a health and a pleasure resort. This state of affairs has changed. The Hot Springs of South Dakota have, in recent years, been thrown open to the people, and because of their delightful situation and great curative qualities, are becoming more popular every day. Situated as this resort is, in the famous Black Hills, in the midst of beautiful mountain scenery, possessing that peculiar balsamic atmosphere which is in itself health giving, with waters that are pronounced by experts equal if not superior to those of any other mineral springs in the world, it will soon outrank any other like resort.

The hotel accommodations are of the best—hostelries with all the modern improvements and conveniences. The Evans Hotel, built of pink sandstone, with steam heat, electric lights, and every room an outside one, is easily the best-conducted house between Chicago and Denver. Fine bath-houses are connected with the best hotels. The rates of all the hotels are very reasonable. The surrounding country is more than picturesque—it is wonderful. The marvelous "Wind Cave;" the falls of Fall River; Battle Mountain, the old Indian battle-ground; Deadwood and the gold fields, and the famous Bad Lands are all within driving distance. The mammoth plunge bath at the Springs is noted as being one of the largest natatoriums in the world. So healthful are the surroundings, and so many the conveniences of this "Carlsbad of America," that it is rapidly becoming the "Mecca," not only for invalids, but for pleasure-seekers as well. The "Burlington Route" reaches there in a day and a half from St. Louis. Pullman sleepers and free chair cars on train No. 15 run to Lincoln, and from Lincoln free chair cars and sleepers run through to the Springs.

For further information, call on any "Burlington Route" Agent, or address D. O. Ives, G. P. and T. A., St. Louis, Mo.

Two women in Baker county, Oregon, own silver mines, and are now running them in person. They do not actually handle the shovels and work the dirt, but they superintend the working of their property, and while they admit the business has rough sides for a woman, they are making money and propose to hold on.

VINDICATION.

Truth cannot die! She may, for years,
Be trampled on by Slander's feet;
Lies buried in a sea of tears,
And wear the garb of base deceit:
Yet, she will rise—however deep
The sun may dip his burning brow
In occidental seas, he'll sweep
The mist again from Orient's brow.

Truth cannot die! Cold prison walls
May shut her in from air and light;
And none may heed her plaintive calls
For trial at the bar of Right:
Yet, she will triumph—Virtue's tears,
Tho' swallowed up by thirsty sand,
Will undermine the massive piers,
And snap the belts like giant's hand.

Truth cannot die! Her heart may sheathe
Each arrow sped from Envy's bow;
And, helpless, mocking hands may wreathe
Her brow with cypress steeped in woe;
Yet, she will live—the grain of corn
Lies dormant in old winter's womb,
But, in the lap of spring, 'tis born,
Adorned with crown of gorgeous bloom.

Truth cannot die! In darkness tomb
She may, for centuries, sleep on;
While twilight deepens into gloom,
And Hope, despairing, cry, "She's gone."
Yet, she'll awake, some Easter morn,
With armor bright, and gleaming sword;
She *must* prevail—Jehovah's throne
Is resting on her plighted word.

REAL WHALEBONE A RARITY.

A little thread and needle shop in Sixth avenue has recently displayed in one of the show windows a large slab of a now exceedingly rare substance. It is labeled with the words, "Real whalebone."

It is only a short time ago, as history runs—twenty, perhaps not more than ten years—that a display of "whalebone" in a shop which makes a specialty of thread and needles, corset-covers and minor articles for a woman's toilet, would be regarded as an absurdity.

"Real whalebone, forsooth!" my lady would have said. "Well, why not? Where else should we look for whalebone but in just such a shop as this?" And, indeed, it was true. No one thought of false whalebone then, if they thought of the substance at all. How the times have changed! Whalebone has almost disappeared from commerce. Not because a substitute has been found for it, for that is not the case; not because the women-folks have no longer any occasion to use pliable corsets, for as long as they will wear such wretched things they will prefer whalebone.

The scarcity of whalebone is due to several contributing causes. Since the advent of petroleum, whaling for oil is no longer profitable, and the original whalers cruised both for bone and oil. The substances were secured from two different species of whales. The whalers sought oil first, and hunted for bone on the "outside." Now there is no incentive to seek oil at all, and a whaling voyage for bone alone is not a particularly profitable business, even though the price of the substance, owing to the scarcity of supply, has gone up forty-fold.

In addition to the meagerness of the profit, the right, or bone-producing, whales have become very timid of late. They used to be found in great abundance off the southern shores of Greenland and Alaska. The advent of the bomb harpoon has made them timid, and they are more difficult to locate than formerly. That this is true, it is only necessary to state that several whaling-ships last year captured but one for their entire season's take of whales, while some were entirely unrewarded. A catch of five whales yields a handsome profit for the venture by any one ship, and it is said that one will pay expenses.

And while the whales are seeking colder water and higher latitudes, men of an inventive turn throughout the world are busy racking their brains for some substitute for the whalebone. As yet they have not found it, although they have tried celluloid, finely split rattan, various metals and numerous other substances. Nothing as yet hit upon possesses at once the lightness of weight, elasticity and tenacity of the real article.

Unless the men with ideas succeed in finding the substitute, no one can foretell what future generations of gentleman drivers will do for a good whip; and alas! what will woman-kind not suffer for a comfortable corset?—*New York Herald.*

THE MENU OF MANKIND.

Nature has provided a vast, curious and interesting bill of fare for mankind at this great table of the earth. The elements that contribute to it come from all seas, lands, climates, atmospheres; and they come swimming, creeping, flying, climbing. The ogre man, going about seeking what he may devour, devours almost everything he sees; he does not care whether it comes out of the depths of the ocean, the ground or the encompassing sky. The only question he asks is, "Is it good for me to eat?" That answered favorably, he opens his mouth and swallows; neither queer and ugly shape nor repulsive color will make him shrink. In his long experience of eating he has learned that the taste of some things is not pleasant, that some make sick, and some kill; these he lets alone; the rest he eats.

There is a Greek myth about some giant who ate the earth. Man is that giant. Man has been defined as "an omnivorous biped who wears breeches." This is not in its

entirety a true definition, for all men do not wear breeches. But the first part is almost true, and relatively to other creatures it is quite true. Other creatures confine themselves to comparatively simple fare; an ox wants only grass and corn; a lion wants only flesh of certain kinds; but man takes in the whole range of the earth's products, in some of its species.

Nature has arranged foods for her favorite, man, to whom she has given so great an appetite, in what may be called natural courses. As we sit down to table with mankind, we will take a glance at the whole bill of fare. At the top of the list are the mollusks and crustaceans, those skeletonless creatures, whose tender, delicate substance melts in the mouth with so delicious a flavor. Most famous of these, used from remote times by savage and civilized peoples, whose shell-heaps remain in evidence, is the oyster, native to all temperate seas, but found in greatest perfection along the coasts of Europe and the Atlantic coasts of North America. The oyster did not have to await the appreciation of the cultivated epicure, but won his way into the affections and stomach of the primitive man, who, as Lang elegantly puts it, "dwelt in a cave by the seas, and lived upon oysters and toes."—*Calvin Dill Wilson, in May Lippincott's.*

THE NECESSITY OF COMPOSURE.

One thing that, if not a necessity, is at least conducive to comfortable living, is hardly appreciated even by those who most need it. This is the need of having some time each day entirely alone. It is impossible to live comfortably without composure of mind, and there is no way of securing it so surely as to spend a short time each day (and a long time is even better) in silence and free from interruptions. It is soothing to tired nerves, and strengthening to a tired mind. The person who does not like to be alone, who does not even strongly desire to be alone once in awhile, is already on the highroad toward ill-health. It is the only way to have relief from the confusion of always being in some one's presence, which will, sooner or later, either affect the nerves or weaken the mind.

Wherever or however you live, then, see to it that you have at least one hour out of every twenty-four that you can call your own. Some busy people may at first think this is impossible, but we rarely find any one who does not waste more than this every day, and who is not the worse off for the waste. The very act of taking this hour strengthens the will, and adds that much to the comfort of living, since a weak-willed person is at the mercy of everything and every person that encroaches upon his rights, and not the least of these is the right to live a healthy, comfortable life.—*Demorest's Magazine.*

THE TOOTHPICK INDUSTRY.

Insignificant articles like the toothpick represent the investment of millions of capital, the employment of skilled labor, utilization of the latest inventions, the consumption of vast quantities of wood, and the operation of a long line of complex activities. These small articles play an important part in the economies of all civilized nations. To stop at once the manufacture of toys and all not really needful articles in these nations would be to put a stop to a large part of the working and producing forces that constitute the origin of civilization. Some European nations live mainly by their work on articles that are really only mere toys and playthings. In the United States we are rapidly adding to our productions all the wares that find favor abroad, while we have originated scores of novelties in the amusement line that are being sold and imitated abroad. There is in humanity a chord that responds to the touch of frivolity, adds the *American Wood Worker*, and that chord has enabled the inventors of ingenious nothings to coin fortunes out of their trifles.

The great wealth, either of the Mormon church or of the individuals at its head, has been again demonstrated by the recent investment of \$10,000,000 by the "First Presidency" in a new corporation called the Utah Company. This new company is to operate coal-mines, a railroad, a bathing beach and pleasure resort at the Great Salt Lake and build, equip and operate telegraph and telephone lines. This is purely a church scheme, in which Gentiles have no part, and is, like the Zion Co-operative Company, to be managed to add to the wealth of the church.

There is one perception which a horse possesses to which little attention has been paid, and that is the power of scent. With some horses it is acute, as with the dog; and for the benefit of those who drive at night, such as physicians and others, this knowledge is invaluable. Never check your horse at night, but give him a free head, and you may rest assured that he will never get off the road and will carry you safely and expeditiously.

The new academy at Athens is built of marble from the same quarries which furnished the marble for the Parthenon, and its sculptures are brilliantly decorated in red, blue and gold. This might be considered barbaric if it were not classical, but since the discoveries made in excavating at Athens within the last twenty years, it is no longer possible to doubt that the ancient Greeks often painted their choicest marbles in the most gaudy colors.

THE ATMOSPHERE OF MARS.

Amid the seemingly countless stars that on a clear night spangle the vast dome overhead, there appeared last autumn to be a new-comer, a very large and ruddy one, that rose at sunset through the haze about the eastern horizon. That star was the planet Mars, so conspicuous when in such position as often to be taken for a portent. Large as he then looked, however, he is in truth but a secondary planet travelling around a secondary sun; but his interest for us is out of all proportion to his actual size or his relative importance in the cosmos. For that sun is our own; and that planet is, with the exception of the moon, our next to nearest neighbor in space, Venus alone ever approaching us closer. From him, therefore, of all the heavenly bodies, may we expect first to learn something beyond celestial mechanics, beyond even celestial chemistry; something in answer to the mute query that man instinctively makes as he gazes at the stars, whether there be life in worlds other than his own.

Hitherto the question has received no affirmative reply, although the trend of all latter-day investigation has been to such affirmation; for science has been demonstrating more and more clearly the essential oneness of the universe. Matter proves to be common property. We have learned that the very same substances with which we are familiar on this our earth, iron, magnesium, calcium, and the rest, are present in the far-off stars that strew the depths of space. Nothing new under the sun! Indeed, there is nothing new above it but ever-varying detail.

So much for matter. As for mind beyond the confines of our tiny globe, modestly backed by a probability little short of demonstration, forbids the thought that we are the sole thinkers in this great universe.

That we are the only minds in space it takes indeed a very small mind to fancy. Our relative insignificance commonly escapes us. If we reduce the universe to a scale on which we can conceive it, that on which the earth shall be represented by a good-sized pea, with a grain of mustard-seed, the moon, circling about it at a distance of seven inches, the sun would be a globe two feet in diameter, two hundred and twenty feet away. Mars, a much smaller pea, would circle around the two-foot globe, three hundred and fifty feet from its surface; Jupiter, an orange, at a distance of a quarter of a mile; Saturn, a small orange, at two fifths of a mile; and Uranus and Neptune, good-sized plums, three quarters of a mile and a mile and a quarter away, respectively. The nearest star would lie two hundred and thirty thousand miles off, or at about the actual distance of our own moon, and the other stars at corresponding distances beyond that; that is, on a scale upon which the moon should be but seven inches off, the nearest star would still be as far from us as the moon is now. When we think that each of these stars is probably the center of a solar system on a grander scale than our own, we cannot seriously take ourselves to be the only minds in the universe.

Now, changes take place upon the surface of Mars, changes vast enough to be visible from the earth. When properly observed they turn out to be most marked. We will begin with the look of the planet last June. Its general aspect then was tripartite. Upon the top part of the disk, around what we know to be the planet's pole, appeared a great white cap, the south polar cap. The south lay at the top, because all astronomical views are, for optical reasons, upside down; but inasmuch as we never see the features otherwise, to have them right side up is not vital to the effect. Below the white cap lay a region chiefly bluish green, interspersed, however, with portions more or less reddish ochre. Below this, again, came a vast reddish-ocher stretch, the great continental deserts of the planet.

The first sign of change occurred in the polar cap. It proceeded slowly to dwindle in size. Such obliteration it has, with praiseworthy regularity, undergone once every two years for the last two hundred. Since the polar cap was first seen it has waxed and waned with clock-like precision, a precision timed to the change of season in the planet's year. During the spring, these snow-fields, as analogy at once guesses them to be, and as beyond doubt they really are, stretch in the southern hemisphere, the one presented to us at this last opposition, down to latitude seventy, and even sixty-five south; covering thus more than the whole of the planet's south frigid zone. As summer comes on they dwindle gradually away, till by early autumn they present but tiny patches, a few hundred miles across. This year, for the first time in human experience, they melted, apparently, completely. This unprecedented event happened on October 13th, or forty-three days after the summer solstice of the southern hemisphere, a date corresponding to about the middle of July on earth. Evidently it was a phenomenally hot season on Mars, for the minimum of the polar patch is reached usually about three months after Martian midsummer. It will be noticed how nearly such melting parallels what takes place with our arctic ice-cap on earth.

But the disappearance of the polar snows is by no means the only change discernible upon the surface of the planet. Several years ago Schiaparelli noticed differences in tint at successive oppositions, both in the dark areas and in the bright ones. These, he suggested, might be due to the seasons. This year it has

been possible to watch the change take place. From the Martian last of April to the Martian middle of August, the bluish-green areas have been steadily undergoing a most marked transformation. There proves, in fact, to be a wave of seasonal change that sweeps over the face of the planet from pole to pole. We will examine this more in detail when we take up the question of water. For the present point it suffices that it takes place; for it constitutes proof positive of the presence of an atmosphere.

A moment's consideration will show how absolutely positive this proof is; for it is the inevitable deduction from the simplest of observed facts. Its cogency consists in its simplicity. It is independent of difficult detail or of doubtful interpretation. It is not concerned with what may be the constitution of the polar caps, nor with the character of the transformation that sweeps, wave-like, over the rest of the planet. It merely states that change occurs, and that statement is conclusive.

Having thus seen with the brain as much as with the eye, and in the simplest possible manner, that a Martian atmosphere exists, we will go on to consider what it is like.

One deduction from this thin air we must, however, be careful not to make: that because it is thin it is incapable of supporting intelligent life. That beings constituted physically as we are would find it a most uncomfortable habitat is pretty certain. But lungs are not wedded to logic, and there is nothing in the world or beyond it to prevent, so far as we know, a being with gills, for example, from being a most superior person. A fish doubtless imagines life out of water to be impossible; and similarly, to argue that life of an order as high as our own, or higher, is impossible, because of less air to breathe than that to which we are locally accustomed, is, as Flammarion babbly expresses it, to argue, not as a philosopher, but as a fish.

To sum up, now, what we know about the atmosphere of Mars: We have proof positive that Mars has an atmosphere; we have reason to believe that this atmosphere is very thin—thinner at least by half than the air upon the summit of the Himalayas—that in constitution it does not differ greatly from our own, and that it is relatively heavily charged with water vapor.

In the next paper I shall take up the question of water upon the planet.—*The Atlantic Monthly.*

HOW TO GET RID OF THE BLUES.

The blues make the person suffering from their presence extremely uncomfortable, and her discomfort in a subtle way acts upon others, so that nobody is quite cheerful in her neighborhood. People who are "blue" are quite often cross as well, and are unable to accept pleasantly the ups and downs of every day. Now, when you think of it, you must admit that it is a very humbling experience to be cross, for cross people are disagreeable, and none of us wish to be that.

The best way to get rid of the blues is not to own that they have you. Put on your hat and go for a walk. Call on a friend and take her the piece of music you are to try together, or the book you have just finished, which you would like to lend her. Do something kind for somebody, and stop thinking about yourself. The greatest waste of time in this world, dears, is to think too much about oneself. Mrs. Browning gives the right idea in her poem, "My Kate," when she says,

"Twas her thinking of others made you think of her."

Don't laugh at me, girls, when I tell you that half the low spirits one bears of springs from a very prosaic source. That pound of chocolates, that rich pudding, that piece of frosted cake, all of them very delicious, but all very indigestible, are to blame, in most instances, for a young girl's depression. Try what Emerson called "plain living and high thinking," and see how cheery life will become.—*Harper's Round Table.*

Referring to the warmer climate which is evidenced as having existed at one time all over the earth, Sir William Thompson says: "The earth might be a globe of white-hot iron, covered with a crust of rock 2,000 feet thick, or there might be an ice-cold temperature within fifty feet of the surface, yet the climate could not on that account be different from what it is, or the soil be sensibly more or less genial than it is for the roots of trees or smaller plants." Manifestly, therefore, the duration of life upon the surface can in no way be dependent upon the length or intensity of heat supply from the interior. This, it is claimed, could not at the present time melt a millimeter thickness of ice.

In another column of this issue will be found the advertisement of Portland Mfg. Co., of Portland, Mich., who are the sole manufacturers of Terriff's Perfect Washing Machine, that has become so well and favorably known to many of our readers. Such confidence have the manufacturers in this machine that they will send one machine at the wholesale price where it has not been introduced; at the same time they guarantee the machine to be superior in every respect to any Washing Machine on the market or no sale. The manufacturers are always on the alert for good agents, to whom they pay big money to introduce their washer; it will therefore be to the advantage of those interested to write them concerning the agency.

GLEANINGS.

An attempt to propagate blue points and other noted varieties of eastern oysters on the Pacific coast is soon to be made by the United States Fish Commission. A car-load of oysters from the East are to be planted in Willapa bay, Washington, just above the mouth of the Columbia river, where there are extensive oyster fisheries.

The value of the electric light as a saver of time is strikingly illustrated in a return just made of the average time occupied by ships in passing through the Suez canal. With the electric light, the journey is accomplished in eight minutes under twenty hours. Without the light, thirty-one hours and twenty-four minutes is the time usually required.

The law of Russia requires all Russian subjects over the age of twelve years to take the oath of allegiance on the accession of a new czar. The Russian government never surrenders its claim to the allegiance of a native of Russia, nor admits that a Russian can, without its permission, become a citizen of another country. Of course, there is no means of enforcing this claim against Russians who have become American citizens.

One of the most interesting applications of kindergarten methods has been made in the teaching of music to young children. The instruction is begun at a very early age. Tiny children are taught to sound a given note after it has been struck on the piano, and to do many things that at first seem impossible to the very little. Much of the knowledge of music usually imparted in later years, with much labor to both teacher and pupil, is thus acquired with comparative ease.

One of the dirtiest trades is that of the weaver of rush chair-bottoms. A well-made rush bottom will last a long time, and the demand is not great for such chairs, though their use is reviving. The rushes come to the weaver still soiled with some of their native ooze, dry and dirty. The preparation for the work requires the wetting and twisting of the rushes, and in this process muddy streams are wrung out, which trickle over the hands of the worker and make dirty puddles on the floor. It is just possible that malaria germs lurk in the rushes.

The trade-winds are the prime motors of ocean currents. They cause a surface drift of no great velocity over vast areas of water in the same general direction as that in which they blow. These drifts, after meeting and combining their forces, eventually impinge on the land. They are diverted and concentrated and increased in speed. They either pour through passages between islands, as in the Caribbean sea; are pressed up by the land and escape by the only outlets possible, as, for example, the Strait of Florida, and form a great ocean current like the Gulf Stream.

Coal is prominent among the products of the Northwest just now, and the results of prospecting in the Puget sound region give promise of the opening of extensive new coal-fields there shortly. Washington and Oregon have been getting a large part of their coal supply from British Columbia. Within the last month or two there has been great activity in coal prospecting, several new syndicates have been conducting boring operations, and many indications have been found of the existence of coal veins of great extent and high quality along the southern shore of the sound.

HOMESTUDY. A thorough and practical in Book-keeping, Shorthand, etc., given by MAIL at student's home. Low rates. Cat. free. Trial lesson 10c. Write to BRYANT & STRATTON, 30 College Bldg., Buffalo, N.Y.

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"Could I have another Glass of that **HIRES' Rootbeer**"

Give the children as much Hires' Rootbeer as they want. Take as much as you want, yourself. There's no harm in it—nothing but good.

A 25 cent package makes 5 gallons. **The Chas. E. Hires Co., Philada.**

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Northern advantages in Southern mountain climate, 130 miles from Cincinnati. Reduced R. R. rates. 3 College Courses. Music, Academy, Normal, Manual. Tuition free. Incidentals \$4.50 a term. The great expense in education is board. Go where good board can be furnished cheaply. Address Pres. W. G. FROST, Ph. D., Berea, Kentucky.

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Sets any name in one minute, prints 600 cards an hour. YOU can make money with it. A font of pretty type, also Indelible Ink, Type Holder, Pads and Tweezers. Best Liner Marker, worth \$1.00. Sample mailed FREE for 10c. stamps for postage on outfit and large catalogue of 1000 Bargains. **R. H. Ingersoll & Bro., 65 Cortlandt St., N. Y. City**



No. 2.—"For de lan' sake, 'Rastus, what you gwine to do wid dat stovepipe?" "Gwan away; dis is just a little 'vention ob my own."

Our Household.

"HE KNOWETH THE WAY WE TAKE."

Oh, heart, we will no longer question,
 You and I,
 Of all the strange, perplexing things that lie
 About our destiny.
 Saying, alas! we tarried here too long
 To grasp our fate,
 And there we failed in patient hope to wait,
 The opening of a gate
 That would have led to greener pastures,
 Where cool rivers flowed,
 And golden sands upon their margin glowed,
 And smooth the road.
 Winding away among the sheltering trees,
 Where perfumed breeze
 Swept in from distant seas,
 With song of peace.
 We might have shunned this pain,
 For seeming gain,
 Once being lost, came never back again
 Through sun or rain.
 Nay, heart, but let us make
 Our refuge here;
 He knoweth the way we take,
 Through smile or tear,
 In sun-bright ways,
 Or deserts lone and drear.
 In His unerring hand,
 He holds the plan,
 Which His omniscience scanned,
 Ere we began,
 This way or that to trend
 Toward the end.
 Here resting let us make
 Nor moan, nor cry,
 Though all the world go by;
 Hushing all passionate pain,
 Because of the unattained,
 For His most blessed sake,
 Who knoweth the way we take.
 —Emily Bugbee Johnson, in *Chautauquan*.

HOME TOPICS.

RICE.—One who has only used rice in puddings or as a sweet dish, will be surprised to find how good it is when served as a vegetable. It is rich in starch, and although less nutritive than some other cereals, is a valuable article of food, easily digested, and can often be eaten when potatoes cannot. Plain boiled rice is best when it is to take the place of a vegetable at dinner. Wash half a pint of rice and put it into a double boiler with a quart of boiling water and a teaspoonful of salt. Set the boiler where the water in the under part of it will boil briskly. Stir the rice occasionally until it begins to thicken, then let it cook until each grain is tender, but whole. I think rice is better when half milk and half water are used to boil it. Boiled rice always seems especially good to serve with chicken.

RICE CROQUETTES.—When I boil rice, I always try to have enough left for croquettes the next morning. To a cupful of boiled rice add an egg and a tablespoonful of rolled crackers or dried bread. Make into croquettes about two inches long and an inch in diameter, dip them in beaten egg and then roll in fine crumbs, and fry in boiling fat to a delicate brown.

HOT-WEATHER DINNERS.—The hot days of July and August try the health and strength of housekeepers until it sometimes seems almost unhearable to be obliged to go into the kitchen, and over a hot fire prepare a dinner. Every kitchen ought to have an oil or vapor stove, if it is only large enough to boil a tea-kettle. They



GIRLS' BONNET.

soon save their cost in fuel, and on a score of economy ought to be in general use, to say nothing of the discomfort one will save during these trying days. By the aid of even a lamp-stove, a ham, a piece of corned beef or anything that needs to be cooked several hours may be boiled without heating the house. Not long ago I put a ham to boil just before I went to bed at night, set the little lamp-stove in the cellar,

turned it low, so the water would boil very slowly, and at five o'clock the next morning it was nicely cooked.

On Sunday in hot weather we always have a cold dinner, sometimes with hot soup, which is prepared in the early morning or on Saturday, and then reheated when wanted, and hot coffee, if anybody wants it. We have cold beef, ham, tongue or chicken, a salad, sometimes a dish of cold enried rice, bread and butter, and dessert of fresh cake and fruit, gelatin and fruit, or some one of the custards or puddings which are best eaten cold. During an unusually hot time we also have a similar dinner two or three times during the week, and find it far more healthful than a heavier dinner, and certainly better than standing over a hot cook-stove and cooking a hot dinner. These are busy and hard days for the housekeeper, even when all surroundings are the most convenient and circumstances the most favorable. No one knows who has not tried it, how, as the heat increases, work grows apace, soiled

I really think they bloom better when there is plenty of chance for root growth in summer, and when that is checked by potting in the fall, there is plenty of strength to go the other way and form plenty of blossom material. Other flower growers may insist that calla roots must rest through the summer. It may be best for theirs, but after trying both plans thoroughly, I shall follow the bedding-out process as long as my callas continue to bloom so profusely through the winter with that treatment, as I think it the best.
 GYPSY.

VISITING-DRESS.

A perfectly plain dress depends mostly for its style upon the elegance of the material.

Our illustration can be used in any of the summer crepons for the skirt, and silk for the waist.

While fancy waists are worn, it is really not necessary to have more than one handsome skirt, as it goes out of style so soon,



VISITING-DRESS.

garments to be washed multiply, fruit-canning time is here, and all household stores need especial care that nothing may be wasted. While you carefully look after the health and comfort of the family, busy mother, do not forget yourself. Adopt every plan that will tend to make your work easier and save yourself from becoming worn out, nervous and fretted; for upon this, as much as upon anything else, rests the comfort of the whole household.
 MAIDA McL.

SUMMER TREATMENT OF CALLA, OR EGYPTIAN LILY.

There are many ways of treating callas, and I believe I have tried nearly all, and like my last plan best.

For the past two years I have bedded the callas out in a sunny place on the lawn, among some rock work in which is a fountain; the water is allowed to run only a little while every evening, to give the plants a thorough watering. What immense roots form through the summer, and how the callas grow when they are brought into the house in the latter part of September! Mine commenced blooming in two weeks after they were taken up, and I have had forty blooms from six callas, and part of them were not very old plants.

and all sorts and kinds of waists can be worn with it.

The box-plait down the front of the waist is a favorite style.
 C.

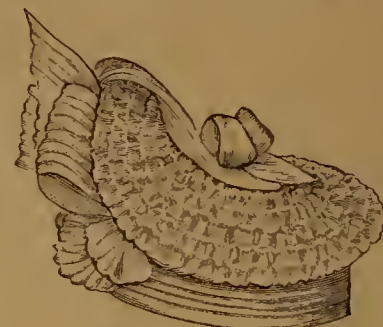
PASTE.

Many times through the summer months, papering can be done that had to be put off when cleaning house, for want of time. For this purpose, make the paste of rye flour instead of wheat. The coarse bran should be sifted out and the finer used for paste. It will not thicken up quite as much as flour, so more should be allowed for

a given quantity of paste than if wheat was used. It is certainly the stickiest stuff, aside from glue, that I ever saw, does not seem to wet through the paper so much, and will dry so rapidly that the colors in the wall-paper do not have any chance to run.

Be sure to save some rye flour for fall papering, if you do not need it before.

My experience this spring may be of profit to others, and I can safely say that I like rye-flour paste the best of any I ever saw. But be very careful not to get any on



BOYS' CAP.

the right side of the paper, as it is a little darker than wheat flour and will leave its trace on delicate colors if applied to the right side.
 GYPSY.

BABY-CAPS.

Many mothers are so proud of the baby that they desire to make a difference in its dress, so that all shall be aware of the fact. The cap illustrated is made of mull upon a coarse net foundation, and very easily made at home.

The girls' bonnet is a little more elaborate, as all girls' things are.

Either can be made by a good milliner, though they can be found on sale in all large cities.

A HOME-MADE BINDING.

After receiving the history of the United States offered by FARM AND FIRESIDE, I was so well pleased with it that I thought I would try to protect it with a substantial binding, and succeeded so well that I would like the army of FARM AND FIRESIDE readers to know how to do likewise.

In the first place, take two pieces of heavy muslin the length of the book and about three inches wide. Fold them neatly over the back of the book, and sew through the muslin and the book just alongside of the wire stitching, where the leaves were stitched at the bindery.

Use heavy twine, or better still, wax-ends, and take stitches about an inch long. You will need a good, straight awl to do this. After this is done, you will have two ends of cloth projecting from each side of the book. Now procure two pieces of heavy cardboard a little larger than the leaves of the book, and paste this between the muslin.

Place the book under a weight until dry, then trim the cardboard, leaving it about an eighth of an inch larger than the leaves of the book; then cut a cover out of cambric, and after applying a liberal coat of paste to the cardboard covers, put on the cloth cover, smoothing it down carefully and seeing that all corners are nicely folded over, also around the edges, after which paste a sheet of paper inside each cover.

Place a weight on the book until dry, and you will be surprised at the neat work that can be done, and you have a cloth-bound volume equal to any dollar book in the market. Covers of this kind are also very nice for scrap-books.
 J. A. S.

STUFFED ONIONS.

Peel six large onions, boil ten minutes to draw out the strong flavor, and loosen the inside. Chop this and season, and add a little sausage meat, bread crumbs and egg. Mix, stuff the onions and steam one hour and a quarter. Remove from the steamer and set in the oven; add a little brown gravy, cook fifteen minutes more; serve. They can be served as taken from the steamer, with drawn butter.—*The Chef*.



SCALDS
 and Burns are soothed at once with
Perry Davis'
PAIN KILLER.

It takes out the fire, reduces the inflammation, and prevents blistering. It is the quickest and most effectual remedy for pain that is known. Keep it by you.

HYGIENIC RECIPES.

Solomon says, "There is nothing new under the sun." So, while the writer of this article believes that these recipes are original, as they are the result of considerable thought and trouble, still they may, in some form, have appeared elsewhere. She trusts that they may assist some toiling housewife, who, like herself, sees the necessity of setting something before her family which is both nutritious and cheap.

Do you desire to break off the habit of coffee and tea drinking? If so, the writer can assure you, from her experience, that it will often lessen, if not cure, those distressing attacks of sick headache. While it is best not to drink at all while eating, you will find the two following recipes a great help at first; and when too tired to eat, try them in lieu of food until you are sufficiently rested to digest more solid articles.

TWO SUBSTITUTES FOR COFFEE.—Take a quantity of rolled oats and put in a pan; let set in the oven until slightly brown. It is ready for use as soon as it seems brittle when taken between the teeth. Have a quart of milk placed in a pan of water, unless you have a double boiler. When the milk is thoroughly hot, put in five tablespoonfuls of the oats, salt to taste. Stir the oats for a few moments, when it will be ready to serve. The other substitute is to brown some whole-wheat flour, taking care that it does not burn. To one coffee-cupful of hot milk, prepared as in the first recipe, use a tablespoonful of flour. Cream this with a little milk or water before adding to the milk. Let the milk boil for a moment or two, if you can do so without burning it. If the fire is too hot, set it back on the stove, stirring it frequently.

TOAST.—Take five or six slices of whole-wheat bread and brown them in the oven. Upon these pour slowly a cupful of thin cream and let soak for a short time while you are preparing the milk. Take a quart of unskimmed milk and heat it thoroughly. Into this stir two tablespoonfuls of corn-starch thoroughly dissolved in two tablespoonfuls of cold milk. Stir the milk until it has thickened slightly. Salt to taste. Pour this over the bread and let it stand for a few minutes before serving. White bread could of course be used, but whole-wheat bread contains much more nutriment. Sugar can be added at the table, if desired, though the milk could be sweetened before pouring it over the toast. Another way is to add to each slice of toast about a teaspoonful of sugar. Pour over it the prepared milk, and when it has cooled a little, gently stir in a few strawberries which have been mashed and sweetened. This is delicious. Other fruits could doubtless be used.

PUDDING WITHOUT EGGS.—Take either three fourths of a cupful of seedless raisins or one cupful of prunes from which the seeds have been taken, and put them into one quart of boiling water. If the raisins have not been cooked, let them boil for a few moments. Into this gradually put enough rolled oats, which have been browned, to thicken it thoroughly, add a scant teaspoonful of salt and three tablespoonfuls of sugar. Butter an oblong dish slightly and place the pudding in it, being sure to set it in a cool place. Use twenty-four hours after it is made, when it will be found to have a rich fruity flavor. Milk makes a good sauce, but the children will like it if it is sliced and put in their lunch-baskets.

BEAN SOUP WITHOUT MEAT.—To one quart of hot milk add one cupful of unseasoned brown beans which have been passed through a sieve in order to free them from the skins. Stir the milk thoroughly and salt to taste. Use white beans if preferred, freeing them from skins in the same way. C. G.

ABSOLUTELY PAINLESS IN MOST CASES, yet the best remedy in Liver affections, Disordered Stomach and Digestion, Headache, Constipation, Bad Breath, etc., DR. D. JAYNE'S SMALL SUGAR-COATED SANATIVE PILLS.

I have ordered six patterns from you, and am delighted with them. I shall do all I can to get new subscribers for your paper. FANNIE KING, Charleston, Ark.

TOILET FOR ELDERLY LADY.

As age creeps on apace, the lady who wishes to appear well in the eyes of those who love her must pay special attention to the little details of the toilet.

With whitened hair a bonnet of pale gray velvet straw or crape is so much prettier than black. A bunch of very dark red roses or small flowers is a very becoming trimming.



TOILET FOR ELDERLY LADY.

Color to enter the toilet of a lady growing old should be of a very subdued shade of red or rich plum color.

The cape has a very attractive trimming around the neck of chiffon, made very full. This hides the lack of fullness about the throat. L.

UMBRELLA-CASE AND PILLOW-COVER.

Make yourself comfortable while traveling, by providing a comfortable pillow, either of down or a rubber air-pillow. Make a brown linen cover for it, embroidered in brown wool or silk, and attach a handle to one side. This can easily be carried.

A case for umbrellas can be made of the same material—double, so as to carry across the arm.

In the pillow-case you can slip a short sack, to use on the sleeper if needed. L. C.

PUTTING UP FRUIT.

Presupposing this is the young housekeeper's first year in her new home, putting up fruit for the first time on her own responsibility, let me say, "Do not attempt too much at once."

Put your jelly juice through two bags, one of four double tartan, and the next one of flannel.

A little white of an egg, beaten to a froth, will clear jelly very nicely.

Don't try to make jelly of everything. Currant, grape, gooseberry and crab-apple are the standards. The following recipes for different things will be found very reliable:

RED OR BLACK RASPBERRY JAM.—To use one third currants to two-thirds raspberries is better than the berries alone. Mash the fruit well and let it boil twenty minutes; weigh the quantity; allow two or three pounds for the kettle to weigh, and to every pound of fruit use three quarters of a pound of sugar. After this is put in, let it boil till, by taking some out on a plate to try it, no juice gathers about it. Then it is

ready to put away, as you would jelly, in glasses; or stone jars are nice.

RHUBARB AND APPLE JELLY.—Cut up your rhubarb and wash it; put on the fire without any water at all. Take good, sour apples, pare and quarter, and cook in a very little water. Strain the juice from both, and put them on the stove to cook for fifteen minutes. Then add the heated sugar, three fourths as much sugar as juice. Boil

hard for twenty minutes; turn into glasses, and set in the sun, if possible, for half a day. Seal the next day.

SPICED GRAPE JELLY.—Take grapes half ripe, crush all the juice out well and strain. Take equal quantities of juice and sugar; to each quart add one half teaspoonful of cloves and one tablespoonful of cinnamon. Cook hard twenty minutes, then remove from the stove and pour into glasses.

PINEAPPLE PRESERVES.—Pare and slice the apples; then weigh them, and to every pound of fruit use a pound of sugar; put a layer of the slices in a jar and cover them with a layer of sugar; and thus proceed until the apples and sugar are used up; let them stand over night; then take the apples out of the syrup, cook the syrup till it thickens, replace the apples, and boil fifteen minutes; take the apples out of the



PILLOW-COVER.

syrup and let them cool; then put them in jars and pour the syrup over them. A few pieces of ginger-root boiled in the syrup will improve it.

TO SEAL CANS OR JARS.—Scald the fruit thoroughly; pour into the cans; have ready three or four pieces of paper (a thin, tough tea-paper is best); cut about one inch larger around than the top of the can; wet the under side with the white of an egg; press on quickly, and put two or three more pieces on top of this; wet the same as the first; tie a string around over these, to be sure they are close.

TO FILL JARS WITH HOT FRUIT WITHOUT WARMING THEM.—Place the jar in a bowl of cold water and pour into it one cupful of the boiling fruit. This will heat the jar without breaking it, and it must be taken out of the water to finish filling it. Care must be taken not to fill the hot fruit higher than the water on the outside of the jar before removing it, or it will be sure to break. This will also answer for filling jelly-glasses. CHRISTIE IRVING.

SHERIFF WILKINS FREED.

YEARS OF SLAVERY AND HOW HE ESCAPED
—HEALTH IS IMPROVING—HAS GAINED
FIFTEEN POUNDS IN WEIGHT
—TALKS ABOUT HIS DE-
LIVERER DAILY.

Urbana, Ohio, June 26, 1895.—(Special.)—This town is in quite a boil of excitement since the facts about the improved physical condition of many of our leading citizens became known. Anderson & Cramer, the big wholesale and retail druggists, were called on and frankly admitted that they were the first to start the good work, as Mr. Anderson termed it. "Yes, we introduced No-To-Bac into this town about three years ago. The demand at the start was very light, the folks had no faith in it, but we sold to a few people, and to our great astonishment everyone reported a cure. Since that time we have sold hundreds of boxes, and everyone under a guarantee to cure or refund the money, and strange as it may seem, we have never had a call to refund money. This is indeed a great record of merit, and it is because of this merit that the big sale has resulted. As every cure brings in at least twenty-five customers, we know that No-To-Bac can be relied upon in every respect, and No-To-Bac not only relieves the nervous irritation and makes the use of tobacco entirely unnecessary, but at the same time builds up and fortifies the general physical condition. I just saw two of our prominent merchants pass down the opposite side of the street; they were cured by No-To-Bac a year ago, and they have not used tobacco since and have been greatly improved in health. We have a great many customers, men who are well advanced in years, who have been cured of the tobacco habit by the use of No-To-Bac, and who continue taking it right along for its tonic effects. As a natural invigorator and stimulant we believe there is, no preparation in America to equal it."

"You know R. P. Wilkins, our sheriff, don't you?"

"Yes, of course I do."

"Well, you want to interview him."

Mr. Wilkins was called upon, and said: "Yes, November 4th, last, I bought my first box of No-To-Bac from Anderson & Cramer. I had little faith, and to my great surprise, after using part of the third box, I was completely cured and did not have the least desire for tobacco. I have been a perfect slave to tobacco for over twenty-five years; I smoked from twelve to fifteen cigars a day; to-day I feel better, I sleep better, think better, and I have gained fifteen pounds in weight, and there is not a day passes that I do not recommend No-To-Bac to many of the tobacco users who I know are destroying their lives and vitality by the use of the weed."

Further investigation revealed the fact that there are five hundred people living in this town and the surrounding country who have been cured by No-To-Bac. If the cures go on at this rate it will not be very long before the tobacco industry is going to be seriously affected. The sale of No-To-Bac has been phenomenal.

The public should be warned, however, against the purchase of any of the many imitations on the market, as the success of No-To-Bac has brought forth a host of counterfeiters and imitators. The genuine No-To-Bac is sold under a guarantee to cure by all druggists, and every tablet has the word No-To-Bac plainly stamped thereon, and in the purchase of the genuine article you run no physical or financial risk.

I like your patterns very much. They seem like a Godsend to poor people.

MRS. S. W. CRAWFORD, Jefferson, Ohio.

Your patterns are a great attraction. It is an inducement to take the paper for them alone. LUCINDA SIGLER, Manchester, Tenn.

I have found your patterns the most satisfactory of any I've ever tried.

MRS. L. R. LAUREN, Topinabec, Mich.

Please send immediately No. 6229. I have had three of your patterns before this, and I find them equal in every way to Butterick's patterns, for which I have had to pay more than as much again.

MRS. E. L. STILES, Box 97, Tuckerton, N. J.

Our Household.

FIFTY-THREE.

No, my friend, you are not old,
Though to silver turns the gold
Of your hair, and though the blue
Of your eyes grows fainter, too,
And you gravely say to me,
"Ah! to-day I'm fifty-three."

Such a loyal heart as lies
In your bosom Time defies,
And your voice must still be young,
For it late sweet verses sung;
And your laugh is wondrously
Spring-attuned for fifty-three.

Some there are but half those years.
Deaf to everything that cheers,
Dumb when they should kindly speak,
Blind to all the poor and weak.
Older these, 'tis plain to see,
Are than you at fifty-three.

None throughout this world, in sooth,
Part so slowly with their youth
As those spirits who delight
In making dreary pathways bright.
Old, my friend, you will not be
When much more than fifty-three.

—Margaret Eytlinge.

HOUSEKEEPERS' NOTES.

WALL DECORATION.—I saw a very pretty, simple little decoration the other day. It was only a small cluster of wheat-heads, perhaps half a dozen, that had been gathered just as they reached the golden stage, before they were dead ripe; and a spray of bright green holly tied together with a bow of narrow scarlet ribbon and tacked to the wall beside a picture representing a harvest-field. It seemed to brighten up the entire room. Another simple little thing which almost any one could have was a banner about six by eight inches, covered with black velvet with a band of scarlet satin at the top, one inch wide on one side and sloping down to two inches wide on the other. Fastened to this with invisible stitches was a feathery spray of greenish-gray wistaria seed-pods, and two or three scarlet bolls (or seed-pods) from the wild rose. If the wistaria cannot be obtained, there are many things that could be used instead. One wild plant, commonly called a weed, has small clusters of seed-pods that when ripe burst open and are a beautiful silvery white, and are very pretty with a spray of evergreen or a few rose bolls. Grasses, wheat or oat heads or millet are also pretty with a bit of green and tied with a scarlet ribbon.

WOOD-BOX.—Going into a strange kitchen not long since, I noticed such a convenient wood-box that I want to tell you all about it. It was perhaps four feet long and two feet broad, and about three or three and a half feet high; the front being boarded up only about two feet high above this, the sides sloped backward a little, and on top was a shelf about fourteen inches wide. This shelf was covered with a pretty oil-cloth, and the box answered for the double purpose of a wood-box and a table; but perhaps the best thing about it was that it was mounted on casters and could be easily moved from place to place when the kitchen was swept or scrubbed. Near it stood a small home-made table or stand covered with an oil-cloth similar to the wood-box, and held the water-pail. In scores of kitchens a box and stand like these would surely "fill a long-felt want."

FACIAL EXPRESSION.—Circumstances have taken me from home a great deal lately, bringing me into contact with hundreds of people; people of almost every rank and condition in life, from those dwelling in the most humble cottage to successful, prosperous country homes and the wealthy city residence, students, professional and business people, artisans and housekeepers, and women who were boarding, with nothing to do but to kill time. The thing that has impressed me most during these last few busy weeks is the almost universal care-worn expression of the women everywhere, and the premature wrinkles that are marring their faces. Coming home one day with my mind full of it, I went to the mirror and studied

my own face (something I've not taken time to do before in years), and found that I, too, was much more wrinkled than my age would warrant. Why is this? I have wondered much about it, and have concluded that it is due more to carelessness than to anything else. I think that, as a rule, the average busy woman does not give as much thought to her daily personal appearance as she should, and for that reason goes about much of the time with drawn brows, and soon the wrinkles begin to come that would indicate crossness. Then, when talking, nine out of ten women unconsciously raise their eyebrows, thus making in a short time the permanent, horizontal wrinkles that disfigure almost every forehead. At other times we squint, thus making wrinkles about the eyes that ought to come to us only with extreme old age. Then if we notice ourselves closely, many of us will find that we have a peculiar way of holding our lips when listening to something in which we are much interested, that soon brings wrinkles about the mouth.

If we think about it, and closely notice the many women we meet, we will soon see that a woman of thirty with a smooth, un wrinkled face is very, very hard to find. Instead, girls not yet out of their teens are as wrinkled as a woman of forty need be, if she were always careful not to distort her face as the majority of us are now doing daily and hourly. So I would sound a note of warning, for I find that these prematurely wrinkled women are not confined to any class or calling, but all seem to be alike disfigured, whether poor and hard-working, or possessed of wealth and leis-



VELVET COLLAR.

ure. Yet I am fully convinced that if we notice ourselves and keep our features in repose, there is no need of these wrinkles, which we all dread. It may be hard to begin now, but if we carefully watch ourselves we may arrest these "footprints of time," which are more often footprints of carelessness, and the woman between the years of thirty and forty-five need look no older ten years from now than she does at present. If girls and young women would bear in mind, and keep cheek and brow from unnecessary wrinkles, the next generation of women would "carry their age" much better than the present one. We all long to make a good appearance and retain our attractiveness, so let us watch closely, and keep the unnecessary wrinkles off by not giving them a place on our faces, even for a few minutes.

CLARA SENSIBAUGH EVERTS.

VELVET COLLAR.

This collar, which can be used as an accessory to several toilets, is made of black velvet lined with pale yellow silk.

Around all the edges it is trimmed with very narrow jet trimming, or steel passementerie and narrow lace. It sets off a plain dress, giving enough black about the face to tone down both the color in the face, and dress; also is a beautiful trimming for a black dress.

L. L. C.

A BIG DROP IN SUGAR.

Sears, Roebuck & Co., better known as the Cheapest Supply House on Earth, at 171, 173 and 175 W. Adams St., Chicago, Ill., are selling 40 lbs. of the very best granulated sugar for \$1. and other groceries at proportionately low prices; they ship their goods to anyone anywhere; they will supply you if anywhere within one thousand miles of Chicago, selling granulated sugar 40 lbs. for \$1. and everything accordingly. Send no money, but cut this notice out and send to Sears, Roebuck & Co., Chicago, for full particulars.

Highest of all in Leavening Power.—Latest U. S. Gov't Report

Royal Baking Powder

ABSOLUTELY PURE

VARIOUS SWEETS AND SOURS.

As the season for canning and pickling approaches, a few timely hints, the result of experience, may be a real benefit to the new housekeeper.

In order that peaches, pears and apples may keep firm and of good color, select well-ripened, firm, sound fruit, discarding any that show the least sign of decay. In paring, be very careful to remove all bruises. As the rind drops, put each piece into clear lime-water and let stay until all are prepared. Lay on a sieve, rinse and drain. If for canning, pack closely in jars and set in cold water up to the neck; bring to a boil, while you make a syrup of half a pound of sugar and half a pint of water to each pound of fruit. Cook five minutes after the sugar melts. Skim well and fill the jars brimful, let stand two minutes, then fill again if it has sunk below the top. Press the fruit well down with the back of a spoon and seal at once.

Be careful to set glass jars on something warm when you take them from the water, lest a chill burst them and your labor be in vain.

For delicate fruits, such as strawberries, make the syrup thicker—about three fourths of sugar to half a pint of water. Select large, firm berries, handle as little as possible, boil the syrup ten minutes, or until it ropes, then drop in a handful of berries at a time. As the syrup boils again, take them out with a skimmer and pack down in a glass jar. Keep on scalding a few at a time until all are down; then boil the syrup until it ropes freely, pour over them until the fruit is completely covered. Seal while boiling hot. Fruit treated in this way keeps its shape, color and flavor.

For preserves, allow five pounds of best sugar to each four pounds of pared fruit. After rinsing, drain for a few minutes, then pack in layers with the sugar, in a deep stone jar. Let stand twenty-four hours in a cool place. Pour off the syrup into a perfectly bright kettle and boil for ten minutes; skim very closely and pour over the fruit, let stand another day. Drain off again, bring to a boil, and add the fruit after skinning well. Keep it boiling briskly, neither very fast nor slow. Never crowd your kettle. When clear pink or golden jellies and preserves are desired, cook only a moderate quantity at once. If the heat is just right, in two hours your fruit will be clear and sugary all through. Take it out with a skimmer and lay on dishes. Boil the syrup until it is like honey, adding, if desired, the strained juice of three lemons and their peel boiled in clear water until a straw will pierce it. If ginger is preferred, soak two pieces over night in half a pint of water and add the whole of the syrup before boiling down. When thick enough, pack the fruit carefully in the jars and cover an inch deep with the syrup. Lay brandied paper in the mouth of each jar, and tie down securely without sealing.

If you care for peach cordial, save the parings and seeds from preserving, pack them in your kettle, add a quart of water and let simmer for three hours. Strain through a sieve, and to every pint of liquid add a pound of sugar, with the spices you like. Boil and skim well, but do not reduce. When blood-warm, add half its own bulk of whisky or brandy, cork tightly and dip the heads in melted wax.

Most delicious citron can be prepared from watermelon rind, quite equal to the citron fruit. Choose thick, sound rind, cut it in lengthwise strips an inch or so long, or in dice. Take off the green and remove the soft inside; drop it in strong brine, where it must stay at least three days—a week is better—then soak in clear water, changing often until perfectly fresh. Wash clean and scald for five minutes in weak alum-water, then boil in ginger tea until a straw will pierce it. Now make a syrup of three pounds of sugar to every two pounds of rind; add to every three pounds a pint of fresh ginger tea and the strained juice of three lemons, along with the shredded peel boiled tender, as before directed. Boil until it ropes, skinning constantly, then add the watermelon rind and cook until clear all through, taking

care not to scorch it. Keep at hand some boiling water, and pour in a little from time to time as the syrup grows too thick. When the rind looks translucent, it is done. Skim it out carefully and fill glass jars. Boil the syrup almost to candy height and pour over it. This is not only exceedingly palatable, but makes a very pretty dish.

Grate four quinces, after removing the skin, add two pounds of granulated sugar and one quart of water, boil twenty minutes. Put in tumblers. Pineapples treated in this way are also delicious.

For cucumber pickles, cover with salt-water over night, drain dry and cover with a weak vinegar, in the proportion of a small teaspoonful of salt and a teaspoonful of powdered alum to a gallon of weak vinegar, poured over them cold. Let stand in this as long as it will keep—say about a week—then wash and drain dry. Heat to the boiling-point strong cider vinegar, and to every gallon of vinegar add two pounds of brown sugar, one fourth pound of white and black mustard-seed and celery-seed, mixed, some pieces of unground mace, cloves, cinnamon and a few red peppers, small onions, some lemon and a small amount of grated horse-radish. Tie a perforated cloth over the jars. When the liquid is hot, if the cucumbers are not a nice color, a small piece of copperas and the cucumbers put in the liquid when on the stove will make them a nice green.

VIRGINIA MIXED PICKLES.—

1½ pecks of green tomatoes,
½ peck of cucumbers,
¼ peck of white onions,
¼ peck of green peppers,
2 large heads of cabbage,
½ teaspoonful of grated horse-radish,
5 cents' worth each of mustard, cinnamon and ginger,
½ ounce of whole cloves,
½ pound of white mustard-seed,
½ pound of celery-seed,
1 pint of molasses,
1 pint of brown sugar,
2 cents' worth of turmeric, for coloring.

Chop the vegetables after removing the cucumber and pepper seeds, mix, and add one and one half pounds of coarse salt. Let stand two days, strain out of the brine quite dry and cover with weak vinegar. Let scald, not cook, strain again, add horse-radish and spices. Have five quarts of good cider vinegar scalding hot and pour over the whole, then bottle while hot. This is excellent.

ELLIOTT.

Pears'

Pears' soap

has no free alkali in it. Neither reddens nor roughens the skin.

Delicate Cake
Easily removed without breaking.
Perfection Tins require no greasing. 10 styles, round square and oblong. 2 layer tins by mail 30c. Circulars Free.
Agents Wanted. Richardson Mfg. Co., 9 St., Bath, N.Y.

WALL PAPER.
Samples free from largest Wall Paper concern in U.S.
KAYSER & ALLMAN 352-354 Market St. Philada.

MEN'S all-wool SUITS, \$6
Worth \$10. Well-made and Trimmed. Black, Blue or Brown. Neat Patterns. —Samples Sent Free.—
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Good, substantial qual., worth \$4.00.
In ordering send chest measure over vest, waist measure over pants, and inside leg measure. Send Money by Registered Mail, P. O. or Express Order, or Bank Draft.
Goods sent C. O. D. when ½ amt. comes with order.
E. M. WOLF & CO., 117, 119 N. 8th St., Phila., Pa.

Free to Any Address Our New 8-page Catalogue, Illustrating Nearly 200 Stylish Patterns for Ladies', Misses', Children's and Infants' Garments.

40 Cent Patterns for 10 Cents.

Any FOUR Patterns, and Farm and Fireside one year, 50 cents.

These patterns retail in fashion bazaars and stores for twenty-five to forty cents each, but in order to increase the demand for our paper among strangers, and to make it more valuable than ever to our old friends, we offer them to the lady readers of our paper for the remarkably low price of only 10 Cents Each. Postage extra.

The patterns are all of the very latest New York styles, and are unequalled for style, accuracy of fit, simplicity and economy. For twenty-five years these patterns have been used the country over. Full descriptions and directions—as the number of yards of material required, the number and names of the different pieces in the pattern, how to cut and fit and put the garment together—are sent with each pattern, with a picture of the garment to go by. These patterns are complete in every particular, there being a separate pattern for every single piece of the dress. Your order will be filled the same day it is received. You can order any of the patterns offered in the back numbers of this paper. For ladies, give BUST measure in inches. For SKIRT pattern, give WAIST measure in inches. For misses, boys, girls or children, give both BREAST measure in inches and age in years. Order patterns by their numbers. Satisfaction guaranteed or money refunded. To get BUST and BREAST measure, put the tape measure ALL of the way around the body, over the dress close under the arms. Price of each pattern, 10 cents. Postage one cent extra on EACH pattern, except on skirt and wrapper patterns, 2 cents extra.

Address FARM AND FIRESIDE, Springfield, Ohio.



No. 6463.—CHILD'S DRESS. 11 cents. Sizes, 2, 4 and 6 years.



No. 6454.—GIRLS' FROCK. 11 cents. Sizes, 4, 6, 8, 10 and 12 years.



No. 6472.—MISSES' BLAZER. 11c. Sizes, 12, 14 and 16 years.



No. 6444.—LADIES' WAIST. 11 cents. Sizes, 32, 34, 36, 38, 40 inches bust.



No. 6470.—GIRLS' COSTUME. 11c. Sizes, 8, 10 and 12 years.



No. 6379.—LADIES' HABIT BASQUE. 11 cents. Sizes, 32, 34, 36, 38, 40 inches bust.



No. 6385.—LADIES' WRAPPER. 12c. Sizes, 32, 34, 36, 38, 40, 42 inches bust. No. 6386.—INFANTS' ROBE. 11 cents. Cut in one size only.



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No. 6387.—LADIES' RIDING-SKIRT. 12 cents. Sizes, 22, 24, 26, 28, 30 inches waist.



No. 6381.—LADIES' BLAZER JACKET. 11 cents. Sizes, 32, 34, 36, 38, 40 inches bust.



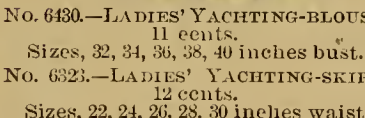
No. 6469.—MISSES' BLAZER. 11 cents. Sizes, 12, 14 and 16 years.



No. 6378.—LADIES' ROUND BASQUE. Sizes, 32, 34, 36, 38 and 40 inches bust.



No. 6465.—LADIES' BLAZER. 11 cents. Sizes, 32, 34, 36, 38, 40, 42 inches bust.



No. 6323.—LADIES' YACHTING-SKIRT. 12 cents. Sizes, 22, 24, 26, 28, 30 inches waist.



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No. 6382.—LADIES' BLOUSE-WAIST. 11c. Sizes, 32, 34, 36, 38 and 40 inches bust.



No. 6462.—LADIES' ETON JACKET. 11c. Sizes, 32, 34, 36, 38, 40, 42 inches bust.



No. 6467.—LADIES' WAIST. 11 cents. Sizes, 12, 14 and 16 years.



No. 6445.—LADIES' BASQUE. 11 cents. Sizes, 32, 34, 36, 38, 40 inches bust.

No. 6446.—LADIES' SKIRT. 12 cents. Sizes, 22, 24, 26, 28, 30 inches waist.

Our Sunday Afternoon.

THINE EYES SHALL SEE THE KING IN HIS BEAUTY.

I shall see the King in his beauty,
In the land that is far away,
When the shadows at length are lifted,
And the darkness is turned to day.

To behold the Chief of ten thousand,
Ah! my soul, this were joy enough,
'Twill suffice for making my heaven,
That the Lamb is the light thereof.

Who can tell the rapturous meeting
When the Lord shall gather his own?
With one sight all eyes are now ravished,
The Lamb in the midst of the throne.

Oh! to none will the King be a stranger
Of the throng who bow at his feet;
For the hearts of the saved will know him
By the prints of the nails in his feet.

I shall see him. I shall be like him,
By one glance of his face transformed,
And this body of sin and darkness
To his own bright image conformed.

—A. J. Gordon, D.D.

JERUSALEM.

THE altitude of Jerusalem is always a surprise to the visitor who comes here for the first time. He knows, of course, that it is a mountain city, and that it was built upon Mount Zion and Mount Moriah; but he does not realize, until he makes the gradual ascent, that it is about twenty-six hundred feet above the level of the Mediterranean, and nearly four thousand feet above the surface of the Dead sea. As high on the one side as the Catskill Mountain house; as high on the other as the crater of Mount Vesuvius.

Jerusalem is a city of surprises. It is, apart from its sacred associations, an intensely interesting spot even to travelers who are already saturated with the hitherto unfamiliar and surprising charms of Cairo, Athens and Constantinople. Its size can best be expressed by the statement that the journey around about the outside of its walls may be made by an ordinary rapid walker in the space of an hour. Its houses are small, irregular in shape, squalid and mean. Its streets, if streets they can be called, are not named or numbered; they are steep, crooked, narrow, roughly paved, never cleaned, and in many instances they are vaulted over by the buildings on each side of them. Never a pair of wheels traverse them, and rarely is a horse or a donkey seen within the walls. The halt, the maimed and the blind, the leprous and the wretchedly poor, form the great bulk of the population of Jerusalem, and with the single exception of the Hebrews, they are persistent and clamorous beggars. Trade and commerce seem to be confined to the bare necessities of life, and to dealers in beads and crucifixes. There is but one hotel, and that not a good hotel, within its walls; and one Turkish merchant, who displays in his little windowless, doorless shop a small assortment of silver charms, trinkets and bric-a-brac to the gaze of the passer-by, is almost the only vender of anything like luxuries in the place. His customers, of course, are the pilgrims who come to see and not to worship.

Jerusalem is unique as a city in which everything is serious and solemn and severe. It has no clubs, no bar-rooms, no beer-gardens, no concert-halls, no theaters, no lecture-rooms, no places of amusement of any kind, no street bands, no wandering minstrels, no wealthy or upper classes, no mayor, no aldermen, no newspapers, no printing-presses, no book-stores—except one outside the walls, for the sale of Bibles—no cheerfulness, no life. No one sings, no one dances, no one laughs in Jerusalem; even the children do not play.

The Jews, it is said, form almost two thirds of the population of the city. They occupy a section which covers the greater part of the eastward slope of Zion, and the Jewish quarter is the most wretched in the whole wretched town. Its inhabitants are quiet and subdued in bearing; they make no claims to their hereditary rights in the royal city of their kings; they simply and silently and patiently wait. The Wailing Wall of the Jews, so wonderfully painted by Verestchagin, is perhaps the most realistic sight in Jerusalem to-day. In a small, paved, oblong, unroofed inclosure, some seventy-five by twenty feet in extent, and in a most inaccessible portion of the town, is the mass of ancient masonry which is generally accepted as having been a portion of the outside of the actual wall of the Temple itself. Against these rough stones, every day of the week, but especially on Friday,

and at all times of the day, are seen Hebrews of all countries, and of all ages, of both sexes, rich and poor alike, weeping and bewailing the desolation which has come upon them, and upon the city of their former glory. Whatever may be their faith, it is beautiful and sincere; and their grief is actual and without dissimulation. They kiss the walls, and beat their breasts, and tear their hair, and rend their garments; and the real tears they shed come from their hearts and their souls, as well as from their eyes. They ask for no blacksheesh; they pay no attention to the curious and inquisitive heretics and Gentiles who pity while they wonder at them. They read the Lamentations of Jeremiah and the mournful words of Isaiah; they wait for the days that are gone; and they pray to the God of Abraham, the God of Isaac, and the God of Jacob, that they may get their own again.—From "The Literary Landmarks of Jerusalem," by Lawrence Hutton, in Harper's Magazine.

COMING QUICKLY.

However wide apart men may be as to dates and times, we may all draw the one conclusion from the message of the divine Master to the seer of Patmos, "Behold I come quickly," that the time fixed for the second coming of Christ is not far off. Measured by the world's past, since the "beginning," when the keel of our planet was laid, the objective point of the believer's watch and hope—the return of its King—is "quickly" to take place.

Whether at morn, at noon, or at night, we may not tell, but of its immediate possibility we can safely be at rest.

The few memoranda on the program of events still unwrought, can easily be compressed into a short space of time, if the "quickly" is to be so interpreted. And certainly never was history so rapidly made. Everything moves at high pressure, and events fairly tumble over each other in the haste of their fulfillment.

It will not be amiss for all who "love his appearing," to be in readiness for the august and blessed event. His word, emphasized and underscored, is, "Watch, for in such an hour as ye think not the son of man cometh."

This does not mean that we climb to house-roof and mountain-top, and level our glasses into the blue to search for the parting heavens through which he comes. But that with singleness of purpose and quietness of heart we take up the daily work appointed by him, doing it faithfully and gladly, with the thought that before the evening-time he may come. It is to live daily, hourly, in the joy and inspiration of the "blessed hope," to keep our work and plans up so snug that any hour we may be ready for "his appearing."

The hope helps to simplify life, to rid it of its burdensome ambitions, and develop in one that true spirit and secret of success which throw the heart and energy into the work in hand.—Contributor.

GOOD CHEER.

In the year 1641 a traveler, visiting Amsterdam, went up into the tower of St. Nicholas church to note the playing of the marvelous chimes. He found a man away below the bells, with a sort of wooden gloves on his hands, pounding away on a key-board. The nearness of the bells, the clanging of the keys when struck by the wooden gloves, the clatter of the wires, made it impossible to hear the music. But in the distance, many men paused in their work to listen to the chiming.

It may be that in your watch-towers, where you are wearily pouring the music out of your life into the empty lives of the lowly, that the rattling of the keys and the heavy hammers, the twanging of the wires, the very nearness of the work, may all conspire to prevent your catching even one strain of the music you are creating; but far out over the eternal sea, the pure melody of your work blends with the song of angels, and is ringing through the corridors of the skies. It may gladden some burdened souls here, and harmonize with the rapturous music of the redeemed, hereafter.—Helping Hand.

Every Man Should Read This.

If any young, old, or middle-aged man, suffering from nervous debility, lack of vigor, or weakness from errors or excesses, will inclose stamp to me, I will send him the prescription of a genuine, certain cure, free of cost, no humbug, no deception. It is cheap, simple and perfectly safe and harmless. I will send you the correct prescription and you can buy the remedy of me or prepare it yourself, just as you choose. The prescription I send free, just as I agree to do. Address, E. H. HUNGERFORD, BOX A. 253, Albion, Mich.

DON'T STOP TOBACCO

It is Injurious To Stop Suddenly

And don't be imposed upon by buying a remedy that requires you to do so, as it is nothing more than a substitute. In the sudden stoppage of the use of tobacco, you must have some stimulant, and in most all cases, the effect of the stimulant, be it opium, morphine, or other opiates, leaves a far worse habit contracted. Ask your druggist about **BACO-CURO**. It is purely vegetable. You do not have to stop using tobacco with **BACO-CURO**. It will notify you when to stop and your desire for tobacco will cease. Your system will be as free from nicotine as the day before you took your first chew or smoke. An iron-clad written guarantee to absolutely cure the tobacco habit in all its forms, or money refunded.

WE HAVE HUNDREDS, WE PUBLISH BUT FEW.

Office of the Pioneer Press Co.,
C. W. Hornick, Supt.
St. Paul, Minn., Sept. 7, 1894.
Eureka Chemical & Mfg Co., La Crosse, Wis.
DEAR SIRS—I have been a tobacco fiend for many years, and during the past two years have smoked fifteen to twenty cigars regular every day. My whole nervous system became affected, until my physician told me I must give up the use of tobacco for the time being at least. I tried the so-called "Keeley Cure," "No-To-Bac," and various other remedies, but without success, until I accidentally learned of your "Baco-Curo." Three weeks ago to-day I commenced using your preparation, and today I consider myself completely cured; I am in perfect health, and the horrible craving for tobacco, which every inveterate smoker fully appreciates, has completely left me. I consider your "Baco-Curo" simply wonderful, and can fully recommend it.
Yours very truly,
C. W. HORNICK.

Rodden, Ill., Jan. 14, 1895.
Eureka Chemical & Mfg Co., La Crosse, Wis.
DEAR SIRS—I have been a tobacco fiend for thirty-three years, and during the past two years have used chewing tobacco very extensively. My nervous system being affected considerably. I have often tried to give up the use of tobacco, but always failed, until I bought three boxes of your "Baco-Curo." I used tobacco at the same time while taking "Baco-Curo," and after a week I lost the appetite for tobacco—smoking or chewing. I am enjoying better health, and consider your "Baco-Curo" the safest, most harmless and reliable remedy for to break the tobacco habit.
Yours truly,
JOHN RODDEN,
Postmaster, Rodden, Ill.

Rodden, Illinois, January 15, 1895.
Eureka Chemical & Mfg Co., La Crosse, Wis.
DEAR SIRS—I have used chewing tobacco very extensively the past thirty years. I tried so-called "No-To-Bac" and other remedies, but without success, until I bought three boxes of your "Baco-Curo." I continued chewing tobacco while taking the preparation, and find that the horrible craving for tobacco has left me, and I consider myself cured. I can fully recommend "Baco-Curo" to any person wishing to break themselves of the tobacco habit.
Yours very truly,
S. D. WHITE.

What Mr. Kraemer says of "Baco-Curo."

Atlantic, Iowa, Feb. 4, 1895.
This is to certify that I, F. D. Kraemer, of Atlantic, Iowa, was an inveterate smoker of cigarettes for more than two years. About eight weeks ago I bought three boxes of "Baco-Curo." I began taking it according to directions, and after taking one and one half boxes, all the desire for cigarettes left me and I have had no desire since. I can heartily recommend "Baco-Curo" to all who are slaves to the Cigarette habit or tobacco habit in any form, and are in search of a cure. I had become so under the influence of cigarettes, I could not remember anything; could not study, unless under the influence of the drug, which is death in the end, if kept up. Cigarettes are sapping the lives out of more boys and young men to-day, than anything that is known to the world. Boys, before it is too late get some of this remedy that killed the craving for cigarettes in me and save your young life. Restore yourself to manhood. You will feel as though you had escaped an awful doom, and you have, when cured by "Baco-Curo," for you feel like a new being. I never felt better in all my life than at this present writing. I did not know what was the matter with me, until informed by the agent. He told me what was the reason I could not do anything unless under the influence of the death-dealing poison found in cigarettes. I did not believe him at first, until he explained the action on the system. Then I bought the goods, and thank God and all concerned, I am a sound person to-day. Hoping that this may reach the unfortunate cigarette smoker, I remain
Yours respectfully,
F. D. KRAEMER.

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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 inclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Lice on Cucumbers.—Mrs. N. W., Neb. Spray or sprinkle with kerosene emulsion or strong tobacco-water.

Mixing Beans.—R. W. B., Delaware county, N. Y., writes: "Will pole beans and bush beans mix, if planted in the same field? Which is the best way to harvest beans, drawing them to the barn at once, or putting them around poles stuck into the ground?"

REPLY BY JOSEPH:—The different varieties of ordinary beans, both running and bush sorts, are very liable to produce crosses if planted close together. On the other hand, I have planted the various kluds of bush and pole Limas intermixed in the rows for some years, for the very purpose of producing crosses, and I have been unable to find even a single one thus far. If the beans are dry enough, and you have a dry loft in the barn, I think it would be safer to gather and haul them at once.

Clover-hay Worm.—D. M. M., Spring Valley, Minn., writes: "I herewith send you a specimen of what destroys our hay in the bottom of stacks, all the way from one and one-half to three feet up from the ground. Please let me know what it is and how to prevent it."

REPLY:—Your hay has been damaged by clover-hay worms. These small, brown worms live solely on dry clover. They interweave the hay with a white silken web and cover it with black excrement resembling coarse gunpowder. Their work is generally confined to the bottom of the stack or mow. As preventive measures, it is recommended to clean out the mows before putting new hay in, or build the stacks in new places, on good rail foundations; at least, never put new hay in contact with old hay that is infested. Salting the hay liberally, especially the two or three feet near the bottom, is also recommended.

Vegetables for Profit.—E. D. B., Ontario, Canada, writes: "I have five acres of ground that I am going to work this summer and try and make a few dollars out of it. I want to know what vegetable or thing pays the best per acre. I was thinking of putting in an acre of potatoes and other vegetables. What would you advise me to plant on this five-acre field? I was thinking about five different things, one acre to each. As there are so many different kinds, please name over the best kinds of each vegetable."

REPLY BY JOSEPH:—I am afraid that I shall not be able to give satisfactory advice to this inquirer. It is not likely that he could make much money out of any crop that he would plant on one or more acres, so long as he does not know much about that crop. When one understands all the needs and requirements of a crop, has the right soil and conditions for it, and a good market assured, it will be safe to plant it on a large scale, otherwise not. I cannot tell whether this man will be successful with any of the crops he contemplates planting. I greatly doubt it. And I surely cannot name the one which promises the most money returns. Learn to grow different crops, and then plant the one most suited to your abilities, conditions and market.

Second-crop Potatoes.—J. E. F., Guthrie, Oklahoma, writes: "I planted twelve bushels of second-crop Early Rose potatoes last spring. Owing to the drought I will not much more than get my seed back. Would like your advice as to digging and planting again for second crop. Should they make large tubers in case we have late rains? Here at Guthrie we have not had a good rain for thirteen months."

REPLY BY DAVID:—Second-crop potatoes are not at all a sure crop, but you may be very successful in your attempt to grow them. After digging the seed, clip a bit off each tuber to hasten sprouting. Then place the seed in a thin layer on the ground, and cover with an inch of soil, leaving it until a portion of the tubers show sprouts. Only those that show a tendency to start sprouts should be used for seed. Prepare the land well, so that the moisture will rise, and furrow deep with a broad opening-shovel. Plant the seed in bottom of furrow, covering two or three inches deep. As the plants grow, gradually fill the furrows with harrow, weeder or light-running cultivator. In your latitude you should get fair-sized potatoes if you plant in July, and have reasonable weather. As a rule, it is advisable to make all experiments on a limited scale, so that failure will not bring heavy loss; but it certainly would be wise for you to make a trial, as men in your latitude, farther east, are succeeding with this crop.

Making Mushroom Spawn.—W. F. L., Albion, Iowa, writes: "Please explain how mushroom spawn is prepared. I have some spawn, and am nearly ready to put it in the bed. I would like to save the expense, and avoid the risk of always sending away for the spawn."

REPLY BY JOSEPH:—There may be some mushroom growers in America who make their own spawn, but the imported is so cheap compared with the expense of making it in small quantities that there would be nothing gained by it so far as expense is concerned. I think some dealers offer it at about seven cents per pound. Yet in some cases it might pay to make it for the sake of avoiding the risk of getting stale or lifeless stuff. It has always seemed to me that a great deal of spawn that will not grow is sent out by our importers and dealers. Wm. Falconer, in his mushroom book (price \$1.50), says: "So far as I have been able to find out by diligent inquiry, mushroom spawn is not made for sale in this country; but I am informed that a few growers do save and use their own flake spawn. * * * But this state of affairs cannot long continue. The demand here for fresh mushrooms is so great, the industry of mushroom growing so important, the price of imported spawn so high, and the quantity of foreign spawn imported annually into this country is so large, that before long we hope some one will find it to his advantage to make a specialty of growing mushroom spawn in this country to supply the American market. * * * In order to make spawn profitably, we must make it in large quantities." Recipes for making the spawn are given at length in the book mentioned.

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 inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. DETMERS, 1315 Neil Avenue, Columbus, Ohio. Note.—Parties who desire an answer to their inquiries in this column, must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered under any circumstances.

Broken Hip.—S. S., Leland, Idaho. If the hip, or external angle of the ileum, of a horse is broken, nothing can be done.

Periodical Ophthalmia.—R. R. D., La Fayette, Ala. No cure. Cause: Special predisposition and probably bacteria.

Garget.—W. P. B., Marietta, Ohio. If you find that milking three times a day is not enough, milk four times, or even oftener.

Obstetrical.—C. W. S., Ft. Madison, Iowa. I do not see what can be done in your case, except to have a good obstetrician in attendance when the ewes are lambing.

Spavin.—C. W. R., Garrison, Mo. It is at present the wrong time for the treatment of spavin. Wait till late in the fall, and consult FARM AND FIRESIDE of November 15, 1894.

Probably Tuberculosis.—L. R., Framingham, Mass. Your description very much points toward tuberculosis. Have your cow, by all means, examined by a competent veterinarian.

An Old Lameness.—E. A. H., Sterling City, Texas. If your horse has been lame for two years, and the seat of the lameness is in the shoulder, the case, as far as a cure is concerned, is a hopeless one.

Lousy Hogs.—J. M., Louisville, Ill. Wash your hogs every five or six days, in a thorough manner, with a five-per-cent solution of Pearson's creolin in water, but after each wash put the hogs in a clean pen.

Afraid of Reaper and Mower.—A. W., Cross Plain, Ind. If your horse is afraid of reaper and mower, perhaps on account of the noise, all you can do is to patiently convince the horse that there is no danger.

Probably Weakness.—J. K., Chardon, Ohio. The symptoms of dizziness shown by your horse when making a long trip are probably due to weakness. Feed some oats, and get your horse gradually accustomed to more work.

A Dead Stallion.—H. E. K., Elliott, N. D. If you had taken upon yourself the trouble of making a post-mortem examination, you would have found the cause of the death of your horse, and that probably in or near the stomach.

Heaves.—W. H. C., Fishaher, Ala. Your horse has what is called "heaves," a term applied to any chronic, feverless and incurable difficulty of breathing. Please consult numerous answers on same topic in FARM AND FIRESIDE.

Covered with Boils.—J. M., Wittrup, Kan. I cannot answer your question. The only advice I can give you is to have your eleven-year-old mare examined by a competent veterinarian, provided she is worth anything.

A "Lump."—J. H., Bloomington, Ind. Have that "lump" on the jaw of your heifer examined by a veterinarian. I cannot tell you what it is if you don't think it worth while to give a fair description. Some people call everything a "lump."

Died Suddenly.—T. McK., Caledonia, N. Y. If it was as hot on June 4th, in Caledonia, N. Y., as it was in Columbus, Ohio, I would not be at all surprised if your calves, each about six weeks old, succumbed to the great heat; that is, died of sunstroke.

A Large Swelling.—G. H. R., Denver, Col. You ought to have given a description of the large swelling on the head of your cow. It may be actinomycosis. If so, I have to refer you to a long article on the treatment of that ailment in a former number of FARM AND FIRESIDE.

So-called Sweeney.—N. C., Iliopolis, Ill. What you describe is probably a case of radical paralysis (so-called sweeney). Exempt the colt from work for six to eight months, feed well, and allow as much voluntary exercise as the colt is willing to take, and everything will turn out all right. No medicines.

A Cancerous (?) Sore.—W. F., Put-in-Bay, Ohio. What you call a "cancerous" sore may be nothing but the opening of a fistulous canal. First, clean the sore with warm water, then carefully probe it, and if you find that my diagnosis is correct, cauterize the fistulous canal, clear to the bottom, with a stick of lunar caustic (nitrate of silver).

A Barren Heifer—Probably Diseased Teeth.—S. P. G., Goshen, Ind. Fatten your barren heifer and sell her for beef.—Concerning your cow, which probably is advanced in years, the trouble complained of may be due to one or more diseased or decayed teeth. Examine her mouth, and if you find any diseased teeth, have them pulled out.

Actinomycosis.—A. P. W., West Middleburg, Ohio. Not long since a complete description of the treatment of actinomycosis was given in these columns. It is too long to repeat in every number. If in your cow the morbid process has its seat in the bone, as seems to be the case, according to what you say, the best you can do will be to prepare your cow for the butcher.

Swelled and Stiff in All Joints.—L. D. D., Robards, Ky. If your three-year-old filly is swelled and stiff in all her joints, shows soreness in all her muscles, and the disease is of four months' standing, I am inclined to think that the prospect of recovery is a very poor one; at any rate, without knowing any more about the case than what you write, I cannot advise you what to do.

Mange.—K. C. P., S. Pittsburg, Tenn. The treatment of a dog affected with mange is best left to a veterinarian, because it requires the strictest attention and good judgment, and therefore an amateur seldom succeeds in effecting a cure. There are a good many effective remedies. One of them, which is not poisonous, is a salve made of Pearson's creolin, one part; soft soap, one part; and alcohol, one to ten parts. This salve, which has to be the more concentrated the more inveterate the mange, must be rubbed in once a day; but if the mange extends over the whole body, only one third of the surface of the body should be thus treated on the same day. This treatment must be continued for two to three weeks, but care must be taken to prevent the dog from reinfesting himself at his old sleeping-place, etc.

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Bloody Milk.—H. C., Unity, Wis. You say your cow has been injured by having been chased by dogs, and it is very probable that this constitutes the first cause of the bleeding. Since the cow has to calve in about seven weeks, it will be very desirable to make her dry if it can be done without producing garget. Keeping her for awhile on dry food will greatly facilitate matters. Meanwhile, see to it that the milking is done in a gentle manner.

Castration of Colts.—A. F. M., Deer Island, Oregon. Your communication does not contain anything by which the cause of death of the three-year-old colt can be determined, unless it is the statement that the colt died four and a half days after castration. Your method of operation is not a good one; it affords too many chances for infection. All things considered, the old method with clamps, properly prepared, is by far the best and safest.

Prolapsus of the Vagina.—Z. M. M., Coropolis, Pa. Prolapsus of the vagina before calving is not dangerous. See to it that your cow has some voluntary exercise, and if kept in the stable, that she stands a little higher with the hind feet, or at least fully as high with the hind feet as with the fore feet, and then do not feed too much voluminous food. As a prolapsus will only occur when the cow is lying down, drive her up when you see the vagina prolapsed.

Rupture of the Bladder.—G. C. V., Fillmore City, Utah. The retention of the urine from which your hogs suffered was caused by the presence of a stone, or stones, in the bladder; the retention, or rather, its consequence, the continued accumulation of urine, caused the rupture of the bladder. When this happened, the animals very naturally felt relieved; but the relief was of short duration, and as you say, in three to four days more the animals died. Death was caused by uremia (poisoning of the blood with urine).

A Roarer.—M. L. S., Batavia, N. Y. According to your description your horse is a so-called roarer. Roaring may be produced by several causes, but in most cases it is the result of a paralysis of the recurrent nerve, usually on the left side. Such a paralysis prevents a sufficient opening of the larynx at the inspiration, hence the roaring or whistling sound. In cases of roaring caused by such a paralysis, a partial cure is sometimes effected by an operation, but as its performance requires an expert surgeon, who, of course, knows how to execute it, a description is not necessary.

Somewhat Like Anthrax.—J. B. B., Buckner, Mo. Your description, as far as it goes, somewhat reminds of anthrax, but that is hardly possible; if anthrax, not one half of the number of the sick animals would have recovered. If you give a complete description, including the results of post-mortem examinations, and state all the circumstances, I have no doubt the cases will assume an entirely different aspect. Did the cases perhaps occur in the fall of 1893 and 1894, immediately or soon after the cattle were allowed to go into the corn-stalk field?

Rachitis.—S. S., Solon, Iowa. The degeneration of the noses of your neighbor's shoats and the other symptoms you describe, such as sneezing, rubbing of the nose, itching, etc., are caused by rachitis. Tell your neighbor to change the diet of his shoats, to avoid sour milk and acid slop, to give food rich in phosphates and lime salts, especially red clover, or if that is not available, bran, or even soluble bone-meal. Such a change of diet will not restore the degenerated nasal bones to a normal condition, but will prevent a further progress of the morbid process. The disease is neither contagious nor infectious, but is due to like causes in all animals affected.

Heaves—Cannot be Fattened.—A. C. M., Bedington, W. Va. If your old mare is as badly affected with heaves as you say she is, you may succeed in keeping her alive by feeding her with moderate quantities of juicy but sound and nutritious food, and keeping her in a cool and shady place, but you will never succeed in restoring her to usefulness.—If your mare, ten years old, cannot be fattened and does not shed her coat of hair, in spite of sufficient quantities of good, sound and nutritious food and good care in general, she must be suffering from some severe constitutional disease. The quantity of food to be fed to a working-horse depends to a considerable extent upon the size and the make-up of the animal, and upon the kind and amount of work to be performed. On an average, ten to twelve pounds of first-class hay and ten to twelve pounds of good oats, or their equivalent, will suffice for a medium-sized horse employed at moderate work.

Lameness—Chronic Eczema.—H. D., Delta, Ohio. Your statement concerning the lameness of your horse amounts to this: "Your veterinarian says it is in the coffin-joint, and the horse limps a good deal after standing still a little while." How can you expect me to base a different diagnosis upon such a statement? Perhaps your veterinarian is right; let him treat the animal, or follow his advice.—Concerning the chronic eczema on the neck, under the mane, beneath the forelock and on other parts of the body of your horse, it is not strange at all that each veterinarian proposes a different remedy, because a good many different remedies will effect a cure, if properly applied; and if not, none of them will. If you desire to effect a cure, the first thing necessary is to keep the horse clean, well groomed, and in a clean place. If this is done, you may apply to the sores once a day a mixture of iodoforn and tannic acid, equal parts, or something else that has a similar effect. If the sores are irritated by long hair, it may be advisable to cut the latter away.

May Have Been a Snake-bite.—L. T., Burnett's Creek, Mo., writes: "Last Saturday evening my three-year-old mare was taken with a swelling along the lower part of right half of the lower jaw. The swelling increased until the right eye was swollen shut and the tongue extended. There was a very offensive smell. Tuesday a thin, yellow matter exuded freely from the swelling under the jaws. Wednesday morning the swelling had gone



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from the eyes and the tongue was nearly free from swelling. She breathed much better. By eight o'clock she began breathing rapidly, and in a few minutes dropped dead. I examined closely at first and could find no wound or mark of any kind. The mare was in good condition and had access to the pasture and baru-lot. A thick, watery matter came from her mouth, and she wanted to lie down a good deal. I should be pleased to know your opinion of the above case and what should have been the treatment. I observed no other symptoms."

ANSWER:—What you describe may have been caused by the bite of a poisonous snake. About as good a treatment as any is to make, as soon as possible, a subcutaneous injection of tincture of iodine right into the swelling. At least, in my hands this treatment has always been attended with success.

STEEL ROOFING FOR THE FARM.

In these days of domestic economy and progressive mechanism, the iron and steel Roofing manufacturers have not overlooked the farmer, and have produced a simple, strong, durable and cheap steel roofing and weatherboarding that will meet the most exacting conditions. There is no telling how long these roofs will last, but there are a great many steel roofs in Ohio, Indiana and Kentucky which were put up 25 to 30 years ago by the Porter Iron and Steel Roofing and Corrugating Co., of Cincinnati, O., and are in first-class condition at the present time.

By the way, this company are the pioneers in this roofing business and are still the leading manufacturers in Cincinnati. Our readers who contemplate building, remodeling or repairing any buildings, now or later, will do well to write for their free catalogue and factory prices.

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Our Miscellany.

RUSSIA'S rye crop is 792,000,000 bushels.
 IN Paris one person in eighteen lives on charity.
 CHINA raises and consumes more ducks than any other country in the world.
 A RED-HAIRED girl of the name of Hellbrand has been discovered in eastern Maine.
 THE Italians have a proverb which says that where the sun does not enter the doctor does.
 IN Philadelphia a young man with small feet advertises that he will break in new shoes for ladies.
 THE king of Italy is the owner of a valuable hunting-coat. It is lined with sableskins, and is said to be worth \$5,000.

INMATES of English prisons are employed in picking oakum, making coal-bags for the navy and mail-bags for the general post-office.

THERE were last year 16,789,000 American hogs who bled and died that we might have hams, and soups, and shoulders, and spareribs.

THE vast region called Western Siberia forms less than one fifth of all Siberia, but contains two thirds of the population—numbering nearly 3,000,000 souls.

SIRIUS, the dog-star, the brightest star in the heavens, moves through space at a velocity of thirty-three miles a second. Its distance from the earth exceeds about a million times the distance of the sun.

A WOMAN who had lost her way on the street in London, recently paid three pence and had herself conducted by special messenger from the post-office to her home, where a receipt for her was duly obtained.

EVERY Japanese barrack has a gymnasium, and the Japanese soldiers rank among the best gymnasts in the world. In half a minute they can scale a fourteen-foot wall by simply bounding on each others' shoulders, one man supporting two or three others.

AN authority on hypnotism says that hysterical persons are very difficult to influence. They are so wedded to their own fancies—mental and physical—that they prove very obstinate hypnotic patients. Even if an influence is gained, it passes off very quickly.

THE doctor who pulled the old ameer of Afghanistan through his late illness is a young woman of Ayrshire, Scotland, Miss L. Hamilton, M.D., who took her medical degree three years ago in Brussels, and practiced in Calcutta before she went to Afghanistan.

AMONG the many uses to which celluloid is now put is the making of jewelers' ring-trays. A ring-tray of white velvet lasts ordinarily but a single season; carefully as it may be handled it is sure to get soiled. A celluloid tray can be easily cleaned, and it lasts for years; there are thousands of them in use.

HAWAII is not the only place where prisoners have been known to be hired out for domestic service. It was discovered some years ago that long-term convicts in jail at New Castle, Delaware, were commonly sent on errands about town, and even life prisoners were slightly watched. A murderess was employed in the jailer's family and permitted to go about the streets.

THE "staff" used in the Chicago fair buildings was an incumbustible material made of plaster of Paris and a small percent of cement, strengthened and tempered by fibers of hemp, jute or sisal-grass so that it could be bent, nailed, sawed or bored. It was cast in molds for use on the buildings. The plaster material came from Texas, where it is found in quantities.

LATIN seems to have been the favorite language with the men who decided what should be the mottoes upon the coats of arms of the states. Elaborate Latin mottoes are commoner west than east. Maine is the only state to have for its motto a single Latin word, and Maryland is the only one having an Italian motto, the famous "Fatti maschi, parie femine" (Deeds are masculine, words are feminine).

OF over 5,000,000 children in elementary schools in England, only 890,000 pay for their schooling, and of these 500,000 pay no more than a penny a week, according to a recent official statement. Of the "voluntary schools," in which the whole or part of the tuition is paid by the parents, 5,000 receive from ten to twenty shillings a head for the children in attendance, 4,000 between five and ten shillings, and 5,000 under five shillings.

"MR. PEABODY, who was an American," said Dean Hole the other day, "was one of the greatest benefactors of London. His houses built for and occupied by the workmen are models which every great city would do well to copy. At a flower and plant exhibition in London which I attended four or five years ago, I was surprised and delighted to find that a large number of the prizes for the best plants went to people who were dwellers in Mr. Peabody's houses. That shows what a better atmosphere will do for the working classes. Public gardens and parks and working-men's clubs, I think, are always conducive to temperance. But people will never be made temperate by constraint. To secure temperance is impossible by mere human obligations and vows. Force of common sense, conscience and spiritual influence are necessary."

A LIGHTHOUSE lens of the first order is six feet in diameter, and costs \$4,250 to \$8,400; second order, four feet seven inches, and costs \$2,760 to \$5,550, and the third order, three feet three inches, and costs from \$1,475 to \$3,650. There are three other sizes.

A JAPANESE girl says that when ladies go to buy a dress in her country they tell the shopkeeper their age, and if they are married or not, because there are special designs for the single and double relations of life, as well as for all ages. The consequence of this painful custom is you can tell the age of every lady you meet, and know whether she is married, precisely as though she were labeled, or you were a census-taker. But then, of course, as the ladies in Japan don't care who knows it, there is no fun in finding out.

MISS KATE FIELD has been decorated by the French government for her literary services. She has received an official communication from the French ambassador, M. Patenotre, informing her that President Carnot conferred "The Academic Palm" on her, instituted to recompense artists and authors. The official certificate issued by the minister of public instructions and fine arts described the lady as "Miss Kate Field, conferencie A, Washington," and states that she has been named "Officier de L'Instruction Publique."

NERVOUS prostration among actors and actresses is commonly accompanied by stage fright. Men and women long accustomed to face the public find themselves suddenly seized with nervous fear even at the thought of a rehearsal. Bicycling, as a pleasant and easy mode of exercise, has been recommended in such cases, and an actress who confessed that she rose one morning with a dread of the afternoon rehearsal, declared that after two hours in the open air with her bicycle every trace of stage fright had disappeared.

"ALBANY BEEF" is the euphemism on the shores of the Delaware for sturgeon meat. Doubtless the term goes back to a time when the Hudson sturgeon fisheries were really important. The meat, cut into long, thick chunks and kept in cold storage, was recently an important article of commerce a few miles above the head of Delaware bay, but the sturgeon fisheries in the Delaware, as elsewhere on the Atlantic coast, have greatly fallen off in importance. The sturgeon is the hated enemy of the shad fishermen, as he destroys their light nets.

THE familiar "dancing beans" which have been displayed of late in the shop windows have become a very popular novelty, and great quantities of them have been sold throughout the country at ridiculously high prices. The bean is the seed of the Sebastian palmeri, a shrub which grows abundantly in Alamas, Senora, and other parts of Mexico. The curious movement, or "dancing," is caused by the antics of a larva, the Carpopso saltitans, which is imprisoned in the hollow shell of the bean. The larva resembles closely the common apple-worm of our orchards. The bean has no particular intrinsic value.

In this issue will be seen a new adv. of D. Y. Hallock & Sons, of York, Pa. It is illustrated with their new "Success Jr." Potato Digger, to which has been added many valuable improvements over the implement advertised in previous years, insuring for it greater simplicity, efficiency and economy than can be found in any other potato digger now on the market. The very low price at which it is sold should encourage its general introduction among the farmers in all sections of the country where potatoes are cultivated. If your dealer does not have it on sale, write direct to the manufacturers, as above, for particulars, and be sure to mention FARM AND FIRESIDE.

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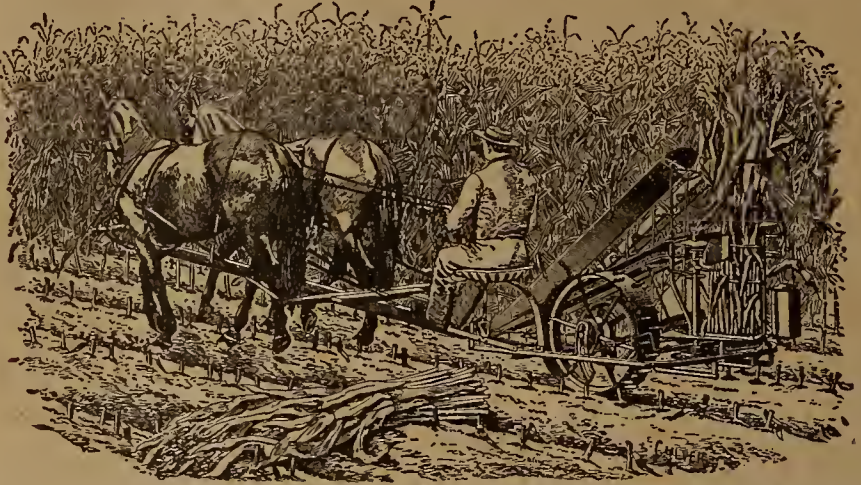
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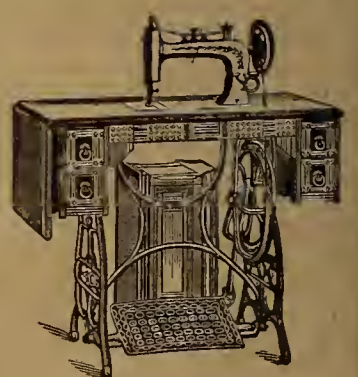
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Smiles.

THE GOLDEN MEAN.

The girl of ninety years ago
Wore skimpy frocks and sandal shoes;
A wholesome reverence she could show
For snuffy men with canes and queues.

VERY.

The turkey at the boarding-house
Was blue as he could be;
'If you should ask me how I am,
I'm feeling tough,' said he.

ERRORS OF NEWSPAPERS.

CONSIDERING the short time in which
a daily paper must be written and
printed, it is not surprising that many
laughable errors occur.

A double murder was once committed in an
inland city. The reporter got all the details.
He said, among other things: "John Jones
was shot in the abdomen. The other man got
shot in the saloon next door."

It must have been the same reporter who
wrote: "Several dogs were shot in the west
end."

A number of periodicals fall into line with
the following:

She whipped him upon his return.—Burlington
Hawkeye.

He kissed her back.—Atlanta Constitution.

We feel compelled to refer to the poor woman
who was shot in the oil regions.—Medical
World.

And why not drop a tear for the man who
was fatally stabbed in the rotunda, and for
him who was kicked on the highway?—Med-
ical Age.

Why not mention the fact of a man being
shot in the waterworks?—California Medical
Journal.

How about the woman who was shot in the
fracas?—Railway Age.

A Chicago footpad who was hurt in the tun-
nel.—Western Medical Reporter.

A "mahogany child's chair" was recently
advertised for sale. That mahogany child
may grow up to be the wooden-headed boy so
often spoken of.

PETE'S MISTAKE.

He was the owner's nephew, and when he
came to the ranch "to learn something about
raising gows, you know," he was unanimously
nicknamed "The Kid." Shortly after his
arrival, he came over to the kitchen one
morning while the boys were at breakfast and
sought Pete, the cook, in dismay.

"I say, Pete, have you seen anything of my
camphorated chalk?"

"Your—how much?"

"My camphorated—my tooth-powder."

"What might it look like, Kid?"

"It's a white powder in a little, round tin,
and—"

"Well, I'll be derved! Say, were that teeth-
powder? Why, I asks yer pardon, Kid, but I
tboug't 'twas bakin'-powder and used it in
ther biscuits!"—Life.

CLEVER.

Woman—"That rocking-chair you sold me
is a fraud."

Second-hand dealer—"How's dot?"

Woman—"The rockers are not even, and as
you rock it keeps moving sideways all over
the room."

Secoud-hand dealer—"Mein cracious! I have
made a meestake und sent you von uew patent
rocker varranted nod to vear oud de carpet all
in von plae. Dot kiud gosts two tollars
more."

Womau—"Well, it's your mistake, and I
won't pay the two dollars, and I won't send it
back—so there!"—New York Weekly.

PROCRASTINATION.

There is a story to the effect that an old gen-
tleman said there were three things that
always puzzled him to account for. The first
was, why should boys knoek apples from the
trees? If they only waited they would fall
off of their own accord. The second was, why
should men go to war to kill each other? If
they only waited they would die of their own
accord. The third was, why should the men
go to see the women? If they only waited the
women would come to see them.—National
Stockman.

DAY-DREAMS.

Farmer—"Look how many blossoms are on
those trees. If every blossom would bring
forth an apple, I would be rich next fall."

Dr. Bolus—"And if every apple were eaten
when green, and every eater got a colic, my
fortune would be made right off."—Truth.

THE SUNDAY MAN.

The following story is told of a busy man
who leaves his home early in the morning and
gets back after dark, and rarely sees his chil-
dren. One morning he found that his little
boy had got up before him and was playing on
the sidewalk. He told the child to go in. The
child wouldn't. He cuffed him and went to
business. The child went in, crying. The
mother said:
"What's the matter?"
"Man hit me," said the youngster.
"What man?"
"The man that stays here Sundays."

HIS DOG COULD DO IT.

One frequently hears people say, when ad-
dressed in some language with which they are
supposed to be familiar, "I can understand it,
but I cannot speak it." The expression would
not be heard as often if all who used it were
treated as brusquely as was a highlander by
an old friend of the family.

The old man spoke to him in Gaelic, and
received the customary reply, "I can under-
stand it, but I cannot speak it."

"My dog can do that," said the Macgregor
scornfully.—Scottish Nights.

CLASSIFIED HIM.

"T'bis is about the time of year," said Mrs.
Watts to her neighbor, "that the fishing fever
strikes my husband. If he can get out on the
banks of some creek and catch two or three
little mudcats in the course of an afternoon,
he is perfectly happy."

"So he is fond of fishing, then?"
"Fond of fishing? Why, that man is a per-
fect anglomaniac."—Texas Siftings.

WHERE THE SHOE PINCHES.

Wade—"What's the matter, old man? You
look as cross as two sticks."

Butcher—"You'd be mad, too. I lost my
gold collar-button, and was searching and
searching—"

Wade—"Why, you've got it on now."
Butcher—"Yes, that's it! I found it just
where my wife said it was at first."

AN APPEAL TO SENTIMENT.

"Have you had that printing done in which
we refer to the silver tones of the tenor?"
asked the manager of the opera company.

"Not yet," replied the agent.

"Well, have them put that line in the
biggest type they can get. We play Denver
week after next."—Washington Star.

AN OUTRAGE.

Conductor—"You'll have to pay fare for that
child, sir; he's over six."

Passenger (indignantly)—"Well, that's the
first time I've ever been asked to pay fare for
that baby, and he's ridden with me on street-
cars for nine years and more."—Texas Siftings.

A DIFFERENT SPECIES.

Mullen—"Phwat was you an' Clancy talkin'
about a while ago, Tim?"

Glynn—"Oi was jist tellin' Clancy that I
didn't belong to the A. p. a., an' he said,
'That's roight; yez belongs to the a-p-c.' Now,
phwat did he mane?"—Judge.

A WORTHY DETERMINATION.

Tommy—"When I'm a man I'm going to be
a soldier."

Mother—"What, and he killed by the
enemy?"

Tommy—"Oh, well, then I guess I'll be the
enemy."—Yale Record.

A TWO-EDGED ILLUSTRATION.

"You must go to bed now, dear. You know
the chickens all go to roost with the sun."

"Yes; but then the old hen always goes with
them."—Pittsburgh Bulletin.

A maiden lady in Newburg keeps a parrot
which swears and a monkey which chews
tobacco. She says between the two she doesn't
miss a husband very much.—Atchison Globe.

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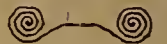
The above is one of the illustrations in "Pictures of All Countries."

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As you turn its pages you will imagine yourself traveling from scene to scene, passing from clime to clime, from the New to the Old World, visiting strange people in cities and country, viewing cathedrals, palaces and capitals, and other magnificent buildings, climbing snow-capped mountains and smoking volcanoes, exploring famous caves and ruins, walking over historical fields of strife, journeying by land and sea from sunny Italy to the Holy Land, on through India, China and Japan, till you have passed around the globe.

This book mailed, postage paid, to any one sending 75 cents for Farm and Fireside six months.

THIS BOOK ABSOLUTELY FREE AS A PREMIUM

To any one sending a club of four six months' subscribers at 75 cents each. See special offer on next page.

Postage paid by us in each case.

Address FARM AND FIRESIDE, Springfield, Ohio.

A FAMILY OF

7 DOLLS FREE

To any one sending 50 cents for Farm and Fireside 6 months.



The tallest, finest dressed, best made and most desirable dolls



On the market, comprising Grandpa, Grandma, Papa, Mama, Brother, Sister and Baby Sister, from 4 to 10 inches in height. Each doll will stand alone.

All Stylishly Dressed in Rich Colors.

Premium No. 35.



Seven Dolls Count As ONE Premium.



There are seven members altogether, and you will find them a most remarkable household. Everyone of them is nice looking, fashionably dressed, and just as interesting as they can possibly be, from Grandpa with his courtly airs and snowy locks, down to the dear little Baby with the flaxen curls. First permit us to introduce you to

GRANDPA He still dresses in the old colonial style, with his long, blue coat trimmed in golden braid, his white waistcoat, brown knickerbockers, and silver buckles on his shoes.

GRANDMA You are sure to love Grandma, with her quaint ways and wonderful stories. She looks for all the world like Martha Washington, with her silver locks all tucked under her dainty lace cap and with her beautiful heliotrope gown.

PAPA Stylishly dressed in a three-button cutaway, light trousers, patent leather shoes, silk hat, tan gloves and walking-stick.

This the first and only set of dolls in which there is a grandpa and grandma. They were made especially for us.

MAMA You would surely admire Mama, if you could see her out calling, fashionably dressed in a brown street costume, trimmed with embroidery and velvet, and a bonnet to match.

BROTHER Dressed in his little Lord Fauntleroy suit of purple velvet and golden braid, with tam-o'-shanter hat to match, and white sailor collar, he is a Brother that any little girl might be proud to claim.

SISTER is just as pretty a little girl as an Empire dress of blue silk and big sleeves can make her. You are sure to like her when you once become acquainted.

BABY Everybody will want to know the dear little Baby, with her pretty white dress, golden curls and dainty cap.

Oceans of Fun for the Little Ones.

Think of the make-believe weddings, parties, visits, and all the delightful combinations that can be arranged. For, remember, this set contains a WHOLE FAMILY OF DOLLS. They cannot fail to please the little people, and at the same time develop in the child at an early age, a taste for what is termed "style in dressing." The costumes of all except those of grandparents are of the most modern styles, fashionable and up-to-date.

Most of the dolls on the market are no taller than our baby doll, and made from paper, while four of our dolls are ten inches high, and are all made from a fine quality of cardboard, fixed to stand alone and lithographed in rich colors. They are

The Largest in Number. The Richest in Color. The Most Modern in Style. The Tallest in Height, and

FINER THAN DOLLS SELLING IN STORES FOR 50 CENTS A SET.

The small illustration given above shows a reduced outline of the dolls, but can only give you a faint idea of their beautiful faces and of the wonderful richness of coloring in the costumes.

SPECIAL TRIAL SUBSCRIPTION OFFER.

FOR 50 CENTS We will send this Family of Seven Dolls, and Farm and Fireside six months, on receipt of 50 cents.

Persons now on our list and receiving this paper may take advantage of this offer, and their subscriptions will be advanced six months from the date on the yellow label.

Postage paid by us in each case.



Special Trial Subscription Offer.

Our Six Months' Trial Subscription Offer, made June 1st, has proved so popular that we repeat it for the month of July. It is the next thing to giving the paper and premiums away. Do not miss this opportunity.

For 50 cents we will send Farm and Fireside six months and your choice of any ONE of these premiums:

- Horse Book.
- Pilgrim's Progress.
- The Family of Seven Dolls.
- The History of the Civil War.
- Five Good Books (Advertised in June 1st issue on page 19).
- Poultry Book.
- The Standard Cook Book.
- Any One Cut Paper Pattern.
- Silver-plated Initial Sugar-shell.
- Silver-plated Initial Butter-knife.

For 75 cents we will send Farm and Fireside six months and your choice of any ONE of these premiums:

- The People's Atlas of the World Contains over 200 large maps and illustrations.
- Gems from the Poets A book of over 400 poems and pictures.
- History of the United States Contains over 600 pages and 240 illustrations. See page 16.
- Pictures of All Countries See advertisement on page 18.

Persons now on our list and receiving this paper may take advantage of these offers, and their subscriptions will be advanced six months from the date on the yellow label.

TO CLUB RAISERS.

We will send ANY ONE of the premiums named above FREE for a club of 4 six months' trial subscribers at 75 cents each, or for a club of 5 at 50 cents each. In this case each subscriber also receives a premium according to the above offers.

Premium No. 24.

A New Song-book.....

"INTERNATIONAL SONG SERVICE,"

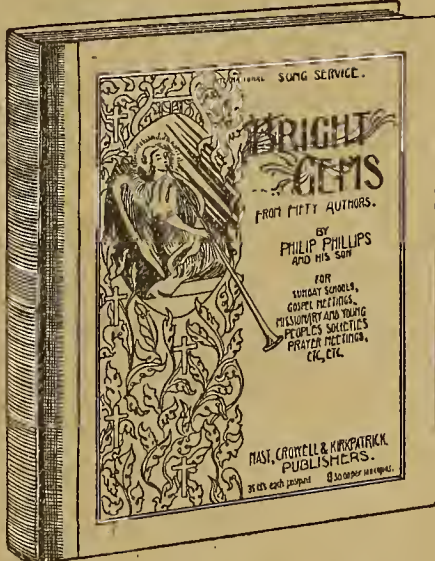
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Bright Gems

FROM FIFTY AUTHORS.

By Philip Phillips and His Son.

Designed for the use of Sunday-schools, Gospel Meetings, Missionary and Young People's Societies, Prayer-meetings, etc.



192 PAGES===300 SONGS.

This work contains many new songs by popular writers and composers, together with a large collection of those old familiar, soul-stirring pieces so dear to every Christian's heart, and without which no song-book would be complete. It is indeed a collection of BRIGHT GEMS.

LARGEST, NEWEST AND MOST COMPLETE SONG-BOOK FOR THE MONEY.

No expense or pains has been spared to make this a most comprehensive and valuable collection of church and Sunday-school songs. The compilers have studied the wants of every phase of religious life, and think they satisfy all, embracing Heart Songs, Life Songs, Work Songs—in fact, songs appropriate for any and all occasions in Christian worship. Among our writers will be found the most famous names among the writers and composers of sacred songs and music, names that are known and loved in every civilized country on earth, and even among the heathen nations of the East.

A FEW OPINIONS OF "BRIGHT GEMS."

I have examined the collection of Sunday-school hymns and tunes, entitled "Bright Gems from Fifty Authors," and cheerfully recommend its use by Sunday-schools irrespective of denomination. Courteously yours, DAVID DAVIS, Cincinnati, Ohio, Choirmaster of St. Paul's P. E. Church. June 4, 1895.

I have found the selections for your new book especially adapted for church and Sabbath-school singing, and would recommend them to any in need of a collection of new and inspiring songs. Respectfully yours, GEO. W. WEBB, Organist, Cincinnati, Ohio. June 5, 1895.

We think your collection one of the best. REV. ELI A. WINNING, Pleasanton, Cal., Pastor M. E. Church.

Your book is a beauty, and I would heartily recommend it. REV. N. L. BURTON, Griggsville, Ill., Pastor Congregational Church.

It is an excellent book. REV. F. E. BRITTON, Albion, Mich., Pastor First Baptist Church.

An admirable collection. REV. A. H. CARVER, Duluth, Minn., Pastor Lakeside Presbyterian Church.

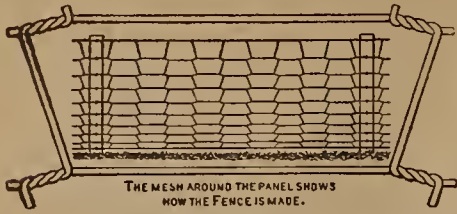
Your book is grand indeed. It is food for the hungry. REV. CHARLES PYLES, Owensboro, Ky., Pastor M. E. Asbury Chapel.

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FOR 50 CENTS We will, for a short time, send this Song-book, and Farm and Fireside six months, on receipt of 50 cents.

Persons now on our list and receiving this paper may take advantage of this offer, and their subscriptions will be advanced six months from the date on the yellow label.

Address FARM AND FIRESIDE, Springfield, Ohio.



WOVEN WIRE FENCE

No other for farm purposes combines so many points of merit as the **KEYSTONE**. Illustrated catalogue free.

Keystone Woven Wire Fence Co.,
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BICYCLES HIGHEST GRADE 1895 MODELS CHEAP FACTORY PRICES

WINDSORS run faster, are built stronger, look handsomer, are better than any other make, and cost \$25 to \$50 less. Send stamp for catalogue. **SPECIAL INDUCEMENTS TO AGENTS NOW. SIEG & WALPOLE M'F'G CO., CHICAGO.**

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BEEKSHIRE, Chester White, Jersey Red and Poland China PIGS. Jersey, Guernsey and Holstein Cattle. Thoroughbred Sheep. Fancy Poultry, Hunting and House Dogs. Catalogue.

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Buckeye Wrought Iron Paunched Rail Fence. Also manufacturers of Iron Creting, Iron Turbine and Buckeye Wind Engines, Buckeye Force Pumps, Buckeye, Globe and Champion Lawn Mowers. Send for Illustrated Catalogue and Prices to **MAST, FOOS & CO. SPRINGFIELD, O.**

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1895 High Grade Bicycles Shipped anywhere C.O.D. Saving you dealers profit. \$100 oak wood for \$62.50 \$85 "Arlington" for \$45.00 \$65 " " for \$37.50 \$20 " " for \$10.90

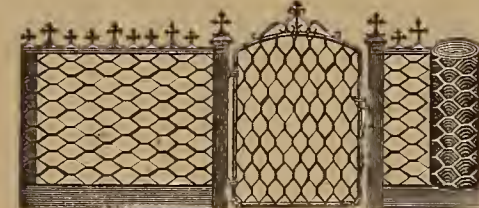
Latest models, wood or steel rims; pneumatic tires; weight 17 1/2 to 30 lbs.; all styles and prices. Large illustrated catalogue free. **Cash Buyers' Union, 162 W. VanBuren St. B 7, Chicago**

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SOLD! UNDER A POSITIVE GUARANTEE

to wash as clean as can be done on the washboard and with much more ease. This applies to **Terrill's Perfect Washing Machine** which will be sent on trial at wholesale price; if not satisfactory, money refunded. Agents Wanted. For exclusive territory, terms and prices write **PORTLAND MFG. CO., Box 4, Portland, Mich.**

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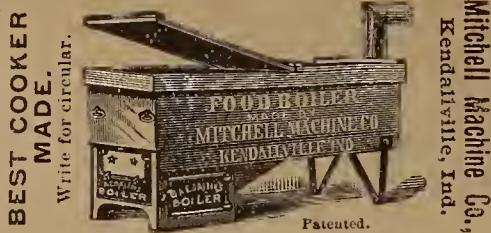
METAL WHEELS for your WAGONS. Any size you want, 20 to 56 in. high. Tires 1 to 8 in. wide—hubs to fit any axle. Saves cost many times in a season to have set of low wheels to fit your wagon for hauling grain, fodder, manure, hogs, &c. No resetting of tires. Cat'l'g free. Address **EMPIRE MFG. CO., Quincy, Ill.**

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CABLED POULTRY and GARDEN FENCE. Also Cabled Field and Hog Fencing, Steel Web Picket Lawn Fence, Steel Wire Fence Board, Steel Gates, Steel Posts, Steel Rail, Tree, Flower and Tomato Guards. Catalogue Free. **DeKalb Fence Co., 38 High St., DeKalb, Ill.**

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but sell direct to the consumer at wholesale prices. Ship anywhere for examination before sale. Everything warranted. 100 styles of Carriages, 90 styles of Harness, Saddles, Fly Nets, etc. Send 4c. in stamps, postage on 112 page catalogue. **Elkhart Carriage and Harness Mfg Co., Elkhart, Ind.**

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Send for free catalogue and full particulars.

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World's Fair Award.

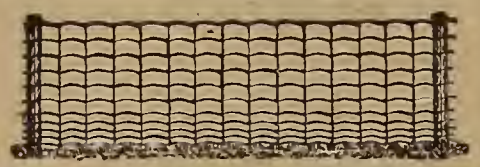
We are the only Steel Roofing Co. awarded Medal and Diploma for **PATENT CAP ROOFING** at World's Columbian Exposition. We are also large manufacturers of all styles of **METAL ROOFING, SIDING, CEILING, ETC.** Send for Catalogue and Price List. Mention this paper.

Sykes Iron & Steel Roofing Co., Chicago and Niles, O. Mention Farm and Fireside.

WELL DRILLING MACHINERY. MANUFACTURED BY WILLIAMS BROTHERS. ITHACA, N.Y.

MOUNTED ON OR SILLS, FOR DEEP OR SHALLOW WELLS, WITH STEAM OR HORSE POWER. SEND FOR CATALOGUE. ADDRESS WILLIAMS BROS. ITHACA, N.Y.

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MISPLACED CONFIDENCE.

Without a shadow of fear farmer Trusty ran his traction engine on the bridge. The builder proved it safe by figures thus: four stringers across the ditch carry 1500 lbs. each, fourteen plank 600 lbs. each, equal to 13,000 lbs. While the coroner's report on Trusty's remains, the builder skipped out. Maybe "figures won't lie," but they are sometimes juggled by ignorant or unprincipled men. Remember when figuring on fences the cross wires or pickets, like the bridge planks add nothing to the strength and the "stringers" of the Page are doubly strong.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

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KEYSTONE Corn Huskers and Fodder Shredders

are further improved for 1895. Better than ever before. You can learn all about them from the free book **"The Great Leak On The Farm."** Send for it now.

KEYSTONE MFG. CO., Sterling, Ill.

We have branch houses.

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A PIANO AND ORGAN BOOK FREE.

Our new Catalogue is a grand portfolio of all the latest and best styles of Organs and Pianos. It illustrates, describes, and gives manufacturers' prices on Organs from \$25.00 up, and Pianos from \$169 up. It shows how to buy at wholesale direct from the manufacturers, and save over 50 per cent.

THE CORNISH ORGANS AND PIANOS Guaranteed for 25 yrs., have been played and praised for nearly 30 yrs.; to-day they are the most popular instruments made. Secure our **SPECIAL TERMS of Credit, framed to suit the times.** Remember this grand book is sent **FREE.** Write for it at once.

CORNISH & CO. (Estab. nearly 30 yrs.) Washington, N.J.

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CARRIAGES, BUGGIES, HARNESS and Bicycles, at Factory Prices.

Work guaranteed and 20 to 40 per cent saved. Our goods received the highest awards at the World's Fair. Our 1895 Mammoth Illustrated Catalogue is free to all. It shows all the latest styles and improvements and reduced prices. It has 200 pages and is the largest and most complete catalogue ever issued. Send for it. **It's free.** **Alliance Carriage Co., Cincinnati, Ohio.** Write to-day.

Mention this paper when you write.

Business Farmers and Milkmen

by the thousand recognize the economy of using the labor-saving **"LOW-DOWN" MILK and DELIVERY WAGONS.** That's why we sold more of them in 1894 (the "hard times" year) than ever before. Send for our catalogue and see if we can't save you at least one hired man's wages.

PARSONS' "LOW-DOWN" WAGON CO., 334 WEST MAIN ST., EARLVILLE, N.Y.

Mention where you saw this advertisement.

STEEL TANKS LOOK for the BEST

We have them in our **GALVANIZED STEEL TANKS.** We sell direct to the consumer. Get our circular. Write the **KELLY FOUNDRY & MACHINE CO., Coshen, Ind.** Mention this paper when you write.

WILL NOT ROT, SHRINK, SWELL, LEAK, NO HOOPS TO BREAK, ARE LIGHT & STRONG.

BUGGIES PHAETONS SURRIES WAGONS

Buy Direct Only from the Manufacturer. We Build Every Part Ourselves and Save Several Intermediate Profits. **GET THE BEST AT THE LOWEST PRICES. THE LATEST STYLES—ALL WARRANTED.** SEND TO-DAY FOR CONFIDENTIAL PRICES AND CATALOGUE. Established 1876. **THE ANDERSON & HARRIS CARRIAGE CO., Elmwood Place, Ohio.** Mention this paper.



No. 3.—"Reckon dat dog gone s'prise hisself when he bit onto dat stovepipe."

A CATALOGUE FREE

Pianos or Organs. \$169.00 \$25.00 And Upwards. :: Warranted 25 Years. Shipped on 30 days' trial. Sold on instalments. Easy terms.

Beethoven Piano and Organ Co., P. O. Box 628 Washington, N. J.

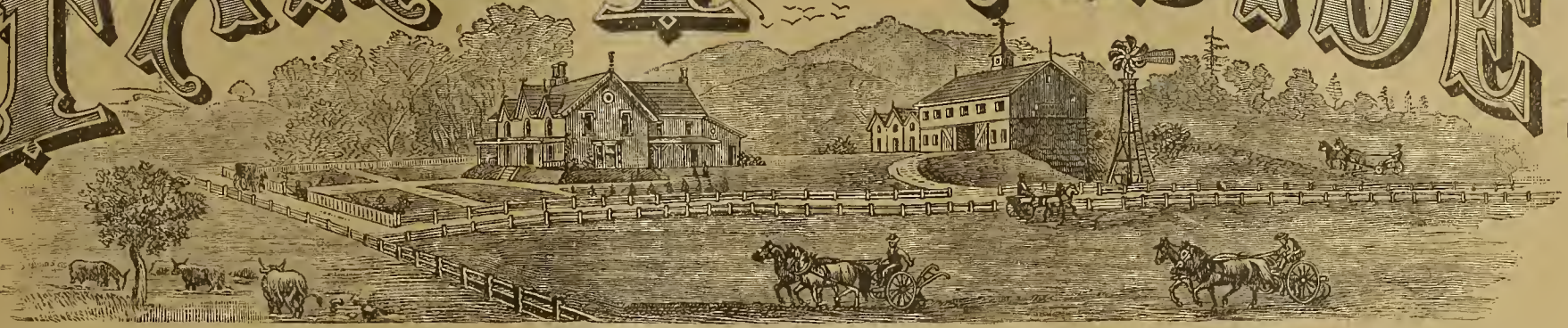
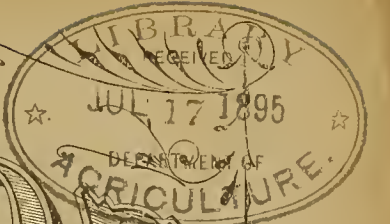
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FRUIT EVAPORATOR and CIDER MILLS.

THE ZIMMERMAN The Standard Machine Different sizes and prices. Illustrated Catalogue free. **THE BLYMYER IRON WORKS CO., Cincinnati, O.** Mention this paper when you write.

FRUIT EVAPORATORS and CIDER MILLS. BEST, CHEAPEST and Most Reliable on the market. Catalogue free. WM. STAHL EVAPORATOR CO., QUINCY, ILL. Mention this paper when you write.

FARM AND FIRESIDE



EASTERN EDITION.

Entered at the Post-Office at Springfield, Ohio, as second-class mail matter.

VOL. XVIII. NO. 20.

JULY 15, 1895.

TERMS { 50 CENTS A YEAR.
24 NUMBERS.

INFORMATION FOR ADVERTISERS.

Average circulation of FARM AND FIRESIDE for six months ending June 15, 1895, has been

279,973

Copies each issue.

We guarantee at least **250,000 COPIES** each issue.

Estimating at the usual average of five readers to each copy, FARM AND FIRESIDE has

More Than a Million Readers

Which is far more than any other Agricultural Journal in the World.

The true annual cost of supporting our government from 1880 to 1894, a period of fourteen years, has averaged but a fraction over \$282,000,000 a year, while the receipts during the same period were a fraction over \$365,000,000 a year. This has left a surplus of \$83,000,000 a year on an average, which has been largely applied to the reduction of our public debt.

"The nearest approach to a billion dollar expenditure in any two years," says Mr. Atkinson, "occurred in 1893-94, when the amount, aside from the postal service, not including the postal deficiency, came to less than three quarters of a billion."

It has been said that we may prove anything by statistics; and sometimes it seems that the statement is not far wrong. There is a way to get at a just estimate of our expenses, and the best one, probably, is to compare one year with another dividing the taxes and expenses by the number of persons who pay the bills. The actual figures show that there has really been very little variation in the true cost of the government since 1879. The greatest variations have been in the reduction of interest and the increase in the item of pensions, which now is approximately \$135,000,000; but each year this expense will grow less.

It is worthy of note that the stringency of 1893, and the attack upon the credit of the country, occasioned a falling off of revenue at the remarkable rate of \$1.50 per head, or, in other words, about \$90,000,000, as compared with the former year, while the loss to the community was ten or twenty times this loss of revenue. But the panic is already a thing of the past. Our credit is re-established; business enterprises have taken on new life; labor is being constantly better and more extensively employed, while wages are being restored to their former figures.

The following table, presented by Mr. Atkinson, will be very interesting to all our readers:

Tax on domestic sp'ts, yielding pr hd	\$1.312
" " beer, " "	.373
" " tobacco, " "	.605
" " foreign liquors, " "	.137
" " tobacco, " "	.160
Total tax on liquors and tobacco,	\$2.587
Tax on sugar for 11 1/4 years at rate of .925 per head, then removed:	
Average for whole term.....	.764
Small internal taxes.....	.077
Miscellaneous permanent receipts, sales of public lands, etc.....	.534
	1.375
	3.962
Taxes on all other imports than liquors and tobacco.....	2.576
Total taxation per head.....	\$6.538

"In dealing with the following table, it will be remarked that the variation, year by year, in each part of the actual cost of the government is very small. Lest the reader should be led to think that such slight changes do not call upon him to watch expenditures lest his money should be wasted, it must be kept in mind that we now number about seventy million people. Therefore, every extra cent per head wasted costs us seven hundred thousand dollars (\$700,000), and every cent per head saved leaves \$700,000 in our own pockets.

"The revenue from stamps does not pay the full cost of the postal service. It is

alleged, apparently on solid ground, that the payment for the mere carrying of the mails is excessive, and that if right discrimination and the application of business principles were applied, the postal service could be made more effective at a lessening cost, without deficiency such as has marked recent years. * * *

"The average cost of each department of



THE MARQUIS OF SALISBURY.

the government, aside from postal service, for fifteen years has been as follows:

	Cents per head.
Cost of civil service administration, legislative, judicial, consular, etc.....	.39640
Public buildings for civil use: post-offices, custom-houses, etc.....	.07386
Support of army.....	.56610
Cost of forts, etc.....	.00600
Improvement of rivers and harbors.....	.18600
Support of navy.....	.25200
Construction of naval vessels.....	.08826
Miscellaneous: District of Columbia, etc., refund of taxes, unlawful sugar bounties, premiums on bonds purchased, etc.....	.92266
Total.....	2.49188
Interest on public debt.....	.90880
Cost of government and interest.....	3.40068
Pensions.....	1.48760
Total expenditure.....	\$4.88828
Taxation in all forms, per head.....	\$6.53800
Expenditures of all kinds.....	4.88828
Difference.....	\$1.64972

"Making no allowance for a slight difference in cash in the treasury June 30, 1879, as compared to June 30, 1894, this difference of \$1.65 per head enabled us to meet the postal deficit, to pay for the support of Indians and for extinguishing their title to large areas of land, and to reduce the public debt over \$1,100,000,000, besides paying a heavy premium on the bonds purchased."

Few of the younger readers will probably recall the fact that at the close of the war, August, 1865, our debt amounted to nearly \$84 per head of the population. At present our national debt, \$1,400,000,000, amounts to about \$20 per head. The government, however, has assets in the way of silver bullion, etc., which, if disposed of at the present value, would reduce the debt until it would not be more than \$16 per head. Our taxes in 1865, per head, on the whole population, north and south, came to \$15.73 per head. To-day, the tax at the rate of \$21 per head would cover the entire cost of the government for the coming year and pay every dollar of our net debt. Notwithstanding the cry against the government, we are making progress.

Mr. Atkinson thinks that it is fairly assured that "the revenue under the exist-

ing laws, even without the income tax, will fully meet all the expenditures during the next fiscal year, ending June 30, 1896, with a probable surplus."

He presents a table extending over a period of fifteen years, from 1895 to 1910, assuming an average revenue of \$5 per head, and draws the following conclusion:

"If the interest and pensions, after a slight present increase of interest in consequence of funding a part of the demand debt, should presently fall off on the average only \$8,000,000 a year during the period of fifteen years (that reduction being a very moderate estimate), the sum of the revenue which has been assigned to interest and pensions would exceed their amount \$1,200,000,000. If we assume that we may ultimately recover from the silver bullion, which has cost over \$500,000,000, and which is now worth about sixty per cent of its cost, only one half, or \$250,000,000, applying that sum to the payment of a part of the demand debt which was incurred for the purchase of bullion, then the above computed surplus of \$1,200,000,000 in fifteen years will more than suffice to meet the remainder of the bonded and of the demand debt."

He thinks there is no doubt that the next Congress will be more capable than the last, and that the "bitter lesson of disaster may lead to the application of common sense to the finances of the country" in the future. By wise management, and the practice of economy, there is little doubt that with a revenue of \$5 per head, we shall be able to wipe out the national debt in the next fifteen years.

"In that event, it will be remarked that the cost of the government, interest and diminishing pensions will be four dollars per head. It is interesting to observe in this connection that even at \$5 per head our rate of national taxation is but a fraction over one half as much as that imposed in Great Britain for the same national expenditures. It is, as far as I can ascertain, less than one half the taxation of Germany for imperial purposes, and only about one third that of France. * * *

"These are the machine-using nations with which we are about to enter into competition in supplying the great markets of the world with the products of the field, the forest, the mine and the factory. By so much as the burden of our taxes is less will our ability to compete be more, our wages higher, and our cost of production lower than those of these debt and army burdened nations, most of whom are still under the oppression of militarism, and still governed by a military caste."

IN a recent unanimous decision of the United States Supreme Court is the following declaration: "The government of the United States has a jurisdiction over every foot of soil, and over every individual within the boundaries of the United States, and while it is one of limited powers, it is sovereign within those limitations. It has power to invoke the civil courts to remove obstructions to interstate commerce, and the civil courts have the right to enjoin those who obstruct that commerce." The meaning of this is that socialistic rioters who are caught in the act of interfering with the transportation of the mails, or of tying up interstate commerce, must go to jail and suffer the full penalty of the law for their crimes.

WITH THE VANGUARD

THE English Liberal Ministry was recently defeated in the House of Commons upon a motion to reduce the salary of the minister of war. Lord Rosebery and his colleagues resigned, and the Liberal party passed from power. Lord Salisbury has formed a new cabinet, and the government is now in the hands of the Conservative party. The Marquis of Salisbury was prime minister for a few months in 1885, and again from 1886 to 1892.

NOTHING, probably, is of greater interest to the body politic than accurate information as to the cost of running our government. It takes more than an expert statistician to learn our actual expenses and present them in a way which is perfectly clear to us. We are often confused, too, by the efforts of the great political parties to charge each other with extravagances.

Each party has been, on one occasion, accused of making appropriations amounting to a billion dollars (\$1,000,000,000). In a way these charges, first made against the Republican party and recently against the Democratic party, are true, and yet in another sense they are not true. In each case the billion dollars was made to include the gross cost of the United States postal service, the greater part of which is self-supporting from the sale of stamps. In each instance the appropriations included large sums for river and harbor improvements and other public works, as well as a large amount for the building of ships for the navy; and the work on these improvements, as well as the expenditure, would extend through a number of years.

Edward Atkinson, who is probably the best authority on the subject which we have under consideration, presents some interesting figures in a recent number of Harper's Weekly, from which we take very largely the material for what we give here.

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Wheat and Silver. In an article on wheat and silver production and prices, Mr. Albert C. Stevens, editor of *Bradstreet's*, says:

"Grouping totals of the world's annual outputs of wheat and of silver, with prices of the same, comparisons are as follows:

"These data permit the construction of a chart, the primary value of which is to indicate the lack of necessity for introducing into a discussion of the probable price of wheat in the United States any extended argument as to what effect the price of silver has had on the price of wheat. The chart shows by double lines, and by a long broken line, respectively, the course of the world's production of wheat and of silver from 1888 to 1894. The single unbroken and the dotted lines indicate, respectively, the courses of prices of wheat and of silver. The point is made that if the world's production of silver available for coinage over a given period increases, by a coincidence, at practically the same rate as the world's output of wheat, then might not one reasonably expect to see the prices of the two products, in the absence of intervening influences, act similarly? The world's out-turn of wheat fell away sharply from 1887 to 1889 (see diagram), when the five-year period of steadily increasing yields began. But silver production throughout the world began to increase a year earlier, in 1888, and continued the movement quite as conspicuously as did wheat, dropping off last year, following the shut-down of mines in the United States, due to the withdrawal of the artificial support to the price and stimulus to production known as the Sherman law. The price of silver shows an eccentric advance in 1890, due to

Years.	Revised totals. World's Wheat Production.	Silver (available for coinage) output World.	Wheat Prices, Farm Average U. S.	Silver Prices oz. London Average.
1889.....	2,137,000,000 bu.	99,710,000 oz.	69 c.	42.6 d.
1890.....	2,304,000,000 "	105,560,000 "	83 c.	47.7 d.
1891.....	2,425,000,000 "	116,416,000 "	83 c.	45.0 d.
1892.....	2,438,000,000 "	131,929,000 "	62 c.	39.8 d.
1893.....	2,521,000,000 "	139,859,000 "	52 c.	35.6 d.
1894.....	2,566,000,000 "	125,000,000 "	49 c.	28.9 d.

the passage of the compulsory silver-purchase law, which is quite out of harmony with the line representing the course of production, as it should be, and which is also apparent from the fact that although the total silver output began to decline nearly two years ago, the metal has only recently showed signs of recovery in price.

"The price of wheat advanced briskly in 1888 on decreased available and prospective supplies at home and abroad, and enjoyed

considerable speculative excitement from which a reaction was inevitable, even though the world's supply fell away in the following year. Then came the steadily increasing world's output of wheat in the period of 1890-94 inclusive, in the face of which farm prices of wheat in the United States advanced from 1889 to 1890, practically holding the advance for another year. This was the period in which our crops of wheat increased heavily, although neither the government reports nor self-appointed granger statisticians discovered it. Then followed self-constituted guardians of wheat producers in the United States with 'hold-your-wheat' circulars."

NOTES ON RURAL AFFAIRS.

A New Apple Enemy. In some of the orchards in my immediate neighborhood (Niagara county) a somewhat new enemy has made its appearance, and in a few instances has been numerous enough to almost ruin the foliage of whole blocks of trees, especially of Baldwins. Professor Saunders, in his "Insects Injurious to Fruits," describes this insect as the "apple-tree case-bearer (*Coleophora malivorella*, Riley), and tells of its "curious little pistol-shaped cases." I found a few of these cases. They are one of the two suits which the insect wears during its existence; namely, its winter suit, easily recognized by its curved shape. In this suit they feed on the buds and on the just expanding foliage. As the insect increases in size, it

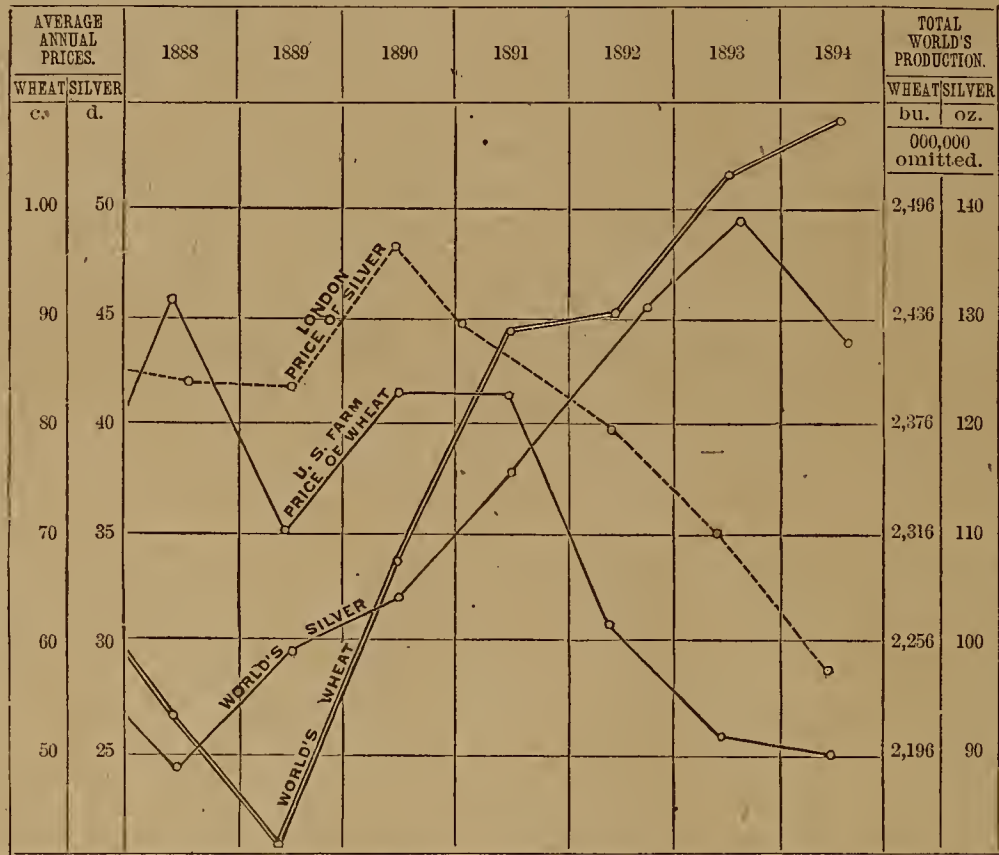
with the Paris green or with the application, I do not know. Our authorities, including Prof. M. V. Slingerland, of Cornell, tell us that thorough and perhaps repeated spraying with Paris green will kill the little caterpillars. I do not see how it can fail to do so if the work is done right and the Paris green good.

The Damping-off Disease. What gardeners call "damping off" is a bad affliction of plants, and a worse visitor to gardeners, for few of the latter escape losses of plants by it. It usually appears without previous warning, and may take whole batches of sowings, leaving but few plants untouched. It is fatal, too, almost unvaryingly and unfailingly. Geo. F. Atkinson devotes a whole bulletin of about fifty pages (No. 94 of Cornell university experiment station) to the description of the disease, and it well deserves all this attention.

Of course, this treatment is rather scientific—too scientific, indeed, for the needs of the practical gardener. There seem to be quite a number of fungi, more or less determined as to name and characters, which produce the result known as "damping off."

Treatment for Damping Off. The conditions which favor the development of these fungi are high temperature, accompanied by much moisture; humid atmosphere, insufficient light, close apartments and fungus-infected soil. The principal lines of treatment sug-

Comparative total annual production throughout the world of wheat and silver (exclusive of silver used in the arts), with average annual prices of wheat (per bushel) at the farm in the United States, and of silver, in pence (per ounce), at London.



soon finds its suit, or case, rather short, and proceeds to build out extensions at one end. But even this is found to be a merely temporary makeshift, and an entirely new suit, or case, has to be constructed. The material is a little strip cut out of the edge of the leaf. From this the insect manufactures a case which resembles a miniature cigar-case. The insect can hide itself completely in this suit. It sticks the head and a portion of the body out at the open end, and feeds on the tissues of the leaf. The case is carried along as it feeds and moves from one place to another. The Cornell university experiment station has just issued a bulletin (93) which gives a full and illustrated account of the insect, which now is

gested from the practical experience of those who have made a study of the disease are as follows: "When cuttings are badly diseased, they should be taken out, the soil removed, benches cleaned and fresh sand introduced. Reset only the sound cuttings (or plants). A fairly cool house is recommended for cuttings, and confined air should be avoided in all cases. As much sunlight as possible should be given, as the plants will stand without wilting. When close atmosphere is necessary, guard against too much moisture and keep an even temperature. The soil should be kept as free as possible from decaying vegetable matter. Soil which is dry beneath and wet on top, as results from insufficient watering by a sprinkler, favors the disease more than uniformity of moisture throughout the soil."

In seed-beds use fresh, sandy soil, free from decaying matter. Avoid over-watering, especially in dull weather; shade in the middle part of the day only, and keep temperature as low as the plants will stand. If the seedlings are badly diseased, it will be wise to discard them and start the bed anew. In the early stages, however, they can frequently be saved by loosening the soil to dry it, and placing the pots in sunny places at such times as they will not wilt. Some advocate sprinkling sulphur on the soil, and in some cases sulphur at the rate of one to thirty is mixed in the soil before sowing, with good effect. When the soil is badly infested, the entire removal of the soil, whitewashing the beds, and the introduction of fresh soil, is the treatment recommended.

Sulphate of Copper for Damping Off. A month ago I complained about the loss of some melon-plants under glass. The cause of the loss was undoubtedly one of these fungi. The only thing I could do was to pull up all the wilted plants, and try the whole thing over again. But before putting in the seed, I gave the boxes a good wetting with a solution of copper sulphate, one ounce to about six gallons of water. This second sowing of plants, in the same soil, has grown thriftily, and



was not troubled with damping off. Whether this exemption is due to the copper sulphate treatment or not, I am unable to say, but I think I shall hereafter give the same treatment to all my potting-soil. If it does not help, it can do no harm, and possibly it may do much good.

Problems in Potato Culture. The Michigan state experiment station has just sent out some bulletins which seem to be of more than usual interest. Bulletin No. 119, by Profs. L. K. Taft and U. P. Hedrick, treats on potatoes. The varieties recommended for Michigan, especially the lower part of the state, are June Eating and Early Northern for extra early; Early Oxford, Early Ohio, Lee's Favorite, Early Harvest and Early Pearl for early; Freeman, Nott's Victor, Thorburn and Rural Blush for medium; American Wonder, President Lincoln, Rural New-Yorker No. 2, Rochester Favorite, O. K. Mammoth, Summit, White Elephant and White Prize for late.

These recommendations, of course, must not be understood to mean that growers should plant all these varieties. I myself plant a much larger number of varieties than those named, but I plant for experiment, not for profit. When I plant for profit, I surely plant along the lines suggested in the following paragraph (quoted from the bulletin):

"A few good varieties, well adapted to the grower's market and soil, are better than a large number, not only that new varieties may turn out to be worthless, but because an unknown sort does not sell as well as an old and favorably known one. * * * Every grower should try, however, the more highly recommended new varieties in an experimental way, because, having served their day and generation, the old sorts must go, and new ones take their places."

Variety a Local Question. Don't forget, either, that one man may find a certain variety very profitable, while his neighbor, or another man at a distance, may pronounce the same variety utterly worthless. It is often a question of soil, or locality, or management. It is every grower's duty to try to find the variety best suited to his wants, and then grow that for main crop. I was reminded of this by reading the long list of "potatoes discarded as worthless," found in the bulletin. This black-list contains many sorts which growers in many localities would hardly wish to dispense with as yet, among them White Star, Minister and Polaris. T. GREINER.

Our Farm.

FARM THEORY AND PRACTICE.

IMPROVING THIN SOIL.—Worn and thin soils are usually deficient in organic matter, and the first rational step toward their improvement is the addition either of such matter or of a fertilizer that will enable them to produce it for themselves. If green manuring is employed in restoring the productive condition of land, we prefer to grow such plants as have the power to take nitrogen from the air and give it to the soil. Red clover stands at the head of the list of such plants wherever it thrives, as it furnishes the best of forage while benefiting the soil, thus affording profit in two ways.

RED CLOVER.—Red clover will not thrive in much of the South, and in the North there is a considerable area in which good growths cannot be gotten without heavy fertilizing. This area is increasing, and is not entirely due to exhaustion of the soil. A continued close rotation that includes clover tends to diminish the power of some soils to grow clover luxuriantly. It is the new soils that give the heaviest yields of clover, as a rule, and when every third year has been devoted to this plant for a period of thirty or forty years, failure to get good stands becomes frequent. It is not safe to infer that the soil is exhausted, as large crops of grain can still be grown, and we are forced to accept the statement of Professor Storer and other students of history of English and continental agriculture, that it is not safe to practice a three-year crop rotation with clover continuously.

COW-PEAS.—Within recent years public attention has been called to some other leguminous plants that may be used in place of clover, where the latter will not grow, and supplementary to it where it thrives. Red clover requires sixteen or eighteen months for its full development, and often we need a quicker-growing crop to be used as a fertilizer. The southern cow-pea is rated highly in the South by those who have used it, and is now a fertilizing crop of great magnitude. It has been used as such a long time, but within late years its use has been extended rapidly. The pea is used both as a fertilizing and forage crop. Some experiments have shown that these plants can be profitably used farther north than was supposed, and on some farms north of the Ohio river ten to twenty acres are annually grown for fertilizing purposes.

The cow-pea is really a bean, and should not be sown until the ground is well warmed up. The first half of June is about right. Foul clover, or rye, or other green stuff, may be turned under, and peas grown on the land, thus securing two crops of vegetable matter to land that under the old order of things received little benefit from the year devoted to clover, because of failure to get a good growth. The peas ripen in September, and should be harvested with hogs. This plan is inexpensive, secures a profit from the crop, which is very nutritious, and returns nearly the entire fertilizing matter of the plant to the soil.

For northern latitudes the Black is as good a variety as any. The yield of grain depends upon the soil, and probably does not exceed eight to ten bushels under favorable conditions, but the peas are very nutritious. The crop should be grown primarily as a fertilizer, and pays for this purpose alone. It is a cleansing crop, and improves the mechanical condition of a clay soil. The actual fertilizing value of a crop of peas varies like that of clover, but in the south, where the growth is luxuriant, it is equalled by that of no other manurial crop, and where it succeeds in the North it grows in favor every year.

CRIMSON OR SCARLET CLOVER.—Crimson clover is another candidate for public favor that is a boon to farmers where it thrives. We do not yet know the limits of the area to which it is adapted, but they extend farther north than was supposed. In southern Ohio, Indiana and Illinois, crimson clover will succeed in dry and protected fields, beyond a doubt. Last fall

was so very dry that many experiments with clover were failures, but where there was moisture to make fair growth before winter, the plants appeared as hardy as red clover. The seed is sown in July or August, after a spring crop is removed, and the plants are in full bloom, ready for hay-making or plowing under, in the first week of May in New Jersey, the Ohio valley and Missouri. Some failure with this new clover is doubtless due to the fact that poor seed has been sent out. Only home-grown seed should be used, the imported being far more risky.

Mr. T. B. Terry, a well-known writer, says:

"Red clover, crimson clover, cow-peas, etc., each has its latitude where it will do best, but one may be made to lap over into the territory of another with more or less success. If I lived in southern Ohio, Indiana or Missouri, I would try hard to make crimson clover grow. There are thousands of corn-fields bare all winter, where corn is to be put in again, where the benefits from growing this plant would be great, if it can be made to do well."

It is a question whether this clover will start well in the heavy corn of the North, but as Mr. Terry says, these renovating plants lap over into the territory of each other, and while growing the one that is best suited to our latitude, we may profitably experiment with others to be used as supplementary to the main one.

DAVID.

PICKED POINTS.

"The power of fertility which exists in the silicates of the soil is unlimited. An improved agriculture must depend on the skill with which this power is brought into action."

Such was the expression of a scientific agriculturist. "Unlimited" is an almost incomprehensible word. It means without height, depth, breadth, beginning or end, or any other qualification the human mind is capable of grasping—illimitable, like the universe.

And this in regard to what most concerns the farmer—plant-food—for without that his fields would be barren, his larder and his pocket empty, and his cattle would cease to "graze on a thousand hills." Chemistry says plant-food has three principal elements—nitrogen, potash and phosphoric acid—the remainder being subsidiary, or "by-products," as it were. Of the first principal element everybody admits that it has no beginning or end, for it is as extensive as the atmosphere itself—it is atmosphere, in part.

But what of the other two principal elements? Is it supposed for an instant that the Creator would supply his creatures so bountifully with the first and neglect to provide the others in equal profusion? He who would make that claim is irreverent, almost blasphemous. But where are these two necessary accompaniments of the first? In the earth, surely. They are of the earth—earthy; and I make the broad assertion that they never can be exhausted, any more than the sphere on which we live can be exhausted, for they are the earth itself. Our scientist, then, is correct in saying, "The power of fertility which exists in the silicates of the soil is unlimited."

But where is the proof? It must be admitted that science and observation have only just reached the border line of inquiry into the secrets of the earth—approached only so near as to see the broad, inviting field for investigation beyond. The country is full of instances where earth has been thrown out of ditches and wells and mines deep down into the bowels of the earth, and after exposure to the atmosphere for a certain length of time, such earth has produced abundant crops, and without the addition of any so-called "fertilization." It is said such earth must "season" before it will produce. Few know what this "seasoning" means. It is simply to give time for the nitrogen of the atmosphere to unite with the potash and phosphoric acid of the earth, for without this great unity of trinity no crops can be grown. Beds of phosphatic rock are found beneath rivers, and of potash salts five thousand feet below the surface of the earth.

But what can be found at the surface of the earth? On the 11th of April last that erudite journal, *The Country Gentleman*, said that by ten analyses of different kinds of soils, to the depth of eight inches, there was found to be an average upon each acre of 3,521 pounds of nitrogen, 4,372 pounds of phosphoric acid, and 19,845 pounds of potash. And then Professor I. P. Roberts is reported to have said before a farmers' institute at Slaterville, New York, on the 29th of last March: "The amount of plant-food in the soil is, on the average, equal to four hundred tons of commercial fertilizer per acre. The main point is to make this available, so that the growing plants can feed upon it." And here my context is pertinent: "An improved agriculture must depend on the skill with which this power is brought into action." This is exactly the point. It may be ascertained yet that all the earth is plant-food; but most of it is unavailable in its present form. It is man's business to make portions of it available from year to year, as his necessities may require. It is not an impoverished soil that confronts the farmer, but the condition of it. It is sacrilegious to characterize soil as "poor," better say, "in poor condition." One might as well say that wheat is poor because it is not ground and baked into bread and fitted to be eaten. Every man's farm is "rich."

It is not the purpose of this communication to offer any advice as to how to make inert plant-food available. Two incidents only, of actual occurrence, will be offered in a suggestive way: A laborer took a small plot of clay ground near his house to see what he could do with it. It was so out of condition it would grow nothing but weeds, and very puny ones at that. He spent his mornings and evenings all summer working that land. He made the soil fine, and kept it so. He grew a fine crop of potatoes. When these were off he sowed wheat, and the next spring clover on the wheat. The wheat crop was immense. In October, after the wheat was cut off, he cut a good crop of clover hay; and the next season he cut four crops of clover. Thorough cultivation effected this. The other case is that of a farmer who had a field of rather stiff clay, so out of condition ("poor," he called it) that some portions of it would not grow anything—not even weeds. As he expressed it, "Large spots were as bare of vegetation as a barn door, and always had been." Twenty-two years ago one hundred bushels of slaked lime per acre was applied, and every season since it has borne an excellent crop. No manure was applied in all this time, except several years ago fourteen loads of barn manure were put on a certain acre which had not seemed to do as well as the rest. The lime cut the clay all fine and made the soil permanently friable. Cultivation in the one case and lime in the other had exactly the same effect. Atmospheric nitrogen was given access to the potash and phosphoric acid of the soil and made that unity of trinity possible.

GALEN WILSON.

AGRICULTURAL CHARITY.

Philanthropic people in Boston have discovered a new way to help the deserving poor. The plan is new to them, but it was tried first in Detroit. Sixty acres of land in Jamaica Plain, a suburb of Boston, were secured for those who might like to cultivate the soil for their own benefit.

The applicants for the privilege numbered one hundred. They were given seed (potatoes, beans, peas, etc.), and cabbage-plants, and also all the necessary tools (including poison for potato-bugs) to do the work with, and fertilizer; all was free, and all the men had to do was to plant. Besides, there was a director or instructor, an experienced farmer, to teach the art of planting if any required it.

Now, it is easy to give away a dollar if no condition of acceptance be imposed, but if a hundred men be offered a dollar on the condition that they saw wood a half day (I have seen this tried again and again), more than seventy-five per cent will decline. Think of this—only one hundred applicants for free land, tools, seed, fertilizers and bug poison in a population of a half million; and of the one hundred applicants, only twenty appeared the first day.

Each applicant was allotted a third of an acre. The size of the lot staggered some of them, and it showed how great is the ignorance generally in relation to land areas. Some of them appeared to think that a third of an acre was merely a back garden patch.

"How much land do you think is in that lot?" asked one man of another, pointing to a piece of land near.

"Well, I think there must be a pretty good half acre in it."

The lot in question was one hundred feet long and sixty feet wide, and contained six thousand square feet, while half an acre contains 21,780 square feet.

Thus, with some of the applicants a third of an acre assumed the proportions of a large farm. But the question of the success of the movement will be settled soon. But in that populous country only one hundred persons would till a third of an acre of land for their benefit when they had only labor to supply. Perhaps if the applicants had been offered self-weeding hoes and automatic machinery generally, with soft cushion and launch-counter attachment, they might have been more numerous and shown more enthusiasm.

GEORGE APPLETON.

NATIVE SHEEP IN AMERICA.

When Coronado, the first Spanish adventurer, visited New Mexico, or possibly Arizona, he found among the Indians wonderful stories of what he and his companions were pleased to call "Woollies," a sheep which the Indians said was as large as the horses which the Spaniards rode. The Spaniards were anxious to get a sight of these interesting animals, and did see the horns, which were like the horns of the ram in shape and form, but as they recorded it, of "prodigious size." They also saw the skins, which were covered with wool suited to be woven into cloth.

The first fur-traders to the Northwest found "Woollies" in great numbers in the valleys of the Rocky mountains, which bore a striking resemblance to those reported by Coronado and his companions. There can be no doubt that there were then found two varieties of the native sheep between the Missouri river and the Pacific coast. These differed in size, in color somewhat, but more especially in covering, the one having wool and the other with an outer coat of hair resembling the deer or antelope, with an under coat of short, fine, soft wool, though of no importance other than as the most complete protection to the animal in the cold mountain climate.

It is quite possible that the original Mountain sheep, or bighorn (*Ovis montana*), reached the American continent by crossing the Bering strait on ice, since the same or quite similar species are found in northeastern Asia; but the change of habitat led to a change in the make-up of the animal. It is reasonable to conclude that a new variety was in time produced that occupied the valley lands where the feed was more nutritious and in abundant supply. These doubtless were the mysterious and wonderful "Woollies" referred to by both the early Spanish and American voyagers in the Rocky mountain regions from Alaska to Mexico. These sheep may have occupied the country for thousands of years before white men saw the country, and roamed whither they would in security. When civilized man, with his means of destroying life, whether for food or sport, came upon the scene, these sheep were perhaps more easily secured than the deer and buffalo, or as their skins were an item of clothing, they were gradually exterminated or forced to flee to the mountains for safety. Whether the "Woollies" were entirely exterminated or not it is certain that a change from the rich valley pastures to mountains would alter their natures, and especially their pelage, and instead of wool a hairy covering would result. Their size would be altered very materially, so that they would not be any longer comparable to horses such as the Spaniards had when they entered the country of "Sibola," about the year 1535.

R. M. BELL.

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Our Farm.

NOTES FROM GARDEN AND FIELD.

A CHEAP INSECT-KILLER.—I have spoken many good words for the well-known insect-powder grown in California from the cineraria-leaved pyrethrum (*Pyrethrum cineraria folium*), and sold under the trade name "buhach." It is sure death to caterpillars, especially the green cabbage-worm, and many other insects. Its only objection seems to be its price, as it cannot be had at retail for less than seventy cents a pound, while ordinary insect-powder is sold by druggists generally at about forty cents a pound. And yet the buhach is far cheaper than the ordinary kinds (Persian, Dalmatian, etc.) simply because it is fresh and in full strength, and therefore sure to kill, while the ordinary insect-powders are often disappointing to the user. We can mix fresh buhach with four or five times its bulk of flour, lime or other dusty material, and apply it with powder-bellows with the same sure effect as if used in full strength. Having told the good points of this insecticide, I will now say that I think I shall use it in rare cases only hereafter. For the purpose of killing lice on poultry, especially on sitting hens, it is excellent, and perhaps unexcelled. I want it for this purpose

But to kill ordinary caterpillars, such as cabbage and currant worms, etc., we have in tobacco dust an insecticide that is just about as effective, and surely much cheaper, as it can be had for one and one half cents, or a little over, per pound by the barrel. A few days ago I found on one of the lawn trees in front of the house some colonies of a species of apple-caterpillar, which had already defoliated some branches very badly. I charged my pocket powder-gun with tobacco dust, and gave the worms a thorough dusting. This stopped their feast at once, and a few hours after, all the caterpillars were either dead or dying. Today I could not find a live specimen on the tree, and it is quite a large one. Now, why should I use buhach, at seventy or more cents a pound, when I can make the cheap tobacco dust answer the purpose just as well?

At one time I was in the habit of carrying one of the small powder-bellows, loaded with buhach, in my pocket when on my daily walks through the garden, and I still recommend this practice to my friends. You will often see worms that you wish to get rid of, and a few puffs here and there with the powder-bellows will dispose of many a worm or other insect that would have been forgotten, and left to continue its mischievous work, if it had required an extra trip to the patch to kill it. But we can just as well carry the bellows charged with the tobacco dust as with the more expensive buhach.

MANURE FOR MOISTURE.—I have often had to reply to the question, "How much manure to use for the garden?" In a dry spring like this we can often very plainly see the good results of heavy manure applications in the greater ability of the crops on such soil to endure even a long dry spell without serious injury. The decaying organic matter in the soil acts like a sponge. It absorbs water and holds it there for the use of plant roots. On soils that contain plenty of such organic matter the plants have made a good growth, and do not seem to feel the effects of the drought a bit. We can continue to sow and plant. The freshly deposited seeds will grow, and the newly set plants take hold of the soil, and soon feel at home in their new quarters. Even during this dry weather, gardening has been a pleasure on such soil where we have done our duty in the way of stirring the surface frequently. On the other hand, the growth of vegetables on soils deficient in humus has been discouragingly slow. Apparently, every bit of moisture had been abstracted from the soil. It was not worth while to try sowing seeds or setting plants. We had to wait for rain, or go to the trouble of applying water artificially. And soil without moisture is soil without life and action.

I have come to the conclusion, therefore, that the best means to guard against the ill effects of a protracted drought is plenty of manure in the soil, and if you ask me how much to put on, the reply will invari-

ably be to use all the manure that you can get and haul, year after year, even if it be one hundred tons to the acre. In seasons like the present one, vegetables and fruits pay well if you can manage to raise them, and you will have no trouble to raise them if your soil is well filled with manure. Better have a full crop on one acre than make a failure on two or three.

TILLAGE FOR MOISTURE.—That the soil moisture can be preserved by constant and thorough tillage, has so often been pointed out and repeated, that there should be no necessity of emphasizing it any further. But have you ever noticed how much deeper even a light rain will penetrate in well-tilled soil than it does in soil that is hard and compact? By good cultivation, therefore, we set a trap for rains and dews. The hard soil is slow to let the water through, and much of the rainfall runs off to ditches and brooks, while another part is held near the surface, where it will quickly evaporate. The well-cultivated soil lets the water pass down all through the loose soil, where it is safe for awhile. Shortly after every rain, again provide a loose surface mulch by cultivation, and thus hold the moisture for the use of the plant roots. My friends will now readily understand the great need of constant cultivation, and the great benefits to be derived from it. We cultivate in a dry time, not only to preserve moisture and to secure the best chances for chemical action (by bringing new particles of soil in contact with one another), but also to be in readiness to get the greatest benefits from a rain. Then we cultivate after a rain to make the best and most economical use of the moisture which the rain has furnished. Tillage, in other words, builds us a reservoir for the storage of rain-water; and tillage also prevents unnecessary waste of the stored moisture.

WORKING THE SOIL ON BOTH SIDES.—In preparing my potato ground this season, and seeing others prepare theirs, I have been once more—and more strongly than ever—impressed with the fact that we do not prepare our land half thoroughly. Hurrying over the rough surface with plow and harrow, marking out, planting carelessly and covering with a shovel-plow may do well enough in clean, loose soils; but for the majority of soils, greater pains and more labor are absolutely necessary for even moderate success. In intensive culture and when aiming for maximum crops, the soil should be mellow as an ash-heap clear down to the subsoil. I have already told of plowing and fitting the land as for planting, and then re-plowing and refitting, thus going through the whole process a second time, "working the soil on both sides." When the furrows are opened, fertilizer strewn along, and this mixed with the soil in the bottom of the furrow by means of going in the furrow once more with the furrower, pressing the blade well down, we leave a nice bed of fresh, fine soil upon which to place the seed-potato. There would be no serious objection to covering the potatoes with one of the various devices used for this purpose. This year, however, I have had all my potatoes covered with the hand-hoe. It is more work, but I think we can afford to take more pains and have every piece covered just right. We can afford to do this, not only with the Carman No. 1 and No. 3 and other choice sorts (which I have been planting mostly this season), but also with the ordinary sorts which we plant for the table or the market.

REFITTING WITH ONE PLOWING.—To work the soil on both sides, it will not be always or absolutely necessary to plow twice. I like Mr. A. I. Root's plan of which he speaks in *Gleanings*. "For potatoes," he says, "we do the manuring the year before; therefore, there is nothing to hinder working the ground up fine and soft before it is plowed. We do this with a two-horse cultivator having all the teeth in and the roller. In fact, we get the ground fine enough to put in a crop before it is plowed at all; then when we turned it over with a plow it is finely pulverized soil down where the potatoes can make their growth. After it is plowed, we fine it up again, and use tools going down deep enough to get to the fine soil turned under." This I consider the best, and indeed the only way to prepare land for securing best results. We must be more thorough in this matter hereafter, for we cannot afford to raise average crops (say eighty bushels of potatoes per acre), such as we get by average methods, any more.

T. GREENER.

Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

ORCHARD NOTES FROM WESTERN NEW YORK.

Never before has there been so much interest in spraying orchards, and in the best parts of the fruit sections of western New York nearly all the fruit growers will spray their trees. The people have now had sufficient experience in the operation to ask most explicit questions about every detail. In the apple districts of Wayne, Ontario, Monroe, Orleans and Niagara counties, it is no longer necessary to exhort the fruit growers to adopt the practice, for they are already convinced and are now chiefly concerned in perfecting the methods and appliances.

Spraying with Paris green for the codling-moth has been an established practice for three or four years, but it was not until last year that the application of Bordeaux mixture for the scab-fungus was extensively tried by apple growers. Many of these experiments with the fungicide were remarkably successful, and they have had a noticeable effect upon the operations this spring. Few persons are now spraying orchards with Paris green alone, but they are combining the poison with the fungicide, and thousands of acres of orchards are being treated with this combination.

For the most part these applications are well made, and the growers are willing to repeat them two or three times. Yet I am more and more convinced that still greater thoroughness is the secret of ultimate success. The Bordeaux combination adheres to the twigs and foliage for weeks, and I am sure that one thorough application of it is more efficacious than two or three carelessly made. This has been well illustrated in some experiments which I have just made on a large scale for the destruction of the canker-worm in an orchard in Orleans county. It is well known to experimenters that this rapacious insect is readily killed with Paris green, and yet the greater part of the most painstaking orchardists of western New York who have had experience with it have failed to completely rout it by spraying. Some persons have even used a mixture of Paris green as strong as one pound to forty gallons of water, with indifferent success. The trouble is that the insect appears suddenly in great numbers and eats voraciously. The treatment which is needed, therefore, is not one of great strength, but one of great thoroughness, so that every portion of the foliage may be coated with the poison. The worms must be killed quickly, before they have eaten far, for five or six of these greedy creatures soon dispatch a leaf. On trees where the worms would average this number to every leaf we were able to destroy them all with two applications of a pound of Paris green to two hundred gallons of water, and in some cases even a single spray was sufficient. But this spray was liberal and thorough. On old trees we applied as much as six gallons to each tree, while growers in general were using from one to two gallons of a twice or thrice stronger mixture with poor results.

Another remarkable feature of the present spring in the apple regions is the great number of orchards which have been plowed up and put under clean culture. The repeated failures of the apple crop in recent years have now thoroughly aroused the growers of western New York. For a time they waited, hoping for productive years, as of old; but the crops did not come, and now an effort is making to bring the crops. I doubt if the experiment of reviving old apple orchards by tillage was ever tried on such a gigantic scale as it is now being tried in western New York. In the meantime, it is gratifying to know that the rural population is at last ready to accept the teachings of investigators quickly and fully.—L. H. Bailey, in *Forest and Garden*.

INQUIRIES ANSWERED

BY SAMUEL B. GREEN.

To Prevent Sheep from Barking Trees.—E. M. B., Pequea, Pa. Wrap the trees with gunny-sacking, any old cloths, wire-netting, or other material.

Maple and Elm Seeds.—A. H. B., Minn. Seeds like those of the maple and elm that ripen in the early part of summer are not easily kept until the next season, but should be planted at once.

Rose-bugs.—D. M. B., Choctaw City, O. T. The bugs that are injuring your grape-blossoms are rose-bugs. They are also very destructive in many other localities. The same insect also eats the flowers of the rose. Various remedies have been tried, but none known are satisfactory. In the case of such

varieties as Concord, and other kinds that are fertilizable with their own pollen, the flower clusters may be covered with paper sacks which protect from rot and birds as well as insects. This practice has been followed successfully in many instances. Where these bugs are not too numerous they can be hand-picked to advantage, as they are very dumpish early in the morning. Paris green and water has also been used successfully for them.

Ants on Grape-vines.—J. V. J., Willard, Va. There are no ants in the northern states that injure grape-vines ordinarily. If you watch them closely you will find out whether they are causing any injury. If you find this to be the case, seek out their nest and destroy them in it with kerosene or hot water. Corn-cobs may be dipped in thin molasses and laid in their haunts, and when covered with them they may easily be destroyed.

Red Rust on Raspberries.—M. W., Cobden, Illinois, writes: "An old field of early harvest blackberries is completely taken by orange-rust this year. The canes that set fruit are looking wilted and dead, and the berries not growing. In former years we trimmed out all affected branches and burned them, but this season all the new growth is rusted, and I see no way but to grub out and burn the whole field, root and branch. A new field has but few affected plants, and two weeks ago I had all of them dug up and taken from the field and burned. The new growth there is bright and clean. Kindly tell me, if we dig out the old field and cultivate it in corn this season, will the ground be sufficiently free from the rust to replant to blackberries this fall or next spring? It is a steep hillside, and with cultivated crops the land washes badly. We try to keep it in berries for self-protection."

REPLY:—I should prefer to have at least two years elapse before planting blackberries again on this land. However, red raspberries or strawberries might be successfully grown on it, but not black-cap raspberries, as these latter are liable to injury from red rust.

Root-killing.—H. D., St. Charles, Minn., writes: "I mail you to-day some pieces of the root of a Longfield apple-tree, also a piece of the body taken about a foot above the ground. The tree is three years from graft. The limbs and body appear healthy, except that there is not as much sap as in most apple-trees at this season. The buds swelled and leaves came out at the same time as my other young trees did, but dried up as soon as three or four leaves appeared at each terminal bud."

REPLY:—You describe a case of what is called "root-killing," and it is probably due to the severe drought of last season, followed by a winter with very little snowfall. The tops, being of a very hardy kind, were not seriously injured, while the roots, being seedlings, were more tender and killed out. The tops leaved out from the strength derived from the food stored up in them in the autumn, and would have done as much if cut off and put in water. A partial remedy is planting the trees so deep that they will root from the scion, roots from the scion being as hardy as the top.

Woolly-aphis.—J. B. S., Bolivar, Mo. Your description applies in every particular to the woolly-aphis, and your trees are doubtlessly infested with it. It will be a very difficult matter to get rid of the pest if it is general in your orchard. The best way, if the case is as bad as you represent, would be to

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BOWELS,

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remove and burn all the infested trees and cultivate the land in some other crop a few years before planting to apples again. If you think this treatment too heroic, it would be a good plan to mulch all the trees for several weeks, and then lay the larger roots bare and apply hot water (at about 120°) to them; but at the best, any remedy will be unsatisfactory when applied to so large an area. Now, these root-lice were unquestionably on the trees when they were set out, and this case is only another illustration of the importance of treating the roots of young apple-trees with hot water or some other insecticide before they are planted out. The risk of not doing it is so much that I am sure it is only taken through ignorance of the seriousness of the trouble.

Injured Plum-tree.—A. S. Kittaning, writes: "I had a plum-tree, planted eight years ago, come out white with blossom this spring, and it made a show of coming into leaf, but appeared later than the other trees. The bark was smooth but for a bit of gum oozing out at a place I thought there might be horers. So I dug my penknife into the bark and was surprised to find that it was dead. Judging from the appearance of the bark which I took off the entire trunk, it commenced dying at the root first. I found small holes bored into the trunk about two inches apart. I sawed out several, one of which I inclose with the insect found in it. What is its name, and did it cause the death of the tree? If so, can you tell me of a remedy against it? The same insect bored into and through the joints, principally, of a Niagara grape-vine belonging to one of my neighbors. The vine bled profusely, but did not die. He tied grafting-wax on the injured places."

REPLY:—The plum-tree was infested with the larvæ of a beetle (*Scolytus rugulosus*). It is not common. The eggs are laid by beetles in the latter part of the summer, and the larvæ work in the wood. A soap wash applied to the healthy trees would probably keep off the insect, which was probably unusually abundant in your section last year. It is doubtful if you are much troubled with it in the future, but you may lose an occasional tree. The trees that are killed by it should be burned before the larvæ escape.

Autumn and Spring Planting.—N. G. B., Delavan, Wis. I like to get most of my nursery stock in the autumn and heel it in or perhaps plant it at once. If properly buried, apple and plum trees will come out in the best order in the spring, and there is no better way to keep such nursery stock than heeled in outdoors. It is far better than storing in cellars. Of the small fruits, red raspberries, blackberries, currants and gooseberries may be safely planted in the fall or heeled in and planted in the spring. Black-cap raspberries (tip layers) should be obtained in the spring, unless you are especially skillful and have had experience in "heeling in" operations. Forest and ornamental trees may be safely buried, that is, "heeled in," in the fall. In regard to fall planting, in milder sections of the country this is the best time to set apple and plum trees, but in your section it is not a good plan to do so, unless after being set out the trees are bent, in the root, to the ground and the tops all covered with earth. If thus treated they are seldom, if ever, injured. Trees thus protected should be raised up as soon as they show signs of growing. The small fruit recommended for fall planting should be covered with a mound of earth and a little mulch when set out. Hardy forest trees of small size may be safely set out in the fall if the work is carefully done. The autumn is the best time to plant out cuttings of such plants as willow, poplar, currants, tamarack, etc., and is desirable, as it can generally be done with more care than if left until spring. One very important point to consider in fall planting is to have the ground moist. If the soil is very dry, planting had better be postponed until spring. Fall planting in your section should be finished by the middle of October; further south a later date will answer well.

ORCHARDING.

In the vicinity of most of our large towns and cities are many desirable farms that may be purchased for little more than the cost of the buildings, and which are admirably adapted to orchard culture. The man who possesses the wisdom requisite to carry out the details in successful fruit growing, will at once determine the character of soil desirable to succeed with the apple. He will not buy a river bottom of alluvial deposit, well knowing that such a soil is not the natural home of the apple-tree. Nor can such farms be bought as cheaply as the rougher hill farms. And here it is that the apple-tree delights to spread itself. Set here in a soil abounding in iron deposits, as indicated by the sulphate which discolors the rocks, the apple-tree almost takes care of itself, as is seen in scores of orchards in every natural apple-growing region.

Such orchards, it is well known, with scarcely any attention produce abundant crops of the finest fruit. In most locations, orchards may be pastured with swine or sheep, which consume the grass and fallen, immature fruit; a practice to be commended, for when an orchard is so far advanced in growth, or the trees protected to prevent injury from the animals, as to admit of being pastured, the owner may

rest assured of future thrift and fruitfulness, with little added cost.

As to pruning, thirty years' experience convinces me that the apple-tree as grown in orchards requires far less than many theorists would have us believe. All varieties of apple-trees, of course, should not receive the same kind of treatment in respect to pruning. For instance, the Northern Spy needs more care in keeping the top properly trimmed and open than the King and other open-growing varieties. Many zealous but inexperienced growers prune too much, and to the detriment of nature's work. Apple-trees, as a general rule, need more attention as to shaping and forming the top when young than in after years, and much of this primary pruning may be and should be done with the pocket-knife, rather than later with the saw and pruning-shears.

ABOUT PLANTING.

In planting an orchard at the present time, one should be governed in the choice of varieties by the outlook for both a foreign and home market, the latter whether his interest lies in shipping to the city supply or local trade nearer home, or all of these.

In selecting varieties, avoid extremes. Because the setting of many summer and fall varieties of apples has been decried, don't go to the other extreme and set nothing but winter varieties. In this particular one should be governed by his nearness to market. Choice summer and fall fruit is often as profitable to grow as the winter sorts, and taking into account the longer time winter fruit has to be kept to get the advantage of the highest market price, and the consequent shrinkage resulting therefrom, even if the price obtained for such winter fruit is a third more than that obtained for the earlier sorts, the difference in cash returns is not always in favor of the winter fruit.

EFFECTS OF SOILS.

There is a wide variation in the qualities of soils and the adaptation of certain varieties of apples to different soils as affecting their growth, flavor and keeping qualities. The hard, rocky hillside farms of Maine and Massachusetts grow the Baldwin and Northern Spy to perfection, while locations favoring an approach to an alluvial soil fail to produce apples of those varieties that keep well, color up well and are smooth, and afford only small crops. The Belleflower is another fastidious grower. Here in Maine there are but few localities where this apple can be said to succeed to perfection. The best Belleflowers that ever come to Maine exhibition-tables are grown on the R. H. Gardiner estate in Maine. Away from that vicinity this variety of apple is seldom produced in such size, flavor and general excellence as there on the deep, rich, granite soil of the Gardiner estate.

Many of our choice summer and fall varieties are not so fastidious in their preferences. They will adapt themselves to a wider range of soils and conditions, and with some extra pains being taken to fertilize the land and feed the trees with lacking elements in the soil—a process which will pay in the vicinity of good local markets—constant crops of fruit may be grown at a profit.

TWO EARLY APPLES.

Of this sort are the Astrachan and Duchess of Oldenburgh. Comparatively few grow Astrachan to perfection. First, the trees are not properly pruned, and when they bear, especially after the trees attain to considerable age and size, all the fruit is allowed to set and grow, which results in a lot of inferior fruit once in two years. The Astrachan, under good cultivation, is a great grower, a profuse bearer of choice fruit for both cooking and eating from hand, at the season of their prime—from the twentieth of July to the last of August. My experience is that half of the fruit should be removed soon after it sets. Wait until nature has done her thinning and after the natural dropping of the excessive amount of fruit which this variety generally produces in embryo, then remove, as a general rule, one half of what is left. So, too, in caring for the tree, the top should be kept open so the fruit will color up well. Au Astrachan which is not red has no friends when it reaches the market. The Astrachan tree has an immense leaf power when the soil is well fed, and the top is liable to become dense and impervious to sunlight and air. But few apples afford as full crops so early in the season, are so showy, possess so much real excellence and command so good a price as the Astrachan. An average price in the markets where I am

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acquainted is about \$1 a bushel for the first picking and 50 to 75 cents for the later gathering.

There is no apple I have grown which fills the place of the Duchess of Oldenburgh in one respect. While all other varieties are green, insipid and unfit for cooking in any form until arrived at something like maturity, the Duchess, before half grown and even when hardly larger than walnuts, when cooked for sauce or made into pies, has a true apple flavor and juiciness, and on that account should be highly prized, even though its excellences when ripe are less than most other varieties that are earlier. But it is a handsome fruit, good size, and attractive in market, and even its quality is esteemed by some people.

THE BUSINESS SIDE OF IT.

Nice winter fruit usually finds a market at some price without great effort on the part of the grower. It is quite different with summer and fall varieties, which are more or less perishable. In this case the grower needs to be a good salesman to get his fruit disposed of and at good prices; that is, if one is making a business of fruit growing. As an illustration, a fruit grower with whom I am acquainted, living some three miles from two manufacturing cities affording a good market, set a large orchard entirely to Astrachans. These young trees gradually came into bearing, and the first fair crop was two years ago, yielding an average of a barrel of fruit to a tree. Another farmer, about the same time that the farmer set his orchard, set a dozen trees of the same variety, which bore a good crop the same season. The local market opened at \$1.25 a bushel, and gradually settled down to 65 cents, later. The farmer with the few trees was first in the market with his apples, but the orchardist with the big lot had larger and more highly colored fruit, the result of more pains and care in looking after his trees. Before the farmer with his seventy-five or eighty bushels had sold half his crop, he got discouraged and disposed of some of his apples at a very low price, fed some to his cows, while quite a few were allowed to rot under the trees.

Quite different was the management of our business-like farmer with his two hundred or more trees. He set his trees with the idea of making a business of selling this summer fruit. He sorted his apples into two qualities and put them into clean bushel boxes or baskets, carefully set them into his large spring-wagon and covered them from dust, and before the sun got very high on his daily round it found this orchardist driving briskly toward the city. Instead of going from store to store and bantering the grocer-men to trade for his apples, he consulted his memorandum-book, noting the orders previously taken at stores and boarding-blocks, checked off the delivery of his goods, booked orders for future delivery—the next day or day after—gathered his empty boxes or baskets, if any there were, and so on until his load was gone, just where it had been sold on previous orders. Now, this man made it a matter of business to have the best in quality of the kind, put up in the most attractive and

best manner, to be prompt in delivering, and to have every box or basket containing just that quality the specimens in sight indicated. So, for him his two hundred trees bearing early, perishable fruit are a source of income to him, and none too many; but for less methodical men, a fourth of that number would be a misfortune.

Maine. L. F. ABBOTT.

EXTRACTS FROM CORRESPONDENCE.

FROM CONNECTICUT.—I noticed what was said in your issue of June 15th about changing the bearing year in apple-trees. I recollect an instance which happened about twenty-five years ago that will sustain the theory. My uncle had a fine orchard, situated on high land and on good soil. One peculiarity of the orchard was, the trees bore full the odd year, while other trees bore but very little. For this reason the orchard was quite valuable, as he was enabled to sell his apples for a good price, whereas in a bearing year apples would hardly pay for picking and fitting for market. About this time there came a hail-storm which pelted the trees severely. It bruised the bark and even cut off limbs as large as pipe-stems. The pathway of the storm was narrow, perhaps not more than thirty rods wide. It changed the bearing to the even year. The trees were just going out of bloom at the time the storm struck them. A. L. A.

Tolland, Conn.

FROM NEW YORK.—I belong to the banner grange of this state, which has between five and six hundred members. We have grange day annually at Thousand Island Park, on the St. Lawrence river, and hear many pleasant speakers from other states. We are having very dry weather, unfavorable for all crops; the wireworms cut off all early corn, and the late is nearly a failure. Some farmers are plowing up the meadows, as grass is very light. Our fruit was nearly all killed by frosts. Butter and cheese are very low. Cheese, 7½ cents per pound; butter, 14 cents to 20 cents per pound. W. H. S.

Watertown, N. Y.

FROM CALIFORNIA.—This is a beautiful land of flowers and delicious fruits every month. One forgets to grow old. This is southern California, where winter never comes, and frost seldom. Tomatoes and other vegetables grow all the year round. We have to irrigate during the summer months, and water costs four cents a thousand gallons. Land is selling for from fifty to five hundred dollars per acre. Five acres make a good home. K. M. C.

Nestor, Cal.

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THE POULTRY YARD.

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

BUILD YOUR POULTRY-HOUSES NOW.

In the summer the preparations for winter must be made. One does not notice the difference between cold weather and the fall season until the snow and cold winds come, and it is then that a visit to the poultry-house at night, when the birds are on the roost, will demonstrate that they feel the change of temperature severely. If the Brahma breed is used, the heavy feathering of the bodies will protect them; but many breeds have no feathers on the body under the wings, which display a naked body bare of down. Such birds cannot endure as low a temperature as those protected by down under the wings, as well as on other portions of the body. Keeping the hens as warm as possible cannot be too frequently discussed, even in summer. Protection at night, when the hens are on the roost, is more important than the food, for should the hens become chilled, it may result in roup.

It is customary to build poultry-houses at the least cost, under the supposition that the hens can endure any degree of cold; but this is true only of those breeds that are well feathered, and even then such hens may go safely through the winter, coming out in good condition in the spring, yet giving little satisfaction as egg producers. They must not only be protected from cold, but must be kept warm. It is proper to lath and plaster the whole house in a cold climate, but this might be overlooked if those keeping fowls did not freeze them with ventilating appliances. It is useless to attempt to keep the hens comfortable and the house warm, and at the same time make openings to allow the warmth to escape, by attempting to afford ventilation. The use of tarred paper on the outside of the poultry-house is a cheap and effectual method of keeping the cold out, and it is better to use it on the outside than the inside, as it is liable to condense moisture if used on the inside. The wood absorbs warmth during the day, if there is plenty of glass, and for that reason paper should only be applied to the inside walls when they are plastered.

KEEP DUCKLINGS DRY.

It is claimed that the Pekin duck will thrive well without ponds. It is true that the ducklings can be more easily raised away from ponds or streams than when allowed to have access thereto, but this is due to the fact that most of the ducklings are hatched with incubators during the winter season, when the cold waters of the pond would chill them and cause loss. Young ducks will thrive better if they are kept away from the ponds until they are well feathered; but despite all claims in favor of the Pekin duck as being adapted to dry locations, my experience is that the adult ducks are more contented when they have a pond. Like all aquatic birds, they enjoy the water, and they will thrive on an open field away from water (except for drinking), yet they give the best results when they have the privileges of a pond.

HARDINESS IN BREEDS.

Our American breeds are as hardy as any in this country, but crosses with the Houdans or Dorkings make better market fowls than can be procured from the American breeds. The Wyandottes, Plymouth Rocks, Javas and Dominiques are considered exclusively American, but as the Brahmas, Langshans, Cochins and Leghorns have been so long bred in this country, and found to be well adapted to our variable climate, they may be added to the list also, as they do well and thrive in nearly all sections.

LANDS FOR SALE

AT LOW PRICES AND ON EASY TERMS.

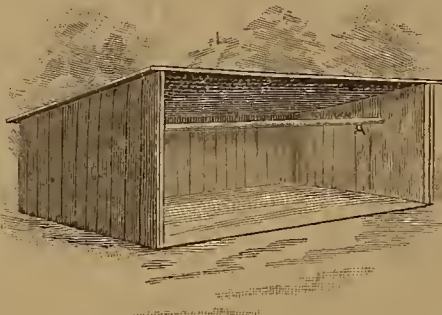
The Illinois Central Railroad Company offers for sale on easy terms and at low prices, 150,000 acres of choice fruit, gardening, farm and grazing lands located in SOUTHERN ILLINOIS. They are also largely interested in, and call especial attention to the 600,000 acres of land in the famous YAZOO DELTA of Mississippi, lying along and owned by the Yazoo & Mississippi Valley Railroad Company, and which that Company offers at low prices and on long terms. Special inducements and facilities offered to go and examine these lands both in Southern Illinois and in the "Yazoo Delta," Miss. For further description, map and any information, address or call upon E. P. SKENE, Land Commissioner, No. 1 Park Row, Chicago, Ill.; or, G. W. MCGINNIS, Ass't Land Commissioner, Memphis, Tenn.

COMPARE RECEIPTS AND EXPENSES.

Eggs have come down in price, and now is an excellent time to compare the receipts and expenses with the winter months. It is not a question of prices, but of profits. A great many farmers and poultrymen estimate their receipts not so much on what the hens are doing as on what the eggs are bringing. They overlook the fact that on the approach of more moderate weather, less food and more eggs are the result. Eggs may go up to fifty cents a dozen when the weather is severely cold, yet not a hen may lay an egg. The very reason that eggs become high is because the hens are not at work. It is certainly more profitable to the farmer to receive even two eggs a week from each hen when prices are lower than have the hens not producing any when eggs are high. The control of laying is not within the province of the farmer. It is not natural for birds of any kind to lay in winter; hence, the laying of eggs at that season is an exception and not the rule.

ROOSTING-SHED FOR TURKEYS.

The turkey usually seeks a high roosting-place, as a matter of protection from enemies, but the jumping from the tree limbs often causes lameness. They are also exposed in winter, which causes roup. A cheap shed, open on one side, with a high roost, will protect them from winds, and at the same time give them all the



advantages of being in the open air. Such a shed will cost but little, but care must be taken that no holes or cracks are in the walls, as small currents of air are more injurious than exposures outside. The walls may be lined with tough paper of some kind, which may be tacked on. By this arrangement more turkeys can be raised, and they will be less liable to disease. They can be easily taught to go under the shed by placing wire mesh along the front and confining them therein for a few days. The house should face the south.

POULTRY AND POTATO-BUGS.

Potato-beetles are a pest, and many farmers who turn their hens on the potato-fields find that the hens will not touch the beetles. It is true that the hens refuse the adult beetles, and in that respect they are wise, as the beetles in the crops of hens and turkeys remain alive for awhile and kill the fowls, but all classes of poultry will eat the larvæ of beetles, which are soft. In so doing, there is a risk from Paris green or London purple; hence, no poisons must be used previous to allowing hens in the field.

I endeavored to test the matter of the preference of hens for beetles, and found that when potato-beetles were placed in the yard the hens would not touch them, nor would they notice the cutworm. The larvæ of the potato-beetle were eaten by a few chicks, but the adults seemed to be very cautious. Many other varieties of beetles, however, were quickly torn to pieces and destroyed.

SHELTER FOR SITTING HENS.

Put the sitting hens in an open shed or any other sheltered location. Use soap-boxes for nests, open at one end, so that the hens must walk in on the eggs. Make a yard of lath, four feet long, two feet high and two feet wide, inclose the box, the end of which should be open so as to permit the hen to come off or on at will. Provide food, water and a dust-bath for each hen, with a cigar-box in which oyster-shells, ground bone and ground charcoal, mixed, are placed. The dust-bath is important. Simply scoop out a place on the ground floor and fill it with fine coal ashes, sifted. With this arrangement the hens do not disturb each other, and but little care and attention are required. The hens can dust and exercise, and they cannot leave their nests. When the chicks are hatched, these lath runs may be placed outside, so as to give the chicks a chance to forage and grow.

"Carowe" is a sure cure for Roup in Poultry. Send 50 cents to Walter Kirby & Co., Marietta, Ohio, U. S. A.

SPADING THE YARD.

The yard should be spaded as often in the season as possible, in order to turn under the filth, and also to have the surface clean and free from weeds, in order that less dampness may exist in winter. When the ground is frozen over in winter or baked in summer, the droppings will accumulate in the yard; but if they are carefully spaded and raked until the surface is smooth, the cleaning can be done more easily. On sandy soils the spading of the yards loosens the top soil and permits the rains to carry down much of the filth that would otherwise remain. A thorough cleaning up late in the season, before cold weather sets in, and good drainage afforded, will greatly aid in preventing disease in the flock.

CORRESPONDENCE.

HOW SHE RAISED FOUR HUNDRED CHICKS.—I have for some time thought of giving my experience in chicken raising. For the past ten years we have kept Plymouth Rock chickens, and have found no other breed that we like better. Every winter or fall we buy new male birds, always securing the pure Plymouth Rocks. I raise from three to five hundred young chicks, and they grow and do well. I feed them corn-meal with one third ground wheat, and half a pint of oil-meal to one gallon of feed. When I give no wheat I use more oil-meal. I soak the feed from one feeding-time until the next, using milk, as we are farmers and have plenty of it. Have used this kind of food for chicks for several years, and find it excellent to keep them thriving. I mix cayenne pepper in the feed occasionally, in the fall. To keep disease away and prevent lice, I have always used coal-oil, lye and plenty of whitewash. A bottle of crude carbolic acid, uncorked and hung in the hen-house, is a good preventive. This country is infested with those pests called mites, no larger than the point of a pin, but millions of them soon destroy the prospects of any profits from chickens. The hens cannot sit long enough to hatch a brood, and if one persists in so doing in defiance of mites, the chicks all die when hatched. Fire and lye is the only way to get rid of them, and in many instances that fails, as they have multiplied and scattered over so much territory.

Iowa.

MRS. G. A. H.

INQUIRIES ANSWERED.

Lameness of Hens.—Mrs. A. K., Scotch Ridge, Ohio, writes: "I have some hens that have lost the use of their legs. They look well otherwise, and have a free range."

REPLY:—They are probably very fat. Remove them from the male.

Swollen Feet.—P. M. R., Snohomish, Wash., writes: "My hens are subject to a foot disease. At first the toes swell, and then they get sore."

REPLY:—It may be caused by the roost being high or from contact with some irritating substance, such as wood ashes, or when too much kerosene is used on the roosts for lice.

Eggs Not Hatching.—I. J. N., Canton, Ohio, writes: "I bought three sittings of Brown Leghorn eggs, and at the end of three weeks of incubation they showed no signs of chicks, being clear."

REPLY:—The eggs were infertile, which may be due to the parent stock being closely confined and too highly fed.

Large Eggs.—J. L. M., Elkhart, Indiana, writes: "Which breed, or breeds, lay the largest eggs?"

REPLY:—The Minorcas, Black Spanish, Houdans, Cochins and Light Brahmas probably come first, but there are hens among all breeds that lay very large eggs.

Management.—J. T. W., Hnbard, Texas, writes: "(1) Can wheat sown in the fall be used for the hens as green food? (2) Should hens be kept in the house in winter or turned outside on a range? (3) Which breed should be crossed with Brown Leghorns to produce large chicks?"

REPLY:—(1) Wheat can be used as stated, but grass is better. (2) In your climate they can be allowed outside at will. (3) The Plymouth Rocks may be used, but Brown Leghorns are too small to produce large chicks.

Lice.—W. L. S., Gap, Pa., writes: "What is the best remedy for lice on chicks newly hatched? I killed some by greasing them."

REPLY:—Grease is injurious to chicks. A drop of melted lard on the head of each chick is sufficient. The hen should also be treated in the same manner as chicks. Dust them well with insect-powder.

Kerosene Emulsion.—R. T., Cazenovia, N. Y., writes: "How should the kerosene emulsion be applied to a poultry-house to rid it of mites?"

REPLY:—Spray it freely into every crack and crevice, and thoroughly drench every part of the house. This should be done twice a week, in order that the work may be thorough.

No Risk

in Vacuum Leather Oil. Get a can at a harness- or shoe-store, 25c a half-pint to \$1.25 a gallon; book "How to Take Care of Leather," and swab, both free; use enough to find out; if you don't like it, take the can back and get the whole of your money.

Sold only in cans, to make sure of fair dealing everywhere—handy cans. Best oil for farm machinery also. If you can't find it, write to

VACUUM OIL COMPANY, Rochester, N. Y.

J. D. SOUDER, JR., Telford, Montgomery Co., Pa. 23 varieties of high scoring poultry stock for sale. Eggs at \$1.00 per 15. Fine catalogue free.

SUNNYSIDE POULTRY FARM Leghorns, Wyandottes, B. P. Rocks, \$1.00 per 13; Minorcas and Red Caps, \$2.00 per 13. Circular. H. T. ANDERSON & CO., Natrona, Pa.

TRY US. We sell your Poultry, Veals, Fruits and all produce at highest prices. DAILY RETURNS. For stencils, prices and references, write F. I. SAGE & SONS, 183 Rende St., N. Y.

MANN'S BONE CUTTER on trial. Try it before you pay for it. Nothing on earth will MAKE HENS LAY Like Green Cut Bone. Ill. catlg. free if you name this paper. F. W. MANN CO., MILFORD, MASS.

HOMESTUDY A practical and complete Business College Course given by MAIL at student's HOME. Low rates and perfect satisfaction. Trial lesson 10 cents. Catalogue free. BRYANT & STRATTON, 30 College Bldg., Buffalo, N. Y.

VIRGINIA FARMS For sale. Fine Hotel at 1/2 cost. J. F. WINGFIELD, Roanoke, Va.

THE POOR MAN'S CHANCE HOMES 100,000 ACRES Choice Hardwood Farming Lands situated along the line of a new railroad now being constructed in central Wisconsin, and near a through trunk line already constructed, for sale cheap to single purchasers or colonies. Special inducements given to colonies. Long time and low interest. Send for full particulars to NORTHWESTERN LUMBER CO., EAU CLAIRE, Wis. Mention this paper when you write.

In Reach of All.

Best Education Christian, Non-Sectarian, Northern advantages in Southern mountain climate, 130 miles from Cincinnati. Reduced R. R. rates. 3 College Courses. Music, Academy, Normal, Manual. Tuition free. Incidentals \$4.50 a term. The great expense in education is board. Go where good board can be furnished cheaply. Address Pres. W. G. FROST, PH. D., Berea, Kentucky.

No Saloons. Find Out About Berea College. Mention this paper when you write.

HIGH-ART FARMING. (After A. B. Frost.)



No. 1.

Said Farmer-artist Jones one day, "I'll farm for hay, and I'll farm for fame, I'll farm for art, and I'll farm for hay! As an artist should who deserves that name!"

Our Fireside.

A BOY'S BATTLE.

BY WILL ALLEN DROMGOOLE.

CHAPTER V.

PEACE.

COURT had been convened, and the prosecuting attorney was sorting his papers, when Mr. James Pearson, accompanied by Andrew, walked into the court-room.

Andrew was pale, but otherwise there was no visible sign of the terrible excitement and nervous strain through which he had passed. He had learned but little from his uncle's manner during the time they were closeted together. To Andrew's trembling confession, "It was I who shot Pete—I was a coward and afraid to own it at first, but now I am not afraid," Mr. Pearson had replied in an absent, troubled way:

"Yes, yes—to be sure—certainly. It must be told at once—to be sure."

How prompt he was to act. His promptness was not lost upon his nephew, whose loitering had caused so much needless suffering.

The lawyer, too, had scarcely seemed to notice his pain and the humiliation of his confession. He had smiled—actually smiled—while the boy was sobbing out the story of his cowardice and his regret—smiled! His face, to be sure, was turned away, so that Andrew did not suspect there were tears in the eyes that had looked upon human misfortune from a humane as well as a legal standpoint.

But the worst was over; he no longer carried his burden alone. Yet he dreaded the publication of his cowardice; he had no hope of being presented in any other light than that of a coward. As to what the law would do with him, what punishment inflict, Mr. Lurton had explained to him, after his confession, that the law was a protector no less than a prosecutor, and that an accident was not, in the eye of the law, a crime. "If," he had added with serious emphasis, "it can be satisfactorily proven that it was an accident."

As he entered the court-room, Andrew felt glad that his father was not present. His uncle had explained to him that his father had been detained at home by a sudden attack of vertigo. He did not tell him that he had sent his own carriage out to bring him in if he were able to travel. Andrew felt that it was far more easy to face the publication of his disgrace than being forced to see a blush upon the proud, tender face of his father.

As he dropped into the seat beside his uncle, near the witness-stand, he lifted his eyes and met those of Uncle Jack. The broad, black face wore an unmistakable grin, as thrusting his hand deep into his coat pocket he drey out a roasted sweet potato that Aunt Jenny had brought him the day before, and began to munch it, with the same relish as when he used to drag them out from the hot ashes in the cabin on the Stone river plantation. His presence gave Andrew new strength; he was able now to look him in the face and smile, which he did, to the very visible delight of the prisoner. Andrew had scarcely taken his seat before the attorney for the defense arose.

"Your honor," said he, and the court-room grew so still that Andrew fancied he could hear his own heart beat, "I have a statement to make which trenches upon the case with such vital importance that I must crave the indulgence of the court in allowing me to make it at once."

The prosecuting attorney was upon his feet in an instant.

"Your honor," said he, "I object."

Nobody was alarmed, however, because of the objection; they seemed to somehow understand that it is the business of the prosecuting attorney to "object"—to always "object" to everything the defense may offer.

"The statement," said Mr. Lurton, "is equally important to the other side. In fact, your honor, the information I have to impart will leave both the prosecutor and myself without a case."

Andrew scarcely heard the laugh which this provoked; he was listening—impatient, eager, for the lawyer to continue his remarks. When the judge had rapped for silence and order was again restored, Mr. Lurton drew himself proudly up and began. His very voice seemed to undergo a change, so gentle, deep and full of pathetic sincerity was every tone.

"Your honor," said he, "there was once a brave and noble boy, who, in a moment of unguarded, boyish fun, without malice, or evil intent, committed an act which, under other and less pitiful circumstances, would have been adjudged a crime, and punishable with death."

The court was as still as the dead; every eye was fixed upon the speaker, except perhaps that of Uncle Jack, who was intently regarding the gap he had made in the roasted potato.

"This boy," continued the attorney, "riding

began to speak, gathering courage as he proceeded. He repeated the whole story, how he had twice attempted to tell his father, the part Uncle Jack had played in the confession, the visit to the town creek, the little seamstress' motto in gay work. There was not one

dusky form had been darting to and fro, in and out the cabin door, each bringing an offering for the "festerbul" that was to celebrate the return of the prisoner.

Not the least energetic among those who prepared the feast was Big Lize, Pete's wife. She had killed her best gobbler, dressed and cooked it, and brought it along with the 'possum that Mose had asked her to bake, with some sweet potatoes, as his contribution to the supper. From the farm-house the mistress had sent down a pound-cake and a basket of doughnuts in Andrew's name, while the master sent the identical shoat that Aunt Jenny was so industriously basting before the big kitchen fire, in the hope of "gittin' it raidy 'g'inst dey all comes," for all the plantation hands were expected to be there to welcome the old man home. It was dark when he reached the cabin door, and stood a moment with his feet upon the threshold, a hand upon either door-post, looking in.

How good it was, that blessed home feeling! How good, and safe, and sweet! After wandering, rest; after turmoil, doubt and uncertainty, peace. The very smell of the corn-cake browning upon the hoe off one end of the hearth was like a perfume—a sweet, familiar old perfume—to his nostrils. And the fat, shapeless figure bending over her barbecue was as perfect to his partial eye as any faultless Milo to the trained eye of an artist. He saw the table with its burden of good things—the odor of 'possum filled the room, seeming to demand recognition. The ex-prisoner thrust his woolly head well into the room, but without entering called out in his glad old way:

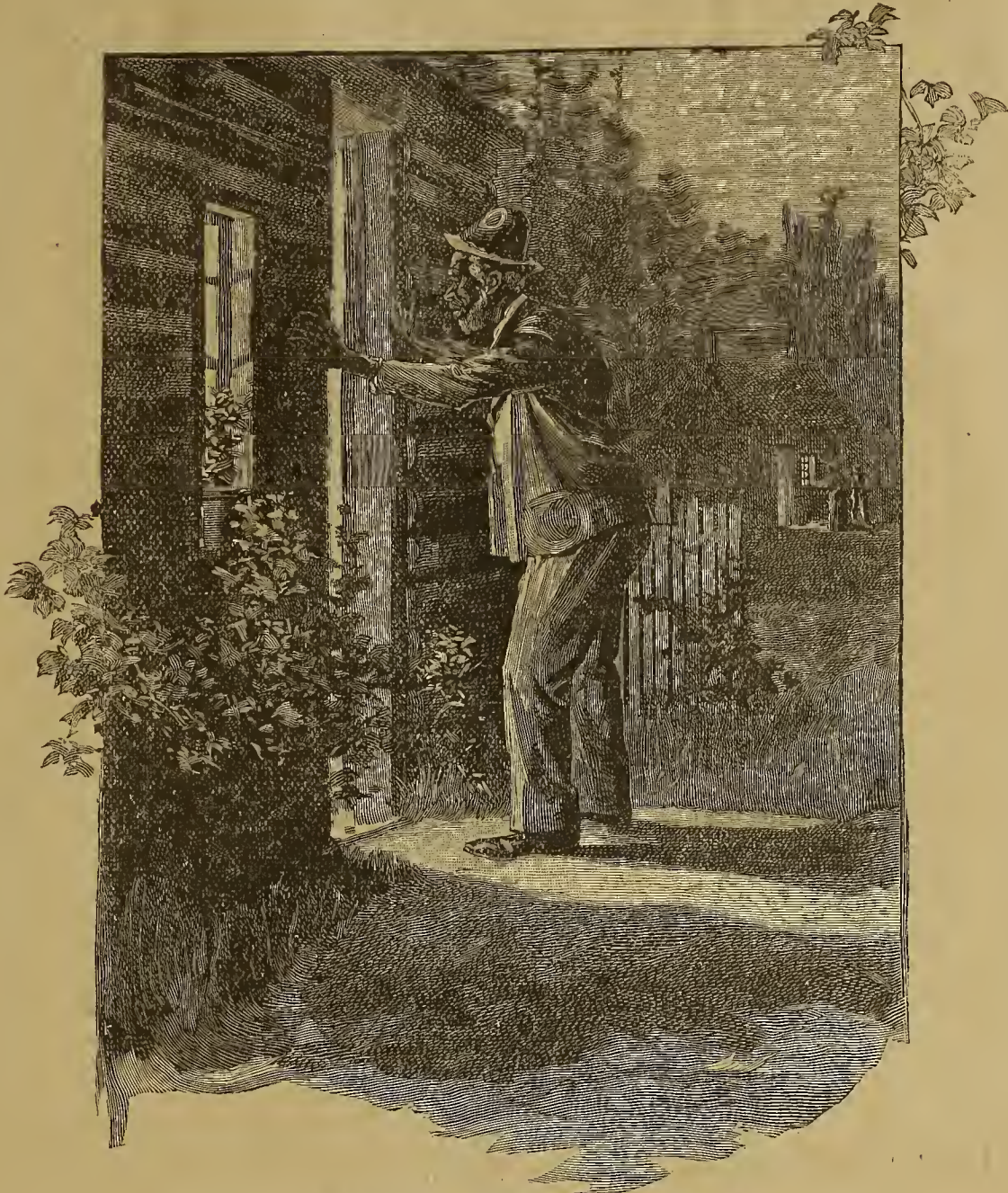
"Eh-eh! Spec' you lookin' fur cunfny ter supper dis night, Mis' Jiny. Sholy, sholy!"

She gave a funny little shout that was half joy, half surprise, dropped her basting-mop into the bowl of vinegar, and for very weakness sat down upon the hard puncheon floor and hegan to cry.

The news of his arrival soon spread, and then the visitors hegan to gather, led by Yellow Pete's widow. Their "Howdy you do, Unc' Jack?" could be heard on all sides, as they came down the little paths to the cabin, across the orchard, through the chinquapin thicket and across the sheep-pasture. They had forgotten the arrest, the mob, the very crime itself;

they remembered only that he had suffered, and that he had returned to them.

Such a night as they made of it! Such



IT WAS DARK WHEN HE REACHED THE CABIN.

along the turnpike in the dusk of the evening, saw an object in a grape-tree which he supposed to be a coon feeding upon wild grapes. With all a boy's love of sport he lifted his rifle, took aim and fired. There was a crash of breaking boughs, a cry which cut to the heart of the horrified lad, and a man, bruised and bleeding, wounded unto death, dropped heavily to the ground. The boy gazed for a single instant; then, horror-stricken, turned and fled. Afterward, thinking the man might be alive and needing help, he turned back to his assistance. Hearing that he was beyond help, and ignorant of the law, the boy turned coward for a moment and resolved to keep his secret, lest the law take hold upon him and bold him guilty of murder. But, your honor, another, an old man, a negro—there he sits—was charged with the crime, and dragged away to jail before the very eyes of the guilty, suffering boy. Yet he beld his peace; he was afraid. He saw the arrest, witnessed the gathering of a mob to take the old man from jail and lynch him, yet fear chained his tongue. He knew that old man was to be tried for his life; knew that in all probability he would be punished; yet he beld his secret unrevealed—no fear could pinch it from him. Yet all the while was conscience, that God-given guide to peace, at work. This morning, your honor, this conscience-stricken boy fought his last battle with cowardly temptation. It was a wordless, bloodless battle, in which good and evil, right and wroug, truth and falsehood, honor and dishonor, arrayed themselves in battle-line 'gainst one another. He fought alone, single-handed, without other weapon than honest blood and manly courage. Your honor, I am here to tell you that he came off that lovely battle-field a conqueror. He asks me to say to this court that he has tried to do that which is right, and that he is ready to accept the consequences. I am here to ask you to hear that brave boy's story, and then to send this faithful old black man home to his cabin and his hoe-cake."

There were few dry eyes in the court-room when the attorney resumed his seat. Among the spectators there was a movement as if they were about to break into applause, but the judge quickly suppressed it, and a moment later Andrew took the witness-stand. As he arose, the first face he saw was his father's. Tears were rolling down his cheeks, and his lips twitched with the emotion he was endeavoring to control. But there was no anger in the face—only surprise, sympathy, tenderness. Andrew turned his own face and

who heard it without tears; there was not one who heard it who had not been a boy himself.

"I was afraid," he said in closing. "It was such a terrible thing for a boy to do, though I did not intend to hurt Uncle Pete. I was afraid they would hang me, at first, then I think I became more afraid of being called a coward than I was of being hung. But I did it; it was an accident. I am telling the truth; I want to do right. I was a coward, but I want to do right—if I die for it."

As he turned to resume his seat, the prosecuting attorney, who had been wrenching his nose for some fifteen minutes, leaned forward and offered Andrew his hand. But the attorney was not the only one to appreciate the boy's brave struggle, and to recognize the courage that had dared to do the right in the face—as he believed—of certain disaster, just because it was right. The judge blew his nose more violently than was necessary; Uncle Jack's potato—be had forgotten to finish it—dropped to the floor, while Uncle Jack gave expression to a low-spoken:

"Dar! Ain' I done tol' you dat little boy ain' no coward? Sholy, sholy!"

"Your honor," said the prosecuting attorney, "I move that the case against the prisoner be dismissed."

This was done at once, after which the court took a recess—"In order to clear up the atmosphere of brine," some one said.

As Uncle Jack was leaving the room he ran against the sheriff who had made the arrest at his cabin a month before. The officer smiled and extended his hand.

"Well, Uncle Jack," said he, "I see you are determined to beat me out of a job."

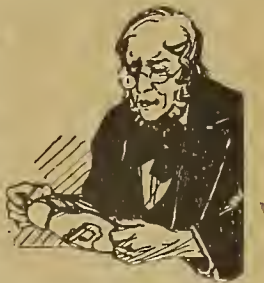
Uncle Jack gave the sheriff his left hand; his right was thrust hastily into his pocket, and a moment later he was flourishing before the eyes of the astonished officer a little flat, soiled, three-cornered bag made of coarse, yellow domestic.

"Ain' I done tol' you dat cunjure-bag keep off de bad luck?" said he. "Dat's buccome I say I 'bleeged ter foteh it 'long o' me. Sholy, sholy!"

But that night, in the cabin on the Stone river plantation, Uncle Jack had a very different story to tell. The news of the releasing of the prisoner reached the farm some hours before he walked into the cabin where Aunt Jenny was bending over the fire basting a roasting pig with a mixture of vinegar, salt and pepper. The table was spread with a white linen cloth, and evidently, festivities of an unusual order were on foot, for since noon

NEVER TOO LATE TO MEND

—the bad habits and early vices of young men and their disastrous consequences. Young men and old men, those who suffer from nervous debility and exhaustion, the wasting away of the vital strength and power from hidden drains or intemperate habits can readily find relief for body and mind by writing the World's Dispensary Medical Association, of Buffalo, N. Y. They employ a full staff of physicians and Specialists, who treat at a distance by correspondence or at the Invalids' Hotel and Surgical Institute of Buffalo, all this class of diseases. Those who suffer from low spirits, irritable temper, a "broken-down" nervous system, and such distressing symptoms as backache, dizziness, shooting pains in head or chest and indigestion, sexual excesses or abuses, all the result of exhausting diseases or drains upon the system,—will find a permanent cure after taking the special prescriptions sent them from the Invalids' Hotel and Surgical Institute. This association of medical men have prepared a book written in plain but chaste language, treating of the nature, symptoms and curability, by home treatment, of such diseases. The World's Dispensary Medical Association, Proprietors of the Invalids' Hotel and Surgical Institute, Buffalo, N. Y., will, on receipt of this notice, with 10 cents (in stamps for postage) mail, sealed in plain envelope, a copy of this useful book. It should be read by every young man, parent and guardian in the land.



The Key to the Situation

—if you suffer from Sick or Bilious Headache, Constipation, Indigestion, Bilious Attacks, or any derangement of the stomach, liver and bowels—is Dr. Pierce's Pleasant Pellets. Mildly and gently, but thoroughly and effectively, they cleanse, renovate and regulate the entire system. One little "Pellet" for a gentle laxative—three for a cathartic. They're purely vegetable and perfectly harmless: these tiny, sugar-coated granules of Dr. Pierce.



stories as were told between the tunes that Mose picked out upon his banjo. And when they were tired of music and feasting, they remembered to ask about the trial.

"Was you skeered? Tell us all 'bout hit," they demanded.

Uncle Jack straightened himself in his chair, laid his rough old hand across Aunt Jeny's shoulder and said:

"I wuz feeling some bad, sholy. Hit seem lack dey wuz boun' ter hang me, anyhow, dis mawnin' when I went inter de cote-room. But wbeu I look up en see de little uarster settin' dar lookin' so brave-lack, all my skeer des went skeeti' off. Soon's I see him I jest tuk out dat sweet 'tater what Mis' Jinny sont me en begin ter eat it, kase I knowed hit wuz all right. En dat's all dey is ter tell. I disremember all dey said, beca'se I wuz thinkin' 'bout de time dat chile rid off in de dark ter fotch de doctor, en I sez, sez I, 'Dat little boy ain' no coward. He gwine tell all 'bout it his owusef, bimeby.' Dat's hucome I ain' told when I see him shoot in de grape-vine en kill po' Pete. I know he gwine tell hit all his owusef, bimeby. En when I see his ma crope out ter de gate ter meet him, when we-alls got home ter-night, seem lack I couldn't hear dat she say, 'Howdy, Uue' Jack? En welcome home ag'in.' Seem lack I could only see her op'n her arms en take dat big boy o' hers inter 'em, en hol' him fast en never say a blessed word. But I spoke up, en sez I, 'Mistiss, dey's some mighty fine folks in dis worl', I reekiu', but dey ain' none in hit mo' braver en what dat ehile am. Sholy, sholy!'"

THE END.

AN AMERICAN CLEOPATRA.

It is much better for a pretty woman to be smart of dress than of speech. Listen to our tale.

Doubtless Miss Loring herself would be at a loss to say exactly how it came about. The simple truth, no doubt, is that she began innocently enough with Marion Crawford, and then, at a single bound, stood dazed before the mysteries of "Isis Unveiled." After that there fell across her brown eyes a melancholy shadow; there crept into her conversation a tincture of theosophy; and in strolling the piazzas her goddess head dropped forward a bit, as though seeking to arrest some fugitive glimpse of the infinite.

This was last summer at Bar Harbor; and this was the first impression that Paul Nugent, after several tedious weeks, got of her there; and it amused him. There, also, and for the first time, he met Prof. Goll. The two men made a false appraisal of each other at a glance. Nugent had height and shoulders and color, and that almost flaunting air of health, the sight of which brings envy to dyspeptics. The professor was a smaller man, of fine, wiry form and memorable head; of olive skin and haggard age. He mistook Nugent for a good-natured swell of dense muscle and perception. Nugent took him for a foreign adventurer who pretended to see celestial glories in symphonies, and who set his liquid eyes as snares for sentimental women. He saw, too, that this man was already much to Miss Loring, and that the two were very effective together.

"Our talk will bore you, I fear," she had said, when he first came upon them. "Professor Goll will deliver a course of lectures in New York this winter on various subjects related to psychic science, telepathy, hypnotism and such things, you know."

She said this glibly, in a tone tolerant of Paul's assumed ignorance, and the professor unconsciously adopted her manner in asking politely:

"Are you interested in the subject?"

"Don't know anything about it," said Paul in a cheerful, confiding tone. "So far as mind-reading and hypnotism and Mme. Blavatsky are concerned—" He paused, disconcerted by the patronizing smile with which both the professor and Miss Loring regarded him. "Why," he added, with a light laugh, "they make me very tired."

After that he was silent and ignored. He listened, however, and learned much, and the next day he gained audience of them again and learned more, as follows:

"Metempsychosis? Believe it?" murmured the professor. "It is the oldest, the only religious. Miss Loring, I know it to be true."

An answering heat flushed on her face.

"Oh," she said, "if I could only tell you what I know to be true!"

Paul was quite forgotten, and this scene was too much for him. He turned quietly aside and entered the music-room, where sat his sister, Mrs. Harkness. She began to gird him gently.

"Paulie, Paulie," she said, looking tenderly up at him, "what a ridiculous baby boy you are!" He swallowed hard and tried to wriggle away; but she kept her hold and went on rapidly. "You know less about women, my child, than the pope. You like pure air and food, and boxing-gloves, and other ridiculous things; and now listen to your sister, who thinks she does know women. Gertrude loves you." She never forgot the grateful look he gave her. "At least she did love you, Paulie; I am sure of that. But you can't capture a woman as you would a bear—not a woman like Gertrude. You must race for her if you want her. Go home and get in training. The race will come off this winter; not before—I won't let it. After this hour, where Gertrude is there shall be your only and own sister. Don't worry about that."

So Nugent next morning went away, and

his sister kept her word. Her witty challenges tricked the professor into a constant exhibition of the lighter and less romantic side of his nature; and this, in retrospect, he found exceedingly provoking. Meanwhile, in New York Nugent boxed a good deal at the fencing and sparring club; but was never sensible of the humor of this.

In midwinter Prof. Goll began his course of lectures. They took at once. He ranged in theme from the open secrets of animal magnetism to the mystic subtleties of esoteric Buddhism. He spoke with admirable eloquence; and above all, there was a charming sympathy between the man and his subject.

Miss Loring, of course, went each time to hear him, and each time with Mrs. Harkness. Nugent had previous engagements, but he heard of the lectures a great deal, and he renewed his acquaintance with the professor one evening at a dinner given by his sister.

It really seemed that Paul had been training indeed. His stories were fresh, brief and abundant; his jocund mood contagious, and it held out bravely to the salad.

The professor was exceptionally quiet all evening, and he stayed late. Paul left early, in obedience to a sign from his wise little sister. Again that night the rivals met at the club, and the professor began to study his man in earnest. Paul, too, made notes. He left, and acknowledged to himself the professor's intellectual superiority. The professor, however, did not seem so ready to concede to Paul his manifest physical advantages.

"I've not had gloves on for some time," he said, "but I warn you I'm rather handy with them."

As a matter of fact, though rather immodest about it, the professor sparred with skill, as Paul discovered the following afternoon at the club. After that they met repeatedly there, and Paul, toying with the professor and learning his tricks, shrewdly arranged for a coup de partie. The other, however, still mistook Paul for a good-natured athletic fool. Otherwise, he would not have remarked, as he did one day in an affectedly languid tone, that it was rather a pity Miss Loring was rich.

"I'm sure," said Paul, "we both agree that Miss Loring needs neither genius nor money to make her perfect."

"She is the most charming woman in the world," said the professor warmly.

But he had delivered himself into the hands of his adversary, and Paul proposed to make away with him at once.

The next day was Wednesday, and on Wednesday afternoons of the season Mrs. Harkness usually came under the spell of the orchestra. There Paul, entering late, found her and Gertrude, and back of Gertrude's chair the professor. Wedging forward, he gained, in the first interval, his sister's ear.

"Now is the time," he whispered. "The race is on. I want you to bring her, without fail, to the club on Saturday night. He thinks he can do me with the gloves; I don't."

Mrs. Harkness looked up at him and began to laugh in her handkerchief.

"Oh, that is too absurd, Paul," she said, "but I'll do it."

Then he bent over Gertrude and said:

"I came here to ask if you would like to see Bernhardt in 'Cleopatra' to-morrow night?"

She started forward in her chair and turned sideways to him a face grown suddenly white. It was the act of an instant, for while yet he stared at her the professor leaned between them, saying softly, "Now, I know." And then, as she sank back in her seat, the blood ran up from her beautiful throat.

Know what? Turning savagely about, Paul was moved almost beyond control by the complacent smile on the professor's face to seize and crush him then and there. But Gertrude looked around again and beckoned him with her eyes.

"Wait for me," she said; "I have something to say to you."

The music drummed on for ages. Know what? Then he harked back to the day at Bar Harbor, and suddenly bethought himself of the strange words she had uttered then on the porch. "If I could only tell you what I know to be true!" she had said to the professor. And now he said he knew. What could he know?

Once out on the street, with the professor and Mrs. Harkness well ahead, he turned to her suddenly and asked:

"Well?"

But speech came hard. "Oh, another time!" she said.

"No, now!" he demanded.

"Well," she laughed, "what have you to say?"

"This," he said, in a sudden whirlwind of passion, "I love you and I hate that man."

"Why do you hate him?" she whispered.

"Because I am afraid you love him. Do you?"

Then he looked at her, and the peace of heaven descended upon him. She was mute, but the message he longed for smiled upon her lips.

"Listen," he said. "I know him far better than you do."

"Perhaps I should have learned to know him too late if it had not been for your sister. She broke the spell. I'm almost ashamed to tell you, but you certainly saw enough at Bar Harbor to know what bond of sympathy was between us. The hooks he gave me to read—our talks about them—that was all. But really, I began to believe—"

"What did you mean that day," Paul broke in, "when you wished you could only tell him what you knew to be true?"

"Oh, don't!" she faltered; then with sudden courage said rapidly, "We had talked a great deal of metempsychosis; maybe you remember. I had about persuaded myself that I believed in it. Then one day he confided to me the great discovery and secret of his life, that—that—oh, it sounds too ridiculous now—well, the soul of Marc Antony had descended through ages into his body. There! But don't laugh."

"I can't," said Paul gravely. "Though the descent is tremendous."

"Then you see," she went on, "that other idea came gradually into my head. Isn't it simply awful?"

"What idea?"

"You know very well; I saw you knew when he spoke this afternoon."

"Pon my word, I don't."

"Why, Cleopatra. Can't you see? Of course, he knew it all the time, though he wished the notion to take root in my mind and grow into conviction as though he hadn't nursed it at all. I hate him!"

Paul stopped short in his tracks.

"Do you mean to say," he slowly demanded, "that you actually believed that you were Cleopatra?"

"Now don't, Paul!" she implored, moving hastily on. "Don't let's talk about it any more. When you asked me to go with you to see Bernhardt I came near fainting; I thought he had told you, and that you were making fun of me. Oh, it is too disgusting to think about! Please—please promise me—"

He promised her everything in that one superlative moment, and then as they drew near to the other two, hurriedly said:

"Do you know the brute thinks you have big money and genius?"

"Is he altogether wrong about that?" she murmured demurely. "But do you know he thinks you spar fairly well? He tells me that with practice you will do very cleverly indeed, and that he enjoys giving a man like you what points he knows."

"Oh, he does, does he?" gasped Paul. "That settles Mr. Marc Antony!"

On Saturday night the big exhibition-room in the fencing and sparring club was lined around with interested and interesting spectators—men of brawn and women of beauty. Foils flashed, gloved hands punched, strong backs bent in wrestling.

Paul came purposely late with the professor. They had barely time, indeed, to get into their clothes when the ring was ready for them. It was seldom Paul showed his skill, and hence the promised set-to was esteemed as the piece de resistance of the evening. The professor, it is only fair to say was not apprised of this; on the contrary, he stopped aghast at sight of the expectant congregation, and would gladly have beaten a retreat, but a grip of iron was on his shoulder, and ere he knew it, he was standing in full sight on guard.

Then a buzz of admiration and surprise went around the room.

"Why, it's Professor Goll!"

He heard, and a fierce hate blazed out of his eyes, and Paul felt that it would be a fight indeed. Gertrude was there; he had sought and found her with his first swift glance.

From the beginning, the professor, smiling wickedly, pushed the bout as best he could, growing conscious, however, with each spent blow that all his tricks were known and that Paul was trifling with him. Pausing for breath, he swept the room with an open, angry stare, and presently it rested upon Gertrude.

He had no thought of retreat thereafter. He remembered, with a rush of blood to his pallid face, how coudesceingly he had spoken to her of Paul. With a higher guard, then, he awaited the onset, sparring lightly for wind. Paul patiently gratified him. Pressed slowly backward, the professor was regaining confidence, when suddenly Paul made one of his famous feints. He took no further advantage of it than to pause and laugh with the spectators at the wild flurry of the professor's arms. But the next instant he saw that his time had come; that the white-lipped man in front of him was no longer to be toyed with, but stricken down.

The laugh drove the professor to an act of folly. He tried to echo it; and then, as it ended in a hoarse, panting cry, lunged forward with a shift of feet. But his man was not there. As the professor's body swung to the right, his head bent forward, Paul coolly turned the blow and drove his left home with staggering effect. Back came the professor with the glare of an infuriated wild beast; the smile on Paul's face half crazed him, and rushing forward, he feinted weakly with both hands, and then swung around on the pivot.

It was a desperate move, and ended in complete disaster. Gertrude hid her face in her hands as she saw Paul's long, strong arm spring full in the face of his antagonist. There was a heavy fall, a storm of cries, in which "It served him right!" predominated, and when she looked up again, Paul was tenderly sponging the professor's face.

"Oh, it was horrid of him!" she said to Mrs. Harkness. Nevertheless, she was proud of her lover.

Not a word passed between the two men until they stood dressed and face to face at the top of the flight of steps. Round about the

professor's left eye was a blotch of red; the rest of his face was very white.

"I must thank you," said Paul, "for the points you have given me." The professor started. "But don't you think Marc Antony made a mistake in selecting you?" The professor smiled feebly. "Because," added Paul, "Cleopatra does."

Then the professor went down the steps.—*Fauntleroy.*

SMALL CHANGE.

Small change is indispensable in going about a city. To have only a five-dollar bill in one's purse when riding in an omnibus or car is almost as bad as to have no money. One requires small change, and the thoughtful husband supplies his wife with bright ten-cent pieces and shining quarters just as regularly as with fresh greenbacks. A woman prefers new and fresh money to that which is greasy and soiled, if she can have her choice, and a certain good man, known and loved in a large circle, always makes a point of bringing home to his family the wherewithal for domestic expenses in a very dainty shape. He is deservedly a favorite.

Small change is as valuable in the commerce of life in other departments as in that of the exchequer. There are people who can talk extremely well on learned and serious subjects, but they have no small change. The quick jest and easy repartee of the drawing-room are not for them. Helplessly and hopelessly, with gloom settling over their faces, and despair in their souls, they sit by while less gifted people chat and laugh and have good times. The trouble is they are destitute of small change.

This puts them at a disadvantage in society where there is not time for homilies and treatises, but where everything is froth and foam. The airy butterfly flight of their neighbors confuses and disturbs them. Their forces must, so to speak, be drawn up in order, and prepared to charge on the enemy, horse, foot and dragoons. All this takes time and thought, and the enemy is up and away, skirring triumphantly elsewhere, before the unlucky opponent has arranged his line of battle. By all means let those who would succeed in society carry about the small change of witty conversation.

THE HANGING OF PICTURES.

In hanging pictures it is well to avoid too much uniformity. Give the picture the best possible position as to light, and above all things do not hang it too high. Pictures must sometimes be skied in galleries, but they never need undergo this humiliating treatment in the drawing-room. The middle of the picture should be on a level with or a trifle above the eyes that look upon it. In a beautiful room great variety may be displayed in the disposition of the various pictures. Family pictures should not be on exhibition in those rooms of the house which are set apart for occasions of ceremony. These may be appropriately used in bedrooms, or even in little studios, or dens which people have to themselves.

Many of our walls are very trying to pictures, and it not infrequently happens that a really beautiful engraving or water-color loses its charm because of an ineffective and discordant background. One may receive hints and suggestions as to the proper hanging of pictures by an occasional visit to studios or galleries, where frequently the tones of the walls are effectively treated so as to bring out the best points in the picture. Not long ago in a country-house a woman of taste hit upon the plan of hanging a bare white wall with a drapery laid on smoothly of rich-toned olive plush. Against this her pictures and engravings stood out in greatly added beauty. Blue drapery makes a cool and effective background for some pictures.—*Harper's Bazar.*

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We shall do this for two reasons, viz.: The first to introduce the La Crosse Camera for 1895; the second, to educate the amateurs in photography. This contest closes on November 1st, 1895.

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REMEMBER, BOYS MAKE MEN.

When you see a ragged urchin
Standing wistful in the street,
With torn hat and kneeless trousers,
Dirty face and bare red feet,
Pass not by the child unheeding.
Smile upon him. Mark me, when
He's grown he'll not forget it,
For remember, boys make men.

When the buoyant youthful spirits
Overflow in boyish freak,
Chide your child in gentle accents,
Do not in your anger speak;
You must sow in youthful bosoms
Seeds of tender mercies; then
Plants will grow and bear good fruitage,
When the erring boys are men.

Have you never seen a grandsire
With his eyes aglow with joy,
Bring to mind some act of kindness—
Something said to him, a boy,
Or relate some slight or coldness,
With a brow all clouded, when
He said they were too thoughtless
To remember boys make men?

Let us try to add some pleasures
To the life of every boy,
For each child needs tender interest
In its sorrows and its joy;
Call your boys home by its brightness,
They'll avoid a gloomy den,
And seek for comfort elsewhere—
And remember, boys make men.

WITH ALL HIS WORLDLY GOODS.

I shall never forget, said an old clergyman recently, the first marriage ceremony I ever performed. I was newly ordained and newly married, and was on my wedding journey in the southern states. We had stepped to visit some relatives of my wife, when one of the servants, learning that I was a clergyman, thought it a good opportunity for wedding the man of her choice.

The service was to be performed at the residence of the groom, a tiny cabin net far away from the house, and my young wife, with a bevy of her girl friends, went along ostensibly to act as witnesses, but really to see the fun. Matters went on smoothly enough until the bridegroom struck the sentence, "And with all my worldly goods I thee endow," when it occurred to him that it would probably be more businesslike to enumerate the items.

Starting in with "Dis yer cabin en de ba'an," he went through with a list of all his possessions, refreshing his memory from time to time with rapid glances around the room to make sure that nothing had been omitted. He finally veered up breathless in the "three pieces er hawg meat and de mewl," leaving me with my place in the prayer-book lost and my mental faculties in a state of chaos.

The girls had long before fled from the cabin, prudently distrusting their powers of self-control, so I finished up as best I could and followed them. I have never married a couple since without a slight nervousness as the man neared that place in the service. Suppose some millionaire should take it into his head to emulate my colored friend and enumerate his worldly goods in the middle of the ceremony!

CLOCKLESS COUNTRIES.

Liberia, in Africa, has neither clock nor timepiece of any sort; the reckoning of time is made entirely by the movement and position of the sun, which rises at 6 A. M. and sets at 6 P. M., almost to the minute, the year round, and at noon it is vertically overhead. The islanders of the South Pacific have no clocks, but make a curious time-marker of their own. They take the kernels from the nuts of the candle-tree and wash and string them onto a rib of a palm leaf. The first or top kernel is then lighted.

All of the kernels are of the same size and substance, and each will burn a certain number of minutes, and then set fire to the one next below. The natives tie pieces of black cloth at regular intervals along the string to mark the divisions of time.

Among the natives of Singar, in the Malay archipelago, another peculiar device is used. Two bottles are placed neck and neck, and sand is put in one of them, which pours itself into the other one every half hour, when the bottles are reversed. There is a line near by, also, on which are hung twelve reeds, marked with notches from one to twelve. A regularly appointed keeper attends to the bottles and rods, and sounds the hour upon a gong.—*Tu-bits.*

DERIVATION OF JEWSHARP.

The name of this little musical instrument is, so far as it appears to show connection with the Jewish race, a misnomer. It has no special hold as a musical instrument among the members of this race, and no more deserves to be called a "Jew's-harp" than the harp of any other people.

The term is merely a corrupted form of the French "jeu-trompe," literally a toy trumpet; but the corruption of "jeu" into "Jews" is clearly of a good age. Timbs, in one of his popular works, has it that the instrument is called a "Jew's-harp" by Hakluyt. Bacon called it "Jeu trompe," while "Jeu trump" is used by Beaumont and Fletcher.

Altogether, the French origin of the term seems the most favored, and this leads one to the conclusion that "jaws-harp" is but a "matter-of-fact" name for that instrument, invented by some of the old folks among whom it circulated.—*Notes and Queries.*

GLEANINGS.

The eldest secret trade process now in existence is in all probability either that method of inlaying the hardest steel with gold and silver, which seems to have been practiced at Damascus ages ago, and is still known only to the Syrian smiths and their pupils, or else the manufacture of Chinese red or vermilion.

Gottlieb von Klackenberg, a South African Beer, has two racing ostriches. One of them has developed a speed of twenty-two miles an hour, and has a stride of fourteen feet. The breeding of ostriches for racing purposes has been seriously interfered with by the passage of an anti-betting law by the English government.

Sheep and cattle ranchers in southwest Texas are asking the state to help them exterminate or keep down the wild animals that are playing havoc with stock in that region. So far from the advent of settlers thinning out the panthers, wolves and coyotes, the animals are increasing greatly in numbers through the plenty of food afforded by the vast herds of cattle and sheep. The ranchers have spent thousands of dollars in trying to abate the pests, but without avail, and now they want the state to take a hand.

Aluminium has the property, when used as a pencil, of leaving an indelible mark on glass or any other substance having a siliceous base. A deposition of the metal takes place, and while this may be removed by a suitable acid wash, the mark itself cannot be removed by rubbing or washing. Magnesium, zinc and cadmium have a similar property, but the mark of magnesium is easily removed; the application of zinc requires a wheel, and zinc and cadmium tarnish, while aluminium is permanent and remains bright. This property is susceptible of a variety of practical applications in decorating glass.

"There is a mystery in the profits of middlemen," said a householder. "I had been paying from 40 to 50 cents a peck for sweet potatoes from my suburban grocer, when I accidentally learned that they were selling at 50 cents a barrel in southern Virginia. By way of experiment I ordered a barrel. Here is what they cost me: Potatoes, at steamboat wharf in Virginia, 50 cents; barrel, 20 cents; freight by boat and rail, \$1.64; cartage to my house, 25 cents; total, \$2.59. My grocer would have charged me at retail from \$4.80 to \$6 a barrel for sweet potatoes not so good as those I thus imported, and I have noticed that his sweet potatoes often rotted on my hands, while these are keeping in perfect condition."

THE RIVAL.

This is the hardest of my fate—
She's better whom he doth prefer
Than I am, that he worshipped late,
As well as so much prettier,
So much more fortunate.

He'll not repent it—you will see
She'll never give him cause to grieve.
I dream that he comes back to me,
Leaving her; but he'll never leave.
Hopelessly sweet is she!

So that in my place she stood
She'd spare to curse him; she'd forgive.
I loathe her, but I know she would,
And so will I, God, as I live!
Not she alone is good.

—*Gertrude Hall, in Harper's Magazine.*

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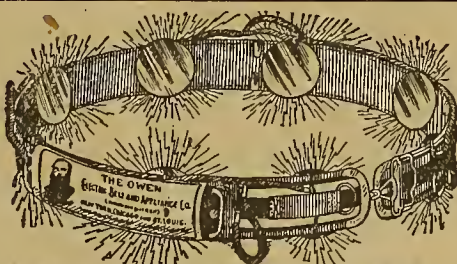
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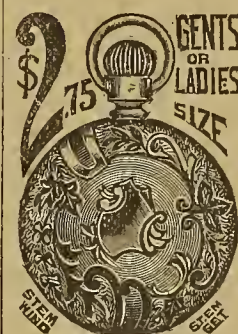
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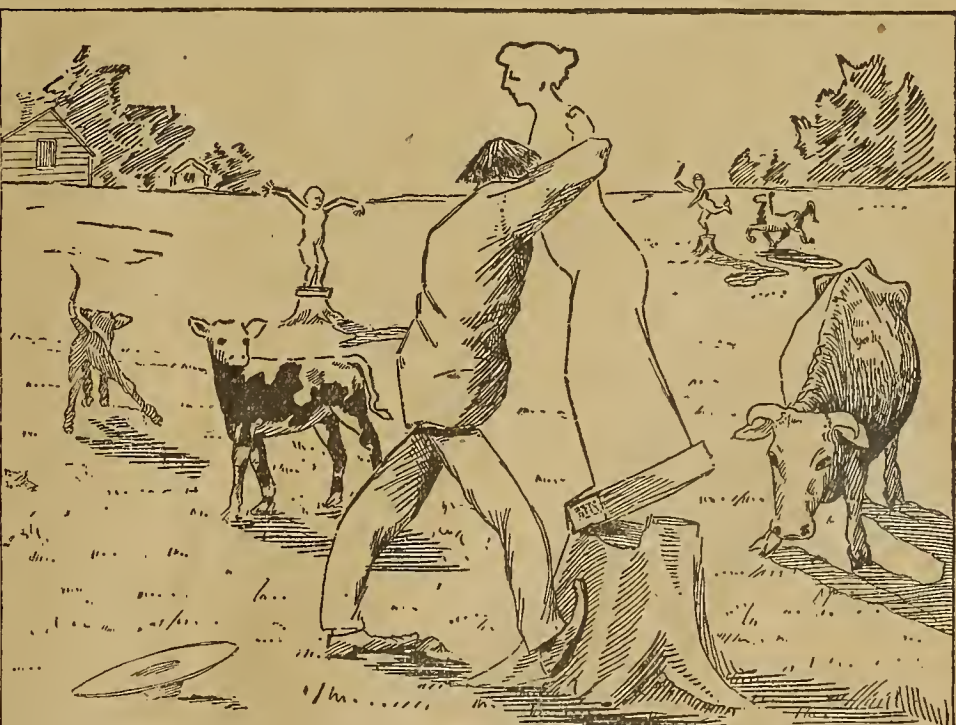
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No. 2.

The neighbors often passed that way,
Early and late, day after day;

Labor was love, and Art was law,
And this is what the neighbors saw:

Our Household.

IN PRAISE OF CONTENTMENT.

[Horace's Odes, III.]

I hate the common, vulgar herd!
Away they scamper when I "booh" 'em;
But pretty girls and nice young men
Observe proper silence when
I choose to sing my lyrics to 'em.

The kings of earth, whose fleeting pow'r
Excites our homage and our wonder,
Are precious small beside old Jove,
The father of us all, who drove
The giants out of sight by thunder!

This man loves farming, that man law,
While this one follows pathways martial—
What moots it whither mortals turn?
Grim fate from her mysterious urn
Doles out the lots with hands impartial.

Nor sumptuous feasts nor studied sports
Delight the heart by care tormented;
The mightiest monarch knoweth not
The peace that to the lowly eot
Sleep bringeth to the swain contented.

On him untouched of discontent
Care sits as lightly as a feather;
He does not growl about the crops,
Or worry when the market drops,
Or fret about the changeful weather.

Not so with him who, rich, in fact,
Still seeks his fortune to redouble;
Though dig he deep or build he high,
Those scourges twain shall lurk anigh—
Relentless care, relentless trouble!

If neither palaces nor robes
Nor unguents nor expensive toddy
Insure contentment's soothing bliss,
Why should I build an edifice
Where envy comes to fret a body?

Nay, I'd not share your sumptuous cheer,
But rather sup my rustic pottage,
While that sweet boon the gods bestow—
The peace your mansions cannot know—
Blessed my lowly Sabine cottage.

—Eugene Field.

HELPS FOR HOT DAYS.

ONE necessary thing often overlooked is to keep cool mentally. The person who frets and fumes, who grumbles, complains and finds fault at that which cannot be remedied, and particularly at the weather, is sure to be too hot in summer and too cold in winter. But they who have learned to take things as they come, and to accept the inevitable as calmly as possible, will always be able to take comfort, no matter about the temperature.

If there is no natural shade about the house, the defect should, if possible, be remedied by awnings and vines. A cheap frame put over the doorway and covered for the first two or three years with heavy

for annual growth, are used, they should not be trained directly against the window, as that will exclude air as well as sunshine. Instead, a frame reaching half way down the window from the top, and extending outward about twenty inches, should be provided, and the vines trained over this on up to the top of the window. Or the frame may be covered with heavy bed-ticking or awning-cloth, thus providing a shade. If the cloth is removed in the fall and laid away, it will last for several seasons.

If one does sufficient planning, they may manage to gather the vegetables for the next day's needs in the cool of the evening. Of course, one is tired then, yet the getting out of the house, when the rest of the work is done, and being among nature's works will of itself be a recreation, and one can go to bed and sleep better for this bit of outing. This will save much time and strength and hot outdoor work the next morning, and give one a chance to do the heaviest, consequently the hottest work early in the morning, before the sun has attained great power. Then, taking a low, comfortable chair, one can retire to the leafy screen, or cloth-covered awning, and as they rest and cool off, prepare the vegetables for dinner, and the cooking of that meal will not seem half so hard after the rest obtained during its preparation.

Every household should own a hammock and a cot for use out of doors during the summer. These can be bought very cheaply now, but if one cannot invest, a very comfortable hammock can be made from barrel-staves. A small mattress should be made to fit it, and filled with straw, corn-husks or excelsior, which any furniture dealer is glad to give away. A good pillow should be provided and slips made for it and the mattress, of denim. The frame for a cot may also be home-made, with denim, heavy ticking or grain-sacks tightly stretched and tacked to it. With a mattress and pillows similar to the one provided for the hammock, the housewife can take solid comfort whenever she has a brief resting-spell; and if one plans and manages the work, they can sandwich in many a bit of time to rest and renew their strength, and keep their youth and good looks. But not if they spend their time baking pies and cakes and making rich puddings. If fresh fruit is not to be had early in the morning, make a delicate, wholesome and easily prepared corn-starch or rice pudding, blanc mange, sago, tapioco or a dish of float. If something sweet must be had to eat with it, stir up a sponge-cake and bake it while getting dinner, or

as will not spoil by standing, and by covering closely in the vessel in which they were cooked, and setting in the hot sun on the west side of a building, where they had the reflected as well as direct rays of the sun, they remained quite warm and palatable. An extra pot of coffee wrapped in a flannel, then in paper, and set in the sun kept warm, and the water for the dishes in a pan on a flat rock in the hot sun, was "just right" when needed. I tried usually to have enough of the meat left from dinner to have cold for supper. If not, dried beef, stewed chicken—kept warm in the sun—or a young chicken split open down the back, baked and served cold, or for a change, hard-boiled eggs. Beans, either green or dry, peas, cabbage, stewed corn, turnips, squash, indeed, almost any vegetables but potatoes, will do splendidly to prepare at noon and keep until tea-time. Add to these beet or cucumber pickles, cold slaw, sliced tomatoes, sliced cucumbers, celery, lettuce, radishes, onions, cottage cheese, etc., fresh fruits or the custards, etc., made in the morning, and one can prepare a meal good enough to set before any one, and which will be enjoyed by all, as it neither overheats the one who prepares it nor those who eat.

By doing much planning one can save themselves much in other ways, and find time for many a quiet rest in hammock or cot, and save possibly a doctor's bill. At any rate, take some comfort in life, and not be continually "dragged out" and almost "roasted."

CLARA SENSBAUGH EVERTS.

HOME TOPICS.

PICNIC BISCUIT.—Sift two quarts of flour with two tablespoonfuls of baking-powder, add a teaspoonful of salt and one third of a cupful of sugar. Rub in one cupful of butter, and add milk enough to make a soft dough. Roll the dough to about twice the thickness of pie-crust. Cutting the biscuits with a small biscuit-cutter or a quarter-pound baking-powder box makes them a pretty size. Rub a little butter over the top of half of them, and place another biscuit on the top of each of these. When baked, it is easy to slip them apart to put grated cheese, potted meat or jam between. In this way a variety of sandwiches can be made with the one kind of biscuit.

PICNIC NECTAR.—Put two quarts of milk over the fire in a double boiler; when it is scalding hot, pour it over the beaten yolks of four eggs, beating as you pour the hot milk in. Sweeten and flavor to taste, let it cool, and then bottle. Serve in glasses with cracked ice. Make this the morning of the picnic.

BREAKFAST PONE.—To one teacupful of corn-meal add one heaping teaspoonful of baking-powder, a teacupful of cold water, a half teaspoonful of salt, a teaspoonful of sugar and two well-beaten eggs. Put a teaspoonful of drippings in a spider and let it get hot; then pour in the batter, put a cover over the top, and let it bake about ten or fifteen minutes; then remove the cover, and carefully lift the edge of the cake to see if it is brown. When it seems nicely browned on the bottom, slip the pone out on a plate, grease the spider again, and turn the pone into it to brown the other side. While this cake bakes best in a thick iron spider, and over coals, yet I have baked it in a sheet-iron frying-pan and over gas or oil fire. It takes a little more care to keep it from burning. This pone always seems especially nice baked on coals, when camping out, but doubtless the camper's appetite has something to do with it. MAIDA McL.

PIE TIMBER.

One hears all sorts of expressions, and the other day I was somewhat amused to hear a dear old lady say that she was about out of pie timber.

I suppose men are men the world over, and that although they are dreadfully unreasonable creatures and can't be convinced that pies are unwholesome, and whatever prejudice we may entertain in regard to the pie question, nevertheless we find the rolling-pin smoothing out the dough and the regulation pie gracing its corner of the table.

When spring comes around again, what are you going to use for "pie timber?" Back in cherry-time perhaps you sealed a dozen cans of this pretty fruit; if you did,

then you have material for three dozen pies. If you thought about it, maybe you dried a few cherries to mix with dried apples, that "tread on my corns and tell me lies" pie; not such a despicable pie after all, if toned up a little—a tablespoonful of vinegar, some spices and a few cherries help it to make quite a respectable pie.

I have found that dried pumpkin pies are equal in every way to the pumpkin pies made in the fall fresh from the vines.

A few cans of grapes and elderberries may not come amiss. Plums and berries



NEW-STYLE LINGERIE.

should be prepared, too, a few of each kind.

When one stops to consider, one comes to the conclusion that it is useless to put away so much fruit, for old canned fruit is not very appetizing, neither is it very wholesome. If one will make a little calculation, she can estimate the amount needed and put up as much of a variety as she can, and not so many cans alike. Taking care of fruit, especially if one gathers it, is very hard work, and this generation of women ought to take a serious thought for the care and preservation of their health, for there are already too many broken-down systems; and if we make our point, we've got to "slow down," and make pies all the same.

MARY D. SIBLEY.

NEW-STYLE LINGERIE.

Many ladies who mourned the decision of fashion in laying aside the chemise will hail its return. With the present voluminous skirt, more underneath is necessary; in consequence everything has taken on width.

The chemise is made as elaborate as an underskirt around the bottom, and is intended to serve the purpose of the short skirt.

The new umbrella drawers, or "Trilbys," are so very comfortable in their width that after wearing them any one would hesitate about going back to the old style that caught at the knee, wore out, tore, scratched when starched, and were uncomfortable in various ways.

The skirts are voluminous also, to correspond.

The night-robe is so pretty it can well be worn as a white wrapper, and costs only two dollars. The skirts are two dollars and fifty cents, the drawers one dollar and one dollar and fifty cents, the chemises one dollar and fifty cents and two dollars. All these articles are much more daintily made than if made at most of our homes.

The skirt has a dust-ruffle underneath the full over-ruffle, which serves to keep out the embroidery. The main skirt is made of Lonsdale cambrie, the ruffles of India linen. L. L. C.

PRESERVING.

Chemists tell us that it takes more than twice as much sugar to sweeten preserves, sauces and the like, if put in when they begin to cook, as it does to add it after the cooking. This is a fact that the average kitchen-maid is not apt to know, or one that she is apt to forget if not reminded frequently. MARY.

CLEANING CORSETS.

A good way to clean soiled corsets is to scrub them with a brush dipped in a strong solution of ammonia and water. The steels should first be removed, and the corset tacked on a board, on which it should be scrubbed and dried. M. E. SMITH.



NEW-STYLE LINGERIE.

bed-ticking or regular canvas will supply a fairly good shade. If grape-vines or woodbine—the five-leaved ivy, which is not poison as the three-leaved variety is—be planted closely about the frame, in two or three years it will supply a leafy shade that will be a beauty and a comfort all summer. Vines or an awning at the windows help to keep the house cool, and should always be provided if there are no trees.

If vines, woodbine for a permanent shade, morning-glory or wild cucumber

some time when there must be a fire for other purposes. There is no cheaper, more wholesome cake, and none more easily or quickly stirred up than sponge-cake.

In getting dinner, by doing a little planning and extra work, the supper may also be provided for, and that meal prepared without making a fire. I know whereof I speak, as I have tried it, even when cooking for harvesters, and they were not only satisfied, but highly pleased, while I "kept cool." When preparing dinner, I cooked enough of such vegetables

OLD GLOVES.

The other day at a reception (it was a warm summer afternoon), I noticed that I was the only lady wearing mitts. Most of the company appeared in brand-new kid gloves. At last I whispered to a friend, "Is it terribly bad form to wear mitts?" She encouraged me by congratulating me on my evident *comfort*. The next day at a called meeting of our literary club I held up my hands to the same friend, and said, "See, if I didn't wear gloves yesterday it wasn't because I have none!" We both laughed, for the gloves on my hands were an old pair of mousquetaires torn at every finger.

"Oh, how I enjoy such gloves!" she exclaimed. "You can double up your fist as tight as you please, use your fan, knock on people's doors, and all with such comfort!"

I felt as she did, and certainly you understand. Even so great a man as Tolstoi uses the expression "as comfortable as an old dressing-gown."

Another truly enjoyable object is a dress skirt that has been shortened and refaced. A new dress is generally just long enough to touch the ground, wear out, and gather a little dirt. When it is old, this superfluous length has been curtailed and the wearer is truly comfortable. Independence of spirit contributes to enhance the value of old shoes, old dresses, old gloves. Apply the principle all through life. K. K.

SEA-SHELL LACE, CROCHETED.

First make a chain of 43 stitches.
 First row—1 sh of (2 tr, ch 1, 2 tr) in ninth st, ch 3, miss 5 st, (1 tr, ch 3, 1 tr) in next st, ch 3, miss 5 st, 1 sh in the next st, (ch 5, miss 3 st, 1 d e in next st) five times, ch 5, miss 1 st, 1 d e in the last st, ch 3, turn.
 Second row—13 tr in first loop of 5 ch, 1 s c in third st of next loop, * ch 5, 1 s c in third st of next loop; repeat from * four times; ** ch 3, 1 sh in sh, ch 1, 7 tr under 3 ch between 2 tr, ch 1, 1 sh in sh, ch 2, 1 tr in third st of ch, ch 5, turn.
 Third row—1 sh in sh, ch 3, (1 tr, ch 3, 1 tr) in the fourth st of 7 tr, ch 3, 1 sh in sh. * ch 5, 1 s c in third st of 5 ch; repeat from * four times, 1 tr on first st of 13 tr, ** (ch 1, 1 tr on each of 2 tr) six times, ch 1, 1 tr on next st, ch 3, turn.
 Fourth row—1 tr on tr, * ch 2, miss 1 ch, 1 tr on each of 2 tr; repeat from * six times, ch 2, miss 1 ch, 1 tr on tr, 1 s c in third st of 5 ch, (ch 5, 1 s c in third st of next loop) three times; repeat the second row the same from **.
 Fifth row—The third row to **, only repeat from * three times instead of four times, * ch 2, miss 2 ch, 3 tr on 2 tr; repeat from * six times, ch 2, miss 2 ch, 2 tr, ch 3, turn.
 Sixth row—1 tr, * ch 2, miss 2 ch, 1 tr on each of 3 tr; repeat from * six times, ch 2,

twice. Repeat the second row the same from **.

Ninth row—1 sh in sh, ch 3, (1 tr, ch 3, 1 tr) in fourth st of 7 tr, ch 3, 1 sh in sh, (ch 5, 1 s c in third st of 5 ch) twice, ch 5, 1 tr on d e, ch 5, 1 d e in the fourth st of 7 tr, (7 tr on d e in sh, 1 d e in the fourth st of 7 tr) twice, ch 4, turn.

Tenth row—1 d e in fourth st of tr, 7 tr on d e in sh, 1 d e in fourth st of next tr, * ch 5, 1 s c in third st of 5 ch; repeat from * four times. Repeat the second row the same from **.

Eleventh row—1 sh in sh, ch 3, (1 tr, ch 3, 1 tr) in fourth st of 7 tr, ch 3, 1 sh in sh, * ch 5, 1 s c in third st of 5 ch; repeat from * four times, (ch 5, 1 d e) twice in fourth st of 7 tr.

All around edge of scallop ch 5, and 1 s c on d e at the beginning of rows, making eight loops of 5 ch, ch 1, turn.

Twelfth row—The first three loops crochet 3 d e, picot, (ch 5, 1 s c in last d e) 3 d e in each loop; next two loops crochet 4 d e, 1 picot, 4 d e, and next three loops, 5 d e, 1 picot, 5 d e, ch 3.

Repeat the second row from the beginning for the length required.

ELLA McCOWEN.

SUMMER TOILET.

The revival of lace in all the summer toilets brings out much that has been laid aside for many years. The woman who is the fortunate possessor of old lace can use it to a good advantage. In our sketch it is carried out in the whole toilet.

RHUBARB, OR PIE-PLANT.

For some palates stewed rhubarb is distasteful; it is either too sour or too sweet. It can be made a delicacy to please the most fastidious. Peel and break or cut into lengths as for stewing, cover it in the stew-pan with cold water, let it come to a boil, drain off the water, sweeten the rhubarb to taste, let it boil up again, then take it from the fire. If possible, stew it in an earthen pipkin and cool it in the same. Rhubarb prepared in this way vanishes like dew before the sun. Rhubarb is a good stand-by all summer, and it can be prevented from heading by breaking off the top of any stalk that promises a blossom. It is apt to grow tough after blossoming. Rhubarb can be canned by preparing as for stewing, then put into cans and covered with cold water. It will keep indefinitely if the tops are tightly screwed on. ANNE NEWCOME.

BEING BEAUTIFUL.

Cel. Let us sit, and mock the good housewife, Fortune, from her wheel, that her gifts may henceforth be bestowed equally.
Ros. I would we could do so; for her benefits are mightily misplaced, and the bountiful blind woman doth most mistake in her gifts to women.
Cel. 'Tis true; for those that she makes fair she scarce makes honest; and those that she makes honest she makes very ill-favored.
 —As You Like It.

Where is the girl who does not wish to be beautiful? It is the subject of discussion in every circle of schoolmates, "Who is the prettiest?" In the privacy of each girl's dressing-room she scans herself in one or two mirrors, and ponders over her defects. Of all my moments of sorrow none was keener than when I first learned to use the hand-glass so as to see my profile, and found that my nose protruded too far and my chin not far enough! Then there is that troublesome matter, complexion. Have you not looked at your skin, inch by inch, and noticed every pore, and hair, and freckle? Have you not spied a wee pimple on your chin and teased it into a positive deformity? Oh to be beautiful! But who is beautiful? It is hard to find a living person who fits our standard; we have to recall the instances in history.

Phryne, a little Greek girl who lived in Boetia, is said to have been perfectly beautiful. She belonged to a poor family, and when a child made her living by selling flowers and vegetables; but she captivated so many lovers that she became immensely rich. One lover was a poet, and wrote sonnets about her. Apelles painted her picture and called it "Venus Anadyomene." Praxiteles made a statue for which she was

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the model. This work of art, known as the Cnidian Aphrodite, was so universally admired that Nicomedes, king of Bithynia, offered, in return for it, to cancel the national debt, which was very large, but the Cnidians refused. Truly, Phryne had a triumphant time, but she has been dead these twenty-one hundred years, and rather than be in her place, I would be a

The Greeks described their ideal of life thus: To be beautiful; to be healthy; to be rich without work, and to be gay and happy with one's friends.

I should omit two of their requirements. It is enough to be healthy, and to be gay and happy with one's friends. Don't wish to be beautiful. K. K.

USE OF SPARE MINUTES.

The man or woman who has learned the use of spare minutes has saved years, not to speak of advantages too numerous to mention which have been gained.

Being a clerk in a country store, I find many minutes unemployed, and will tell the readers how I use this spare time. About two years ago I began making a collection of recipes and any valuable information that was contained in several papers and magazines, cutting out and pasting them in an old ledger. As there were several blank pages, I used them to copy such articles that I could not cut from papers I wished to keep. Now I have quite a store of knowledge on cooking, dairying, horticulture, poultry and flowers, besides many valuable hints on other subjects. Besides this, I have pieced three quilts, worked two pairs of pillow-shams and made innumerable articles of fancy work. One never knows how much time is wasted in idleness until one tries to employ the leisure moments in something—either reading, writing or making some article, be it plain or fancy work.

DANDELION.

VALUE OF THE SCHOOL EXCURSION.

The school excursion is a method of instruction which has been long established in Germany, and to-day it forms a regular feature of perhaps the majority of elementary schools of that country. The school excursion offers the most favorable opportunity for introducing the child into many branches of knowledge, for the reason that, by means of outings, the pupils may be brought in direct contact with various phases of nature and the works of man. And, indeed, the locality is exceptionally unfavorable where an abundance of material may not be found for instructing the child in geography, history and the natural sciences. So far, this broad method is but little known in our country, but it has much to recommend it.



SUMMER TOILET.

happy, honest-hearted American girl with a healthy, freckled skin and a tip-tilted nose.

Helen of Troy was another beauty, although we can find no definite description of her. Homer says she had "white arms and beautiful hair." When she was ten years old she was abducted, but her brothers, Castor and Pollux, brought her back. When she was of marriageable age she had thirty lovers, but, after all, she seemed not to care much for the one she selected as husband. Perhaps, even with Helen, it was the same old story; those who wanted her she didn't want, and the one who pleased her came too late. But Helen of Troy is so long "dead and turned to clay" that our interest in her is languid. We cannot squeeze out a tear when we read that she was finally murdered by the Queen of Rhodes.

It is different with Mary Queen of Scots. She was a beauty, who to this very day takes hold of our hearts. We think of her charming childhood as she played carelessly with four other Maries. We delight in the details of her youth spent in France. We take keen interest in her marriage. She was "dressed in a jeweled white robe, with a long train borne by girls. Her form was full and tall; her hair a sunny brown, falling in luxurions ringlets; her face clear and softly outlined, with a Grecian nose, lovely lips and chestnut eyes; her delicate hands, as they waved in gesture or glided over the strings of a lute, threw the court poets into spasms of admiration."

We know that "court poets" cannot always be believed, but in this case we believe all. We entirely take her part when grim old John Knox accuses her that "as soon as ever her French fiddlers, and others of that kind, got the house alone, there might be seen skipping not very comely for honest women." Then when, at nineteen, she was a beautiful widow with dozens of suitors, how we admire and almost envy her! But the picture has dark shading, and at last ends in blackness. To be betrayed, insulted, and finally beheaded, is often beauty's fate. That Mary was one of the "fair, but scarce honest," some of her biographers maintain, but we cannot believe them.

Pears'

Pears' is the only soap with neither fat nor alkali in it; it is the only soap that cleans the skin and keeps it alive. We want the living skin; we may as well have it clean.



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SEA-SHELL LACE, CROCHETED.

miss 2 ch, 1 tr, 1 s c in third st of 5 ch, (ch 5, 1 s c in third st of next loop) twice. Repeat the second row the same from **.
 Seventh row—Repeat the third row to **. Only repeat from * twice instead of four times, * miss 2 ch, 1 tr on first st of 3 tr, 1 tr, ch 2, 1 tr in second st, 1 tr in third st; repeat from * six times, miss 2 ch, 2 tr in two next st, ch 1, turn.
 Eighth row—1 d e on tr, * 7 tr under 2 ch of sh, 1 d e in 2 ch of next sh; repeat from * three times, (ch 5, 1 s c in third st of 5 ch)

Our Household.

A WOMAN'S HEART.

A woman's heart is a curious thing!
You may bruise and break it and roughly flug
The bauble away as a useful thing!
But the sunshine and warmth of a kindly word

Will nourish the tendrils broken,
And newness of life is within it stirred
By a word so gently spoken.

Oh, woman's heart is of priceless worth,
The tenderest love within has its birth!
Go search and you'll find there is naught on earth

That can rival the wealth of her loving heart,
When once it is freely given;
That can comfort the sad, such joy impart,
Though with grief her own is riven.

But woman's heart is a foolish thing!
With never a doubt all its wealth 'twill bring
And freely bestow. To its idol will cling
Though the world may condemn. Ah! a woman's heart

To reason will never listen;
She will peril her soul, scorn every art,
And barter her hope of heaven;

Will stand unwearied through night and day
By the bed of pain; will tenderly lay
Her own life down; through years will watch
and pray

For the soul of one who could never know,
Could ne'er believe, except in part,
All the strength of love, all the joy and woe,
That lie concealed in a woman's heart.

SMALL FRUITS.

Of all the people on the earth, the farmer ought to have plenty of small fruits for the table, and yet they do not appear as frequently as they ought to on the bill of fare.

Unless one wants to raise them for market, it does not seem necessary to produce them in such quantities as to make the care of picking them a serious burden; yet one likes plenty for putting up besides the amount used in season.

It seems to me that canning, preserving and pickling is a sort of mania among women, and I have known people who hardly knew how fresh fruit tasted because of the anxiety of the thrifty housewife to put everything into cans. This is a mistake, because these fruits are never needed so much as when in their season, are never so good, and never come on the table with so little trouble; and the table might be continually supplied with small fruits through the summer months. Just consider a moment and see. A good strawberry-bed comes first, and if you will set out vines in August, you will be reasonably sure of a few, even next spring. Soon after the raspberries follow, and by the time they disappear, the blackberries succeed them, and such a help will they all prove, that one will feel well repaid, even if they did cost time and labor.

All these fruits are nice made into twenty-minute preserves, which are made by boiling a syrup of sugar until it breaks brittle in water, then dropping the fruit carefully in and cooking twenty minutes. Seal in jelly-glasses, as they are so rich one needs but few at a time.

MARY S. MERKLEY.

SLEEPING ON THE LEFT SIDE.

There is little doubt that an immense number of persons habitually sleep on the left side, and those who do so can never, it is said, be strictly healthy. It is the most prolific cause of nightmare, and also of the unpleasant taste in the mouth on arising in the morning. All food enters and leaves the stomach on the right side, and hence sleeping on the left side, soon after eating, involves a sort of pumping operation, which is anything but conducive to sound repose. The action of the heart is also seriously interfered with, and the lungs unduly compressed. Hence, it is best to cultivate the habit of always sleeping on the right side, although Sandow and other strong men are said to invariably sleep on their backs.—*Scottish Nights*.

A DELICIOUS SUPPER DISH.

TURBOT.—Take a two and one half pound white fish, steam till tender, take out the bones, and sprinkle with pepper and salt. For dressing, heat a pint of milk, and thicken with two thirds of a pint of flour. When cool, add two eggs and a quarter of a pound of butter, and season with onion and parsley (very little of each). Put in the baking-dish a layer of fish, then a layer of sauce, and so on till full. Cover the top with bread crumbs or cracker dust, and bake half an hour. M. E. S.

STAR TABLE-MATS.

Materials required: One spool of Hamburg knitting-silk (for each mat) No. 300, shade 2,002, No. 19 needles.

Cast on three stitches on each of three needles; tie like the beginning of a stocking, then knit two plain rounds, then widen every stitch all around, then knit one plain round, then widen every two stitches all around, then one plain round, then widen every three stitches all around, followed by a plain round. Continue so until there are thirteen stitches between the rays. Knit a plain round every time after widening, then widen and narrow, and widen again, then knit two plain rounds, then widen and narrow, widen and narrow again, widen, and again knit two plain rounds. Continue thus until the star is complete, adding one more widened stitch every two rounds. Bind off.

After one mat has been knit, the knitter can readily see how larger or smaller ones can be knit by the same pattern.

Crescent, Ark.

CHARLOTTE T.

MEDICINE-CASE.

For the traveler perplexed as to how the many bottles necessary for a journey may be safely carried in the most compact form, the small medicine-case illustrated will be found quite indispensable. It can be made at home with small outlay, and would be a very acceptable gift for a friend contemplating a trip abroad.



MEDICINE-CASE—OPEN.

It is made of hemp, colored duck, or very heavy linen, lined with oil silk, and neatly bound with blue silk braid stitched in silk of the same color. The letters are worked in the silk in outline-stitch. The fastenings are buttonhole loops of silk and steel bullet buttons. The dimensions of the cardboard bottom are seven and one fourth by four and three fourths inches. The other parts are proportioned to fit the bottom. M. E. SMITH.

IT DIDN'T WORK.

It isn't always safe for a small boy to take his father's jokes and games too seriously. This was shown very plainly at one time by the experience of an Englishman and his son upon a railway journey which they took together. While the little fellow was gazing out of the open window, his father slipped the hat off the boy's head in such a way as to make his son believe that it had fallen out of the window. The boy was very much upset by his supposed loss, when his father consoled him by saying that he would "whistle it back." A little later he whistled, and the hat reappeared. Not long after the little lad seized upon his father's hat, and flinging it out of the window, shouted, "Now, papa, whistle your hat back again!"—*Harper's Round Table*.

NEW HUSBAND-CATCHER.

Here is a charming little romance from Guilford.

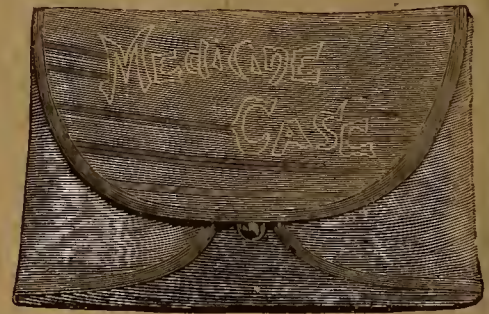
When the Bath and west of England society started its dairy schools and introduced its popular butter-making competitions at the big annual shows, the successful dairymaids got so many offers of marriage, leading in several cases to actual matrimony before the next show, that a joke went the round of the dairy counties of the west that soon there would be a dearth of dairymaids, so rapidly were they being turned into matrons with too many household duties on their hands to take part in the butter competitions. But

the popularity of the dairy schools attracted more and more pupils every year, and while there has been no lack of dairymaids, they have still found an army of manly lovers ready and willing to be conquered. But the Guilford show has yielded a sensation in this way, if the rumor is true, that one of the "winning maids" in the dairy competition so fascinated a nobleman while she was churning and butter-making, that he not only hung around and watched with the devotion of a lover every graceful movement of the beautiful west-country dairymaid, but when she won a medal he sought an interview and "popped the question." Whether she bashfully said "No" and meant "Yes," or hinted that she preferred remaining a dairymaid for fresh butter contests, we cannot say, but the little romance is all the talk of "The West Country."—*Wiltshire Times*.

MODERN UTENSILS IN THE KITCHEN.

There is no reason, for instance, why any woman should be lifting about the old, unmerciful iron kettles weighing some part of a ton, when she can have those of agate ironware, to be moved easily by the feeblest arm. As an immediate practical resource, it is not much for a man to bring in an armful of wood or a pail of water. Have a good wood-box or coal-box and a kindling-box by your stove, and let your husband or the hired man make it his business to keep them full. It is only

and the hot water heaped over the yolk as it cooks, to hasten its covering while it is still soft. A flat, perforated cream-skimmer is the best utensil to take out the egg, and it should reach the table on a square of hot toast from which the crusts are cut, and on a hot plate, thirty seconds from the moment of its leaving the water.



CLOSED.

The egg-poacher is not liked by all cooks. The egg comes out in a beautiful circle, but before the yolk has whitened over it has hardened beyond the perfection-point, the metal ring probably somewhat tempering the heat and action of the water. The poacher is useful, however, where a number of eggs must be done at once, though they need very careful watching. French cooks poach eggs in a ball by giving the water a rapid rotary motion with a fork, and dropping the egg in the center of this swirl.

Scrambled eggs are only eatable when done soft. They should be taken from the fire while still soft enough to run, as they cook a few seconds longer, and even retain a hardening heat on their way to the table, all of which must be allowed for.

The French chef author has not disdained to make the frying of an egg to serve with a bit of broiled ham material for a considerable paragraph. Into a hot skillet are put a few drops of olive-oil—enough to grease the pan thoroughly and prevent burning—and after a moment the egg is dropped in. A quarter of a minute suffices to set the egg so that it may be skilfully turned, and a second quarter of a minute finishes it. Serve on a folded napkin, which is an essential to absorb the oil. With this, although the cook-book does not say it, should go a slice of ham, thin as a ribbon of the tasseled corn, pink as the heart of a Jure rose, broiled, juicy and succulent, over a clear fire, and sent to the table on a hot platter, with a bunch of water-cress in relief against its blushing perfection.

SHOULD WE GO TO BED HUNGRY?

Physicians declare that it is injurious to go to bed hungry; much of the prevalent insomnia is the result of an unconscious craving of the stomach for food in persons who have been unduly frightened by the opinion that they must not eat late suppers.

It is unwise, of course, to indulge in viands which heavily tax the digestive organs; but a bowl of hot broth or soup or thin gruel is a positive aid to nervous people, and induces peaceful slumbers.

This is especially the case on cold winter nights, when the stomach craves warmth as any other part of the body. Even a glass of hot milk is grateful to the palate on such occasions, but a light, well-cooked gruel is better, and in our climate during the cold months of winter should be the retiring food for every person who feels, as so many do, the need of food at night.

CARE OF SHOES WHEN WET.

A woman dislikes to get her nice new shoes wet because it spoils them so, but with care, the wetting will not hurt them much. As soon as the wet shoes can be removed, rub them well with a soft cloth to get some of the dampness out, and remove all the mud, then rub them with a cloth saturated with kerosene or vaseline. Get as much of the oil into them as possible, and stuff the shoes into shape, setting them aside for a few hours. Another application of oil and rubbing will remove all stiffness, and the shoes will be in order when wanted. M. E. SMITH.

THE HOT-WATER BOTTLE.

Many as are the blessings of the hot-water bottle, it must not be forgotten that it is also the source of some danger. Always see that the stopper is absolutely tight, and never use it without a thick cover. Many a painful burn has it given, especially to an unconscious patient or to an old person. In old age, the circulation being weaker, the vitality becomes low. A thick cover will keep the water warm longer, as well as insure against burns. Filling the bag quite full will also cause the heat to be retained for a longer time, but will not be as comfortable as when half full. When not in use the bag should be emptied.

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to go by. These patterns are complete in every particular, there being a separate pattern for every single piece of the dress. Your order will be filled the same day it is received.

You can order any of the patterns offered in the back numbers of this paper. For ladies, give BUST measure in inches. For SKIRT pattern, give WAIST measure in inches. For misses, boys, girls or children, give both BREAST measure in inches and age in years. Order patterns by their numbers. Satisfaction guaranteed or money refunded. To get BUST and BREAST measure, put the tape measure ALL of the way around the body, over the dress close under the arms.

Price of each pattern, 10 cents. Postage one cent extra on EACH pattern, except on skirt and other heavy patterns, 2 cents extra.

Address FARM AND FIRESIDE, Springfield, Ohio.



No. 6380.—LADIES' WAIST. 11 cents. Sizes, 32, 34, 36, 38, 40 inches bust. No. 6299.—LADIES' SKIRT. 12 cents. Sizes, 22, 24, 26, 28, 30 inches waist.



No. 6369.—BOYS' FACILITY SUIT. 11 cents. Sizes, 20, 22, 24 and 26 inches breast.



No. 6419.—LADIES' WAIST. 11 cents. Sizes, 32, 34, 36, 38 and 40 inches bust. No. 6407.—LADIES' SKIRT. 12 cents. Sizes, 22, 24, 26, 28 and 30 inches waist.



No. 6407.—LADIES' GODET SKIRT. 12 cents. Sizes, 22, 24, 26, 28 and 30 inches waist.



No. 6290.—LADIES' CHIFFON WAIST. 11 cents. Sizes, 32, 34, 36, 38 and 40 inches bust.



No. 6332.—LADIES' HOUSE GOWN, OR WRAPPER. 12 cents. Sizes, 32, 34, 36, 38, and 40 inches bust.



No. 6399.—LADIES' BLOUSE WAIST. 11 cents. Sizes, 32, 34, 36, 38 and 40 inches bust.



No. 6347.—CHILD'S FROCK. 11 cents. Sizes, 13, 20 and 22 inches breast.



No. 6186.—LADIES' HOUSE GOWN. 12 cents. Sizes, 32, 34, 36, 38, 40 and 42 inches bust.



No. 6427.—LADIES' BASQUE. 11 cents. Sizes, 32, 34, 36, 38 and 40 inches bust. No. 6423.—LADIES' SKIRT. 12 cents. Sizes, 22, 24, 26, 28, 30 inches waist.



No. 6391.—LADIES' TRAVELING COAT. 12 cents. Sizes, 32, 34, 36, 38, 40 inches bust.



No. 6346.—LADIES' PLAITED WAIST. 11 cents. Sizes, 32, 34, 36, 38 and 40 inches bust.



No. 6424.—LADIES' SLEEVES. All three for 11 cents. Sizes, 32, 36 and 40 inches bust.



No. 6455.—CHILD'S COAT. 11 cents. Sizes, 2, 4 and 6 years.



No. 6349.—LADIES' SHIRT-WAIST. 11 cents. Sizes, 32, 34, 36, 38, 40 and 42 inches bust. No. 6347.—SAME—MISSES' SIZE. 11 cents. Sizes, 26, 28, 30 and 32 inches breast.



No. 6383.—LADIES' WAIST. 11 cents. Sizes, 32, 34, 36, 38, 40 inches bust. No. 6384.—LADIES' SKIRT. 12 cents. Sizes, 22, 24, 26, 28, 30 inches waist.



No. 6432.—LADIES' WAIST. 11 cents. Sizes, 32, 34, 36, 38 and 40 inches bust.



No. 6459.—LADIES', MISSES' AND CHILDREN'S SUNBONNETS. All three patterns for 11 cents.



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No. 6442.—LADIES' SKIRT. 12 cents. Sizes, 22, 24, 26, 28 and 30 inches waist.

Our Sunday Afternoon.

A BOY'S WORST FOE.

Don't send my boy where your girl can't go,
And say, "There's no danger for boys, you
know,
Because they all have their wild oats to sow."
There is no more excuse for my boy to be low
Than your girl. Then please do not tell him so.

Don't send my boy where your girl can't go,
For a boy or a girl sin is sin, you know,
And my baby boy's hands are as clean and
white,
And his heart is as pure as your girl's to-night.

—*Woman's Voice.*

MEDITATION GROWS OBSOLETE.

THE times are against the making of a man. We are too busy making everything else. In our ambition to outdo what has been done, we no longer depend upon individual effort; we sink a hundred individuals to make a single colossus—muscular, brainy, but soulless. The man who ought to have become a great man has become the thumb, or forefinger, or right eye of a great corporation. In such positions we cultivate talent, not character. In fact, the development of the man is discouraged; business sets highest value on an impersonal head. The same tendency is noticeable in our religious life. In our ambition to do we are fast losing our ambition to be. "Meditation" grows obsolete; we talk of "activities" instead.

The church resonates with the shouts of laborers, and of overseers who are calling for more laborers. There is an incessant running to and fro, and a noisy counting of sheaves. The ideal Christian of the day is the man who is so busy looking after other people's souls as to forget that he has a soul of his own. We praise the man who prays with his hands. It is a natural reaction from the selfish piety of a past age when men sat in the cloister and kept their hearts inflamed by constant probing. Perhaps when we have learned that of two evils we are to choose neither, we may discover between these two extremes the happy means of feeding our souls enough to strengthen us for our work, and working enough to make us hunger for stronger meat.

THE LIVING CHRIST.

For these 1,900 years, in all changing circumstances, stepping down, as it were, from generation to generation and from heart to heart, the living Christ has been in the world, changing the sinful, binding up the broken-hearted, lighting the extinguished lamp of hope, and pointing the forlorn children of men to the regions of eternal day. You might destroy the record and leave no letter of it, but Christ you could not destroy; you might banish these gospels from the pulpits, but you could not banish the person of whom they speak, for this simple reason, that he has taken care in all ages to maintain his life in the hearts of human beings. The Christ lives in Christ-lives; you cannot get rid of him if you were to get rid of the books. Wherever two or three are gathered together in his name, there he is; he comes to them, and they know that he is there; his spirit touches them, and their hearts are softened and their sins are washed away. In the strength of the great conviction that he lives they can go out into the godless world and keep undimmed the torch that he has lighted.—*Rev. R. F. Horton, M.A.*

CHRIST, THE FRIEND.

If you wear the livery of Christ you will find him so meek and lowly of heart that you will find rest unto your souls. He is the most magnanimous of captains. There never was his like among the choicest of princes. He is always to be found in the thickest part of the battle. When the wind blows cold, he always takes the bleak side of the hill. The heaviest end of the cross lies ever on his shoulders. If he bids us carry a burden, he carries it also. If there is any that is gracious, generous, kind and tender, yea, lavish and superabundant in love, you always find it in him. His service is life, peace, joy. Oh that you would enter on it at once! God help you to enlist under the banner of Jesus Christ.—*Last Words of Rev. C. H. Spurgeon.*

THE CHILD'S STRENGTHENER is Dr. D. Jayne's Tonic Vermifuge, which corrects all acidity of the stomach, restores digestion and imparts strength and vigor to adults and children alike. Delicate children are almost always benefited by its use; and, if worms be present, it is the mildest and safest of remedies. Sold by all Druggists.

THE TEACHING OF PATRIOTISM.

We are accustomed to say that the stability of our republican institutions depends on popular education. Educate the people and the republic is safe.

The truth of that saying depends on what is meant by education. Reading and writing, grammar and arithmetic will do very little for the preservation of the state. Intellectual attainments, though they be of the highest, science developed in all its applications, knowledge universally diffused—there is no efficacy in these, however desirable for refinement and the comfort of life; there is no efficacy in these to save a nation or avert its downfall. If conscience decays while the intellect ripens, the rottenness will spread until it eats out the heart of the nation's life and prepares the way for the triumph of brute force, or what is the same thing, of unscrupulous demagogism over liberty and right.

Moral training is the crying want of the time. The one thing needful for the safety of the state is that the education of the moral sense in the young keep equal measure with intellectual discipline.—*Dr. Hedge.*

WHAT NOT TO DO AT HOME.

Those who in their home life are well supplied with the following negative virtues mentioned by *Good Housekeeping*, are far on the road toward a happy home:

Don't fret. Fretting irritates and annoys listeners, without bringing comfort or cheer to the fretter. Don't fret.

Don't talebear. Talebearing is not apt to bear good fruit, the product too often being unhealthy, specky and rotten. Don't talebear.

Don't grumble. Whatever else you do, don't grumble, unless you have something really worth grumbling about, and even then don't spin your grumblings out interminably. Don't grumble.

Don't talk needily. There is a time to talk and a time not to talk, as decidedly as there is a "time to laugh" and a "time to cry." Don't talk unless you have something to say worth talking about. Don't talk needily.

Don't pout. Pouting should always be done in the back yard, never "before folks." Don't pout.—*Domestic Journal.*

AN UNBELIEVER ABASHED.

On one occasion, while Sir Isaac Newton was examining a new and particularly fine globe, a visitor entered his study. This caller, as Sir Isaac knew, had often expressed his disbelief in the existence of a God and his conviction that the world and its surroundings were the result of evolution or chance. He was greatly pleased with the handsome globe, and asked:

"Who made it?"

"Nobody," answered Sir Isaac; "it just happened here."

The man looked up in amazement at the answer, but he soon understood what it meant. Who can say that this beautiful and wonderful world came by chance, when he knows that there is not a house, or ship, or picture, or anything in it but has had a maker. The logic of the great philosopher was conclusive, and the infidel was completely silenced.

JOY IN WORSHIP.

The Hebrew worship, we are apt to think, was awe-inspiring and therefore gloomy; but it had, nevertheless, large room for gladness. The magnificent collection of Psalms which have come down to us give token that the element of joy predominated in the worship of their assemblies. To this day we can find no better expression of exultant emotion than these songs supply. We do not think we are wrong in asserting that the tone of public worship to-day is quite below that of the Hebrews, and certainly below that of the early Christians in gladness. In our hymns and liturgies we use their words; but it is seldom that in the worship of a modern congregation one is conscious of the exultant note of joy.

WORTH REMEMBERING.

Emerson's advice to writers is good. "Expression is the main fight. Search unweariedly for that which is exact. Do not be dissuaded. Know words etymologically. Pull them apart, and see how they are made, and use them only where they fit. Avoid the adjective. Let the noun do the work. The adjective introduces sound, gives an unexpected turn, and so often mars with an unintentional false note. Most fallacies are fallacies of language. Definitions save a deal of debate."—*Restitution.*

REGENERATION, NOT EVOLUTION.

We hear much din and discussion about the marvels of "evolution;" but none of the philosophers who mock at the gospel have discovered how to evolve a good man out of a depraved one. Much stress is laid upon "culture;" but culture cannot turn a thorn-bush into a grape-vine. It can strengthen mind and refine manners; it cannot renovate a godless heart. Another school, with philanthropic intent, strikes somewhat deeper, and aims at the reformation of human nature. But it has been pithily said that "reformation affects form, not substance." It pulls old materials into better shapes, but provides no new ones. It is not reformation that sinful human nature needs, but regeneration. That goes to the roots of things. That means the extirpation of the old principles of action and the implanting of new principles. It means not a new form, but a new life. "Ye must be born again," was Christ's prescription to the man who wanted to enter the kingdom of God.

Christ came to bring the infinitely precious boon of a new life for this world and the next. "Whoever is in Christ is a new creature." Men are away from God, in the dark; Jesus came to light them back to him. Men are away from God, in the cold; Jesus came to lead them into the sunshine of God's countenance. Men are away from God in guilt, and under condemnation; Jesus came to secure a full pardon to every penitent soul who is ready to come back to the Father by him. "I am the way; I am the truth; I am the life; no man cometh to the Father but by me." The core of the Bible is Christianity, and Christianity means Christ.—*Dr. Cuyler.*

CHARACTER, NOT BULK OF SERVICE.

Rank in the kingdom of heaven is based upon character, and not upon the bulk of service performed; so that a man might come to God and say, "See all that I have done and all that I have given up for Thee," and yet find that, measured by God's standard, he has done almost nothing. No, you cannot measure up Christian service in any such way as that. Those who are first here may be the last there when the great account is made up. Perhaps there is some Christian here in this congregation looking me right in the face, of whom everybody is saying, "Oh, what a worker he is! How much he is giving up, and how much he is doing for Christ!" And yet there may be in his conduct that subtle spirit of self-consciousness and selfishness which will spoil it all, and he may find himself away back among the last in heaven. And others who have perhaps very little to show in the way of outward bulk of work done, so little that they will look at it in sorrow, and say, "Oh, I have done nothing for Jesus!" And yet there may be such humility and disinterestedness pervading it all, that in the eye of God that little will be of great price. Some obscure sufferer in a tenement-house, some servant who sweeps a room as to God's laws, some widow who unobserved drops her last mite into the treasury, though last here shall be first there.—*Edward Judson.*

"Pilgrim's Progress" has been translated into 203 dialects and languages.

The part of the human body least susceptible to touch is between the shoulder-blades just over the spine.

A WOMAN'S NERVES.

THE STORY OF A WOMAN TO WHOM NOISE WAS TORTURE—PROSTRATED BY THE LEAST EXCITEMENT—PHYSICIANS BAF- FLED BY HER CASE.

(From the Gate City, Keokuk, Iowa.)

Mrs. Helen Meyers, whose home is at 3515 Vernon Avenue, Chicago, and whose visit to Keokuk, Iowa, will long be remembered, was at one time afflicted with a nervous malady which at times drove her nearly to distraction. "Those terrible headaches are a thing of the past," she said the other day to a *Gate City* representative, "and there is quite a story in connection with it, too.

"My nervous system sustained a great shock some fifteen years ago, brought on I believe through too much worrying over family matters and then allowing my love for my books to get the better of my discretion where my health was concerned. Why, whenever my affairs at home did not go along just as I expected, I would invariably become prostrated from the excitement, and I would consider myself fortunate indeed if the effects of the attack would not remain for a week. I was obliged to give up our pleasant home not far from Lake shore drive, because I could not stand the noise in that locality. I could find no place in the city which I deemed suitable to one whose nervous system was always on the point of explosion. To add to my misfortune my complexion underwent a change and I looked so yellow and sallow that I was ashamed to venture from the house at all.

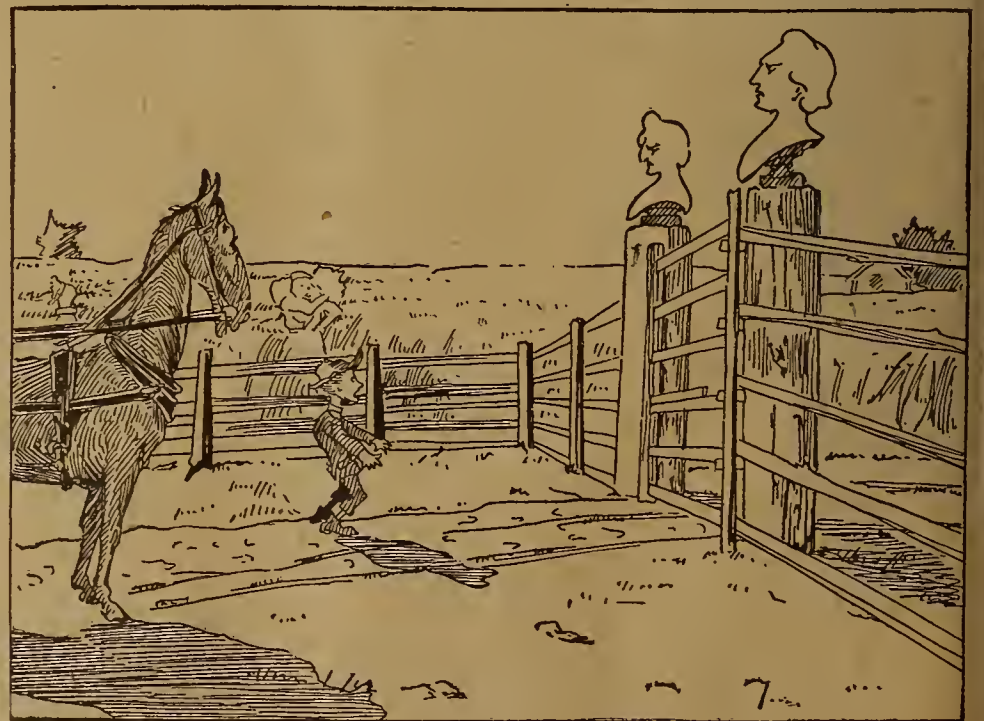
"Madam," said my doctor to me soon after an unusually severe attack of the malady, "unless you leave the city and seek some place of quiet, you will never recover." So I concluded I would visit my uncle, who lives in Dallas County, Iowa, and whose farm would surely be a good place for one in my pitiable condition. I picked up the *Gate City* one day and happened to come across an interesting recital of the recovery of some woman in New York State who was afflicted as I had been. This woman had been cured by Dr. Williams' Pink Pills for Pale People. I thought that if Pink Pills cured that woman they might do the same for me. I began to take the pills according to directions, and I began to feel better from the start. After I had taken several boxes of them I was ready to go back to Chicago. My nervousness was gone and my complexion was as fresh as that of any sixteen-year-old girl in Iowa, and Pink Pills is what put the color in my cheeks. No wonder I am in such high spirits and feel like a prize fighter. And no wonder I like to come to Keokuk, for if it had not been for Pink Pills bought from a Keokuk firm I would not have been alive now," laughingly concluded the lady.

Dr. Williams' Pink Pills contain all the elements necessary to give new life and richness to the blood and restore shattered nerves. They are for sale by all druggists, or may be had by mail from Dr. Williams' Medicine Company, Schenectady, N. Y., for 50 cents per box, or six boxes for \$2.50.

I like your patters very much. They seem like a Godsend to poor people.

MRS. S. W. CRAWFORD, Jefferson, Ohio.

Your patterns are a great attraction. It is an inducement to take the paper for them alone. LUCINDA SIGLER, Manchester, Tenn.



No. 3.

Bands of bards and sages great,
Looked from the gate-posts of the gate.

And in the harvest-fields beyond
Stood figures taken from Breton.

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.

Ticks on Stock.—L. L. R., Hempstead, Texas, asks how to clear horses and cows of ticks. Who can tell a good way?

Lice on Cabbages.—Mrs. T. H. W., Grand Junction, Col. Throw kerosene emulsion, or strong tobacco tea, or hot soap-suds on the affected plants.

Book on Sweet Potatoes.—J. E. C., Goose Creek, W. Va. The only book on sweet potato culture with which I am acquainted is James Fitz's "Sweet Potato Culture." Price 60 cents.

Fighting the Squash-bug.—Mrs. H. F. B., New Preston, Conn. Hunt for the bugs every day, and kill all you can find. Keep this up until the bugs are all disposed of. Pick off the eggs, too, and mash them.

Wireworms in Onion Land.—W. McC., Walled Lake. Plowing in early fall will soon clear the land of wireworms. Unleached wood ashes are a fine fertilizer, and have a tendency to give to worms and grubs a setback. Apply them as liberally as you can afford, up to 100 bushels per acre. Lime will also come acceptable for a change.

Planting Late Potatoes in Virginia.—Mrs. G. T. M., Gladys, Va., writes: "What is the best time to plant late Irish potatoes in the latitude of Lynchburg, Va?"

REPLY BY JOSEPH:—If I lived in southern Virginia, I think I would plant late Irish potatoes in July, using the true second-crop seed, or at least old potatoes kept over in cold storage. Potatoes, if planted early in southern latitudes, will not keep well.

Lime for Garden and Fruit Crops.—L. L., Emington, Ill., writes: "Could I use air-slaked lime to advantage in my garden and fruit patches? I can have it for the hauling."

REPLY BY JOSEPH:—Lime applications often show very marked results on all kinds of crops, and I have this year hought and used quite a lot as a change from manures and fertilizers. If you can get lime without expense, by all means use it freely. It will do no harm, and probably increase a crop or two materially.

Muskmelons and Cantaloups.—S. J. L., Endicott, Neb., writes: "What is the difference between a cantaloup and a muskmelon? What kind of soil is best for muskmelons? What kind of fertilizers can be used, if necessary? What is the general care required for the crop?"

REPLY BY JOSEPH:—Webster defines cantaloup, or cantaloupe, as a small, round, ribbed variety of muskmelon of a very delicate flavor. Vilmorin-Andrieux, of Paris, in "The Vegetable Garden," named the following, among others, as "cantaloup, or rock melons:" Algerian cantaloup, Green-fleshed cantaloup, Early Black Rock, Black Portugal, Prescott Early Frame, Large Paris White Prescott, Silvery Prescott cantaloup. Give to melons of all kinds a warm location and rich, warm, sandy loam. Old compost is, of course, the best manure for them, and all sorts of fertilizers can be used, especially bone-meal, also wood ashes. Plant in hills five to six feet apart, leaving only two or three good plants in the hill, and cultivate and hoe often, almost incessantly.

Lime and Salt.—W. S. P., Palmyra, N. Y., writes: "Our land is a clay loam with a hardpan subsoil, made rich with barn-yard manure. 1. Of what benefit would air-slaked lime be on such land where potatoes are grown? 2. How much lime per acre, and best way to apply? 3. What could one afford to pay for such lime (per bushel), and draw it ten miles? 4. What effect will salt have on such land, and how applied? Is it good for wheat and barley? About how much per acre? 5. What is the cause of scabby or rough potatoes, and what is a good remedy? 6. Would it pay to haul coal ashes three miles to apply on this land?"

REPLY BY JOSEPH:—1. Lime may come handy as a change from manure. It will help to get the plant-food already in the soil in good shape for absorption by plants. 2. Try ten barrels per acre, more or less. 3. I would not give more than a nominal sum (say \$1 per load) for air-slaked lime if I had to haul it ten miles. 4. Salt sometimes gives good results, in the same way that lime does. Try a few bushels per acre. 5. The cause of scabby potatoes is a fungus. Soaking the seed-potatoes for ninety minutes in a solution of corrosive sublimate (one part to 1,000 parts water) is recommended as a preventive treatment. 6. I would not haul coal ashes three miles for use on land, as it would hardly pay.

I have found your patterns the most satisfactory of any I've ever tried.

MRS. L. R. LAUREN, Topinabee, Mich.

Please send immediately No. 6229. I have had three of your patterns before this, and I find them equal in every way to Butterick's patterns, for which I have had to pay more than as much again.

Mrs. E. L. STILES, Box 97, Tuckertou, N. J.

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, 1315 Neil Avenue, Columbus, Ohio.

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

Swine-plague.—J. W. P., Olive Branch, N. C. According to your description there can be no doubt about your pigs being affected with swine-plague.

A Morbid Growth.—W. Y. L., Monitor, W. Va. The morbid growth on the upper eyelid of your cow can only be removed by a surgical operation. Get a veterinarian or a surgeon to do it.

Smutty Oats.—A. A. O., Tullahoma, Tenn. If you have a large field of oats which is very smutty, it is much safer to let it get ripe and thrash it, than to cut it for hay and feed it to horses.

Scurvy.—A. E. K., Saddle River, N. J. If your pigs are affected with scurvy, their diet must have been very defective. If you can do so, pasture them in a good clover-field, or at any rate change their diet.

A "Lump" in the Skin.—C. R. B., Mt. Pleasant, Iowa. If you will tell me where the "lump in the skin" is, on what part of the body, I may be able to tell you whether it can be removed or not, whether it is advisable to do it or not, and how it can be done.

Holds the Head to One Side.—D. S. P., Cunningham, Mass. If your mare is very nervous and holds her head to one side when hitched up and driven, but not otherwise, the cause probably consists in too tight a check-rein, too short a head-stall, or an unsuitable bit.

A Chronic Luxation of the Patella.—R. E. S., Irene, S. C. What you describe seems to be a chronic luxation of the patella, or knee-pan. Although not absolutely incurable, there is in your case hardly any prospect whatever that a cure will be effected, because the animal is now three years old and got it when only a yearling.

Probably Poisoned.—H. R., Wasco, Oregon. According to your description it is quite probable that your cows died of poisoning, but to decide whether it was with a lead compound, white lead paint, for instance, often taken by cows if within their reach, or with something else, is impossible, because your description is too incomplete.

A Hard Swelling.—K. E. T., Sahetha, Kan. If you had not resorted to quackery and had taken proper care of the wound in your horse's leg from the beginning (cold weather is no excuse, on the contrary, makes good care more necessary), the hard swelling would not be there now. As it is I do not think that anything can be done now that will remove it.

Chicken-lice.—W. J. L., Middleton, Wis. You probably sent your inquiry to the wrong address, for I am no expert on chickens. But I can tell you this much, if you wish to get rid of the lice, and not of the chickens, you must first and above all thoroughly clean and disinfect the hen-house; or if that is not possible, burn it and build a new one. If you do this, a few drops of anis-seed oil in the nests, and perhaps also on the chickens themselves, will get away with the lice.

A Calf with Sores, a Lousy, Barren Pig and an Unthrifty Colt.—B. and C., Southampton, Ontario, Canada. You are troubled with a good many ailments among your live stock. Cows and calves have ugly sores, pigs are lousy and barren and have mange, and a three-year-old colt has no life, does not shed its coat of hair, and is troubled with worms. All this looks as if there might be something wrong in regard to the feeding and keeping of your stock. If this is not the case, I cannot advise you but to consult a veterinarian.

Probably Mange.—I. G., Crabbottom, Va. According to your description your hogs, it seems, are affected with mange. Give them first a thorough wash with soap and water, and then, before they are perfectly dry, wash them in a thorough manner with a five-percent solution of Pearson's creoline. At the same time do not neglect to clean and disinfect the hog-pen, or put the hogs immediately after they have been washed into another clean pen, or else all your trouble will be in vain. Repeat this treatment once every five days until no more itching can be observed.

Nymphomania.—E. J. C., Big Plain, Ohio. If your mare is constantly in heat, or in other words, suffers from nymphomania, there are two remedies. One is to have her served and to get her with foal, which, of course, would be the best; but unfortunately such mares seldom conceive, for the simple reason that in most cases the ovaries are diseased. The second one is to have such a mare spayed; that is, to have the diseased ovaries removed by a surgical operation. In a mare, however, this operation, although it can be performed, is much more dangerous than in any other female animal.

Purges When Driven.—W. M. K., Larned, Kas. If your horse purges, or scours, when driven, there is something wrong, not only with his digestive powers, but also with his management. First correct the latter, and the former, probably, in the course of time will take care of itself. In the first place, never hitch your horse immediately after feeding, but give him about two hours' rest for digestion after each meal; secondly, never overtax his digestive powers by feeding too heavy food; thirdly, do not drive too fast, especially at the beginning or for the first two miles; fourthly, feed dry food, or at least let dry food constitute the first part of each meal. If you comply with the above, the difficulty will soon disappear.

Toxic Hemaglobinuria.—W. C. F., Utica, Kan. The disease you describe seems to be toxic hemaglobinuria, or azoturia, as it is called in Canada, notwithstanding that the most characteristic symptom, the red or bloody color of the urine, apparently escaped your observation. It makes its appearance most frequently in well-fed horses accustomed to steady work, if the same are kept idle for a few days, and after that are hitched up to work. The effect of treatment is doubtful. The main point is to stop any exercise immediately as soon as the horse shows signs of weakness in the hind legs, and to keep him, if possible, on his feet. If the horse is down, attempts should be made to get him on his feet and to keep him standing, even if only for a few minutes; besides that, care must be taken to prevent decubitus as much as possible.

Radial Paralysis.—E. M., Pierce, Neb. What you complain of seems to be a mild case of radial paralysis. Exempt your horse from work, allow him voluntary exercise, and feed well, and in about six months everything will be all right. For further information, see recent numbers of FARM AND FIRESIDE.

Infectious Abortion.—C. V. N. H., Spring Hill, Kan. What you describe appears to be infectious abortion. Remove all cows yet with calf to another place away from the infected premises; at the same time disinfect their external genitals and tails by washing them with a two-percent solution of carbolic acid; clean and disinfect the cow-stable or shed in a thorough manner, and clean the cattle-yard, so that sunlight and fresh air will be able to disinfect it. About three weeks after everything has been cleaned and disinfected, the cows may reoccupy their old place. If any other case of abortion should yet occur, it will be advisable to bury the dead calf and the afterbirth at once and sufficiently deep, to disinfect the uterus of the cow with an injection of a one-percent solution, and the external genitals and tail with a wash of a two-percent solution of carbolic acid. Also disinfect the droppings and remove and destroy the soiled bedding.

Paralysis of the Facial Nerve.—W. H. L., Meyersburg, Mont., writes: "Please tell me what to do for my horse. Last August I noticed a small lump on the left side of his face, about half way between his eye and end of nose, which continued to grow until March. It was as large as a hen's egg. Then on examining him closely I found his upper teeth were very sharp on the outer edge, and the lump was caused by hay and other feed placed between the teeth and cheek; so I got a file and filed the sharp edge of the teeth off, thinking that would stop it, but he still continued to put his feed there. It makes a very unsightly lump and makes his breath smell bad. His feed is oats and timothy hay. I tried turning him out to pasture for two weeks, but it did not help him. The lump is easily moved by pressing on it from the outside with the fingers, or by pushing it out with a stick from the inside, but it returns again as soon as I feed him."

ANSWER:—Your horse suffers from paralysis of the facial nerve, consequently one side of his face, cheek included, is paralyzed. Send him to pasture, not for two weeks, but for all summer and fall, and he probably will recover.

Cutaneous Diseases.—A. N., Dix Hallwood, Va., writes: "I have a mule, six years old, that has tender shoulders. After working all day hard lumps form in the skin. They do not seem to hurt him if pinched or squeezed."

The hard places are all the way where the pressure of the collar is. I have used three different collars on him, all having the same effect. Where a tick gets on him it swells up and becomes a scab. Please let me know what would be good to put on the mule. I have another mule that has what some people call stable-pox. He breaks out all over. When curled or brushed, the scabs come off, after which flies bother him badly. Inform me what to do for him."

ANSWER:—Concerning your six-year-old mule with the tender shoulders, I would recommend to you to keep the parts with which the collar comes in contact, and also the collar itself, scrupulously clean, to wash the skin of the shoulder quite often with cold water, or still better, with a decoction of oak-bark, or with a weak solution of acetate of lead, and then, of course, see to it that the collar exactly fits and causes nowhere any undue pressure. As to your other mule, it is possible that the same suffers from a peculiar skin disease, known as "Dermatitis pruriginosa," caused, according to Rivolta and other good authorities, by the presence of small thread-worms in the skin, provided, of course, the skin disease is not caused by an accumulation of filth in the coat of hair. I would advise you to have the animal examined by a competent veterinarian.

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Messrs. F. W. Bird & Son, East Walpole, Mass., offer to send entirely free to any of our subscribers a full line of samples of their Neponset Red Rope Roofing Fabric. This fabric is water-proof, wind-proof, frost-proof, cheaper and better than shingles. Takes the place of shingles or clapboards on out-houses and back plaster lu dwellings. Any one can put it on, and we advise our readers to send for a line of their samples.

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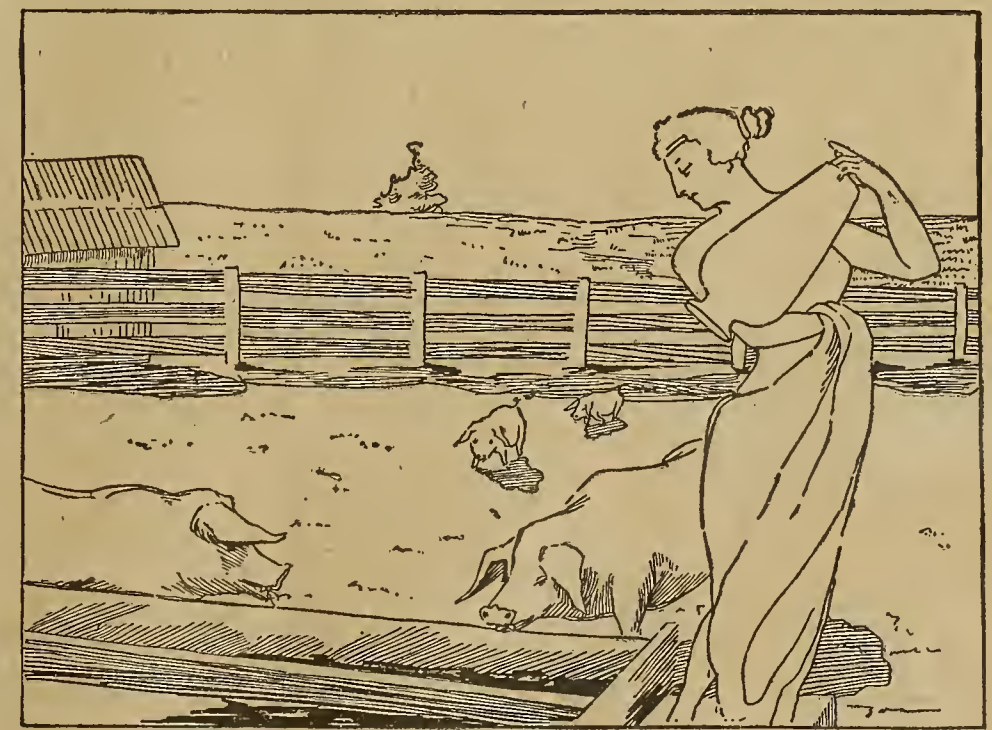
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No. 4.

See the classical Venuses About the barn-yard premises!

A maid pours, out of a Grecian ewer, Into a pig-trough, dainties sour!

Our Miscellany.

THE greatest velocity attained by a whale when struck by a harpoon is nine miles an hour.

THE English lord chancellor gets \$50,000 a year; the United States chief justice gets \$10,500.

IN several European countries, including France and Belgium, elections are always held on Sunday.

AUTOMATIC machines have been devised, for use on a moving train, which mechanically record the condition of every foot of the track.

ALTHOUGH Switzerland is mostly up and down hill, it has 1,950 miles of railroad track, which cost over \$100,000 per mile for construction.

THE coat is in the fifteenth century first mentioned as an upper garment for men. All the seams were then covered with gold braid or lace.

RAILROAD authorities say that an ordinary locomotive has 300 horse-power and burns a ton of coke for eighty miles of passenger-train travel.

AMONG the Hottentots, when a widow wishes to marry again she must cut off the joint of a finger and present it to her new husband on the wedding-day.

A CONSIDERABLE number of Berlin doctors have started a "warehaus," or warehouse, for the supply of general merchandise as well as medical stores.

THERE are forty-eight different materials used in constructing a piano, from no fewer than sixteen different countries, employing forty-five different hands.

IT is said that the cross-mark instead of a signature did not originate in ignorance. It was always appended to signatures in medieval times as an attestation of good faith.

A NEW YORK doctor says he has examined the men who work in a large brewery, and found that it is the custom of those who have free access to the beer to drink a keg a day.

IT is estimated that about \$10,000,000 have been invested in coffee-houses as an antidote of the saloon in England. It is said there are about 7,000 of them, employing 56,000, and they are a paying investment.

THE common dock is considered a nuisance by cultivators, and yet some of the species serve a useful purpose. The one known as "sorrel" is used in the Old World to make special sauces for meats, and one of the species is used in the form of spinach; this is known as the spinach dock.

"TORPEDO-SCISSORS," a new form of torpedo-net cutter invented by a Danish naval officer, have proven successful, it is said, in recent tests. They are fixed to the head of the torpedo, and fall apart on striking the net, cutting it so as to let the torpedo pass through and strike the ship.

ACCORDING to a traveler, an intense prejudice exists against the introduction of electricity into Turkey. The only application of electricity in evidence in that country is the telegraph. Large sums have been offered the government for electric lighting and telephone privileges, but all have been refused.

ACCORDING to one of our consuls in Germany there is a great field in that country for factory-made furniture from the United States. Not only is the German furniture more expensive than ours, because less effective machinery is used to make it, but it is also less beautiful, convenient and durable.

THE United States has not a particularly large military establishment—in fact, it is regarded as meager for such an extensive territory; neither have they many posts from which the sun is saluted at morning and evening. Still, it costs the government \$20,000 annually for ammunition for the morning and evening gun, which figures out the expense at \$54.79 for each of the 365 days in the year.

NAVAL officers have various devices for getting their mail when cruising. Some, when in European waters, have all matter sent to the care of an agent at London. A few make out a tentative itinerary for the convenience of their correspondents, but there are too many elements of uncertainty about this for it to be entirely safe. The best rule for the correspondent when in doubt is to address his man at the Navy Department, Washington.

A FLORIST says that he is always glad when the chrysanthemum season is over, for in spite of the fancy prices asked for these flowers they do not yield so sure an income as roses and pinks. One reason is that flowers for cutting, in order to be large, must be reduced to two or three on a plant. Counting the year's struggle to perfect them and all, a quarter apiece for a couple of blossoms is a moderate price. The florists refer to the flowers as "mums."

YELLOWSTONE NATIONAL PARK. THE WONDERLAND OF AMERICA.

Reached by the "Burlington Route." By application to the undersigned, a beautifully illustrated pamphlet descriptive of the Park will be sent free to any address. Also send for descriptive pamphlets of our Personally Conducted Summer Tours to Colorado and Yellowstone Park. D. O. IVES, Gen. Pass. Agt. "Burlington Route," St. Louis, Mo.

A SCOTCHMAN has advanced the theory that the Japanese are the lost ten tribes because they have a place named Hiroshima, which is like the Hebrew name for Jerusalem.

SPANISH wines are seeking a wider market in America. The government at Madrid has made a move toward the formation of an association of wine exporters to introduce into this country such Spanish wines as will find sale. It has in addition promised financial support, possibly in the way of a bounty on all goods shipped to the United States.

WHEN an American meets an acquaintance after dark, no matter what the hour, he says: "Good-evening," and when they separate he says "Good-night." But in Canada one often hears the latter phrase in salutation as well as in good-by. To an American it seems odd when, on seeing a friend, the latter advances with, "Good-night, sir. How are you?"

DOVER, N. H., one of the prettiest of the smaller cities of New England, is one of the largest consumers of snuff among all the cities of the country. The population is something like 10,000, and last year more than five tons of this form of hohacco was used there. The habit of snuff-dipping is not usual in New England, and it was brought to Dover, so it is said, by soldiers just after the war, and has increased to its present proportions.

ATTORNEY-GENERAL HENSEL, of Pennsylvania, whose home is at Lancaster, sometimes astonishes his friends by showing what he calls his \$10,000 watch. Mr. Hensel and some others at Lancaster subscribed to the stock of a watch factory established there some years ago, and the managers of the factory made and gave to each of the subscribers a handsome gold watch. The factory afterward failed, and the subscribers have only the watches to show for their money.

THE dying Economite society of to-day was strong and flourishing when the Duke of Saxe-Weimer visited it about 1825. Elder Rapp, a hale man of seventy, led his 700 disciples as priest and prophet, if not king. Even then there were few marriages and births in the community. The duke was pleased to note that there was a bowl of flowers upon every machine in the great factory of the society, and sixty of the girls sang for him the hymns that were used by Rapp and his followers.

THE FARMER, THE FANNING-MILL AND THE BAGS OF ATMOSPHERE.

"I see," remarked the wide-awake farmer to the Buffalo express man, "that wheat has gone up to 70 cents in Chicago, and there's a report that it will keep goin' till it gets to \$1. Now, I'd like to contract to sell you my crop for 70 cents. Seventy cents will do me. I'd rather have a sure thing while it's goin' than to take my chances on doin' better by waitin'."

"But," replied the commission merchant, "I can't agree to contract for your wheat at 70 cents."

"Why not? It's goin' up to \$1, an' you'll make 30 cents a bushel. Ain't that enough?"

"Oh, yes; but you see, that 70 cents is only a speculative price. It ain't what they pay for real wheat."

"Don't pay that for real wheat? What in thunder do they pay it for, then?"

"Why, for options."

"Well, what the blazes are options?"

"Why, they're promises to get wheat and sell it for such and such a price."

"Well, then, they got to get the wheat, ain't they?"

"No; they sell the promises again, according as the market rises or falls."

"An' don't they buy an' sell any real wheat at all?"

"Not much."

"Just buy an' sell wind at 70 cents a hushel?"

"That's about it."

"Thunder an' Mars, wish I'd knowed that last fall. I wouldn't a-sowed any wheat. I'd tied my grain bags to the hack o' my fannin'-mill an' kept the boy turnin' it all winter, till I'd filled all the bags I could get hold of. But it ain't too late yet. By gosh, if it's wind they want 'stead of wheat, I can supply the market for the hull country right off my farm!"

THE DAIN STEEL CORN CUTTER.

We invite the attention of our readers to the advertisement of the Dain Mfg. Co., appearing in this issue. This adv. illustrates, in a small way, their new up-to-date corn cutter. This implement is made of steel, thoroughly adjustable to all conditions, and capable of doing a very large range of work. It has safety shaft and safety guards, which protects both the horse and operator from coming in contact with the knives. It also has safety saddles, adjustable to any desired height independently, so that a tall man or a short boy may operate together in convenient positions. They are so arranged that the operators can lean forward in gathering down stalks without fear of accident. Its mode of operation is simple and easy, and compared with the old way, is as marked an advance along the line of agricultural progress as the modern railway train is over ancient canal or stage-coach transportation. It does a very large amount of work in a very short time, and saves the farmer the price of a machine two or three times over in a single season. For additional particulars, address Dain Mfg. Co., Carrollton, Mo., and be sure to mention F.A.M. AND FIRESIDE when you write.

MONTANA has chosen the bitter-root as the state flower.

POLICE authorities of Munich order all persons to close the windows when playing on pianos.

A CITIZEN of Buffalo rolled a peanut a mile with a toothpick in that city in payment of an election wager. This comes under the head of peanut politics.

Two adventurous aeronauts, M. Mallet and M. de Fonvielle, have undertaken to make a sky trip around France, keeping their balloon as near the earth as possible, so as to be able to descend with ease occasionally. They want to prove that agreeable and economical journeys can be made by balloons as well as by rail or water.

YOU DON'T HAVE TO SWEAR OFF.

The St. Louis Journal of Agriculture says: "We know personally of several that No-To-Bac cured. One, a prominent St. Louis Architect, who smoked and chewed for years. Two boxes cured him so that even the smell of tobacco makes him sick." No-To-Bac's guaranteed to cure tobacco habit or money refunded by druggists everywhere. Book free. Sterling Remedy Co., 10 Spruce St., N. Y., or 45 Randolph St., Chicago.

THE SUREST THING ON EARTH.—Pay no attention to this, but attend to that Head Ache. Sick Head Ache positively and permanently cured. For particulars, address with stamp Dr. G. S. Farquhar, 205 Woodlawn Ave., Zanesville, Ohio.

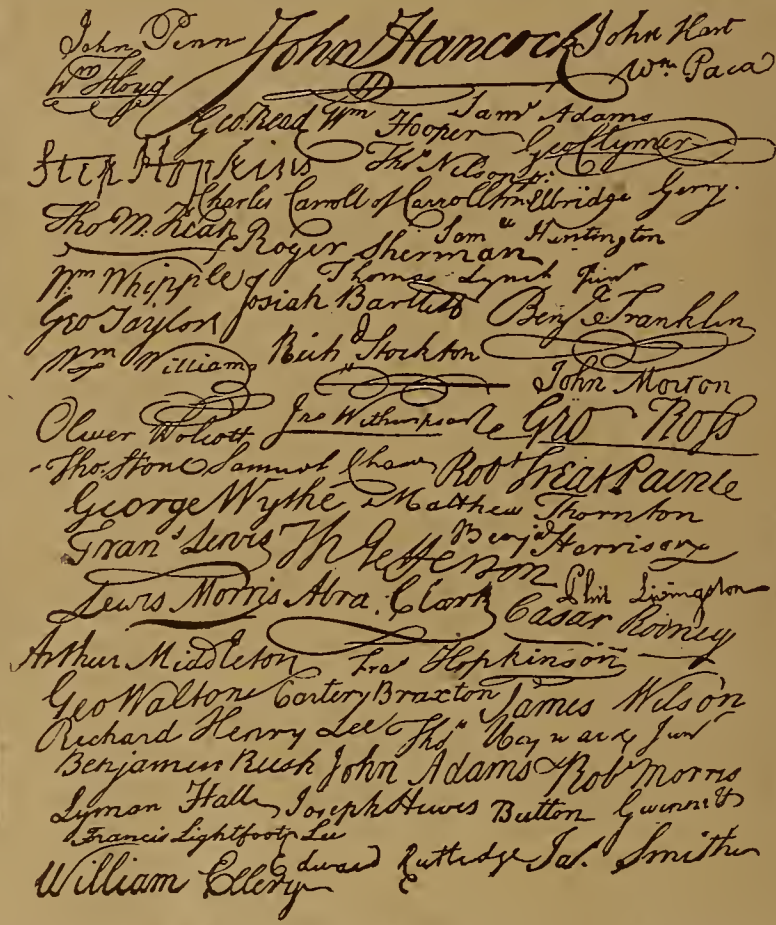
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No. 5.

To keep the poultry from alarm; Where once the scarecrow beckoning stood, To keep them safe from hawks and harm, A Roman soldier draws his sword.

Smiles.

TOO PARTICULAR.

Placid I am, content, serene. I take my slab of gypsum bread, And chunks of oleomargarine Upon its tasteless sides I spread. The egg I eat was never laid By any cackling feathered hen, But from the Lord knows what 'tis made In Newark, by unfeathered men.

I wash my simple breakfast down With fragrant chicory so cheap, Or with the best black tea in town— Dried willow leaves—I calmly sleep.

But if from man's vile arts I flee And drink pure water from the pump, I gulp down infusoriae And hideous rotatoriae, And wiggling polygastricae, And slimy diotomaciae, And hard-shelled orphryocercinae, And double-barreled kolpodiae, Nonloricated ambrociiae, And various animaculae Of middle, high and low degree, For nature just beats all creation In multiplied adulteration.

TWO LIARS.

At a recent gathering of notable men, the after-dinner chat turned upon personal experiences, and a distinguished jurist related this:

After graduation, he migrated to a western town. Months of idleness, with no prospect of improvement, induced him to seek a new home. Without money to pay his fare, he boarded a train for Nashville, intending to seek employment as reporter on one of the daily papers. When the conductor called for his ticket he said:

"I am on the staff of the —, of Nashville; I suppose you will pass me?" The conductor looked at him sharply. "The editor of that paper is in the smoker. Come with me; if he identifies you, all right." He followed the conductor into the smoker; the situation was explained. Mr. Editor said: "Oh, yes; I recognize him as one of the staff. It is all right." Before leaving the train the lawyer again sought the editor. "Why did you say you recognized me? I'm not on your paper." "I'm not the editor, either. I'm traveling on his pass, and was scared to death lest you should give me away."—Fashions.

WOULDN'T YOU?

This is a what a young lady is reported recently to have said, apropos of marriage: "Well, no, I don't know if I would marry for money alone; but if a man had plenty of money, allied to a sweet disposition, and a mustache that curled at both ends, and nice blue eyes, and a social position; if he had a distinguished status in a profession, or even as a merchant, and his father was rich, and his mother and sisters aristocratic, and he wanted to marry me, and he would promise to let me have my own way in everything, and keep me liberally supplied with money, and have a splendidly furnished town house and a handsome country residence, was liberal about diamonds and other gems, also about a milliner, never grumbling, and I really and truly loved him, I shouldn't consider marriage a drawback."—Frank Harrison's Magazine.

BEGINNING BUSINESS.

Some people can set up in business on a very small capital. One morning little Susie Green called at Mrs. Brown's door. "Say, Mrs. Brown," she said, "ma wants to know if she could borrow a dozen eggs? She wants to set 'em under a hen." "So you've got a hen that you're setting, have you?" said Mrs. Brown. "I didn't know you kept hens." "No'm, we don't; but Mrs. Smith's going to lend us a hen that wants to set, and ma thought that if you'd lend us some eggs we'd find a nest ourselves!"

WOMAN'S SUFFERAGE.

A St. Louis paper is responsible for this yarn: A man met the village doctor and said: "If you happen to be out our way at any time, I wish you'd stop and see my wife. She don't seem to be feeling very well." "What ails her? What are some of her symptoms?" "I duuno. This morning, after she'd milked the cows, and fed the pigs, and got breakfast for the men, and washed the dishes, and built a fire under the boiler in the wash-house, and done a few little jobs around the house, she complained of feeling tired-like. I shouldn't wonder if her blood was poor, and I guess she needs a dose of medicine."

HIT THE MARK.

The Detroit Free Press reports this dialogue between a scribbler and his friend: "Why don't you ever write any poetry, Scribe?" asked the friend. "I did write a poem once—an 'Ode to Oblivion.'" "Indeed! What became of it?" "It reached its destination."

WHY THE BELL TOLLED.

A gentleman traveling from the north had occasion to stop at a country village some fifty miles from London. Having a few hours to spare, he went around inspecting the places of interest in the neighborhood to kill time. At midday the bell of the village church began tolling. His curiosity being aroused, he stopped a boy, who happened to be passing at the time, and said:

"Can you tell me, my little man, why that bell is tolling?" "Course I can," said the promising rustic; "'cause the sexton's pullin' the rope."

SPELL THE SAME BOTH WAYS.

A person with a considerable amount of spare time on his hands, has collected the following list of words which may be spelled forward or backward—palindromes, as they are called in learned language:

Anna, bab, bob, hub, did, civic, dad, deed, deified, dewed, eece, ewe, eye, gag, gig, gog level, madam, noon, otto, pap, peep, pip, pop, pup, redder, refer, repaper, reviver, rotator, sees, sexes, shahs, tat, tit, toot, tot and tut.—Pearson's Weekly.

POLITICS.

"You say that he was prominent in politics, but really, I never heard of him doing anything."

"No; his specialty was the kind of work that is not heard of. He was never brought to trial."—Cincinnati Tribune.

BAD BREAK.

Jess—"It's all over between Jack and me; he kissed me on my birthday." Bess—"And you got mad about that?" Jess—"I guess you would; he gave me something over forty."—New York World.

PREPARED TO DIE.

"There she lay," says the sensational writer, "there on the floor, breathing out her life in short pants." She must have been a lady bicyclist in up-to-date garb.—Spare Moments.

TITBITS.

A newspaper of a Boston suburb mentions the return of a resident from Maine, "where he has been shooting and visiting his friends."

Giles—"What did Cora give you for Christmas?"

Merritt—"That's a mystery I've tried in vain to solve. As she made it herself, I don't know whether it's a pincushion or a tobacco-pouch, but at present I'm using it for a peewiper."—Judge.

Friend—"I notice that you have a string around your finger, and a knot in your handkerchief, too."

Old lady—"Yes; the string around my finger is to remind me that I have a knot in my handkerchief, and the knot in my handkerchief is to remind me that the things I want to remember are written on a piece of paper in my purse."

A Las Vegas (N. M.) newspaper calls the attention of patriotic New-Mexicans to the fact that Arizona has one hundred and nineteen inmates in its state insane asylum, while New Mexico, with nearly three times the population of Arizona, has only fifty in its asylum. Further, Arizona's insane population has increased thirty per cent in the last eighteen months. The newspaper urges that "the next legislature should remedy this crying defect."

A story is told of a country clergyman whose finances do not apparently extend to banking operations and experience. Going to a bank with a check, the clerk handed it back with a request that he would indorse it, and it would then be cashed. After much deliberation the reverend gentleman came to the conclusion that he could, without violation of his conscience, accede to the request. So he took the treasured piece of paper and wrote across the back of it: "I heartily indorse this check."

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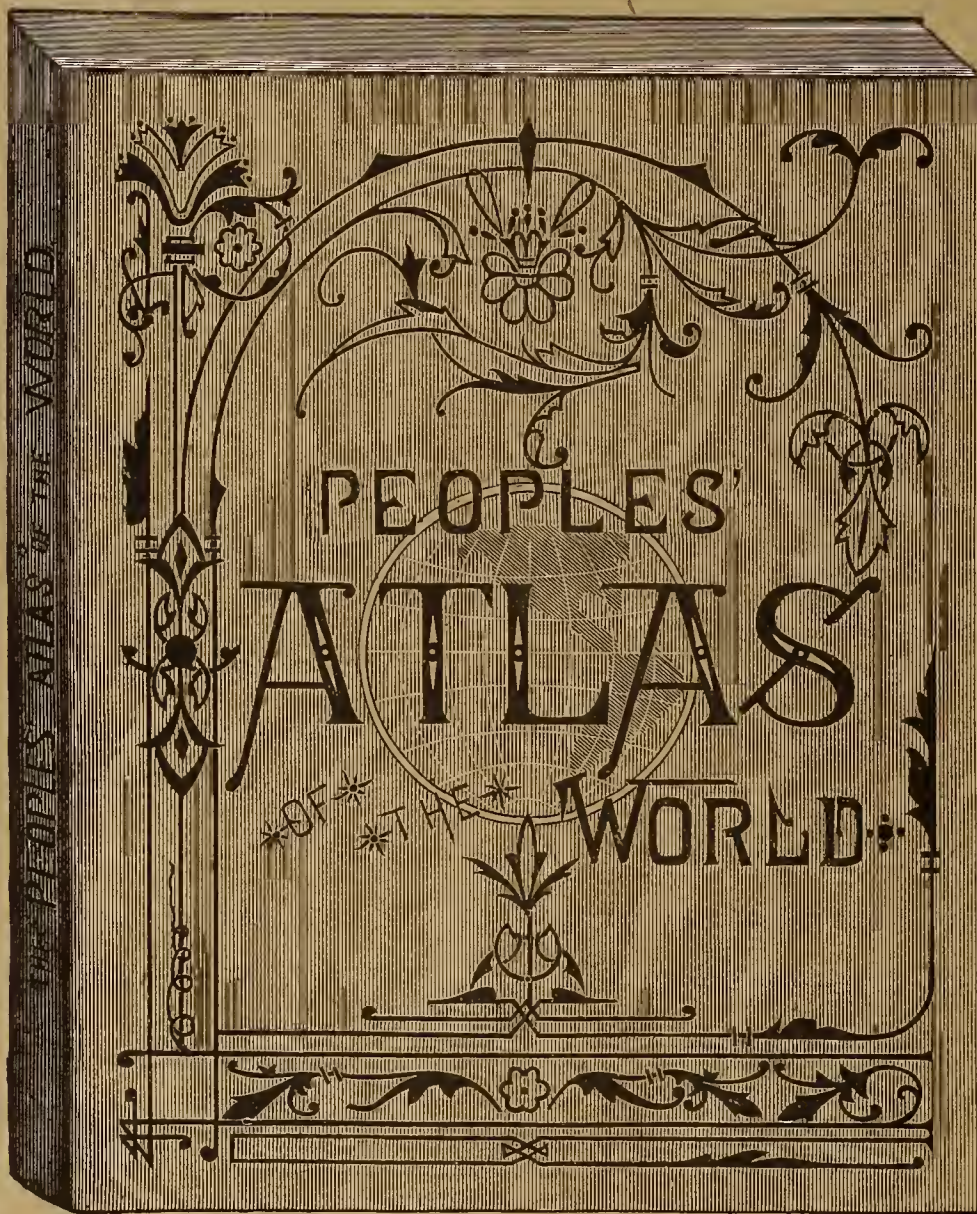
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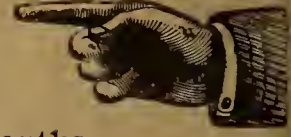
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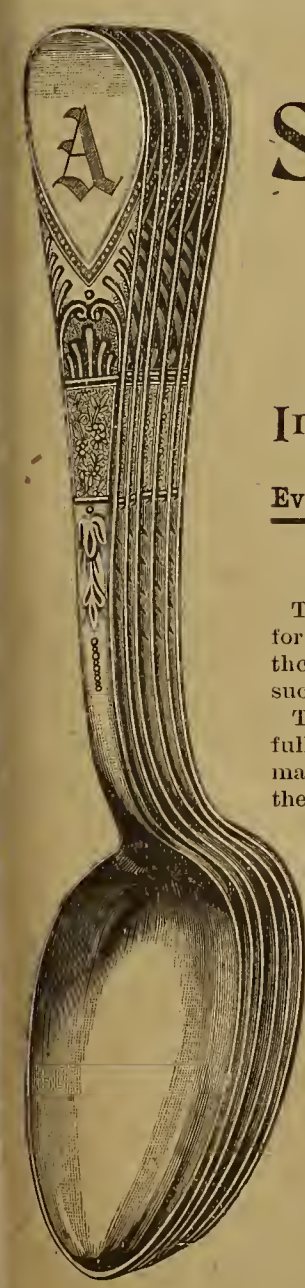
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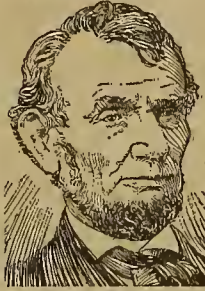
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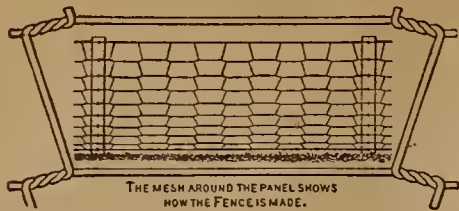
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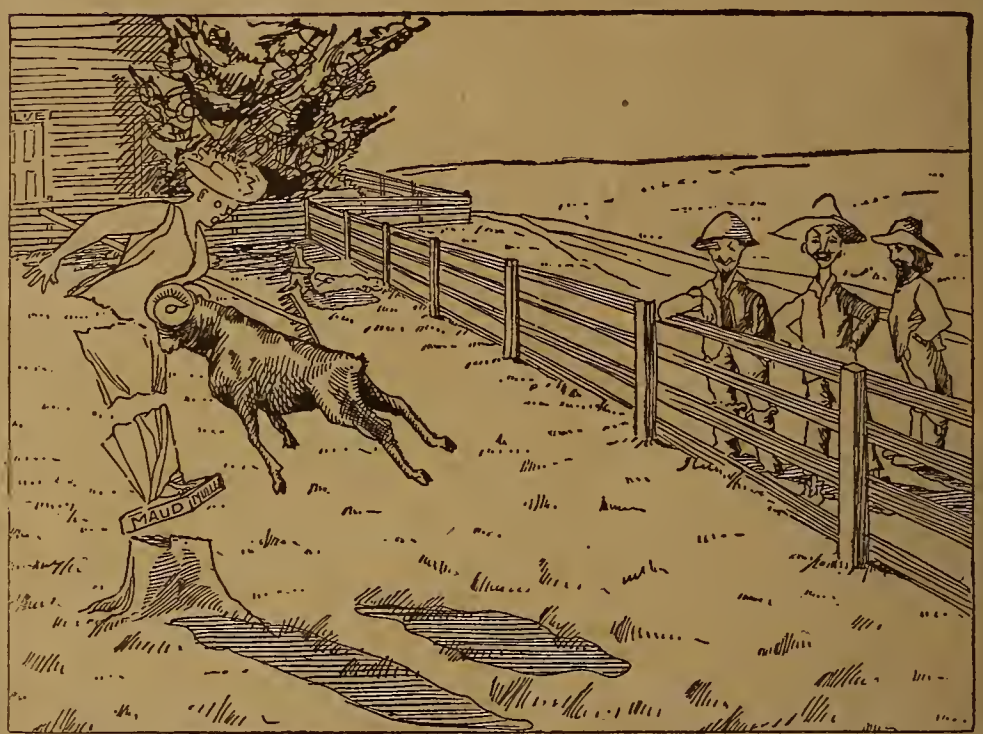
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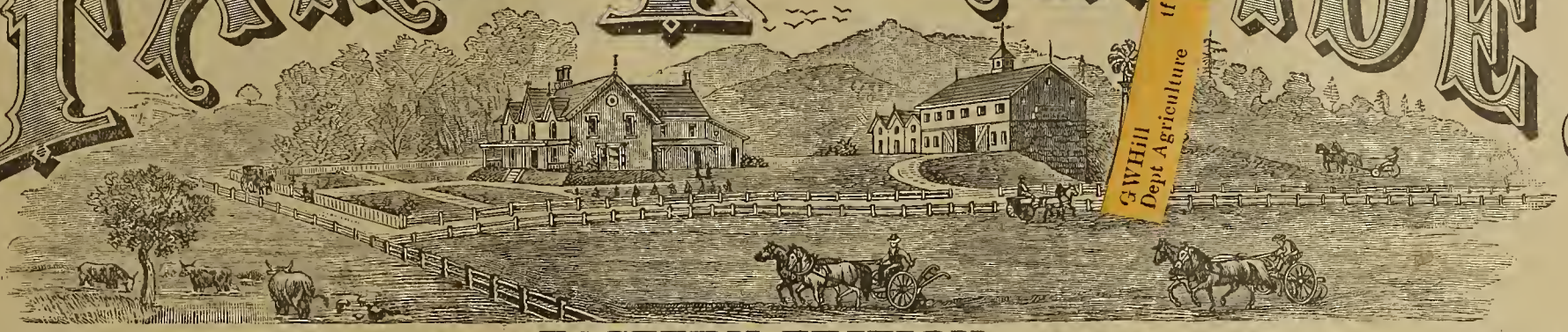
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FARM & FIRESIDE



G. Whill
Dept Agriculture

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INFORMATION FOR ADVERTISERS.

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ductive power. For example, "An ordinary farm-hand in the United States raises as much grain as three in England, four in France, five in Germany or six in Austria, which shows what an enormous waste of labor occurs in Europe, because farmers are not possessed of the same mechanical appliances as in the United States."

As regards railways, Mr. Mulhall says: "The construction of new lines has cost a million dollars a day during the last twenty years, and if some of these lines have proved unfortunate to shareholders, it is nevertheless true that every dollar spent in this way has been a benefit to the country. The freight charge in 1890 averaged ninety-three cents per ton per hundred miles, which is less than one half the charge customary in Europe (\$1.90), and this implies a saving in this respect alone of \$845,000,000 yearly to the American people, or ten per cent on the original cost of constructing the lines."

IN the history of science and philosophy the nineteenth century will ever be known as the age of Darwin, Tyndall, Huxley and Spencer. There now remains but one of this quartet of eminent teachers and leaders who revolutionized modern thought. Professor Thomas Henry Huxley died at Eastbourne, England, June 29th, at the age of threescore and ten.

Unconsciously but faithfully he is said to have sketched his own character in the following:

"That man has a liberal education who has been so trained in youth that his body is the ready servant of his will, and does with ease and pleasure all the work that, as a mechanism, it is capable of; whose intellect is a clear, cold logic engine, with all its parts of equal strength and in a smooth working order, ready, like a steam-engine, to be turned to any kind of work, and spin the gossameres as well as forge the anchor of the mind; whose mind is stored with a knowledge of the great and fundamental truths of nature and of the laws of her



PROF. THOMAS H. HUXLEY.

operations; one who, no stunted ascetic, is full of life and fire, but whose passions are to come to a halt by a vigorous will, the servant of the tender conscience; who has learned to love all beauty, whether of nature or of art, to hate all vileness, and to respect others as himself."

His own estimate of his work and spirit is given in the following:

"If I may speak of the objects I have had more or less definitely in view since I began the ascent of my hillock, they are briefly these: To promote the increase of natural knowledge, and to forward the ap-



HON. A. J. BALFOUR.

plication of scientific methods of investigation to all the problems of life, to the best of my ability, in the conviction, which has grown with my growth and strengthened with my strength, that there is no alleviation for the sufferings of mankind except veracity of thought and action, and the resolute facing of the world as it is, when the garment of make-believe by which pious hands have hidden its uglier features is stripped off. It is with this intent that I have subordinated any reasonable, or unreasonable, ambition for scientific fame which I may have permitted myself to entertain, to other ends; to the popularization of science; to the development and organization of scientific education; to the endless series of battles and skirmishes over evolution; and to untiring opposition to that ecclesiastical spirit, that clericalism, which in England, as everywhere else, and to whatever denomination it may belong, is the deadly enemy of science."

Now that harvest is over, what about those little improvements which you planned last winter? Some new gravel walks about the yard and barn-lot, a new fence, maybe, or some general cleaning up? It ought to have been done in the spring, but somehow that other work put it off and it isn't done yet. We don't feel like doing any more than we have to do while it is so awfully hot, and yet there is nothing which so adds to the real joy of living as these little conveniences, and the little touches which beautify our homes or our grounds.

It is a shame that your wife must wade through the mud when she goes out to milk. When she caught that severe cold last winter you resolved that another summer should not pass without a good walk out to the barn-lot. See to it now that you don't allow winter to slip up on you.

It is these little things which you can do in a few hours, or a day or so at most, which will save so much work. Hundreds of people spend more time during a single winter cleaning their boots than it would take to build decent walks. Nowadays, farmers have plenty to do, if they keep up in the race of progress, and their time is precious. Anything, therefore, which saves

their time should be looked after, even if it were not for the comfort. Your farm is worth five dollars more on the acre when you have a beautiful yard, a nice gravel driveway, and convenient walks about the place. A little paint or whitewash, too, has a wonderful effect. Plenty of shade-trees and a well-kept yard will repay all the labor and pains they cost. Take advantage of any little bit of spare time which you may have to do these things you have so long intended to do, but never really got at up to this time.

THE result of the recent parliamentary elections in Great Britain is an overwhelming majority for the Conservative party. As leader of the Conservatives in the House of Commons, and one of the chief members of the Salisbury cabinet, the Hon. A. J. Balfour now occupies a commanding position in English politics. And as one of the ablest advocates of international bimetalism, special interest in him is now manifested in other countries.

SOME months ago it was thought that the Cuban revolution would be short-lived; but the insurgents knew that their greatest ally would be the havoc which the hot months would work with the Spanish troops. They rely upon yellow fever and the fact that thousands of men, so soon as the sugar season is over, will be out of employment, and ready to join them. The revolution is undoubtedly making substantial progress. The always-victorious General Campos is seriously concerned as to the result of the campaign. He has not been able to end the trouble at once and return to Madrid in triumph, as he had hoped. More money and more troops are asked for from the mother-country.

The evident sympathies of American private citizens are naturally with the Cuban patriots. There is no reason why we should feel otherwise. While efforts are made to prevent cargoes of arms and ammunition being sent to the insurgents, these will from time to time elude the vigilance of all the watchers, and be landed in the Cuban camps.

Spain has not taken the wisest policy with Cuba. In the revolt in Cuba, which began in 1895 and continued ten years, the number of troops sent from Spain is said to have been 140,000. There is no precise record given as to how many lived to return to the mother-country. It is known, however, that yellow fever and other deadly maladies destroyed the larger part of the army. Sooner or later Cuba must be granted her freedom; or some such policy as Great Britain applies to her colonies must be instituted. Our age is not the one in which coercive actions will hold colonies. They become attached by liberal and progressive treatment. Spain has never been either liberal or progressive with the Cubans.

THE revenues of the government are still far below its expenditures. At the end of the fiscal year, June 30th, the deficit, as reported by the Treasury Department, was over \$43,000,000. Three weeks later it was over \$55,000,000. One of the first acts of the next Congress will be a revision of the revenue laws.

WITH THE VANGUARD

IN an article in the *North American Review* on the "Power and Wealth of the United States," Michael G. Mulhall, the eminent statistician, says:

"The physical and mechanical power which has enabled a community of woodcutters and farmers to become in less than one hundred years the greatest nation in the world, is the aggregate of the strong arms of men and women, aided by horse-power, machinery and steam-power, applied to the useful arts and sciences of every-day life. The power that traces a furrow in the prairie, sows the seed, reaps and threshes the grain; the power that converts wheat into flour, that weaves wool or cotton into textile stuffs and garments; the power that lifts the mineral from the bowels of the earth, that forges iron and constructs railroads; the power that builds up towns and cities; in a word, whatever force is directed for the production, conveyance or distribution of the necessities, comforts or luxuries of life, may be measured at each national census with almost the same precision as that with which the astronomer indicates the distances of the heavenly bodies. The working power of an able-bodied adult is three hundred foot-tons daily; that of a horse, three thousand, and of steam horse-power, four thousand."

On this basis, Mr. Mulhall gives a table of the working power of the United States at different periods, showing that the absolute effective force of the American people is now more than three times what it was in 1860. By another table he shows that the United States possesses almost as much energy or working power as Great Britain, Germany and France collectively, and that the ratio falling to each American is more than what two Frenchmen or Germans have at their disposal. In another table he compares the production of grain and meat in various countries with the number of farm-hands, and shows how far the United States leads in individual pro-

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FARM AND FIRESIDE,
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.

The Indiana experiment station has issued the following bulletin on destroying the Hessian fly:

"Owing to the prevalence and destructiveness of the Hessian fly this year, concerted efforts should be put forth to prevent a recurrence of its ravages upon the next wheat crop. In order to prevent a serious attack of 'the fly,' the following measures should be adopted:

"Thoroughly burn all fly-infested wheat stubble in which there is not a stand of young clover or grass.

"Prepare very early a border, one or two rods wide, around each field of wheat, and sow the same to wheat in August.

"Turn this border under very late, using a jointer following with roll and harrow, and then sow the entire field.

"By taking this course, many of the insects which escape the fire will be buried when the early-sown border is turned under, and the late sowing of the general crop will avoid the earlier attacks of any remaining 'fly.'

"If these precautions are carefully and generally observed by the farmers, the Hessian fly will not seriously damage the next wheat crop. United effort is necessary to be effective."

Bradstreet's says: "Statisticians of exchanges and other bodies have calculated or estimated on the government wheat crop for July that the crop will be about 400,000,000 bushels; in some instances, a little less than that. If, as indicated by Bradstreet's reports of available stocks and larger wheat-crop estimates during the past two or three years, the United States carried over on the first instant about 90,000,000 bushels of wheat; certainly 50,000,000 bushels of that quantity may be counted on as among available supplies during the next twelve months. Taking most recent crop estimates and this available portion of the reserve from the old crop, the total supply of wheat for the new cereal year is about 447,000,000 bushels.

"If one is to admit the estimate of 4.6 bushels of wheat as the quantity consumed per capita each year, plus the quantity required for seed, this will call for about 365,000,000 bushels within the current cereal year, leaving only 82,000,000 bushels, on the face of it, available for export. It is only

fair to add that this looks very small. Did the grain trade believe in any such extremely light supplies available for export during the next twelve months, the price would be much higher than it is."

Farm Products In the July 15th number appeared a table and chart showing the courses of the production and prices of wheat and silver. The following table gives the prices of corn, oats, pork and silver:

	Corn. bu.	Oats. bu.	Pork. bbl.	Silver. oz.
1871.....	42.9 cts.	35.7 cts.	\$14.65	\$1.32
1872.....	34.8	29.4	11.91	1.32
1873.....	41.5	32.3	14.14	1.29
1874.....	58.9	47.3	17.44	1.27
1875.....	36.6	31.8	18.42	1.24
1876.....	33.1	31.4	17.51	1.15
1877.....	33.9	27.6	13.98	1.20
1878.....	31.6	21.4	9.71	1.15
1879.....	37.5	33.1	9.83	1.12
1880.....	39.6	36.0	13.23	1.14
1881.....	63.6	46.4	16.94	1.13
1882.....	48.5	37.5	19.79	1.13
1883.....	42.0	32.7	16.59	1.11
1884.....	36.0	28.0	16.48	1.11
1885.....	33.0	29.0	11.58	1.06
1886.....	36.6	29.8	10.63	.99
1887.....	41.4	30.4	15.00	.97
1888.....	34.1	33.3	15.10	.93
1889.....	28.3	22.9	12.58	.93
1890.....	50.6	42.4	12.13	1.04
1891.....	40.6	31.5	11.38	.98
1892.....	39.4	31.7	11.52	.87
1893.....	36.5	29.4	18.35	.78
1894.....	45.7	32.4	14.13	.63

Based on the simultaneous fall in the prices of wheat, cotton and silver, leaving out of consideration the increased production of each, is a theory that silver fixes the prices of all farm products. An examination of the foregoing table is enough to convince the wayfaring man, though a fool, that the theory is false. In 1873, when silver was worth \$1.29 an ounce, corn was worth 41.5 cents a bushel, and in 1894 silver had fallen to 63 cents and corn was worth 45.7 cents a bushel. The prices of oats and pork were almost exactly the same in 1894 as in 1873, but silver had declined over 50 per cent.

The theory is also disproved by the course of prices of cotton and wheat during the past few months. From February until June, cotton advanced twenty-five per cent and wheat advanced thirty-two per cent. The apparent connection between these two staples and silver disappeared also.

The following table gives the price of seventeen farm implements in bushels of wheat in 1873 and 1889:

	Bu. of wheat	
	1873.	1889.
One-horse steel plow.....	6.4	3.8
One-horse iron plow.....	4.9	2.7
Two-horse side-hill plow..	17.6	13.7
One potato-digger.....	19.6	10.2
Old-fashioned tooth harrow.....	14.7	8.9
One-horse cultivator.....	6.8	4.7
Mower.....	83.3	61.6
Com. iron garden-rake (doz.).....	11.7	5.1
One-horse horse-power.....	44.1	34.2
Binder.....	277.7	184.9
Corn-sheller (one hole).....	11.2	8.2
Common rakes (wood) per doz....	2.9	2.4
Scythes (Ames grass) per doz....	15.7	10.2
Scythe-snathes (patent) per doz....	10.8	6.1
Shovels (Ames) doz.....	17.6	13.0
Spades (Ames) doz.....	18.1	13.7
Total.....	569.4	388.1

Although wheat declined in price considerably between 1873 and 1889, the price of these farm implements was reduced still more. For instance, in 1873 it was necessary for a farmer to sell 277.7 bushels of wheat to get money enough to pay for a binder; in 1889 it required 184.9 bushels to pay for a binder.

In the process of pasteurization, pure, freshly drawn milk is heated nearly to the scalding-point, then quickly and thoroughly chilled, put at once into bottles sterilized by steam and sealed up air-tight. By this means the active ferments in the milk, and possible disease germs, are destroyed, and the rich, sweet flavor of the new milk preserved. Within the past two years there has been a large increase in the sale of pasteurized milk in the city retail trade. Physicians have given it the

highest indorsement, recommending it particularly for children. In cities where it has been introduced and its merits have become known, the demand for it is ahead of the supply. It will revolutionize the milk trade of large cities. Pasturized milk can be shipped safely long distances. No city need be without a full supply of pure, sweet, wholesome milk. Pasteurized milk can reach the consumer sweet from a farm one hundred miles or more away.

NOTES ON RURAL AFFAIRS.

Soda and Potash. A great deal has been said in the agricultural papers of late about the substitution of soda for potash in plant nutrition. I have already referred to it, perhaps repeatedly, and tried to show that plants cannot be made to accept soda, to any great extent, when they want potash. The Rhode Island experiment station is now sending out advance sheets from their report for 1894, which treat on this question. Unfortunately, the whole matter seems to be rather complicated, and it is presented in such a manner that it will appear somewhat hazy, even after close study of the treatise, to the average intelligent but unscientific soil-tiller.

The people who investigated the question whether soda has any direct fertilizing value, have found the same difficulty which everybody who seeks light on the great manure problems is bound to meet; namely, the interference of unlooked-for conditions. For instance, when we apply nitrate of soda and get good results from it, we naturally infer that the effect is due altogether to the nitrogen with which the plants were fed. In truth, however, the effect might possibly have been due to other causes, especially also to the action of the soda, not only in liberating the insoluble potash, but also in removing a natural acidity of the soil. To draw correct conclusions from even carefully conducted experiments is a most difficult and often an impossible task.

Then there is a difference in crops. Some plants flourish better upon a rather acid soil; others like a rather alkaline soil. The latter refuse to grow until "the acidity of the soil has been decidedly reduced or overcome by lime, wood ashes, barn-yard manure or other alkaline treatment." Beets and similar plants sometimes are unable to make satisfactory growth, presumably on account of the acidity of the soil, and will promptly respond to alkaline treatment, by application of soda or other alkaline substances. It is found that soda makes the soil more alkaline than does potash. In some cases, therefore, we may see as good results from soda as from potash, and even better ones, and we may be led to the belief that soda had been of direct manurial value when in fact it had not.

"In our experiments," says the Rhode Island station, "we have found that sulphate of ammonia has proved in most instances inferior to nitrate of soda, and in some injurious to plants; a result which in our case was, in all probability, largely attributable to the acidity of the soil and its effect upon the nitrification of the sulphate of ammonia, which factor appears not to have been taken into consideration in the least by Wagner and Dorsch, and by other experimenters whose results they cite in support of the manurial value of soda."

One of the objects the Rhode Island station had in view in an experiment reported in the bulletin, was to discover whether the use of soda in addition to that naturally existing in the soil and in the manures possesses any advantages or not. The question is not definitely settled as yet. Where, in the reported experiment, soda was used without potash, the yields were generally smaller than where potash was used without soda. Again, where potash in increasing quantities was added to a full ration of soda, the yields were generally increased, though not always in a uniform degree, according to the amount of potash added. On the other hand, where soda in increasing quantities was added to a full ration of potash, the results were generally less satisfactory.

Where sodium and potassium chlorids were used, the yields were generally inferior to those where carbonates of sodium and potassium were used. Those plants which show the greatest benefit from the use of the carbonates—such as beets, spinach, lettuce, etc.—are among those which in other experiments had been found most benefited by the use of air-slaked lime. It seems likely that the particular advantage of the carbonates over the chlorids, in this instance, was due to the fact that the former were decidedly effective in reducing the acidity of the soil. But the quantities of the sodium and potassium carbonates were not sufficient to reduce the soil acidity in a great degree, as it was found that the use of air-slaked lime still further increased the yields of those crops most seriously affected by soil acidity.

When the object we are seeking is to neutralize soil acidity, and to render an acid soil rather alkaline, it seems to me that lime would be the most natural and usually most convenient means. The same station reports experiments with lime applied for the purpose of correcting acidity of the soil. Spinach and lettuce were more seriously affected by the acidity of the soil than any other crops grown, and almost failed in some instances to gain a foothold even after the seeds had germinated well. The most important Rhode Island crops which were decidedly benefited by the use of lime were the beet, onion, muskmelon, cabbage, cauliflower, cucumber, barley, red clover, pea, and rutabaga, or Swedish turnip. Tobacco, sorghum and wheat also were greatly benefited.

"Marked differences have been observed between individual members of the same family of plants; for example, of two leguminous plants, the clover and the lupine, the former cannot be grown successfully on our soil without lime, barn-yard manure or some other alkaline treatment, while the latter (lupine) is injured by lime. Again, in respect to the melon family, the muskmelon was a total failure without lime, while the total yield of watermelons was not increased by it. In regard to the cereals, barley was not a success without lime; wheat and oats were benefited by it in the order named, though in a less degree, while the rye derived but little benefit from it. The results indicate that lime rids soil of sorrel more on account of the fact of its putting the soil in a condition to produce clover and other agricultural plants, which in turn crowd it out, than to the inability of the sorrel to grow on limed land."

All this shows that the condition of an upland soil—whether acid or alkaline—as well as the peculiarity of the crop itself, have a great bearing upon the advisability of applying lime, and both are fit subjects for study.

That it will not do to treat all soils alike, so far as the application of alkaline or acid substances is concerned, is a fact which just at this time has appeared very plain to me. With a view of trying the effects of granulated sulphate of copper as a direct application, along in the furrow with the seed, for potato-scab, I made a number of experiments on different plots. In one instance the soil was evidently quite acid already. It is thought that scab cannot live in an acid soil. To make a sure thing still surer, I applied thirty pounds of copper sulphate in the manner mentioned, to about one quarter of an acre, on a lot of Carman No. 1 potatoes. Next to this is another quarter of an acre planted to the same variety and in the same manner, except that no copper sulphate was applied. The copper application seemed to have a very injurious effect on the germination of the seed in this acid soil, as it retarded growth to such an extent that six coppered rows look now as if planted two weeks later than the others, while in fact they were the first planted. In another part of the grounds, and on soil that is evidently alkaline (from yearly applications of barn-yard manure, nitrate of soda, ashes, etc.), I applied copper sulphate in the same manner to one of the long rows of Early Ohio potatoes, without apparent bad effect. What the effects will be on scab and yield time will soon tell.

T. GREINER.

Our Farm.

TOMATO CULTURE IN FLORIDA.

It has been but a few years since Bermuda ceased to have a monopoly in the growing and shipment of winter tomatoes to the northern markets. They were carefully gathered, then wrapped in brown paper and packed in seven-quart boxes. These usually sold for one dollar a box, often more, but seldom less. The season usually commenced about January 5th and closed about the middle of March. The South Florida grown tomatoes have now taken the place of the Bermuda product in the early spring markets of the leading northern cities.

In South Florida there are stretches of what are called frost-proof lands. They are the elevated sand-hills or ridges which retain the noontday heat. A great number of lakes of beautifully clear and excellent water are common in the locality. These afford water protection against frost. This proved to be the case in Polk county during the prevalence of the blizzards last winter. This was the case in the Indian river district, also. Frosts will come yearly and kill the tender vegetation on the lowlands, but the high sand-hills are measurably secure from destructive frosts. The arctic weather of last winter came on so unexpectedly that hundreds of growers who went to bed trusting that there would not be "much of a frost, after all," were dumfounded on awakening in the morning and seeing the vast amount of damage that had been done.

In the vicinity of Winter Haven the tomato growers commence operations early in the fall by plowing, harrowing, and hauling the various fertilizers that are needed. The soil is thin, and it is necessary to apply commercial fertilizers. The best plan is to begin still earlier and dig out a number of cords of muck and compost this with the chemicals and all the stable manure that can be procured. A compost heap of this kind, if frequently cut down and well mixed, soon becomes thoroughly decomposed and a most valuable manure.

A crop of twelve or fifteen acres is a most common one for each individual, and he can do most of the work necessary until the crop is ready for picking. From eight to fifteen seeds are usually planted as early as the first of October, in hills three by three and one half, four by three and one half or four by three feet, much as the northern farmer plants corn. Where the land is comparatively new it is only necessary to furrow out and cultivate one way, but on old lands both ways. Considerable hoeing is also required, although most of it is done by horse-power.

The bulk of the seed usually comes up in a week's time, and the rake or hook is used to hasten the growth. If the land is old and somewhat grassy, the grasshoppers are quite destructive. Paris green, mixed with flour and dusted over the plants as rapidly as a man can walk, is the usual method. If the winter is a comparatively warm one the plants usually begin to blossom about Christmas-time, but on the other hand they may get about a hand high and so remain for a month or six weeks. The plants are rarely injured by suspended growth in ordinary seasons.

After the crop is well started it must again be fertilized, cultivated and thinned. A third application of fertilizer is made just about as the fruit is setting well and the crop "laid by." In the meantime the cut-worms and grasshoppers will have destroyed many plants which have to be transplanted from the seed-bed.

Many growers have adopted the plan of planting an enormous seed-bed, as about three thousand plants are required to the acre. If the plants are set by hand, only about half an acre is a day's work. Where the transplanter is used, four acres can be planted, and in a better manner, in the same time. There is no special need of haste, as we have ample time here to get our crops into market ahead of other truck-growing localities. Where the transplanter is used, two men sit on the machine and drop plants in a furrow made by the plow on the forward end of the planter.

At the same moment a valve opens and drops a gill of water and the rollers firm the plant in the ground. Where the ground is clear the planting is superior to hand work.

When transplanting by hand, open but a few furrows at a time. Make holes for the plants with a short stick, put in the plants, water and tramp the earth about it. Large, well-rooted plants require more space, more water and more care. The tomato-plants will bear much abuse and still grow and thrive.

When once established, the superfluous growth is to be kept constantly pinched out so as to increase the size and perfectly develop the fruit. When the crop reaches maturity, then comes the rush of work. The tomatoes must be picked before they become fully ripe, in order to bear shipment to northern markets. They are dumped out of the picking-baskets onto the packing-tables, and carefully sorted into firsts and seconds, and separately wrapped in paper and packed in one-half-peck fruit-baskets. Six of these baskets are packed in a slat crate and are then ready for shipment, where they frequently bring as high as six dollars a crate. Generally speaking, the proper time to gather and pack is when the tomato is full-grown and beginning to color, or is partly colored, depending, of course, upon the length of time the fruit is in transit. J. W., JR.

FARM THEORY AND PRACTICE.

MANURIAL VALUE OF FOODS.—Our scientific investigators have furnished us tables giving the number of pounds of the three important fertilizing ingredients contained in a ton of many farm products. We know how many pounds of nitrogen, of phosphoric acid and of potash are removed from the field in a ton of hay, or corn, or potatoes. We buy these elements in the form of fertilizers, and we sell them in the form of food for man or stock. These fertilizing ingredients have a valuation put upon them based upon the market price of these substances, and it is supposed that we can thus determine the manurial value of our products. By comparing the manurial value with the market value, the idea is that we are enabled to tell whether we are playing a losing game or not.

FEEDING OR SELLING.—When farm products are fed to stock on the farm, only a small per cent of their manurial value need be lost. Experiment shows that when the manure from stock is carefully saved and returned to the field, we can safely count upon returning over eighty per cent of the fertilizing ingredients of the food to the soil. The amount of loss depends upon the kind of stock to which the food is given. As the greater part of the manurial ingredients of farm products can be given back to the soil by feeding these products on the farm, there may be two profits from feeding—the one from converting everything into the form of flesh, wool or dairy products, and the other from the manure. The manurial value of many foods is rated so high in these tables that it has been believed that one can often buy these foods at market prices and get their feeding value as clear profit, because the manurial value is placed at a higher figure than the market price.

When studying these tables I have often felt that there was something misleading in them for the practical farmer. As an illustration: Wheat bran is valued at \$12.45 as a manure; that is, it contains that much nitrogen, phosphoric acid and potash, calculated at market price. Estimating a loss of twenty per cent in feeding, we have remaining about ten dollars' worth of fertilizing ingredients, according to these tables. The manurial value of clover hay is placed at \$9.07; deducting twenty per cent for loss by feeding, there remains a value of \$7.25. In fact, a study of the manurial values of all the leading grains and grasses would lead one to suppose that it was a losing game to sell these farm products off the farm, and that profit was apparent from buying many feeding stuffs on account of their manurial values, even if fed to stock that gave no returns at all for the food values of these feeding stuffs. I say that such was the natural inference from these tables, while most practical farmers know that the adoption of such a course under their conditions would be sheer folly. Then, what is wrong about these tables?

HENRY STEWART'S OPINION.—It seems to me that the veteran agricultural student, Henry Stewart, states the case concisely. He says: "I do not question that the manure from the feed contains all the fertilizing matters of the food that has not been digested. It is the valuation of them that I think excessive, and this excess is a serious injury to all purchasers of the foods and of fertilizers as well. At these times, when farm products are lower than in my memory of half a century, I find that the values of these feeding stuffs are as great or greater than ever; and when a ton of bran is worth more to buy than a ton of wheat, and the refuse of the cotton-oil sells for more than the whole cost of the seed (and the same with most of the other valuable feeding stuffs), and the manure from a ton of clover is valued more highly than the clover itself, I am inclined to think, and to say to others interested, that something is out of joint about it; and this, I am convinced, is the assumed value of the elements of plant-food in the manure."

Something is out of joint. Chemically, the manure from a ton of bran, fed to stock, may be worth \$10, but practically we cannot get \$10 from that manure when applied in the usual way to wheat, corn or potatoes, and I do not believe that the manure from the average ton of bran fed on our farms yields us half as much money when converted into staple crops. The valuation of the chemical ingredients are too high in actual practice. The manure from ten tons of bran, fed to stock, cannot be sold to a practical wheat or corn grower for \$100, nor for \$50. Its value to the user depends upon circumstances. If he is remote from the market, and grows cheap products, the value of the manure is less to him than to the gardeners near a great city market. Practically, stable manure throughout the country cannot return to the user any such amounts as these tables of manurial values of foods indicate.

BACKBONE OF GOOD FARMING.—It is not my object to depreciate stable manure. It is the backbone of good farming. But it is unwise to buy fertility at the valuation these tables put upon the manure from feeding stuffs. It is usually good policy to buy some highly nitrogenous feeding stuffs because their feeding value equals or exceeds the cost, and the manurial value is a big item; but when there is some loss from feeding, we cannot go ahead with the idea that we get \$20 in the manure from a ton of cotton-seed meal, or \$10 from bran, or \$7 from clover hay. We do not get it. The products of the soil grown with this manure are too low in price to permit us to do so.

Whenever I can convert any field product into flesh, thus retaining the manurial value on the farm, and in so doing get as much cash for the products, good farming requires me to do so. I can well afford to care for the stock free of charge for the sake of returning the manurial value of the food to the farm. But the high valuations put upon nitrogen, phosphoric acid and potash, be they in the form of chemicals, feeding stuffs or animal manure, are no absolute criterion for the farmer. As a means of getting relative values they are useful, that is all. They do harm in giving the impression that these ingredients are worth this sum of money to the farmer. Manufacturers of commercial fertilizers point to these valuations, and use them as an influence in making sales. Our scientific men probably intend them, and many say they are to be taken only for comparisons, but many farmers do not understand. They see that the valuation is placed at a certain figure, and that settles it. The manurial value of most farm feeding stuffs is much less than these tables say that it is, and all tables of valuation should be changed to conform more nearly to actual values in this era of cheap farm products.

DAVID.

FEEDING SOWS AND PIGS.

It does not pay to keep the scrub breeds of hogs. The feed should be given regularly twice a day. For the first ten days after the litter comes the sow should be fed very sparingly, and preferably wheat bran and milk; or in the absence of milk, ground wheat, a pint at a feed, till the tenth day, and then gradually increased till the fourteenth day to three pints. After this give the sow all that she will eat up clean twice a day, and the pigs will thrive and grow much more rapidly than

they would were the sow gorged from the start. As soon as the pigs will eat, give them a run where the mother cannot get at them, and when she is fed, place some feed for them, preferably milk, or milk and ground wheat, and at one feed, twice or three times each week, put in their slop a teaspoonful of wood ashes for each pig. Furnish both mother and pigs plenty of clear water, and salt and charcoal. While it is true that this line of care is more troublesome than the haphazard way of feeding, yet the extra rapid growth and healthfulness of the hog will more than repay, as at nine months they should weigh from two to three hundred pounds when butchered.

D. T. STEPHENSON.

Indiana.

SOME GLIMPSES OF MR. BAKEWELL.

So much interest centers in the life work of Robert Bakewell that, though nearly one hundred and fifty years have elapsed since he lived, anything about him is read with the keenest relish. Mr. Bakewell's wondrous success in improving and breeding live stock, and the supposed secrets possessed by him, give an air of mystery to the man and his work that has not been cleared up by those who have studied the man and investigated what he accomplished.

Two pictures of Mr. Bakewell have always been before us. At times he has appeared as a practical philosopher, in his studio studying the laws of breeding, the influence of feeds and a careful observer of results, dictating to his subordinates what to do and when to do, much as a general in the field would direct the movements of an army.

In the other picture he has been outlined as a shrewd, narrow-minded, thrifty, unscrupulous farmer, possessing all the wisdom of his times, commanding the respect and attention of farmers, lords and statesmen of England.

With all the mysteries cleared up, he still appears as an autocrat, and must ever remain such, because he held the key to a system of live-stock improvement that no one possessed in his time. As a man and breeder we can see Mr. Bakewell in his true light by following Mr. Horseman, in an article contributed to the *Journal of the Royal Agricultural Society*, of England. He says:

"Mr. Bakewell's kindness to brute animals was proverbial, and being in constant practice at Dishley, was rewarded with extreme docility in the farm animals. Powerful bulls of terrible presence, looking the more formidable for the immense horns distinguishing their breed, were led about by mere children. One writer says he saw an animal of elephantine bulk led about by a pack-thread by a boy of seven. Another, that a lad with a switch could guide him to any part of the farm by holding the switch to one side or the other to indicate the way; and a third had been greatly amused by a little boy five years old mounted upon one of the big bulls, and so guiding him with the point of his switch. Similar instances of docility resulting from unvarying kind treatment were noticed in the stallions, and throughout the live-stock departments of the Dishley farm confiding gentleness, as in effect, afforded the surest evidence of considerate and compassionate gentleness as the cause. On this subject Mr. Bakewell was far in advance of his day, for his generous anger was kindled instantly by the sight or report of cruelties so often practiced in the times when the sufferings of the inferior animals, however discreditable and degrading to man who inflicted upon them, were thought beneath the notice of the law."

It matters not whether Mr. Bakewell's methods were wholly his own inventions or whether they were mysterious and justifiable, consistent or praiseworthy, the results have been of inestimable value to the agriculture of England and the live-stock industry of the world. The Bakewell sheep stands for the highest standard of an agricultural sheep with all sheep breeders of the world.

R. M. BELL.

Vacation

Benefits are more
Than equalled by the
Pure Blood, Life and
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Our Farm.

NOTES FROM GARDEN AND FIELD.

LATE CULTIVATION OF ONION-PATCH.—How to manage the onion-patch after midsummer, when the tops are too large for cultivation with the wheel-hoe, has often been somewhat of a puzzle to me, and is still a matter of frequent inquiry. A reader in Minnesota says his onions have started to form bulbs, and their roots, a little way down below the surface, have spread themselves all over the soil. If he continues to cultivate, he says, some of the roots will be cut off; and if he ceases to cultivate, the ground will soon get hard and dry. Apparently he is "between the devil and the deep sea."

My practice always is to cultivate with the wheel-hoe, just as long as I can go through the rows without doing much damage by breaking the tops down. I prefer to do a little damage in this way, or by tearing some of the surface roots rather than let the crop suffer much more from want of cultivation. This, indeed, we may accept as a general principle, applicable to all hoed crops.

SHALLOW TILLAGE.—There is no need of letting the roots come up almost to the surface. The uppermost two inches of the soil are not intended as a feeding-ground for the plant roots. We need them as a mulch, which tends to keep the roots below them supplied with moisture and air. We do not want the roots to be choked to death by a hard crust on top. With proper tillage, unless the season is an abnormally wet one, roots will have little chance to form near the surface. They are kept down in the moister soil below all the time. In this vicinity we have had only one moderate rain since winter, and the soil surface is so dust-dry that it absolutely forbids the formation of roots within two or more inches of the top, whether we cultivate or not. But we do cultivate, and we aim to cultivate shallow, giving the roots full possession of the soil if they can get it, up to the shallow layer that is kept constantly stirred to serve as mulch.

PURSLANE IN ONIONS.—After awhile, of course, the size of tops, and perhaps their somewhat tangled condition, forbid the further use of the wheel-hoe. Yet rains that may come at this time are still liable to leave the surface hard and crusted, and weeds, especially the quick-growing, hot-weather-loving purslane, will continue to spring up, and when left undisturbed would soon cover the ground between the onions, and perhaps part of the latter themselves, with a thick mat. This must not be allowed. We have to keep the crust broken, and weeds down and out, just as long as the crop is in growing condition. Thus, late in the season we have usually done this work with the hoe, going backward in one row and pulling the hoe through the rows, taking three or four rows at a time. Of course, one has to go quite carefully to avoid injury to the crop by breaking down some of the brilliant tops. Some of the purslane-plants may escape, and grow to be large and spreading. They are gathered by hand and carried out of the patch in baskets. Sometimes it is hard work to kill them. They seem to be bound to grow

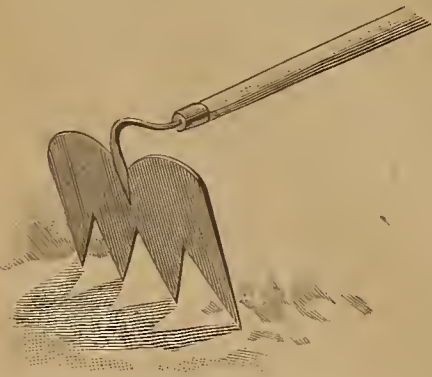


FIG. 1.

and ripen seed, even if thrown together in a big, loose heap. The best way to dispose of them is to feed them to poultry kept in confinement, or to pigs, etc. I think these succulent greens might be chopped up, mixed with bran or meal and fed to ducks. I have Pekins by the hundred this year, and will try the plan. If you cannot make use of these weeds in some sneh way, pile them up on a stone heap in the hot sun, or bury them in the ground and cover with soil.

TOOLS FOR LATE CULTIVATION.—The hoe, however, is hardly the best tool that could be devised for the purpose of keeping the surface between the onion rows stirred and clean during the last few weeks of the growing season. A narrow steel rake, for instance, would be much better. Most of the garden rakes found in hardware stores are too wide to be used in this manner where onions are planted in rows a foot apart. Yet rakes of the proper width may be found if one looks for them, or wider ones can be cut down, or a tool that will do good service may be made by the nearest blacksmith. A simple way would be to take an old hoe and have it cut out as

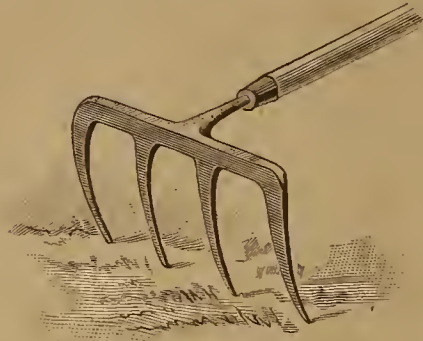


FIG. 2.

shown in accompanying sketch (Fig. 1). It wants to be drawn very lightly over the soil between the rows. Better than a hoe thus transformed would be one of the potato-digging hoes as used in many localities, and illustrated in Fig. 2. A still better device might be made by taking four or five pieces of steel rod (three eighths of an inch) and arranging them somewhat like the fingers of the hand, welding them together for fastening to a hoe-handle. The device is to be used in the same way as mentioned for the hoe. Use it lightly, but thoroughly. Of course, it can be used among many other crops besides onions. It shows, too, that in many cases we can devise our own tools that will just fit a certain place.

CELERY FOR HOME USE.—Possibly celery will be in less plentiful (or rather, super-abundant) supply this year with us than it has for many years. Having been busy otherwise, I neglected to make provisions for irrigating the celery-patch, and just this season it was so urgently needed. The early plants, started in greenhouse and transplanted to cold-frame, were on hand. But I waited long and patiently for a rain to moisten the dust-dry soil. When just on the point to haul water for the purpose of giving a good soaking to ground enough for at least a single row, rain set in, and the plants were set out right after the rain, the soil being then in fine condition. But no rain has come since, and the ground has dried out again, so that the plants are seemingly at a perfect standstill. Fortunately, some of the early plants had been set in a cold-frame, about three inches apart each way, with the intention of leaving them there to make a crop. Of course, they stand rather close, but stimulated by rich soil and free applications of water or washing-suds, they have made a fine growth, and will soon give us a fair supply of fair stalks for the table. They are the White Plume, of course. I have spoken of this plan before, and tried it several times. Last year, in a frame of White Plume planted six inches apart each way (in April), every plant went to seed. Nothing of that sort is threatening this year.

A week or more ago I was at the experiment station at Geneva, New York. Among other things I was shown a frame of White Plume, with plants set about seven inches apart each way (or seven by eight inches), and this patch looked very fine and thrifty, and undoubtedly will give a fine lot of good stalks shortly. Of course, the soil put into the frame was almost clear manure (old hotbed manure), and probably deep, so that the plants have all the food they can use, and more, too, for the most luxuriant growth. I shall try another frame like this for late celery (Giant Pascal), and see if I cannot get my home supply in this way. Without irrigation it would be absolutely useless this year for me to set celery-plants in open ground. I could not make them live, and if they did live they would not make much growth. All around us there has been rainfall. We have had none except the one rain June 20th and 21st. Plants are also extremely scarce. Seed of the late crop sown in open ground in April failed to come, and the boys cultivated the rows up. It is the first failure in late celery-plants I have had to record for years. Should rain come by August 1st,

however, and this is to be hoped, or else many others of our crops will be seriously injured, I shall set late plants yet, if I can get them. Probably the fall will be a wet one. In localities south of me celery may be set even in August, with the expectation of getting good winter celery. I advise my friends once more to make a trial of the frame plan. It is not much trouble. All you have to do is to provide plenty of rich soil, mostly old manure, and set the plants rather closely together. Then give plenty of water, and the plants will thrive and give a large crop on a small space.

T. GREINER.

Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

INQUIRIES ANSWERED

BY SAMUEL B. GREEN.

Lichi.—E. S., Canton, N. J. The fruit received is called lichi. It has a brittle, hollow shell and a date-like fruit inside. It is too tender for cultivation in this country north of southern Florida, and even there its culture has not been successful, so far as I can learn. It comes from southern China, and its botanical name is *Nephelium Litchi*.

Mildew on Lilacs.—B. J. B., Beaufort, N. C. Lilacs are very apt to be mildewed when they are growing in locations closely sbut in. I think possibly this is the case with yours. All the extra sprouts should be removed and the plants given plenty of room; also, dig the soil up around the plant and keep it well stirred. It probably fails to bloom from the fact that it is unhealthy and has too many sprouts around it. It would be a good plan for you to spray the foliage this year with Bordeaux mixture, if you can find the time to do it. For formula of this, see reply to M. K. in this issue of FARM AND FIRESIDE.

Clearing Hammock Land.—R. E. F., Roberts, Ala., writes: "What is the best way of clearing the forest growth from hammock land? In what season should it be done? Should the timber be deadened first?"

REPLY:—The most practical way I am acquainted with, if the work is to be done on a large scale, is to get a first-class stump-puller, which if used in a proper manner is of the greatest assistance, and by its aid even large trees may be soon pulled out so that they can be cut and trimmed. In a small way, if you cannot easily get a stump-puller, your best plan would be to grub out the trees. I should not deaden the trees first, as they are then harder to work up. Such work may be done at one season as well as another, so far as the trees are concerned.

Plum-scale.—W. H. H., East Dover, Maine. The tree should be thoroughly sprayed at once with kerosene emulsion, and the treatment should be repeated several times; it would be a good plan to scrub the branches with it. But if the tree is small and weak, I should burn it, as it will surely prove a center of infection for your whole orchard, and a new, healthy young tree would do better than this. Within a few days my attention was called to this same trouble on a specimen sent to the New York experiment station while I was visiting there, and it was referred to as a new trouble. The scale-insects can only move during a few days or hours of their lives, and it is during this period and soon after becoming fixed in place that they can be successfully treated.

Planting Strawberries.—J. J. F., Nashua, Mo. You had better not begin planting strawberries on such a large scale as you contemplate, but should wait until you have gained experience on a small scale first. Better try about a quarter of an acre to begin with. Plant in rows three feet apart and sixteen inches apart in the row, as early in the spring as you can get the plants, providing the land is in good order. June is apt to be too hot for most successful planting in your section, and it should always be finished by the time berries are found on the plants. I think you had better use one third of the varieties of Beder Wood and the other two thirds equally of Crescent, Haverland and Warfield, putting the first every third row. Strawberries will grow in any good corn land, but the richer the better. You will get no berries until the second year.

Renewing Strawberry-beds.—E. J. B., Harriman, Tenn., writes: "My strawberry-bed is two years old, in matted rows. I think I shall cut paths through the bed as soon as we have a good rain, cutting the plants out in squares of about a foot and putting them in good, rich ground, about three feet apart."

REPLY:—The best way for you to renew your strawberry-bed would have been by mowing the leaves all off as soon as the crop was gathered and then raking them all together and burning them. This treatment gets rid of the leaf-spot, which is liable to be abundant on the old leaves, and the new leaves that start will be much healthier than if the tops were not mowed off. When this has been done, cut the bed out into beds or rows about one foot wide, by plowing away from these rows on each side; fill the furrows thus formed with fine stable manure and start your cultivator and work the soil thoroughly. I have used a riding eorn-cultivator to good advantage, instead of a plow, in cutting out the plants. A disk or outaway harrow, with the two inside sections removed, is also good. As soon as the plants show new growth, go over them with a hoe and cut out all that are weak, and thin out where they are too thick, leaving the plants

about six inches apart each way. Treated in this way, if you have rain, the bed will be as good as ever for fruiting next year. I have a bed that has borne four good, successive crops under this treatment.

Dwarf Rocky Mountain Cherry.—E. H., Victoria county, N. B. The Dwarf Rocky Mountain cherry has been little tried, and so far as I have seen it, the plants have been grown from seed. I look upon it as of no great value now for any section of the country where the common cherries and currants thrive, but think well of planting it or the sand-cherry of Minnesota and the Dakotas in droughty locations where better fruit cannot be grown. I doubt if it will prove adapted to your conditions. It is very hardy, and stands well in very dry situations. I think you should try some of the more productive beach-plums, such as are found along the coast of New England, and that they will be more liable to prove of value to you than plants from the interior of this continent, though the cost of trying the latter on a small scale would be but little.

Pruning Trees—Lawn-dressing.—R. H. L., Eau Claire, Wis., writes: "Which is the best time to prune plum, crab-apple and elm trees?—I live on a high, sandy soil. What is the best dressing to put on a lawn in the fall of the year, to prevent winter-killing, eow or horse manure? How much should be put on, and how long should it be permitted to remain in the spring of the year?"

REPLY:—Plum and apple trees should be pruned very early in the spring, before any growth has started, if they are to be severely cut, but June is the best time for light pruning. In any case, all wounds over three fourths of an inch in diameter should be covered with grafting-wax or blue clay, to protect them until they heal over. This is more important in your section than in climates less severe. Elms may be safely pruned at the times mentioned above, but may also be safely pruned at any time after the growth stops and before it starts in the spring, providing the frost is out of the wood. The wounds should be protected from the weather.—If by dressing you mean some form of stable manure, then use either eow or horse manure, but have it thoroughly rotted and fine when applied. Put it on evenly in the fall, about the middle of November. Early in the spring break it up with a rake, and rake off only what will not work into the grass. Coarse manure applied in the fall is liable to smother out the grass in spots; I do not like it. For a number of years, however, I have not used stable manure on lawns, but in preference have used tankage, which is the dried fertilizer from slaughter-houses, and I have applied it in the spring with the best results. This material costs in St. Paul, Minn., about \$20 per ton, and 500 pounds is a great plenty to use on an acre. It acts quickly and effectually, and lasts a number of years. Of course, it does not afford any winter protection, but blue-grass lawns should not require other protection in winter if they are left about three inches long on approach of cold weather. Of course, this grass will have to be raked off in the spring.

Should be Looked Into.

THOROUGH INVESTIGATION REQUESTED.

A BOLD ASSERTION.

Ever since Prof. Koch startled the world by promising to cure consumption with the Koch lymph and his complete failure to do so, the people have been looking for some discovery which would prove an absolute, certain cure for that dread disease. Over a quarter of a century ago Dr. R. V. Pierce, chief consulting physician to the Invalids' Hotel and Surgical Institute, put in a claim for a medicine, which he had discovered and used, in his extensive practice, that would cure ninety-eight per cent. of all cases of consumption when taken in all its early stages. Time has proved that his assertion was based on facts gained from experience. His "Golden Medical Discovery" has cured many thousand people in all parts of the world, and Dr. Pierce invites all interested to send him for a free book which gives the names, addresses and photographs of many prominent people who have willingly testified to the marvelous curative properties of his "Golden Medical Discovery." He has also written a Book of 160 pages on "Diseases of the Respiratory Organs," which treats of all Throat, Bronchial and Lung diseases, also Asthma and Catarrh, that will be mailed by the World's Dispensary Medical Association of Buffalo, N. Y., on receipt of six cents in stamps, to pay postage.

Consumption, as most everybody knows, is first manifested by feeble vitality, loss of strength, emaciation; then local symptoms soon develop, as cough, difficult breathing, or bleeding from lungs, when investigation proves that tubercular deposits have formed in the lungs. It is earnestly advised that the "Discovery" be taken early and the latter stages of the disease can thereby be easily avoided.

To build up *solid flesh and strength* after the grip, pneumonia, ("lung fever"), exhausting fevers, and other prostrating diseases, it has no equal. It does not make fat like cod liver oil and its nasty compounds, but, *solid, wholesome flesh*.

Black-rot on Grapes.—M. K., Republic, Mo., writes: "Please tell how to save grapes from black-rot. I have sprayed with a whisk-broom, using one pound of bluestone colored brown with prussiate of potash, and then blue again with whitewash, making eight gallons. It shows blue on the vines. I did not begin to use it until some grapes showed the rot a little. Should the wash be stronger and put on earlier? Should I use only the clear liquid, or keep it stirred?"

REPLY:—The proportions in which you have used bluestone and lime in making Bordeaux mixture are about right. The material should be kept stirred when used, and the bunches of fruit should be well covered with it. This material should be first applied as soon as the fruit is set, and the fruit kept covered with it until it begins to color up. The formula I use now is five pounds of blue vitriol, five pounds of quicklime and fifty gallons of water. But there is no need of weighing the lime when you use the prussiate-of-potash test.

Mulberry Seedlings.—M. D. R., Warthen, Ga. Mash the rotten berries in dry sand, and when dry enough to crumble easily, sow the seed at once in a nicely prepared border on the north side of a building or other partially shaded place, and see that the ground does not get dry; but it must not get soggy. Under a temporary shelter of boards is a good place to sow the seed. They sprout very quickly when thus treated, and it is the usual practice, but great care must be taken to prevent their drying out. A little litter thrown among them is the proper winter treatment, and the seedlings should be moved to nursery rows in the spring. They should then be about one foot high. Sometimes I sow the seed in a box, which gives me a little better chance to look after it, and then I can give them full sunlight after they get up. The seed should be covered about one quarter of an inch deep. If you have the seed already saved, you should sow it at once.

Apple-rust.—J. L. S., Alabama. Your apples are affected with what is called rust. It is a fungous disease that has become common in all apple-growing sections of the country of late years, and is often the cause of failure of the crop. Some varieties—as, for instance, the Spitzenburgh—are more seriously affected than others, but most varieties are injured by it in years favorable to the growth of the disease. The best remedy—which is really a preventive and not a remedy—for the disease is to spray the foliage and fruit of your apple-trees with Bordeaux mixture, made of five pounds of lime, five pounds of blue vitriol (sulphate of copper) and fifty gallons of water. This should be commenced as soon as the leaves appear, and the foliage be kept covered with it during the growing season. The apple growers at the North are very generally adopting this treatment, and experiments on a large scale demonstrate that it pays well. The disease lives in one stage of its existence on red cedar trees, and forms the cedar-apples, which are covered with bright red, jelly-like, pointed masses in early summer, and the removal of red cedar trees has in many cases prevented the spread of the disease. But such treatment is seldom practical.

Varieties of Small Fruits.—G. J. L., Arroyo Grande, Cal. I have very little to guide me in replying to your questions, and think you had better look around among the successful growers of small fruit in your section, if there are any, and find out what they are doing. However, I suggest as desirable kinds well worthy of trial, of currants, Red Dutch, Versailles, Victoria and White Grape; of blackberries, Snyder, Lawton and Erie; of red raspberries, Cuthbert, Marlboro, Shaffer, Turner and Clark; of black-caps, Nemeha, Ohio, Older and Souhegan; of strawberries, Haverland, Warfield and Crescent, and pollenize with Beder Wood. Currants, properly cared for, should last a lifetime. Blackberries and raspberries seldom fruit well over seven years, sometimes not so long, and then they may do well a longer time. Strawberry-beds should seldom be permitted to bear more than three crops, and even then should be renewed and manured each year. It is quite difficult to say how long a fruit plantation will remain productive, as much depends on the soil, and of course diseases or insects may become seriously injurious at any time, and if these are neglected the plantation is soon ruined. I do not know anything about the Longworth strawberry.

A LIBERAL OFFER.

Messrs. F. W. Bird & Son, East Walpole, Mass., offer to send entirely free to any of our subscribers a full line of samples of their Neponset Red Rope Roofing Fabric. This fabric is water-proof, wind-proof, frost-proof. Cheaper and better than shingles. Takes the place of shingles or clapboards on out-houses and back plaster in dwellings. Any one can put it on, and we advise our readers to send for a line of their samples.

Please send immediately No. 6229. I have had three of your patterns before this, and I find them equal in every way to Butterick's patterns, for which I have had to pay more than as much again.

MRS. E. L. STILES, Box 97, Tuckerton, N. J.

When I get these patterns they will make six patterns I have had of you. I am very much pleased with the ones I have already had.

Respectfully yours,

MRS. F. J. LEWIS, Copopa, Ohio.

See new patterns on page 13.

SOUTH ATLANTIC ORCHARD AND FARM NOTES.

Since 1870 not less than nine cold waves have visited Florida; each as it receded was followed by a steady increase in fruit production.

The causes of the present low prices for farm products, and the best means of restoring agricultural prosperity, has been the leading topic of discussion during the past winter. It is still open for discussion.

Florida is planning to have an unusually creditable display at the Atlanta, Ga., exposition. Florida has schools and churches and enterprise. Her editors are wide-awake and the people are brainy and energetic, and know the value of such an object-lesson as the fruits, woods, phosphates and other products of Florida will present.

The talk of better cultivation and diversification of crops is good. It is but one of the many ways leading from the slough of despond. When we see that only five senators from the South voted in favor of the Nicaragua canal bill, ten voted against it, and eight were paired on this vital question, we are led to inquire, why is it the farmers, who are in the majority, do not and will not attend the primaries and see that men are elected to Congress who will at least try to legislate in harmony with the industrial interests of the nation?

Of course, Florida, like other states and sections, has its advantages and disadvantages. But few states can grow such a diversity of products, and in none is the expense for good living less. With judicious planning, and twelve months in each year in which labor can be done to grow a crop of some kind, surely the farmer and the fruit grower ought to succeed in making more than a mere living. When the grain-growing farmer in the South loses his money crop, he loses a year's time, whereas the one in Florida can raise a crop of vegetables in a few weeks, for which there is usually a good market in the North and Northwest.

A movement has been set on foot in Lake county, Florida, since the last freeze for the organization of vegetable growers' clubs, with the view of planting all available lands in vegetables for shipment to northern points. By co-operating it is anticipated that the railway lines can afford to, and will probably reduce their rates for transportation at least one third from existing rates. This movement, which originated with Mr. J. H. Raudolph, of Lake county, has been ably seconded by the orange growers and ruckers in Alachua and other counties on the main railway lines centering in Jacksonville. This move will be of the greatest service in affording employment to hundreds who now stand so much in need of it.

J. W., Jr.

ALFALFA IN NEBRASKA.

In the past few years quite a number of farmers here have been experimenting with alfalfa clover. Last year was the dryest ever known here, and yet three to four crops were cut, and the yield for the season was five to six tons of hay per acre. Seed yielded five to eight bushels per acre, generally, but some patches made twelve to fourteen bushels. Where seed was saved, the yield of hay was less. Seed is worth five dollars per bushel. The hay usually sells for five dollars per ton, but last winter sold readily at ten dollars per ton. The crops any year are worth twenty-five to forty dollars per acre. When once set it will produce crops for twenty years without reseeded. The above crops raised last year, without irrigation and almost without rain, grew in bottom land. There is more than 40,000 acres of bottom land in this (Red Willow) county, all good alfalfa land. Alfalfa makes excellent pasture for stock. One acre of it is worth two acres of clover for hogs. Cows fed on the hay will give a good flow of milk in winter. Horses will leave grain to eat the hay. About as fine beef as I ever saw was fattened on alfalfa hay. Alfalfa did so well last year that several thousand acres were sown last spring, and many more thousand will be sown next. It is sown in April and May here, without any other crop, twelve to fifteen pounds of seed to the acre. It likes a loose, porous subsoil. There has been so much rain since the last of May that it will yield, I think, eight or nine tons per acre

this year. Some fields have been cut twice already. I mail you sample to-day, second crop, and stands nearly three feet high now (July 12th). First crop was cut June 6th to 8th, and made two one and half tons per acre.

WM. COLEMAN.

Nebraska.

CRIMSON CLOVER, NORTH.

Farmers near the forty-third parallel should sow crimson clover in July. Sow it in the growing corn and buckwheat fields. It should be borne in mind that as far north as central New York the growing season in the autumn is short, and the weather generally too dry for young clover-plants.

Last year I sowed in August, and although so late, the crop, which looked discouraging until May 20th, proved by June 1st to be better than red clover was at haying-time. If the crop is to be turned under for corn or potatoes, sow turnip, pea or buckwheat seed with it to protect it through the dry, hot weather after corn is cut, and to die down for a mulch as a protection in winter.

If for silage or hay, winter oats might do well. I shall try these oats this fall. I do not know that they have ever been sown as far north as this. I will give them the same treatment as winter wheat and report results next summer.

I believe that in a few years crimson clover will be in as good repute North as it now is in the South. Any crop which has the manurial value of the clover, and which can be sandwiched between two seasons, has a value which can hardly be overestimated.

I hope to see the time when the small farmer will be able to maintain the fertility of his acres without cows or commercial fertilizers. "This is a consummation devoutly to be wished." Then will it be possible to live well, prosperously, happily and independently on a forty-acre farm. All hail the advent of crimson clover!

New York.

E. J. MARSH.

CORRESPONDENCE.

FROM MINNESOTA.—Pope county is a good farming county, with good soil, mostly prairie, producing fine crops of wheat, oats, barley, flax and corn. All vegetables grow and do well. Good markets are close at hand for all surplus. Grain growing and stock raising is the common practice with most of our farmers. There are good small towns scattered through the county on railroads. The people are largely Scandinavians and Americans. We have good schools and churches. The summer climate is fine. The winters are cold, but dry and sunny. There are many fine lakes full of fish. Fuel is plentiful and cheap. Farms that are producing 15 to 20 bushels of wheat, 30 to 40 bushels of oats, 30 to 40 bushels of corn, and 150 to 200 bushels of potatoes per acre, with good, comfortable buildings, can be bought for

\$15 to \$20 per acre, on easy terms. The population of this county is about 13,000.

Hancock, Minn.

G. F. T.

FROM ARKANSAS.—I have lived seven years in Fulton county. I often wonder why it is not more thickly settled here than it is. The only drawback is that Arkansas formerly had a hard name in the northern and eastern states, which may have been justifiable. We now have law, order and good society in most localities, and good schools and plenty of churches, including nearly all denominations. We have some rich farming lands, producing good crops of all kinds. We have the finest stock range in the country. The finest of fruit grows here. Farms are cheap.

J. H. P.

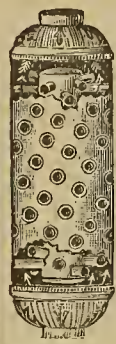
Mammoth Springs, Ark.

Your money

back if you want it—Vacuum Leather Oil. Get a can at a harness- or shoe-store, 25c a half-pint to \$1.25 a gallon; book "How to Take Care of Leather," and swob, both free; use enough to find out; if you don't like it, take the can back and get the whole of your money.

Sold only in cans, to make sure of fair dealing everywhere—handy cans. Best oil for farm machinery also. If you can't find it, write to

VACUUM OIL COMPANY, Rochester, N. Y.



SAVE 1/2 YOUR FUEL

By using our (stove pipe) RADIATOR. With its 120 Cross Tubes, ONE stove or furnace does the work of TWO. Drop postal for proofs from prominent men.

TO INTRODUCE OUR RADIATOR, the first order from each neighborhood filled at WHOLESALE price, and secures an agency. Write at once.

ROCHESTER RADIATOR COMPANY, No. 8 Furnace St., ROCHESTER, N. Y.

WHEAT GROWERS!

If your dealer does not handle the best Three, Five and Six Hoe Wheat Drills made, the STAR, then write us for special discount. The Star Drill Co., Rushville, Ind.

To Get RICH GO FAYETTE COUNTY, West Tenn.

where the climate is genial, the soil fertile and the people hospitable. Northern people are settling here in large numbers. A. J. Rooks, Sec., Summerville, Fayette Co., Tenn.

CRIMSON CLOVER. Send your address on a postal and get the most complete instructions ever printed. Tells what seed is hardy. How to succeed in dry weather. Tells everything. Don't spend any money until you read it. J. A. Everitt, Seedsman, Indianapolis, Ind.



DAVIS CREAM SEPARATORS

A Peerless Leader. Successful. Meritorious. Pamphlet Mailed Free. AGENTS WANTED. DAVIS & RANKIN BLDG. & MFG. CO. Sole Manufacturers, 240-254 W. Lake St Chicago, Ill.

SEED WHEAT.

Wilson's Fall price-list for 1895 now ready. New and improved varieties of Seed Wheat, White Rye. Small fruits, Strawberry plants, Asparagus roots and other things for fall planting.

ADDRESS SAMUEL WILSON, MECHANICSVILLE, PENNSYLVANIA.

CRIMSON CLOVER

The best crop for fertilizer known. Nothing better for Pasture and Cattle. It is necessary to have the Best Seed. Send for circular, tells all about it. Our prices low. Every farmer should try it. Sow in Aug. J. CHAS. McCULLOUGH, Seedsman, North-East Cor. Second & Walnut Sts., Cin., O.

HEADQUARTERS FOR GENUINE HARDY

Crimson Clover

JOHNSON & STOKES, Seed Growers, Philadelphia, Pa.

The most valuable crop in existence. It heads the list for Green manuring, equally valuable for Hay, Pasture, and Silage. Our home grown acclimated seed succeeds everywhere and on all kinds of soil when sown in July, August or September. We have the largest crop of seed ever grown in this country. It will pay you to get our prices before ordering and ask for our descriptive circular, mailed FREE.



IRON AND STEEL ROOFING, SIDING, CEILING AND WEATHER BOARDING.

Galvanized Eaves Troughs, Conductor Pipe, Etc. Specially adapted for Farm uses, Stores, Dwellings, Barns, Elevators, etc. Simple, strong, durable, cheap. Any man can put it on. Fire, water and storm proof. Will last a lifetime. Send for factory prices and free catalogue.

PORTER IRON ROOFING CO., FRONT, NEAR VINE STREET, CINCINNATI, OHIO.

Mention where you saw this advertisement.

DAIN THE BEST, THE CHEAPEST, THE STRONGEST, THE MOST DURABLE STEEL CORN CUTTER.

A PRONOUNCED SUCCESS---THE VERDICT IS UNANIMOUS.

An Entirely New Departure. STRICTLY UP TO DATE.



ADJUSTABLE, PRACTICAL, SAFETY SEAT, EASY TO RIDE, SAFETY SHAFT, SAFETY GUARDS, REASONABLE IN PRICE.

"I think it by far the best corn cutter I ever saw." H. G. WILLIAMS, Shenandoah, Ia.
 "Works splendid. A valuable implement, an absolute necessity for every corn grower." N. GIBBS, Mt. Vernon, Mo.
 "Find it satisfactory in every way. I would not raise corn without one." J. S. HOCKING, Wheatland, N. D.
 "A success and a great labor-saving machine. Every farmer ought to have one." O. B. BROLLS, Bowling, Mo.
 "The best corn cutter I ever saw." A. W. SCARBOROUGH, Elmo, Mo.
 "Works perfectly. Can cut from five to seven acres per day." ABRAM GILBERT & SON, Franklin Grove, Ill.

It will cut more corn than any device ever invented and at less expense (machines costing \$100 to \$150 not excepted). For special information, prices, etc., address

DAIN MANUFACTURING CO., CARROLLTON, MISSOURI.

Our Farm.

THE POULTRY YARD.

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

BUILDING A POULTRY-HOUSE.

It is very difficult to give a design of a satisfactory poultry-house, as so much depends on how much one desires to invest. Of course, the "best" may cost too much, and there is a disposition to economize. Then again, a winter house may not serve for the summer. It is as difficult to suggest a plan of a poultry-house as it is to attempt to please all with a plan of a dwelling, owing to individual preference being a factor. There should be plenty of room on the floor, to enable the hens to work and scratch in winter, and also because the hens detest a dark poultry-house. For 100 hens a house fifty feet long and sixteen feet wide would not be too large. It should be built on a foundation, which need not extend more than six inches or a foot above the ground. On this lay a cement floor to keep rats out. Make the house eight feet high in front and seven feet in the rear, of rough boards, placed perpendicularly. On these boards place tarred paper, with strips on the paper, the roof to be of tarred paper also. Have four windows, the larger the better, and divide the house into four apartments, with twenty-five hens in each. Make the partitions of boards, running to the ceiling, but have all boards above four feet movable, so that wire netting may be used in summer. Place two roosts at the rear, with dropping-boards under the roost, and nests under the boards. It is better to have no passageway, allowing doors to open into each apartment, thus securing more room. Cover the floor with cut straw, and scatter all grain in the straw. A water-trough may be of wood and kept in the sunlight. A dust bath should be near the window. In summer, ventilate by leaving the windows open, covered with wire netting. Such a house will cost from \$50 to \$100, according to labor, location and price of materials. There should be a yard in front of each partition, 12 by 100 feet, and one at the rear, changing the hens from one to the other, as necessity demands, which will permit of growing something in the unoccupied yard, and also assist in keeping them clean by turning under the top soil. A ventilator may be placed at the peak over each partition, but it should never be opened unless in summer. The object in suggesting board partitions is to prevent the possibility of drafts on the fowls at night.

The south or southeast is the proper direction for the house to face. A flat roof is the cheapest, and where tarred paper is used, the boards need not be smooth. But for the expense we would advise plastering also, as it better protects against lice. If the tarred paper is placed on the outside, instead of on the inside, it prevents the boards from becoming wet and keeps the house dry. Cover the paper with coal-tar and sand two or three times, and it will last for years. It may also be whitewashed whenever it is desirable to do so.

USE THE MANURE HEAP.

Any farmer who has a large manure heap can derive additional profit from it by allowing the hens to have free access to it. Hens are willing to scratch over the manure, and they secure a large amount of food. Even chicks delight to work on the heap. There is a large amount of waste food in a manure heap, and it should be converted into eggs as a matter of economy. Hens that will not lay under other circumstances will always produce eggs when allowed on the manure heap, as the exercise obtained prevents them from becoming overfat, and keeps them in the best possible condition for laying.

DRENCHED CHICKS.

When heavy rains come up suddenly it often happens that small chicks are overtaken and completely drenched. They are not drowned, as is sometimes supposed, but chilled; and if they are placed near a stove, wrapped in warm flannel and given time to dry, they will revive. A chick that is to all appearance dead may be restored by warmth. Even in the middle of summer chicks are easily chilled by sudden showers.

"Carow" is a sure cure for Roup in Poultry. Send 50 cents to Walter Kirby & Co., Marietta, Ohio, U. S. A.

RENEWING TARRED ROOFS.

It is not the practice of those who renew tarred-paper roofs to do so in summer, as the heat causes much of the gas-tar or roofing-paint to run off; but if it is used in just the quantity needed to cover any leaky places in the paper, and sand freely applied over the paint or tar, the summer is an excellent time for repairing the roof, for it will dry sooner, and, if preferred, a second application may be made, as the cost is but little.

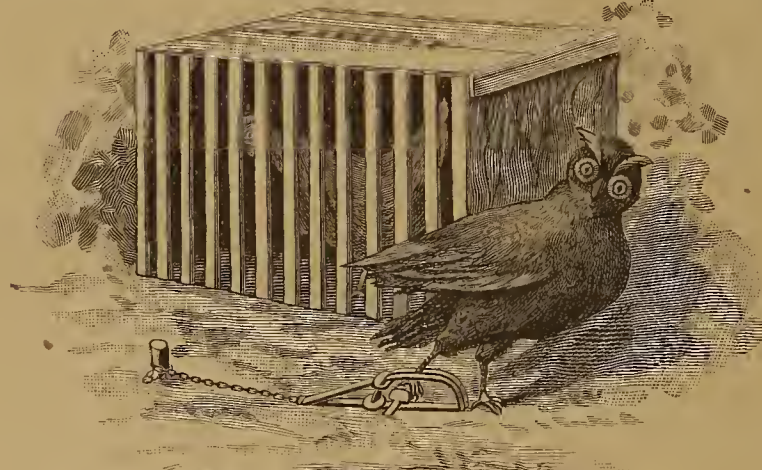
MINKS.

How to prevent the depredations of minks is a long-standing problem. Near streams of water minks will come up in daylight and attack the fowls. In such cases the best protection is a large yard surrounded with a wire fence. At night the poultry-house must be closed, using wire over the windows and openings for ventilation. It is during the night that the greatest damage is done by minks.

CAPTURING A THIEF.

How he lost his chickens and how he caught the thief, is thus described by Mr. C. E. Miller, Columbia county, N. Y., who writes:

"My young chickens, which roosted in small, open coops out in the lot, were disappearing at the rate of three or four half-grown ones every night. I supposed that likely the thief was a mink or a weasel, and decided to try the following plan: I made a box large enough to hold a hen and brood of chickens, making it tight all around, except one end, which I covered with narrow strips placed one inch apart (wire netting would be better), and into the box I put a hen and half a dozen young chickens. Then, after putting all the other chickens securely away in the barn, I set a small steel fox-trap outside



CAPTURING A THIEF.

the box, close to the stripped end, sinking it level with the ground and covering lightly with fine, dead grass. In the morning I was greatly surprised to find a large and ferocious owl securely fast in the trap, which, after killing and nailing up against the barn, I found to measure four feet two inches from tip to tip of the wings. He had all the appearances of being an 'ould fellow."

MARKET STOCK.

If farmers could visit the markets of the large cities, and inspect the stock of poultry on the stalls, there would be quite a revolution in the methods of marketing poultry. Stand by one of the stalls and watch the buyers. No matter how high the stalls may be piled with dressed carcasses, the customers will carefully pick out and select the best, and when the choice ones are sold the merchant will begin to sell off the inferior stock at any price he can get, for he cannot compete with better stock that may be on neighboring stalls, and because he knows that every day in warm weather lessens the value.

Now, the ones who owned the choice stock will not complain when they receive their returns, but those who sent the inferior stock to market will be the first to declare that it does not pay to market poultry. It is a fact that the larger share of poultry reaching the market is inferior, and when a commission merchant receives a choice lot he will not forget from whom it came, and will endeavor to secure his trade and procure for him the highest prices.

Now that it seems a pretty settled fact that the advantages are all on the side of cooked food for stock, and for the good reasons that it is more palatable, more digestible and more easily assimilated, which all goes to make it more economical and profitable, we should think that our readers would want to investigate the matter of feed cookers. Write the Mitchell Machine Co., Kendallville, Ind., who will take pleasure in giving you any desired information.

WHEAT CHAFF ON THE FLOORS.

One of the best uses for wheat chaff is to use it on the floor of the poultry-house. It may be three or four inches thick, and serves several purposes, the first being to keep the floor always dry and clean, and the next is that if a few millet seeds be scattered in the chaff, the hens will work and search industriously for the seeds. It is always fine, and is excellent for the manure heap when the floor is cleaned off. Where wheat is grown, the chaff is the cheapest substance that can be used, and in the winter it will serve to keep the fowls warm by shutting off drafts of cold air along the floor.

BREEDS AND LARGE EGGS.

Some breeds lay very large eggs, such as the Minorcas and Black Spanish. We received samples of eggs last year which weighed five to the pound. They were not the ordinary large eggs that are often produced by very fat hens, and which lay but few, but from the hens which layed more than the average number of eggs for the whole year. Such hens, as a matter of course, really convert more food into eggs than those which may lay a larger number, but whose eggs are smaller. This fact should not be overlooked in selecting a breed.

FEATHER-PULLING.

Feather-pulling is a subject that has been frequently discussed in this department, and is open for more information at all times from those who have experimented in that direction. It is usually the result of confinement and idleness. It was once supposed that a lack of some kind of food caused the hens to pull feathers, but it has been found that hens kept under all conditions are guilty. They nearly always begin by pulling feathers from the neck of

the male. One hen starts the habit and the others soon learn. Then the hens begin to pull feathers from one another. They cannot produce new feathers and eggs at the same time, and a flock of feather-pullers are therefore unprofitable.

There is no sure remedy. The first hen caught at it should be killed. Some smear the bare places with tar, and others trim the edges of the upper and lower mandibles so that the hens cannot hold a feather. Others separate them, confining them for two weeks. The cheapest preventive is to keep the hens at work, but as a cure is difficult, it is best to send them to market and begin anew.

GRAPE-VINES ON POULTRY-YARD FENCES.

It is an advantage to have grape-vines on the outside of the fences of poultry-yards, as they provide shade for the hens and also enable the farmer to utilize the fence by securing a crop of grapes. Do not place the vines (which may be set out late this fall) too close to the wire, but allow a space for the hoe to keep down the weeds. When the vines are well grown, which will be in two or three years, they can be trained in any manner preferred on the wire of the fence, but the grapes should be high, as the hens will get a share.

INQUIRIES ANSWERED.

Roup.—P. S. L., Fresno, Cal., writes: "My fowls have a disease that attacks the eyes and head. It commences with a watering of the eyes, which are finally closed, and a large lump or swelling forms."

REPLY:—It is roup, and is contagious. If they have the disease now it will be worse in winter. It is incurable, and you will save time by destroying all affected birds and thoroughly disinfecting the premises occupied by them.

Profit on Half an Acre.—W. J. D., Bals-ton Spa, N. Y., writes: "I have a piece of land 135 by 210 feet. How many fowls can I keep on it by fencing it in, and what profit can I clear by taking proper care of them?"

REPLY:—The plot is a little more than half

an acre, and fifty hens should be sufficient to such a space. It would be well to divide it into two yards. A profit of one dollar, clear of all expenses, is the average for each hen in a large flock, but it is possible to secure twice as much.

Chicks Dying.—Mrs. E. F., Nashua, Mo., writes: "I have lost over 200 chicks, and they are still dying, having bowel disease. They die in a few days or a week. Goslings also die in the same way."

REPLY:—You should have given details of management. The surroundings may be at fault, or you may possibly be feeding too heavily at this season. It would be well also to examine for lice, especially the large lice on the heads. Feed but little, and twice a day. Anoint heads with a little melted lard, and dust well with fresh insect-powder.

Goslings and Water.—J. W., Oxford, Pa., writes: "In May, when the weather was cool, I would find some of my young goslings dead. The geese had the run of a field in which was a small pond fed by a spring. At the present time those left are healthy. What was the cause?"

REPLY:—Due to the young goslings being chilled by the cold water. It is a mistake to allow them to go on the water early in the season until well feathered. Now that the water is warmer they are not so liable to be chilled.

DOLLARS IN EGGS.

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Our Fireside.

LIFE'S TRUE SIGNIFICANCE.

Deeper than all sense of seeing
Lies the secret source of being,
And the soul with truth agreeing,
Learns to live in thoughts and deeds;
For the life is more than raiment,
And the earth is pledged for payment
Unto man for all his needs.

Nature is our common mother,
Every living man our brother,
Therefore let us serve each other;
Not to meet the laws' behests,
But because through cheerful giving
We shall learn the art of living;
And to live and serve is best.

Life is more than what man fancies!
Not a game of idle chances;
But it steadily advances
Up the rugged height of time.
Till each complex web of trouble,
Every sad hope's broken bubble,
Hath a meaning most sublime.

More of religion, less profession;
More of firmness, less concession;
More of freedom, less oppression;
In the church and in the state;
More of life and less of fashion;
More of love and less of passion;
That will make us good and great.

When true hearts, divinely gifted,
From the chaff of error sifted,
On their crosses are uplifted,
Shall the world most clearly see
That earth's greatest time of trial
Calls for holy self-denial,
Calls on men to do and be.

But forever and forever
Let it be the soul's endeavor
Love from hatred to dis sever,
And in whatso'er we do,
Won by love's eternal beauty,
To our highest sense of duty
Evermore be firm and true.

EVELYN'S CROSS.

MARY TOWNLY sat in a large easy-chair, busily knitting a beautiful little silk purse. It was brilliant yellow, and studded with bright steel beads. Her slender, white fingers flew in and out the bright silken meshes, and her graceful form, clearly outlined against the dark, rich velvet chair, formed a pleasant picture.

Her mother sat near, engaged in sorting some small garments in a large "Dorcas basket," as Mary called it; for it was the one in which the various articles made by the Dorcas society were kept. Herbert Townly occupied the other window-seat, idly reading, oftener glancing out of the window.

Suddenly Mary dropped one of her needles, and in stooping to get it she glanced out of the window just in time to catch a salutation from one of the occupants of a swiftly moving vehicle. A fine span of horses drawing a beautiful little cutter, in which sat a slender girl of sixteen years of age, clad in some rich, dark stuff, her golden curls crowned by a little velvet toque, passed quickly out of sight, as Mary rose from her stooping posture. A dark and decided frown clouded her once sunny face, and a scornful smile curved her lips, as she listened to Herbert's remark. He had seen the cutter, too, but a very different expression lighted up his features.

"There goes Evelyn Dacre, Mary. She is a regular trump—hugging your pardon, mama." Before mama could reply, Mary spoke up sharply:

"I don't believe the feeling is mutual, Herbert. I heard her say the other day that she thought it ridiculous for you to smoke cigarettes."

Herbert's face flamed, and at mama's "Oh, Herbert!" he replied in a dignified tone:

"Mama knows I do not smoke cigarettes habitually. I smoked those Evelyn spoke of for a wager. I think smoking both foolish and weak."

Mama looked pained, but was silent.

"And," Herbert went on, "it's none of Evelyn's business if I do smoke. She is as vain as a peacock."

Mary smiled.

"I thought you'd change your tune."

"Well," replied her brother, rather maliciously, "she thinks you're studying too hard for the prize, and says you will be worn to a shadow before the 'ex.' comes."

"Pooh!" Mary tossed her pretty head. "I have as good a chance as she has. Besides," she added, "she always looks like chalk, whether she studies or not."

"She does not have to study. She is all brain. I heard Dr. Scott tell her father so the other day, and that he must repress her desire for knowledge."

Her mama said quietly:

"For whom is your purse intended, Mary?" Mary flushed and glanced at Herbert. Then she bit her lip and said with forced carelessness:

"Oh, it's for Evelyn."

Herbert gave a suppressed whistle.

"Well, girls are queer creatures! You've been working on that for a week, and yet you seem to dislike the one you're knitting it for."

"A sentence should not end with a 'prep,'" said Mary sentimentally, and with an evident desire to end the conversation.

"Evelyn ought to look into your heart. I do not think she'd appreciate the purse. I know

what is the matter with our Mary, mama," Herbert said, turning to his mother with a smile. "She's jealous of Evelyn, for she is not the first in all her studies now, since this new girl has entered the lists. Evelyn leads the school in composition."

"Well, I am equal to her in everything but composition, and I believe she gets her papa to help her in that."

"My dear children," said mama, "Birds in their little nests agree." Evelyn inherits her graceful and expressive manner of writing from her mother, who was an author of no mean merit."

Both children exclaimed, "Why, mama, we heard her mother was alive and in a mad-house!"

Mrs. Townly looked grave.

"I hope you do not listen to idle gossip; and never repeat anything that might prove injurious to another."

"Why, dear mama, it is all over the school; and one day Susan Evans was in the reception-room with Evelyn, and Susan accidentally upset a bottle of ink on Evelyn's newly copied French exercise. Susan said she turned as pale as ashes, and in a perfect fury shook her fist in her face, and muttered something that sounded like 'beat.' Susan was terribly frightened. It was all over in one second, and the next minute she was asking Susan's pardon; and next day she brought her a box of chocolate comfits."

Mama sighed.

"Well, dears, do not repeat any of this story. Slander is like a snake in the grass. Let us put our heel upon it and stamp it out of existence."

"What, mama? The snake?" asked Herbert, with a droll smile.

A peal at the bell startled our little trio. A servant entered a moment later, and as Mary took the card extended to her she grew very red.

"Show her in here, Susan. It is Evelyn, mama, and the parlors will be too cold."

A moment later a very graceful, fragile-looking girl, the late occupant of the cutter, entered and sank at once into the nearest chair. Mrs. Townly greeted her warmly.

"Are you quite well, Evelyn?" she asked gently. "Your eyes look heavy, as though you had been indulging in late hours."

"Oh, thank you, I am as well as usual," she answered in a sweet, rich voice; "but I never sleep well."

"Indeed? That is bad. You should see Dr. Scott."

"Oh, he knows," she replied carelessly. "I inherit it," she added, and then checked herself, and a sigh fluttered from the soft lips, while the bright flush that stained the delicate cheek and the quickly succeeding pallor made Mrs. Townly look at her anxiously.

Herbert, meanwhile, had withdrawn to the window, and was gazing at the pawing, prancing horses.

"Evelyn, aren't you afraid to trust yourself behind those wicked-looking black beasts?" he asked.

"Oh, no," said the fair guest, with a smile. "They are perfectly gentle; but papa never lets me drive alone."

"He thinks so much of his little girlie," remarked Mrs. Townly, looking affectionately at Evelyn.

"Yes; I am all he has now," she said simply, but there was a piteous little catch in the sweet voice.

"Well, I am sure you'd be enough," began Herbert, warmly, when he stopped in confusion; for Mary, fully equipped for her ride, entered just then, and catching his last words, smiled quizzically.

She had teased Herbert about his admiration for the new scholar, whose winning ways and brilliant intellect had taken by storm more hearts than his.

"Oh, you are ready, Mamie," Evelyn said; and rising, she drew on her long fur gloves and adjusted her rich furs carefully. As she did so, she caught sight of the purse.

"Oh, how lovely! Who is the fortunate one now? Those fingers are always husy, dear."

And she gave Mary a loving glance.

Herbert's smile was rather derisive.

"Yes," said mama, "Mary is industrious." And she gave her daughter a smile and an affectionate glance, for Mary had replied rather awkwardly.

Indeed, the young people of the village all acknowledged Evelyn's superiority, and she was considered the rara avis of the flock. But it had not spoiled her. In truth, she had been accustomed to homage from her childhood. Her father petted and spoiled her, and her black nurse loved her with a devotion characteristic of her race. Thus, surrounded by admirers and reared in an atmosphere of indulgence (love never hurt any one), it was true that she did not take kindly to correction.

"Well, mother," remarked Herbert, "if she is spoiled, as they say she is, there is a great deal of material to work upon."

Herbert spoke with energy, as he watched the girls drive off.

"Come here, Herbert," said his mother. "Will you grant me a favor?" And she pushed the bright hair off his forehead as he threw himself at her feet.

"To the half of my kingdom, mama," the boy said, as he took her hand and kissed it.

"I want you to put down—nay, stamp out—that report about poor Evelyn's mother. She is in a mad-house, and poor Evelyn's cross is heavy, for she fears she may inherit the same

fatal tendency; though it is not probable, as she is more like her father's side of the family. I can trust you, dear. Mary is too hasty, too ready with her tongue."

"I'll be torn to atoms before I tell!" Herbert looked very brave.

"Well, I trust you will not be called upon to go such lengths; but you may help Evelyn some time. Reticence is only valuable to the true gentleman, and I want my boy to be that always."

"I hope I shall be, indeed," said Herbert, gravely. "Mama," he said, after a pause, "I hope you'll excuse more gossip, but I heard another queer story about a Frank Dacre."

Mama was silent a moment.

"Dear, I had intended to omit that part, but as you speak of it I may as well tell you all. She has a brother Frank, said to be in prison for killing a man."

"Oh, mama!"

"Yes; but it is not so bad as it sounds. He was twitted about the family malady, and upon making a violent reply to his persecutor, the latter struck him, and Frank, enraged at what he considered an insult, struck back. The blow was fatal. He was but sixteen years old, and will be released soon, on account of his extreme youth."

"Poor Evelyn!" Herbert shaded his eyes a long time, as his mother dwelt feelingly upon the sin of gossiping. "Well, she is the very smartest girl I ever met, but I'll never feel the least bit envious of her again," he said seriously.

Mary entered at that moment, flushed and gay, the vapors of ill temper and envy having all dispersed, and she looked the sweet girl she really was as she exclaimed:

"Just think, mama, Evelyn is just wild with joy. Her brother Frank is coming home to-night, and she is flying around in a perfect fever of excitement."

"To-night?"

Mama and Herbert exchanged glances.

"Yes; and Evelyn is going to fill the house with company, for she says Frank writes he wants all the cheering up he can get. He is dull as can be. She has asked us," looking at Herbert, "for the holidays."

Herbert seemed dazed, but said as he left the room:

"I hope you and Evelyn won't quarrel at the ex."

"Are you going to have a class dress, dear?" asked mama, as Mary resumed her knitting.

"No; we decided not to, by vote. Evelyn suggested it would not be right, so many poor girls are in class A this term. We want navy blue, with a slight trimming of silver braid; but Evelyn thought we'd better not."

Mary gave a little sigh, for she dearly loved a pretty dress. Mama smiled.

"So my little girl is coming under the gentle sway?"

"Well, I like Evelyn, but I won't bear too much." And Mary looked lofty.

"Oh, sis," said Herbert, who had just entered, "you'll get off the stilts."

Mary deigned no reply, and walked into the music-room, and soon the strains of the beautiful "Lohengrin" floated out, while Herbert listened, entranced.

"I'd rather have Mary's talent for music than anything else she possesses," he said.

Examination-day soon came, ushered in by a cold, drizzling rain, which beat sullenly against the window-panes, and looked as if it had "set in for a week's pour," said old nurse.

Mama decided not to go to the school. A cold rain always made her "sneezy." So the carriage rolled away with but a single occupant, Herbert having decided to "walk it," and refresh himself for the ordeal of examination.

The girls of class A were gathered in the little dressing-room, all excited, all talking and combing out their frizzes, and "fussing around like a flock of pigeons," said the janitor's wife, as she passed through the corridor. Suddenly the sharp clang of the bell called them in solemn file to the large recitation-room, which was fast filling.

The prizes were to be distributed by a committee of two, and as Mary caught sight of them she felt more than usually nervous.

In days past, before Evelyn Dacre's connection with the school, she had proudly and serenely taken her place in the senior class, feeling sure of success. It was a trying hour for Mary, as she felt just second every time, Miss Dacre's name carrying first honors.

The exercises were drawing to a close when Professor Green arose, and after a short address said:

"We have decided to give Miss Evelyn Dacre the preference, slight though it be, as her department record is perfect, her conduct toward her teachers and associates having been all that was polished and Christian-like."

A dead pause followed the professor's announcement. Class A remembered several violent scenes in the dressing-room, and the never-to-be-forgotten episode of the ink-bottle stood out clearly in all minds.

"He ought to have seen her shake her fist at me!" muttered Susan, as loud as she dared.

But all eyes were turned toward the graceful girl advancing slowly to the platform to receive the prize for department. She was daintily dressed in dove-colored cashmere, and the pink carnations in her bosom were not more sweetly colored than her cheeks.

She received the prize with a graceful bow, and walked back with head erect, but with a strange paleness about her mouth, and took

her place beside her father and her brother Frank, who had just arrived.

Mary Townly, the recipient of the second prize, walked slowly to her seat, and a moment later the class was dismissed. Mary, despite her courage, was sorely wounded.

"I've always been first until now—"

She turned away coldly from Evelyn as the latter began a remark upon the past exercises.

"You ought to have had it, Mamie dear," said Evelyn, in her sweet tones. "Here, take it. I have all the money I can use." And she tried to thrust the gold into Mary's hand.

"Thank you, Evelyn, but I don't need your charity," said Mary, turning coldly away.

But not even "Mamie" could damp Evelyn's perfect happiness; for wasn't dear Frank out there, and would they not have a long, blessed evening together?

A crowd of girls were entering the second dressing-room, the first being reserved for the seniors, who had all left but Mary and Evelyn. The voices floated out on the chill air, fraught with deadly meaning to one ear. Susan Evans was speaking.

"Well, I would not put on so many airs if I had a brother who wore the stripes but not the stars."

"She's crazy, anyhow, and so was her mother before her," said a second voice.

Mary stood as if petrified, while Evelyn, white as death, and with burning eyes, dashed open the door of communication just as the hall door, which had been ajar, admitted Frank Dacre and Herbert Townly. They had heard the cruel words, and Herbert, like the little gentleman he was, though his eyes flashed, said in tones whose sarcasm everyone in that room understood:

"Ladies, let me introduce to you Mr. Frank Dacre, just returned from a European trip. I am sure he is pleased to meet such a promising portion of Kingston society."

Dacre coolly greeted the abashed group, while Susan shrank so far behind the door that it was a mercy she wasn't crushed.

Evelyn's lips were ashy, but recovering by a violent effort her composure, she turned to the girls and said in her sweet, polished way: "Don't forget my charade party next Tuesday," and linking her arm in Frank's, they left the room together.

Herbert found Mary in tears.

"Oh, Herbie, what a brute I've been! Poor, poor Evelyn! And I've never tried to help her!"

"Well, dear, you need not feel so bad. It is true about her mother, but false about her brother. She has a distant connection of the same name. Frank says they never heard a word about it till he came home. He says it could not be true about his cousin, for he had a letter from him not a month ago."

"Oh, dear!" said Mary. "I do not wonder mama calls slander a snake in the grass. I'll never be guilty of gossiping again."

"Didn't I get that off well about Frank's European trip? I should think Susan Evans would feel small."

Evelyn told Mary all her sad story that night.

"I have a dreadful temper, Mary, but I drank it in at poor mama's breast. No medicine can cure me, but the great Physician can heal me," she added simply.

Mary answered with a kiss, while she whispered:

"And I will help you bear your cross, Evelyn."—*Ada Russell, in Waverley.*



HOUSEKEEPERS

who are delicate, run-down, or overworked, and those who suffer from back-ache, headache, dragging-down sensations in the abdomen, and many other symptoms of derangement of the

female functions can find renewed strength and health by taking Dr. Pierce's Favorite Prescription. For the pains and aches, the periods of melancholy and sleeplessness—nothing can do you so much permanent good as this vegetable compound. You save the doctor's fee, as well as your modesty, by purchasing this "Prescription" of Doctor Pierce. For a great many years Dr. R. V. Pierce (chief consulting physician and specialist to the Invalids' Hotel and Surgical Institute, of Buffalo, N. Y.) made a specialty of the diseases of women, and from his large experience he was able to compound a "Prescription" which acted directly upon the special internal parts of women. When in doubt as to your ailment write him, it will cost you nothing. A Book, on "Woman and Her Diseases," published by the World's Dispensary Medical Association, Buffalo, N. Y., is of interest to all women. It will be sent for ten cents in stamps.

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Brooklyn, Jackson Co., Mich.
Gentlemen—I am more than willing to say your most valuable medicine has cured me of female weakness and a catarrhal discharge from the lining membranes of the special parts. I suffered for years with pain in my back, never a night was I free. At your request I commenced treatment with Dr. Pierce's Favorite Prescription. I could not sleep on a mattress; it seemed as though it would kill me. Since taking the medicine I can sleep anywhere; I am perfectly well. I would not be placed in my former condition for any money. Gratefully yours,

Mrs. J. H. Parker

PHILIP PHILLIPS.

I think it was Stoddard who addressed an ode to a celebrated singer, a part of which we quote:

It flowed like liquid pearl through golden cells,
It jangled like a string of golden bells,
It trembled like a wind in golden strings,
It dropped and rolled away in golden rings,
Then it divided and became a shout,
That echo chased about,
However wild and fleet,
Until it trod upon its heels with flying feet.

Doubtless countless thousands have felt it in their hearts to give utterance to a similar expression when they listened to the voice of Philip Phillips. Some one has just laid upon my table "Bright Gems," being a collection of three hundred songs by Philip Phillips and his son. This book brings to mind a remarkable life, some of the details of which will be found very interesting to our readers.

* * *

Among those who took up arms against the British in the war of 1812 was a young man who could enliven the camp by songs, no doubt, when there were no battles raging, as well as he could aim a rifle at the redcoat during the conflict. After the war was closed the young soldier, with his wife, made his home at what was then comparatively a pioneer district, in Chautauqua county, New York. In this county, August 13, 1834, the tenth of what afterward became a family of fifteen children was born to the pioneers. This child was destined for a wonderful career. He was to learn the chords of the human heart, and play upon them with far greater skill than is done by the adept harpist.

* * *

Philip Phillips has encircled the globe with his songs. At the age of nine years he lost his mother, and very soon afterward, being solicited by a neighboring farmer to come and make his home with him, he accepted, and remained for seven years. In 1847 he became converted, and united with the Baptist church. Very early in his life he gave indications of rare musical ability. The farmer with whom he lived was not blind to the unusual talent manifested by the youth, and seemed to have taken more than a kindly interest in him. A new melodeon was bought and placed in the sitting-room, and young Phillips was told that it was for him to play on, but that he must not neglect his regular work.

* * *

Almost from boyhood he took an active part in rendering church music. At the age of twenty-one he commenced to study under Dr. Lovell Mason and other noted composers; and then came a period, such as has come to many great men, when he went about from place to place earning but little more than a bare pittance during those early years of struggle in his profession. He conducted singing-schools, taught classes in the country schools, and sold musical instruments, and sang whenever opportunity offered. He was about twenty-five when he located at Marion, Ohio. A year later he married one of his pupils, Miss Olive M. Clark. She was a member of the Methodist church, and Mr. Phillips after their marriage united with the same church. He resided in Marion three years, and then, in 1856, formed a partnership with William Sumner & Co., of Cincinnati, Ohio, and opened a music-store. He had already written and published a number of hymns. After going to Cincinnati he began issuing his "Musical Leaves," which contained some of his most popular compositions, and attracted to their author wide attention; as many as three quarters of a million were sold. It is said that Ira D. Sankey once stated that from Mr. Phillips' singing he had received the impulse which led to his becoming a singing evangelist.

* * *

In 1865 a great meeting was held in the Hall of Representatives, at Washington. Mr. Phillips sang a hymn which so deeply touched President Lincoln, who was present, that he wrote the chairman of the meeting a note, saying: "Let us have 'Your Mission' repeated by Mr. Phillips. Don't say I called for it." The publication of Mr. Lincoln's request on this occasion, which was printed the following day in connection with the report of the meeting, made Mr. Phillips' reputation national. The next year he issued the "Singing Pilgrim," for a long time his most popular and best known work. It was a blending of the Bible and Bunyan in sacred song. From this book he came properly to be called the "Singing Pilgrim."

* * *

In 1866 he removed to New York and prepared a new hymnal for the Methodist denomination. Two years later he visited Europe and gave "evenings of song" in all the principal cities and towns of the United Kingdom. While in London he compiled the book of songs entitled "The American Sacred Songster," of which it is said more than one million copies were sold. In 1875 he began his singing tour around the world, going to Australia, where at Melbourne he sang for the first time, and taught to three thousand children the beautiful song, "Jesus Bids Us Shine." He visited during his tour, India, Egypt and the Holy Land, spending almost three years in making his world tour. In

Bethlehem he sang in the Church of the Nativity, an event often referred to by him as one of the greatest pleasures and privileges of his life.

* * *

Some ten years ago he took up his residence in Delaware, Ohio, where, June 25th of the present year, he died of consumption.

"All who ever heard Mr. Phillips' sing can understand why he was so popular. There was music in his voice which charmed; there was unction also, which gave him power. No other person could sing his hymns with the power he did. Men and women who seemed to be beyond the reach of other good influences were moved by his tones, at least while under the spell of his voice. One Sunday evening, while he was singing in Jerry McAuley's mission, New York City, there entered the room the famous Kit Burns, a notorious and desperate character, accompanied by about thirty roughs. They marched to the front and took seats. After several songs had been sung, some one called out from the door, 'Kit, you're wanted.' Kit arose, and with an oath told them not to bother him. Mr. Phillips continued his singing, but before long the voice was again heard, shouting roughly, 'Kit, you're wanted outside.' Kit stood up, and in a coarse voice replied: 'Tell 'em this is the first Jesus meeting I've ever been at, and I shall stay till it's out.' Among the songs Mr. Phillips sang on this occasion was 'Scatter Seeds of Kindness.' A few days after a woman who had attended the meeting was found drunk on the street by the matron of the mission, who took her into the mission room. When the woman began to recover from her drunken stupor she raised herself on her elbow, looked around, and thinking she was in the tombs, or 'lock-up,' soliloquized, 'Now, I'll have to stay here thirty days; my business will all go to sticks. I know the policeman. When I get out I'll show him.' At this point she, looking around more closely, realized that she was mistaken, and muttered, 'I ain't in the tombs, after all. Where am I?' Then, after a moment, she said, 'Oh, I'm in that place where they scatter seeds of kindness!' Before the woman left the place a prayer-meeting for her special benefit was held. She was converted, and several months later died in triumph.

* * *

"Much of Mr. Phillips' public work, aggregating nearly five thousand services, was done gratuitously for benevolent objects. Besides, he gave large sums in unostentatious private charity. Hundreds of the poor reverence his memory. His personal intercourse was a spiritual blessing to thousands. To those whose hearts were bowed down from bereavement, or troubles from any cause, the indescribable pathos of his voice was like the dew of heaven that brightened and refreshed and gave hope. Some of them, as he sang, 'may forget the singer, but they will not forget the song; others will remember him while they live, and be cheered by his beautiful songs in the hour of death.'

* * *

There is nothing which does more toward making the home ideal than music, and the best is none too good for any home. I hope that there will be many thousands of homes made brighter and happier by having the songs and echoes of the beautiful melodies which fill the pages of this book. Published by Mast, Crowell & Kirkpatrick, Springfield, Ohio.

TO MAKE POTPOURRI AT HOME.

People who like sweet odors should take advantage of the summer season to make their own potpourri and sachet. The custom of preserving the petals of sweet-smelling flowers for the sake of their fragrant perfume is one of considerable antiquity. It doubtless originated in the East, where the practice of perfuming by means of dried herbs and fragrant woods is almost universal. In England there is little record of the custom until medieval times, when we find in most old recipe-books some method for preserving rose leaves and lavender, which were probably the earliest forms of potpourri.

The perfume of many of the sweetest flowers dies with them, and it is therefore obvious that only those which retain their odor when dried are of use in making a potpourri. Of these, the chief are the rose, lavender, sweet violet, patchouli leaves and cassia buds.

There are two things it is necessary to bear in mind in making a good potpourri. The first is to use only the best quality of the necessary articles, and the second to see they are thoroughly blended. For the latter purpose a large wash hand-basin answers well, the ingredients being thoroughly mixed by rubbing between the fingers after each article is added. Essential oils should first be mixed with any powdered substance that may be included in the recipe before being mixed with the other ingredients. Flower petals should always be dried before using, the best method being to place them in a thin layer on a large sheet of paper, and allow the moisture to evaporate spontaneously. Never use heat to dry flower petals. Either of the following recipes makes a delightful potpourri:

Take of rose leaves 4 ounces; cloves, 1 ounce; powdered gum benzoin, 1 ounce; pimento, 1 ounce; essence of bergamot, 100 drops; musk, 4 grains; oil of cloves, 75 drops; oil of lavender

(English), 120 drops; oil of cassia, 75 drops; attar of rose, 40 drops. Mix the musk with the powdered cloves, benzoin and pimento thoroughly, then add the oils. Blend the whole intimately with the rose leaves.

Take of lavender flowers 1 ounce; rose leaves, 3 ounces; powdered orris-root, 4 ounces; vanilla beans, 1 dram; musk, 4 grains; extract of jasmine, 4 drams; oil of sandalwood, 40 drops; oil of Neroli, 10 drops; attar of rose, 20 drops. Mix as before.

Take of rose leaves 4 ounces; tonka-beans, 1 ounce; sweet violet flowers, 2 ounces; powdered orris-root, 2 ounces; yellow sandalwood, 2 ounces; gum benzoin, ½ ounce; cloves, ½ ounce; musk, 10 grains; oil of lavender (English), 12 drops; oil of bergamot, 30 drops; oil of ylang-ylang, 20 drops; attar of rose, 20 drops. Mix as before. It is well to preserve the potpourri in a glass-stoppered jar for a week before exposing it in a bowl. The best way is to put out a little at a time and keep the bulk in the stoppered jar.

In the preparation of sachet-powders the same care should be used, and all the solid ingredients employed must first be ground to a coarse powder. The following selections will be found to be excellent working formulae, and are easily made:

HELIOTROPE.—Take of rose leaves 2 ounces; orris-root powder, 1 ounce; lavender flowers, 1 ounce; tonka-beans, 2 drams; benzoin gum, 1 dram; musk, 5 grains; oil of bitter almonds, 3 drops; oil of sandal, 30 drops; oil of Neroli, 10 drops. Mix.

MILLEFLEURS.—Take of lavender flowers 6 drams; cloves, 2 drams; cassia buds, 2 drams; coriander, 4 drams; benzoin, ½ dram; vanilla, 1 dram; nutmeg, ½ dram; orris-root, 2 ounces; musk, 5 grains; oil of rose, 5 drops; oil of Neroli, 4 drops; oil of patchouli, 2 drops; oil of lavender (English), 4 drops; oil of verbena, 2 drops; oil of sandalwood, 10 drops. Mix well.

FRANGIPANI.—Orris-root, 2 ounces; rose leaves, 2 ounces; vanilla pods, 1 dram; benzoin, 1 dram; oil of lavender (English), 15 drops; oil of bergamot, 16 drops; oil of cassia, 6 drops; oil of pimento, 10 drops; oil of sandalwood, 30 drops; oil of Neroli, 16 drops; oil of rose, 8 drops. Mix well.

SWEET LAVENDER.—Take of lavender flowers 1 pound; benzoin, 1 ounce; oil of lavender (English), ½ ounce; extract of musk, 1 ounce. Mix well.

JOCKEY CLUB.—Take of orris-root, powdered, 1½ pounds; sandalwood, ground, ¼ pound; oil of bergamot, ½ ounce; attar of rose, 15 drops; extract of musk, 1 ounce; extract of civet, ½ ounce. Mix well.

NEW-MOWN HAY.—Take of orris-root, powdered, 2 pounds; tonka-beans, 4 ounces; vanilla beans, 4 ounces; oil of bitter almonds, 5 drops; oil of geranium, 60 drops; attar of rose, 15 drops; oil of bergamot, 30 drops; extract of musk, 6 drams. Mix well.

WOOD VIOLET.—Take of orris-root, powdered, 1½ pounds; oil of bergamot, 15 drops; oil of bitter almonds, 10 drops; attar of rose, 10 drops; extract of musk, ½ ounce. Mix well.

WHITE HELIOTROPE.—Take of heliotropine 30 grains; tonka-beans, 1 dram; orris-root, ½ ounce; musk, 1 grain; attar of rose, 3 drops. Mix well.

CLOVE PINK.—Take of orris-root, in powder, 2 ounces; lavender flowers, 1 ounce; patchouli leaves, ½ ounce; cloves, 2 drams; deer-tongue, 2 drams; pimento, 1 dram; musk, 2 grains; attar of rose, 10 drops; oil of Neroli, 12 drops; oil of sandal, 20 drops; oil of lavender (English), 10 drops. Mix well.

Sachet-powder, after mixing, should be placed in an air-tight jar for a week or more; afterward, it can be placed in thin paper envelops, then carefully sealed, or thin silk bags.

CIGARETTES.

Do you care to know how they are made? I think I can enlighten you. An Italian boy only eight years old was brought before a justice in New York City as a vagrant, or, in other words, a young tramp. But with what did the officer charge him? Only with picking up cigar-stumps from the streets and gutters. To prove this he showed the boy's basket, half full of stumps, water-soaked and covered with mud.

"What do you do with these?" asked his honor.

What do you think was his answer?

"I sell them to a man for ten cents a pound, to be used in making cigarettes."

Not a particularly agreeable piece of information, is it, boys?

In our large cities there are a great many cigar-butt grubbers, as they are called. It certainly is not a pretty name, though very appropriate, for it is applied to boys and girls who scour the streets in search of half-burned cigars and stumps, which are dried and then sold to be used in making cigarettes.

But this is not all, nor even the worst of it. These cigarettes have been analyzed, and physicians and chemists were surprised to find how much opium is put into them. A tobaccoist himself says that "the extent to which drugs are used in cigarettes is appalling." "Havana flavoring" for this same purpose is sold everywhere by the thousand barrels. This flavoring is made from the tonka-bean, which contains a deadly poison. The wrappers, warranted to be rice-paper, are sometimes made of common paper and sometimes of filthy scrapings of rag-pickers bleached white with arsenic. What a cheat to be practiced on people!—*Sunday-school Visitor.*

BEAUTY REPAIRED TO ORDER.

Beauty is not skin deep. At least the beauty specialists say so, and in all big cities there are well-known toilet parlors where women out of repair go and in a few hours have their looks mended and renovated in a remarkable manner.

The process begins with the manicure, who can pare, clean, file, bleach and polish the most neglected finger-tips till the ugliest hand takes on a look of symmetrical refinement astonishing to its owner.

Then, if desired, the clever girl will roll up the customer's sleeves to the elbow, plunge hands and wrists in a crystal bowl filled with warm water and perfumed liquid soap, and give them a genuine bath.

She rubs and kneads them, uses a soft little brush the while, dries them on a linen towel, applies a soothing, odorless white cream, whitens them with a vegetable preparation, touches a liquid borax to moisten palms, scorches away disfiguring hair along the forearm, and at the end of twenty minutes produces a pair of as white, smooth, dainty polished members as ever beauty would ask to display below her ball-gown sleeve.

By making engagements to come at regular intervals, she will treat them till this aspect becomes permanent, and as she works she explains all the means whereby at home the course of improvement can be kept up.

Out of the manicure's hand the expert pedicure carries one off to a little alcove. The cautions of true beauty now read in favor of the feet that are not only straight and seemly inside long, well-shaped patent-leather shoes, but satisfactory objects as well for the owner's contemplation when denuded of all covering.

The hair-dresser comes along after a little and in another alcove, without more injury to one's toilet than removal of one's hat, inaugurates an exhilarating shampoo.

There is yet another process that is followed by women who desire facial treatment for wrinkles or pallor or blemishing moles, moth patches, or the disfiguring blackheads that in the dusty city settle into the closest-woven skins. Here with steam or electricity the most wonderful results are accomplished. A half hour is spent hanging over a cloud of steam, while a firm-fingered attendant smooths and pinches, washes and brushes, polishes and douches the offending features till they glow with color and cleanliness.

Now, so heartily do women advocate and benefit by this species of treatment for good looks, that those who can afford it make a regular round of the toilet parlor by appointment on certain hours and days. They have their own lockers in a big dressing-room, where they keep a flannel or white Turkish bath-robe, a pair of slippers and a complete set of toilet implements for manicure and pedicure, hair-dresser and masseuse. Numbers of them, who believe in the truth of a pound of prevention, bring their school-girl daughters, too, for here the hair-dresser will treat a scant suit for richer growth, encourage their eyebrows to take a deeper, clearer line, keep a girl's feet from corns, cure her of biting her nails and lips, and tone up a complexion that threatens to grow coarse or thick.

MADE BY OUR GRANDMOTHERS.

To have a woven woolen bedspread was a matter of family pride, especially so if the fleece came from one's own flock and the housemother and daughters had carded the wool and spun the rolls.

These preliminaries accomplished, there followed serious consultation concerning the pattern to be selected, or perchance an entirely new one, to be designed by the most ingenious and skilful weaver within call; for such treasures were "to be handed down," a matter of no small moment in those days of thrifty housewifery.

Such an heirloom, blue and white, descended in course of years to a blue-eyed Dorothy, a namesake, from an ancestress three generations removed. It is still on duty, as strong and comely as of yore; not, however, as a coverlet for the best bed, ready for company in a corner of the ancient ample parlor of the old farm-house, but given the place of greatest honor, swaying in massive folds as portiere over the massive archway of an entrance-hall, "the most cherished souvenir under our roof-tree," writes its proud, enthusiastic owner; an oaken rod, finished with delicately carved acorns, fashioned with reverent touch by the master of the house, holds it well in place.

Edging the quilt is a bordering of vines, leaves and flowers, some of them unmentioned in works of botanical lore; these so sway their stems and tendrils as to give space at the four corners to sweeping arabesques and labyrinthine windings perplexingly mysterious to follow.

Pretty well up toward the top one notes a basket of goodly proportion crowded with flowers—old-fashioned garden beauties with a sprinkling of much-coveted herb blossoms so dear to the hearts of our thrifty foremothers.

The grand centerpiece, the head and bust of Washington, appears next, surrounded by a double border of simple white flowers, and between them, woven in Roman letters, just one word—Liberty.

Over the head of the chieftain wave two flags.

Below this pictured story of the Father of our Country stands an eagle with wide-mouthed beak; thirteen stars are above the war-bird's head, and upon an outflowing banner is inscribed, E. Pluribus Unum.—*Harper's Bazar.*

HOW FLOWERS HIRE THEIR POLLEN CARRIED.

What are bees and wasps and butterflies so busy about, as they fly among fruit-trees in full bloom, or above the garden flower-beds, or over the clover-fields? "Gathering honey," you will say, and that is true, as far as it goes; but these pretty flying travelers are doing more than merely feasting and lading themselves with honey, as you call it, to bear home. The correct name for the sweet liquid found in many flowers is nectar, and the part of the flower that holds the nectar is called nectary. The bee sucks the nectar, swallows it into his crop, where it is somewhat changed, then pumps it up, empties it into the cells of the honeycomb, and this is really honey.

I wonder if you know in what part of a flower the nectar is usually kept? I am pretty sure that you as well as insects know where to find it in the red clover, in the sweet locust flowers, and in the curving spurs of columbine; for the children generally are fond of sucking the nectar from these flowers. It is the base, or lower part, of each slender clover-blossom that must be nipped off to get at the dainty droplet which it contains. Now, bees and other honey or nectar gathering insects have had long experience at this work, and know very well where to find what they seek. As a bee makes his way down into the flower to sip its nectar, must he not push his head and shoulders against the stamens and pistils? If the pollen be ripe, some of the grains shaken from the stamens will pretty certainly stick to the bee, particularly if he wears a velvet coat. Suppose a bee or other insect to get well powdered with pollen, in his visit to a flower, do you see what will happen as he dips down into another blossom? As he brushes against its pistils, very likely some of the tiny grains of pollen on his head or body will be dislodged, and if ever so little fall on the pistil of the second flower, a useful work has been done; for in this way the seeds growing down in the ovary will be made fertile. How useful to flowers are the bees, butterflies, and many other insects! When Jack learned how pollen is carried about by insects, he said he thought we might call them nature's little foot-pages, because they do her errands for her.

Of course, the pollen of one flower would do no good if dropped upon the pistils of a different kind of flower, but very often many plants of the same kind grow near together; and besides, bees and butterflies prefer to visit only one particular kind of plant at a time. Then, too, not all nectar-bearing plants yield their delicate food to every insect that comes along. Certain plants hide the nectar in a deep cup or spur, quite out of reach of all insects except special ones that are particularly adapted to secure the nectar of these very plants. Bees not only seek nectar, but pollen also, which they gather and tuck away in little shallow pockets on their hind legs. The golden pollen-dust is taken to the hive or nest, emptied out of the curious pockets, and mixed by the bees with honey into a soft brown paste. This queer-flavored mixture is packed away in cells and kept as food, particularly for the young bees. It is called bee-bread. Just here let me tell you that the flowers which bear nectar, or honey, as you call it, are the ones which are sweet-smelling, or which have bright-colored petals—sometimes are both sweet and gay-colored.

Now, can you guess the use of the showy banners hung out by so many plants? They are signals to say to insects, "Honey is here; honey is here! Come and sip it; come and sip it! I'll give you sweet nectar if you'll carry my pollen to my neighbors and fetch theirs to me." And right glad are the nectar-loving creatures to take advantage of the offer of the flowers; and the flowers, too, may thank the bearers of the pollen freight, for without this help many species would soon die out. In some countries the red clover sets no seeds, because there are no bumblebees. The proboscis of the hive-bee is not long enough to reach the nectar, and therefore they do not visit these flowers. In parts of Central America the same thing is said to be true, and for the same reason of the scarlet runner, the beautiful flowering bean that is common in yards and gardens. So if there were no bumblebees in any part of the world, both the red clover and the scarlet runner would die for lack of fertile seeds to keep up the stock.

I am very sorry to have to tell you that there are some rogues among bees which do not pay for their nectar. Such nectar thieves bite holes through the lower part of the flower into the nectary and steal what they wish, instead of going, as they should, to the open flower and sucking up the nectar, then paying for it by carrying pollen to the other blossoms. This is a very mean thing for bumblebees or for any insect to do; for there is an old bargain between flowering plants and certain little animals that the former shall give their nectar to the latter as payment for bearing their pollen. For thousands and thousands of years before men lived on the earth this traffic was going on, wherever there were flowering plants and insects. And it is to this long-standing commerce that we owe the lilies, sweet-peas and larkspurs of our flower borders; the snow-white flowers of the buck-wheat, and the delicate blue ones of the flax, that cover cultivated fields; the velvet mulleins and brave old thistles, all bristling with armor, of our roadsides; the daisies and buttercups and violets that hedge the meadows and pastures; the geraniums and orchids of the

woods; the blazing cardinal flowers and spice-scented azaleas of lowlands; the wild roses and laurels of hillsides and mountain lands; and the multitudes of beautiful blooming things that make the world lovely, and that load the air with fragrance.

Flowers not only hail passing insects by sending out fragrant odors and fluttering gay petals or sepals, as the case may be, but many of them have distinct markings that guide the insect visitors directly to the nectary. You have all seen many flowers whose corolla is marked with dots, lines or circles of a different color. Flowers that only open after twilight and whose seeds are fertilized by night-moths, do not have the pathfinders, as we call the lines or color-spots that point the way to the nectar; but look at your nasturtiums, pansies, hollyhocks, sweet-williams and oxalis and you will easily find the insect guides.

In many blossoms with irregularly shaped corollas, such as the large ones of the fox-glove and the catalpa, or the small blue ones of the ground-ivy, and most of the mint tribe, the lower lip is beautifully marked with bright dots, lines or mottlings. It is on this lower lip, or "door-step," as some one has called it, that the nectar or pollen seeker alights before entering the throat of the flower, and where he pauses as he comes out to brush off some of the pollen, and maybe to fill his pollen-basket, before flitting away.—*Glances of the Plant World.*

AMERICA ONE HUNDRED YEARS AGO.

Imprisonment for debt was a common practice.

There was not a public library in the United States.

Almost all the furniture was imported from England.

An old copper-mine in Connecticut was used as a prison.

Every gentleman wore a queue and powdered his hair.

There was only one hat factory, and that made cocked hats.

Two stage-coaches bore all the travel between New York and Boston.

A gentleman bowing to a lady always scraped his foot on the ground.

Virginia contained a fifth of the whole population of the country.

Crockery plates were objected to because they dulled the knives.

A day laborer considered himself well paid with two shillings a day.

A man who jeered at the preacher or criticised the sermon was fined.

Beef, pork, salt fish, potatoes and hominy were the staple diet all the year round.

The whipping-post and pillory were still standing in Boston and New York.

Buttons were scarce and expensive, and the trousers were fastened with pegs or laces.

A new arrival in a jail was set upon by his fellow-prisoners and robbed of everything he had.

When a man had enough tea he placed his spoon across his cup to indicate that he wanted no more.

Leather breeches, a checked shirt, a red flannel jacket and a cocked hat formed the dress of an artisan.

The church collection was taken in a bag at the end of a pole, with a bell attached to rouse sleepy contributors.

There were no manufactures in this country, and every housewife raised her own flax and made her own linen.

SUMMER VACATION TOURS VIA THE BURLINGTON ROUTE.

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The "Burlington Route" announces two more personally conducted Summer Vacation Tours for the season of 1895 to the West and Northwest. The first one was given June 26th, and was a great success. These tours include nearly all the scenery and places of interest in Colorado, Utah, Wyoming, Montana and the Black Hills, as well as a trip through Dakota and Minnesota. They are personally conducted because experience has shown that vacationists desiring to make a comprehensive tour in the best company and at the most moderate expense may thus be relieved of all worry and trouble by the manager, who attends to every detail.

SECOND TOUR.

SEVENTEEN DAYS; COST, \$160.00.

Leaving St. Louis, Wednesday, August 7th.

To the Yellowstone Park, by way of Kansas City and Lincoln, Neb., through the Black Hills, by way of Hot Springs, Deadwood, Spearfish, Lead City, Custer Battlefield, six days' circuit of Yellowstone Park, returning via Northern Pacific Railroad, Minneapolis, Lake Minnetonka.

THIRD TOUR.

FOURTEEN DAYS; COST, \$130.00.

Leaving St. Louis, Wednesday, August 14th.

Through Colorado, via Denver, Manitou, Pike's Peak, Colorado Springs, Royal Gorge, Marshall Pass—around the circle—Mt. Ouray stage ridge, Rio Grande Southern, Rico, Durango, Glenwood Springs, Leadville.

WHAT THE COST INCLUDES.—The cost of tickets for these tours includes all necessary expenses en route—railroad transportation, sleeping-car fares, meals en route, lodging at hotels and on car, carriage drives and side trips as specified. For further information apply to D. O. IVES, Gen. Pass. and Ticket Agt., St. Louis, Mo.

MUST WEAR KNICKERBOCKERS.

As a matter of health no form of exercise can surpass the bicycle, and when a woman handles the machine cleverly she makes a picture, with her graceful, well-poised figure, that is good to look upon.

Of course, costume has much to do with her appearance, and no one with a long, flopping skirt under petticoats and other flying draperies can look anything but ridiculous.

In France the women wear the most appropriate cycling costumes, with short tunic and leggings, but in New York ladies prefer a longer skirt, and for them some pretty costumes have been sent from Paris recently.

One of the most attractive is of tan-colored cloth with short, wide skirt, fitting closely at the hips, and plaited in the back. There is no braid, no facing, and the breadths are laid upon each other and stitched. This is to prevent any possible catching of the feet in the drapery.

Knickerbockers of the same material are worn under this skirt, and there are well-cut, close-fitting leggings to match, buttoned on the side. A charming little entaway coat, buttoned over the chest, reveals at the throat and waist a waistcoat of tan-colored bengaline, with hair-lines of red about an inch apart.

The hat, of tan-colored felt, is what is known as alpine shape, the crown cleft in the middle. It has a circular band of tan ribbon, and a scarlet wing at the side. The shoes are of tan suede, low cut, so as to give freedom to the ankle.

Another pretty wheeling-dress, intended for a summer model, to be worn in the country, is of pale gray mohair, with skirt cut as above, Eton jacket, without sleeves, to be worn over a white and black striped cambric shirt, with black satin belt and stock collar, and a little white straw hat, trimmed with choux of black satin.

Black shoes and black stockings were to be worn with this costume, and in cooler weather leggings of black kid, soft and pliable, reaching to the knees.

Alpaca is to be as favorite a material for bicycle as for traveling wear, experience showing it to be almost impervious to dust, easily kept clean, and free from wrinkles. It is, of course, in these respects, a summer material.

Knickerbockers of the same material as the skirt, or certainly matching it in color, are de rigueur.—*Vogue.*

THE THEORY OF A DRAW CUT.

A writer in the *Railway Review* thus explains why it is that a knife cuts better when drawn across the object to be cut:

This matter of varying the angle to be cut by varying the motion of the cutting-tool is something that is learned almost instinctively in actual practice. The small boy very quickly comes to understand that his knife will cut better if he gives the blade a drawing motion while cutting. This is due to two reasons: One that the knife, even on rare occasions when it is sharp, is microscopically a saw, and the drawing motion gives the teeth a chance to act; and the other that, as the drawing becomes more rapid, the cutting angle of the blade is made smaller and sharper, so that a rapid draw really gives a temporary sharpness to the instrument. These are trifling and elementary matters, but they will serve to emphasize what I have many a time urged upon young mechanics; the desirability, nay, the very necessity, of close observation of and speculation upon the reasons for the common phenomena of every-day life.

THE EXODUS OF EMIGRANTS.

With complacency, rather than regret, we may receive the statistics which show that 32,771 steerage passengers left this country for their native shores last year, while only 314,467 immigrants arrived, making the increase in the immigrant population for the whole year less than two thousand. This exodus of the aliens, while due in some degree to the commercial depression in 1894, has other and more permanent causes. It does not imply that we are losing our prosperity; it simply means that there is not now the crying need for labor of any and all kinds, even the least efficient. Immigration of past years has furnished more than enough hands to till the vast tracts of virgin soil, and to aid generally in material development. There was a time when immigrants were welcome, and they came in vast

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numbers; but that time has passed. The United States is no longer an undeveloped country. The population has multiplied, and in the East, at least, the supply of labor exceeds the demand. Poverty, fed and nourished chiefly by the foreign element, is rearing its hydra head. Every year our social conditions are becoming more like those of Europe; and that is why the aliens are returning to their birthplaces. As it is, we have ten millions of them, a number so great as to render slow indeed the assimilation which is so necessary under our democratic institutions.

A SUNNY FACE.

Wear it. It is your privilege. It has the quality of mercy; it is twice blessed. It blesses its possessor and all who come under its benign influence; it is a daily boon to him who wears it, and a constant, ever-flowing benediction to all his friends. Men and women, youth and children, seek the friendship of the sunny-faced. All doors are open to those who smile. All social circles welcome cheeriness. A sunny face is an open sesame to heart and home. By it burdens are lightened, cares dispelled, sorrows banished, and hope made to reign triumphant where fear, doubt and despondency held high carnival.

Get the glow and radiance from such nearness to the throne as God permits to his own. Bring from a holy and divine communion a face luminous with light, and let it glow and shine on all around. A little child on the street of a great city, wishing to cross at a point where the surging throng and the passing vehicles made the feat dangerous to the strong, and especially to the weak, paused, hesitated, and asked a sunny-faced gentleman to carry her across. It was the sunny face that won the child's confidence. Childhood makes no mistakes.

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Our Household.

PARTING SONG.

Say not adieu, but au revoir—
We owe the past a farewell sigh:
A tear to mutual pleasures o'er,
To hallowed scenes a fond good-by;
But even these, in other days,
Shall memory oft renew,
And may we, ere we go our ways,
Say au revoir, but not adieu.

Say not adieu, but au revoir—
And let each overflowing heart,
In silence, a libation pour,
To pledge our friendship ere we part;
No vow with sacred oil or wine
Thou such an offering is more true—
An earnest hand-clasp—mine and thine,
Then au revoir, but not adieu.
—Thomas Thackeray Swinburne.

HOME TOPICS.

WASH-DAY HINTS.—Fruit-time is a hard time on table-linen, and the children's clothes are apt to suffer also, if some one does not attend to the fruit stains before the articles go into the wash-tub. Boiling water poured through the stained places will remove them from either white or colored clothes, but this must be done before they have been washed. The same treatment will remove tea or coffee stains. Fresh grass stains, often so annoying on children's clothing, may be entirely removed with salt and water, if they are first well rubbed with fresh butter or other unsalted grease.

Mildew, iron rust and ink stains may be removed, if taken at once, by thoroughly saturating the spots with lemon-juice, covering them with salt, and then laying the articles where the sun will shine full upon the spots. They may need a second or third application of the lemon-juice and salt. After the stains have disappeared, wash the articles first in clear water and then in the usual way. If these stains have been left for some time, it is almost impossible to get them out without destroying the fabric.

Javelle-water is convenient to keep on hand for removing any stains that do not yield readily to the hot water treatment, and a tablespoonful to a quart of water will whiten any articles that have become yellow from careless washing or lying unused for a long time. This is made by putting half a pound of chlorid of lime in a jar, pouring on two quarts of boiling water and stirring it with a stick until it is dissolved. Let it stand twenty-four hours, and then pour off the clear solution and add to it a pound of soda dissolved in a quart of boiling water. Let it settle again, and then pour off the clear solution and bottle it for use. Keep it in a cool place. After using javelle-water, the articles should be washed in the usual way to remove it entirely from the fabric.

CHILDREN'S COUNTRY HOMES.—A charity which appeals to nearly every heart is that of furnishing a home in the country, if it be only for a few weeks, for the poor children who are huddled in tenements and alleys of our large cities. It seems especially fitting that more favored children and young people should lend a helping hand to the poor little ones who, without this help, can never see the fresh, green country or breathe its pure air. The plan of sending these little waifs out into farm homes, which are kindly opened to receive them for a week or two, has given a foretaste of heaven to thousands of children, but the number who need this outing has always exceeded the places open to them. Now, near some of our large cities, private benevolence has opened homes, where poor mothers, with their weak and ailing babies, can enjoy the life and health giving country air for a few weeks at a time. This summer the Junior Christian Endeavor societies of Washington, D. C., have rented a house about ten miles from the city, furnished it, and opened it for a country home for poor children. The society of the Daughters of the King, of the same place, has opened a similar home at Colonial Beach, on the Potomac river.

If the children and young people whose lives have been spent in the country could realize what life must be in the homes of the poor in a crowded city during a hot summer, I am sure they would be ready and anxious to lend a hand to this good work. If you can do nothing more this summer, try and make a place in your own home for a few weeks for one or two of these little ones. Deny yourselves something, if need be, to do it; at least be

willing to accept your share of the added work it will cause.

A letter sent to the pastor of any city church, if you do not know of an organization for this purpose, will soon find some needy child for you. Remember, our Savior said, "Inasmuch as ye have done it unto one of the least of these, my brethren, ye have done it unto me." If you can find room for a mother with her child, starving for pure country air and food, so much the better.

Another charity that is interesting many earnest people is intended to give a vacation to working-girls of the city, who need rest and change, but cannot afford to pay the expenses of traveling or board. Many poor girls break down entirely who might have been saved by a week or two of rest and quiet country life, such as this charity is designed to give them. MAIDA McL.

BICYCLE SUIT.

As the wheel has come to stay, and the many ladies who ride one are determined to do so in the most comfortable way, we



BICYCLE SUIT.

illustrate one of the prettiest and most sensible suits for wheeling. The white sweater can be purchased at any of the bicycle supply stores, costing from two and one half to three dollars.

The bloomers can be easily made at home. For a lady of medium height, the material in thirty-six-inch-wide flannel, four and five eighths yards will be required. Allow two breadths a yard long for each section. Square the piece that comes off, making a gusset that wide, which insert at the seat. Plait in heavy treble box-plaits, two back and two front. Open at one side, and attach to a wide band of the material. If fifty-four-inch goods is used, one breadth will be sufficient. L. L. C.

YOU DON'T HAVE TO SWEAR OFF.

The St. Louis Journal of Agriculture says: "We know personally of several that No-To-Bac cured. One, a prominent St. Louis Architect, who smoked and chewed for years. Two boxes cured him so that even the smell of tobacco makes him sick." No-To-Bac's guaranteed to cure tobacco habit or money refunded by druggists everywhere. Book free. Sterling Remedy Co., 10 Spruce St., N. Y., or 45 Randolph St., Chicago.

LITTLE ECONOMIES.

The old adage, "Mony a mickle makes a muckle," has no doubt been frequently quoted during the past year, and probably the "mickles" have been more carefully looked after in thousands of families than ever before; although there is a possibility that there has been no very large accumulation of "muckles."

We, none of us, will deny that the sum of human happiness is made up of little things. Events and occurrences, trifling in themselves, yet in the aggregate bringing out clear and strong the lights and shadows of our existence, which, by the blending of the master hand, make the grand picture we call life, and which, by and by, we shall see in its completeness.

In a similar manner the little economies in the various departments of the domestic service—the wise spending to-day, the wise use of material to-morrow, and the careful saving and using of all accumulations in both pantry and closet, as well as a careful and economical expenditure of time and strength—will, by and by, stand

A package of common baking-soda, if judiciously used, contains many economical possibilities. We may make it save fuel, sugar, soap and many other things, besides using it in its legitimate field. When cooking either green or dry beans, or any other vegetables requiring some length of time, or a piece of tough meat, if a small pinch of soda—about the size of a green pea to every quart of water used—be added, they will cook in one fourth less time than usually required, thus saving fuel.

All very tart fruits, such as currants, gooseberries, plums, prunelles, cranberries, rhubarb, etc., may, when cooking, have a bit of soda as large as a navy-bean added to each quart of cooked fruit without in any way impairing the flavor and materially reducing the amount of sugar necessary to sweeten them, and is a bit of economy many housekeepers will be glad to know. If too much soda is used, the fruit has a bitter taste, but if "just enough" is added the quality is uninjured.

A bit of soda added to the dish-water takes the place of soap, and is, in my estimation, far preferable, as it is clean, and that most certainly cannot be said of soap that one buys.

If cream is so nearly sour that pouring the hot tea or coffee onto it curdles it and renders it unfit for use, a tiny pinch of soda added before the tea or coffee is poured corrects the acidity, and it is all right if used at once.

Once a rib of fresh pork and a dressed chicken came from a distance and were so tainted by contact with the pine box in which they had been packed as to apparently render them unfit for use. Unwilling to waste them without an effort to save them, I carefully washed them in strong soda-water, then dropped them into boiling water in which was a small lump of soda, and after cooking for about ten minutes, they were removed from the soda-water and cooked in the usual manner, and as a result were fresh and sweet.

I knew of a beefsteak that was not really tainted, yet not perfectly sweet, that was given a very light sprinkling of dry soda, then dropped into boiling hot fat, and when sent to the table the others of the family declared it to be unusually good; but had it not been for the soda would have been utterly unfit for use.

A neighbor shelled peas for supper and covered them with cold water to stand a few minutes before cooking, when something occurred to prevent her having them that day, and they were thoughtlessly left until the next day. When she went to get them for dinner she found them just beginning to sour, but by carefully rinsing them in clear water, then dropping into boiling soda-water and cooking about ten minutes, after which they were carefully drained and cooked as usual, they were all right.

Fresh, cooked or canned fruits that have begun to sour may be saved by heating and adding a pinch of soda; but they must be used soon, as they will not keep long.

If oatmeal or other cereals are sweetened while cooking, it will be no little economy, as it requires much less sugar than if each individual sweetens it after it is dished.

If skimmed milk is heated scalding hot and added to mashed potatoes, it makes a very good substitute for butter.

Fruits that have been canned without sugar will require less to sweeten them if they are heated, the sugar added, and then cooled before serving, than if the sugar is added to the cold fruit.

CLARA SENSBAUGH EVERTS.

OATMEAL.

Nothing is more tiresome, morning after morning, than the deadly uniformity of oatmeal and milk. It is not always well cooked, nor always daintily served. Deluge it with average milk and it becomes unappetizingly half warm, half cold almost at once; sin against it still further by sugaring it to make it tasty, so that it may "slip right down," and you face a dish that is enough to make a man strike his daddy.

A goodly portion of oatmeal is too hearty an introduction to a neat breakfast. But it may be served and prepared in so many ways as to form the main part of the breakfast, six days out of seven, and please everyone around the board.

First and foremost, it must be evenly cooked and of the same consistency throughout, and it must be served hot.

Oatmeal and milk are not properly served together. Each should be in a separate saucer, and each mouthful of oatmeal

out as clearly and plainly, when we review the past, as do the different parts of a picture; and we can then see and comprehend how certain economies, almost insignificant savings they then appeared to be, later made it possible for us to enjoy some pleasure that would otherwise have been beyond our reach.

Sometimes in painting our life picture it seems to be all shadow, and it is only after a long time that we realize that the gloom is needed to bring out and intensify the bright gleams, and thus really enhance the beauty of the picture. So, too, it sometimes seems that in our household arrangements it is nothing but save, save, with no recompense for all our care; but this is a mistaken and morbid view of the matter, and by and by we will see our reward in some way. If by observation or practice we have learned anything helpful along this or similar lines, it is only fair to other housekeepers that we pass that knowledge along, and thus, if possible, help to lighten the load they carry.

should be taken in the spoon, dipped into the unskimmed milk and eaten at once. Sugar is no addition.

Oatmeal, salt and cream is an excellent variation.

Cooked for a long time in a double boiler in strong, well-skimmed beef stock or any good broth, and served with a dash of butter, it is a dish to build up an invalid.

Oatmeal buttered and sugared, with a grating of nutmeg, is a pleasing innovation. Or omit the nutmeg, and serve with it a saucer of fresh fruit, or stewed or baked fruit, or a small saucer of any kind of fruit conserve, as jam, jelly or marmalade. This opens a long list of possibilities.

Another way of serving it is to put a bit of butter on top of each saucerful of oatmeal, and place on this a poached egg or a shelled hard-boiled egg. This is hard to beat.

Oatmeal served with a generous spoonful of any well-seasoned gravy, to which butter has been added, is another gastronomic eye-opener. Do not add butter to pork or bacon gravy.

Oatmeal served with a sauce made of sweetened, strained and thickened tomatoes, salted and peppered, and to which has been added a good bit of butter and a cupful of finely chopped meat of any kind or of many kinds, is another wrinkle.

Oatmeal is good in late November served with a sausage and sausage gravy.

Cold oatmeal is excellent fried in butter with a poached egg; or fried with bacon and served with the bacon and thickened gravy.

Moreover, if you like oatmeal which tastes scorched, you really like oatmeal. Cooked in an iron kettle, it may be given this sear just before dishing it up.

And furthermore, oatmeal may be served in small cups as a dainty gruel, and the variations may still be of the same character. Liquids, as milk, cream, sauces and gravies, may be added directly to the gruel from a small pitcher, or they may be poured over hot toasted bread or crackers or plain buttered bread. With the gruel, solids, as all kinds of fruit, may be served on a plate or saucer, with or without hot toasted bread or crackers or plain buttered bread.

Oatmeal gruel is an excellent substitute for coffee.

JEANNIE D. W.

BROWN BREAD, BROWN PLUM-PUDDING, BROWN FRUIT OR SPICE CAKE.

Take a cupful each of rye or wheat flour, Graham flour, oat-flakes, corn-meal and molasses, a heaping teaspoonful of salt, three heaping teaspoonfuls of baking-powder, a pinch of soda in half a cupful of boiling water, shortening the size of an egg. Mix the baking-powder and salt into the measured flours, flakes and meal, then rub in the shortening. Dissolve the soda in the hot water and add to the molasses. Stir all the ingredients well together. The dough should be of the consistency of cake batter. A little more Graham flour or a little more hot water will thicken or thin it to the right consistency. Pour it into two bread-tins greased with lard, and bake fully three quarters of an hour in a moderate oven.

The longer under heat,
The better 'tis to eat.

With its thick, delicious crust it is an excellent bread for dyspeptics, and children are not slow to say, "I'd like another piece of that cake."

By adding to one half the above mixture half a cupful each of currants, raisins, citron or candied orange-peel, you have a baked plum-pudding sufficient for a family of eight—a large help all around. The pudding is better after keeping for some time.

When needed as a pudding, steam it, saturate with fruit-juice, and serve with a sauce made of a tablespoonful of corn-starch, two tablespoonfuls of sugar moistened with cold water; add a pint of boiling water, and when thickened, stir in butter the size of an egg, and flavor to taste with nutmeg or vanilla. If not convenient to use fruit-juice, make double the quantity of sauce.

A variation is to add a tablespoonful of ground cinnamon, a teaspoonful each of ground cloves and allspice and half a grated nutmeg to the fruit pudding, or to the plain bread.

With the spiced fruit pudding do not flavor the sauce, especially if the pudding is saturated with fruit-juice.

Either pudding, when not too old, makes a nice cake.

Dyspeptics can venture upon this pudding and call for "more."

ANNE NEWCOME.

HORSES' EAR-NET.

Make a chain of 117 stitches; turn.

First row—1 d e in fifth stitch of ch; * ch 1, skip 1, 1 d c in next; * repeat the length of the chain; chain 4, turn.

Second row—1 d e under 1 ch of the second square mesh, * ch 1, d e under next 1 ch; * repeat to end of row, then ch 1, d e in third stitch of four chain. Repeat second row until there are seven rows, then ch 4; turn.

Eighth row—Make eleven meshes, ch 4; turn.

Nine row—Skip 1 st, 1 ch, 1 d e under next; * ch 1, 1 d e under next 1 ch; * repeat to end of row; ch 4, turn.

Tenth row—1 d e under 1 st, 1 ch; * ch 1, d e under next one chain; * repeat eight times; ch 4, turn.

Eleventh row—Skip 1 ch, 1 d c under next 1 ch; * ch 1, 1 d e under next 1 ch; * repeat to end of row; ch 4, turn.

Twelfth row—Like eleventh.

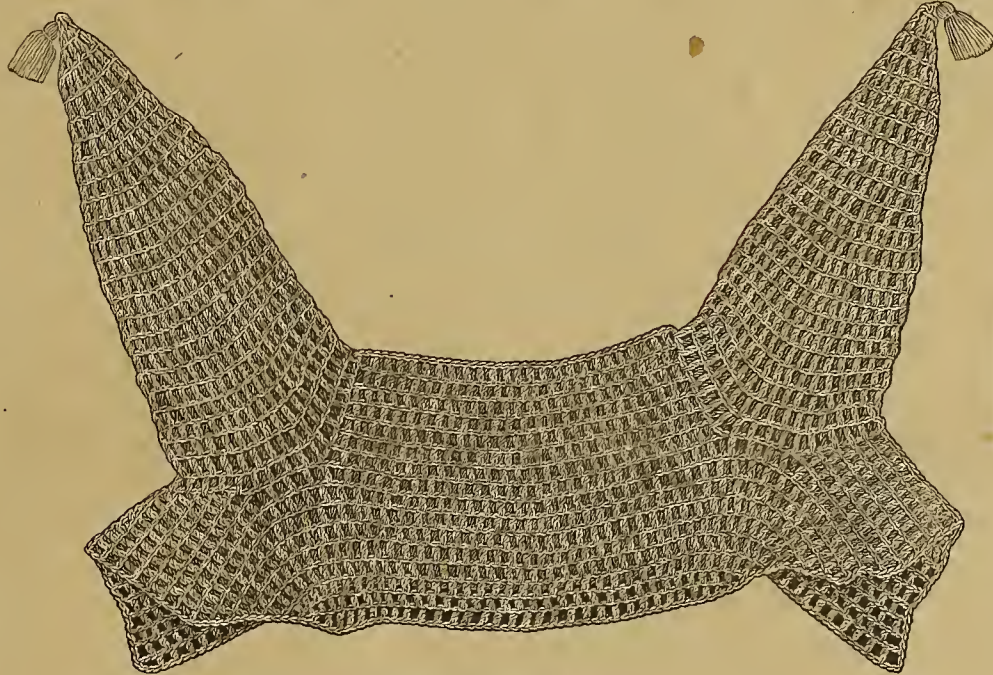
Thirteenth, fourteenth, fifteenth and sixteenth rows—One d e under first 1 ch; * ch 1, 1 d c under next 1 ch; * repeat to end of row; ch 1, d e in third stich of 4 ch; ch 4, turn.

At the end of the sixteenth row, instead of ch 4 make a ch of 9 st and fasten the thread.

Repeat the eighth to fifteenth rows on the other side, omitting the sixteenth row and 9 ch.

Leave a space of two meshes next each side piece, fasten the thread in the third mesh and work back and forth on the remaining meshes for fifteen rows.

At the end of the fourteenth row ch 3,



HORSES' EAR-NET.

pick up the last st of the 9 ch and draw it through the st on the hook, ch 1, and proceed as before to the end of the fifteenth row; ch 9, d e in third st of 4 ch of side piece; * ch 1, d c in next 1 ch; * repeat to end; ch 4, turn. D e in second 1 ch; * ch 1, d c in next; * repeat across the entire length, making three meshes on each of the 9 ch.

Make eight more rows, narrowing each one by skipping the first two meshes at the beginning and end, and after the last d e of the row make 1 l-tr under the 4 ch.

This rounding piece will be the front, and the net will be held in place by the straps of the bridle, which pass in front and back of the ears.

To make the ears, fasten the thread in a mesh, * ch 4, d e in next mesh; * ch 1, d e in next; * repeat all around; ch 1, d c under 4 ch; ch 1, d e in next mesh. Continue to work around and gradually narrow by skipping a mesh, until at the twenty-fourth row you will have but two meshes left; draw these together by 1 s c.

For the first thirteen rounds narrow in the odd rows, but in the last eleven narrow in every row.

This net will be found large enough for any horse, but as their heads differ greatly in size, always, if possible, measure the distance between the ears, then by allowing from two and one half to three inches at the sides of the ears, you will have the exact length of the foundation chain. Also measure the length of the ears and the distance around at the largest part of the ear, being careful to make them plenty large enough. Then make the net according to these measurements. The one illustrated was intended for a horse with a head measuring six inches between the ears.

GRACE McCOWEN.

ON TOP OF YOUR DINNER, one of DR. D. JAYNE'S SMALL SUGAR COATED SANATIVE PILLS, (non-nauseating and painless.) will assist digestion, stimulate the Liver and regulate the bowels. Always safe.

Highest of all in Leavening Power.—Latest U. S. Gov't Report

Royal Baking Powder
ABSOLUTELY PURE

CHRISTMAS.

What a refreshing topic for these hot days! The very novelty of the thought at this time of the year makes it the more striking. But just consider a moment. Many of us have had our summer trip, or have entertained others who have; we have seen many new things and caught new ideas, and certainly have more leisure than during the short winter days and with the numerous fires to tend and keep going.

The familiar saying, "Strike while the iron is hot," seems very appropriate in this case, for while all these new ideas and plans are in our head, it is a good time to put them into execution, while fresh and distinct in our minds.

There are new kinds of fancy work just learned, and you can think of some loved one that it will just suit and be such an appropriate present. Ten chances to one if you wait until winter, there will be something about it forgotten or no time to prepare it.

While one is visiting or entertaining visitors (I have no reference to formal

can make some kitchen-holders (ever useful and ever getting worn out) for mama, if some kind auntie will give her some old stocking-tops and a piece of new cloth for a covering.

In Christmas offerings as in other pursuits, let moderation guide your expenses. Do not give beyond your means, thereby making the recipient of your gift wish you had passed them by entirely, rather than take something that was procured with cash needed in the family. "Peace on earth, and good will to man," is the motto of Christmas-time. Let your gifts be those of love; mementoes of your kindly thoughts and busy fingers; prizes of friendship that shall remain after the fingers that fashioned them are but dust.

Remember Christmas to the little ones at least, if it does take three months of planning; they will think of it with moistened eyes some day, when the home is broken up and the father and mother gone to their long rest.

Mayhap visions of their happy childhood will help them to make their own firesides bright, and the good influences about the hearthstone will cling to a child, like he thrown among ever so many temptations; though he may yield sometimes, the good seed is there and will bear fruit in later years.

GIPSY.

Pears'
Pears' soap
is pure; no
alkali in it.
There are
a thousand
soap-virtues;
it has them
all.

HIRES'
Rootbeer contains enough sarsaparilla alone to give it the highest place as a promotor of good health. To this, add the most delicious herbs, roots, barks and berries and you have the reason why millions of people drink and grow healthful on Hires' **Rootbeer**.
A 25c. package makes 5 gallons
OHAS. E. HIRES CO., PHILA.

PERFECTION
Delicate Cake
Easily removed without breaking. Perfection Tins require no greasing. 10 styles, round, square and oblong. 2 layer tins by mail 30cts. Circulars Free.
Agents Wanted. Richardson Mfg. Co., 9 St., Bath, N.Y.

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Samples free from largest Wall Paper concern in U.S.
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KNOWS A GOOD THING.
My friend and I are perfectly delighted with the patterns we ordered from you. They fit to perfection. Please find amount for three more.
CELESTA A. SPERROW
London, Ohio.

Our Household.

WHICH?

Which are the hands we love the best,
Those that are folded between our own,
Or those that move us to strange unrest
By feathery touch that is quickly flown?
Which, ah! which, do we love the best,
Hands caressing or hands caressed?

Which are the eyes that we most adore,
Those reflecting our every thought,
Or those whose glances our hearts implore,
Whose fire will neither be tamed nor taught?
Which, ah! which, are we drawn most toward,
Eyes adoring or eyes adored?

Which is the heart of hearts we prize,
That which sways with a passionate power,
Or that which yields as a sacrifice,
Gentle and generous, day and hour?
Which, ah! which, do we hold above,
Hearts most loving or hearts we love?

THE STORIES OF THE MARIGOLD AND PANSY.

DON'T you remember that showy little flower all so velvety red and yellow, having such an ill scent that you wonder why such a pretty appearance should prove so deceitful?

This flower, you know, is the marigold, and it is rather interesting to know how Miss Marigold came by her name.

In the long ago there was an old king—Midas by name—who, like a great many other kings, and like a great many people who are not kings, loved gold. Once on a summer day a fairy came to the king and told him that he might have anything he wished for.

I suppose if Midas had taken time to consider, he would have answered differently, but as it was he said: "I wish everything I touch might turn into gold."

Well, the next morning when the king arose everything he touched turned into gold, according to his wish, but by the time he was ready to leave his sleeping-room for the breakfast that awaited him, he had grown alarmed, for everything which received his slightest touch was quickly turned into the yellow luster.

That for which he had most wished now became a torment to him, for at the breakfast-table, when he attempted to raise a morsel to his lips, it became nothing but gold. Poor Midas! If he only could, he would gladly have given a great lump of gold for just a crust of bread.

But his greatest sorrow was to come. It was the custom of his beautiful little daughter, Mary, to greet him each morning with an apronful of flowers. On this particular morning she came skipping toward him, her face all glad and radiant, and her fair hair blowing. In vain did her father call out to her not to come near him, but alas, too late! In a twinkling little Mary was transformed into a golden statue.

When you walk in the garden and look upon the flowers, you will think of the unhappy king and the sad fate of little Mary, who is now the marigold.

You all know and love the little faces that peep and nod at you all through the summer, and wonder what you would do if your garden didn't give you pansies.

Some people give the pausy the pretty name of heart's-ease. The Germans call it stephenmutter, which means little step-mother; and it is from them that we get this fancy.

If you will notice the arrangement of the petals (the five colored leaves which make the flower), you will see that there is one which is very gaudy and large. It stands alone at the top and represents the step-mother, the two just below in rich dress are her daughters, while the two plain ones, half hidden from view, are her unfortunate step-daughters.

MARY D. SIBLEY.

WILL WOMAN RENOUNCE THE SKIRT?

A book has lately been written for business women, by "one of them." Such books are not uncommon, but this particular book has gained the approval of critical men whose opinions are worth a great deal. There is one point, however, in which the author and her admiring reviewer differ. The author tells women that if they wish to succeed in the business world they must display "a concession to the popular idea of what women ought to wear, however absurd it may be." This means that if a woman is to succeed, in business as elsewhere, she must be stylish. The progressive reviewer takes exception to this, and says (almost with tears in his eyes), "The author does not appreciate the fact that the skirt has been for ages the badge of bondage; it fetters the limbs and

retards locomotion; it places woman at a distinct disadvantage in the struggle for bread, and compels her, to a very great degree, to be a slave to the caprice of fashion." There you have the case stated for and against.

Concerning innovations in dress, men are generally more liberal to the opposite sex than women are to each other or to themselves. In a man's writings you will not infrequently find that he arrays his favorite heroines in unbecoming attire. One of Goethe's finest types of woman is Theresa, who was a model housekeeper, a forester, and manager of a farm. When she was riding around overseeing her workmen, she wore a costume which made her look like a "handsome hunter-boy." Mr. Stead, in a recent story, depicts a young Englishwoman, Lady Enid, as wearing trousers when she rides her bicycle, and he praises her for it.

I think that in the matter of skirts moderation is the solution of the problem. A business woman is foolish if she wears her dress too long or inordinately full. A short skirt, fairly above the ankle, does not retard progress, and at the same time it is becoming, without the eccentricity which

NUMEROUS WAYS TO SERVE THE PEACH.

PEACH CREAM.—With a quart of new milk and three well-beaten eggs, the whites and yellows beaten separately, make a thin custard. Dissolve a heaping teaspoonful of arrow-root in cold milk, and stir it in the custard when it is scalding. Let the custard simmer, but not boil. Sweeten to taste, then strain; while it is cooling, peel and mash perfectly firm a sufficient number of thoroughly ripe peaches to make a quart of pulp; make this very sweet with fine, white sugar. Add the fruit to the custard when cold, and beat with a wooden spoon before putting into the freezer.

PEACH SHORT-CAKE.—To make the crust, take equal parts of cream and buttermilk; add enough soda to sweeten, and sufficient flour to make a dough that can be rolled out; bake in pie-pans. When baked, split each cake open, and butter both sides well. Have ready some ripe peaches sliced thin and sweetened. Spread them on the cake, put on the top crust, and send to the table with a pitcher of rich cream.

PEACH SNOW.—Peel and cut into very small pieces some very ripe, sweet peaches. Make a boiled frosting of a cupful of sugar and one egg. Set on ice; when cold

several days. Butter can be kept in a fresh condition for months by using a little borax mixed with the salt.

Poultry and game, if rubbed with powdered borax as soon as dressed, will be preserved from all taint or mustiness. Beef, mutton or pork, sprinkled with borax, may be kept without ice for several days. Along the coast of Norway, where large quantities of fish are yearly exported, the preservative qualities of borax are well known, and it is due to its use that the fish shipped to foreign markets are kept fresh and sweet, notwithstanding the distance of transportation.

As borax is entirely harmless in its effects upon food, when used to preserve it, and the cost so low, there is no excuse for not keeping it for constant use in the household, when it may be made to so greatly lessen the labor in many departments, as well as add to the health and comfort of the family.

ELIZA R. PARKER.

STARCH.

To make fine, clear starch, first wet the starch with cold water and work with a spoon until smooth, then pour boiling water over it in the proportion of one quart to every two tablespoonfuls of starch. Set upon the stove and stir until it boils clear. A small amount of kerosene added will prevent its sticking to the iron. A small quantity of gum-arabic water added to the starch will give an appearance of freshness to muslins and lawns, either white or colored, not attainable by any other means. It is a great help to have the gum arabic ready for use, prepared as follows: Pour a pint of boiling water over two ounces of white gum arabic, stir well, cover it, and let it stand over night. In the morning, pour the liquid off and bottle. Keep it corked for use.

M. E. S.

MORNING ROBE FOR YOUNG MATRON.

We illustrate a robe for morning wear which is made on a tight lining, having the outside loose from the shoulders, confined only by a ribbon brought from under the arms. This is a very comfortable house gown. The trimming of lace should be of some of the heavier kinds.

TOO MANY "DON'T'S."

Let children grow up in a peaceful, quiet routine, and quite without emotions or the counter-shocks of other people's emotions. Thus do their nerves stand a chance of getting a firm, healthy start, which will stand them in good stead later on. The ill-tempered, irritable mother commits a positive crime against her little ones, and the mother who is not ill-tempered, but who worries them, irritably all the same, with continuous admonitions to do this, to leave undone that, on whose lips is a ceaseless refrain of "Don't swing on that door," "Stand up straight," "Don't touch that book," "Don't rumple your hair," commits almost as great a crime. Would not such a persistent hauling up short on every possible and impossible occasion ruin the nerves of a grown person? Would not such restless fault-finding seem an intolerable nuisance? Then why should not the child's nerves suffer? And they do; and the consequences in the end are more far-reaching and ramified than the irritable mothers, unfortunately, ever dream of. Nature, improperly treated, invariably takes her revenge.

CO-EDUCATION.

"It is not as important to graduate well at twenty-two as it is to be a healthy, splendid woman at thirty," were the wise words spoken by Alice Freeman Palmer at Chautauqua, in discussing the question of co-education. Another point well taken in her address was that a basis for marriage made in a co-educational institution is likely to result in a better life than a basis made in a ball-room. Since it is inevitable that young men and women will be attracted to each other, it is desirable that they should become acquainted on the wholesome ground of common interests in study rather than in the artificial life of social gaities. If the ideals are pure and high in the homes from which they come, the intercourse between students of the opposite sex will partake of the same characteristics. But in Mrs. Palmer's judgment the home does not give girls as good preparation for college as boys, and certainly her opportunities for observation, as both student and professor at Ann Arbor and as a president at Wellesley, entitle her opinions to careful consideration.—*Congregationalist.*



MORNING ROBE FOR YOUNG MATRON.

attracts undue attention, and therefore causes an uncomfortable sense of self-consciousness. When the gallant gentleman deploras that woman should be in any degree a "slave to the caprice of fashion," he fails to realize that fashion has ceased to be a senseless despot. Fashion herself shares in the feminine advancement of our generation. Comfort is now the prime requisite of beautiful dress. Very few women wear corsets of the old, tight-lacing pattern. Common-sense waists are popular. Neither is Fashion exacting in material. In all respects she is satisfied with a modest and reserved following.

We cannot admit that the skirt is a "badge of bondage." Prejudice works in all directions. It is unfair to deny the comfort and grace of women's skirts. While wishing for all business women the height of success, we claim that they need not renounce their present mode of dress, but need only modify it to their various activities, according to the dictates of a modest independence.

KATE KAUFFMAN.

and ready, serve this in the center of a fancy dish, and pour around it sweetened, whipped cream. It should be served very cold.

PEACH LEATHER.—Boil tart peaches with a little water until quite tender; take out the stones, and pass the pulp through a wire sieve; boil gently, stirring constantly one hour; stir half the weight of the pulp, before boiling, of sugar into the pulp, and boil one minute. Have ready shallow earthen plates, pour the paste in these, not over a quarter of an inch thick, and dry slowly in the oven.

M. E. SMITH.

BORAX.

Every country housewife should keep a supply of borax on hand, as no other article will be found of equal value. Freely used in summer, it will cleanse, deodorize and disinfect. Rubbed on hands, it will keep them from being molested by insects without further protection. Eggs dipped in a solution of borax will remain fresh for months. Milk to which it is added, even in the warmest weather, will not sour for

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You can order any of the patterns offered in the back numbers of this paper. For ladies, give BUST measure in inches. For SKIRT pattern, give WAIST measure in inches. For misses, boys, girls or children, give both BREAST measure in inches and age in years. Order patterns by their numbers. Satisfaction guaranteed or money refunded. To get BUST and BREAST measure, put the tape measure ALL of the way around the body, over the dress close under the arms. Price of each pattern, 10 cents. Postage one cent extra on EACH pattern, except on skirt and other heavy patterns, 2 cents extra.

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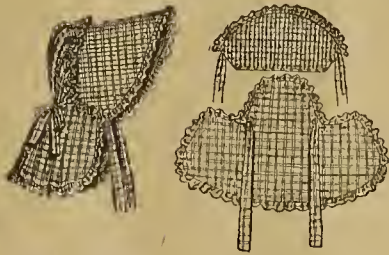
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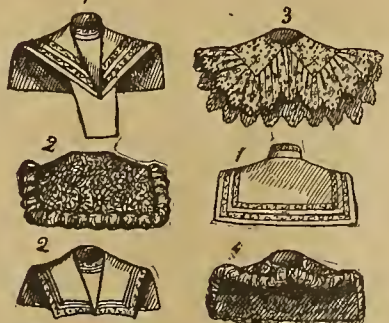
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No. 6433.—LADIES' BELTED ETON JACKET. 11 cents. Sizes, 32, 34, 36, 38 and 40 inches bust.

Our Sunday Afternoon.

It is not just as we take it,
This mystical world of ours;
Life's field will yield, as we make it,
A harvest of thorns or flowers.

—Alice Cary.

THE MORNING BREAKETH.

Awake, O ye who slumber!
Arouse, be on your guard,
List now to him who speaketh,
Be on your watch and ward.
Prayers from millions ascending
He answers swift and clear,
'Mid strife and turmoil sending
His strength and loving cheer.

Know ye not he is calling
Workers more and more,
Consecrated for the harvest,
About our very door?
Souls ahungred, drifting
'Mid darkness, strife and sin;
True hearts he now is sifting
To let the sunlight in.

Behold, the morning breaketh!
Crimson the east has grown,
The Lord is swiftly coming
To claim once more his own.
Let us put on our armor,
Work for him while we may,
Glean jewels for his kingdom
And the eternal day.

"LET'S QUARREL TO-MORROW."

My wife is one of the sweetest little women in the whole world, and I am not considered peculiarly cranky, but sometimes differences would arise, beginning with the most trivial things, which, however, being duly nursed, became of monumental proportions, and very often threatened the peace of the family. Of course, I was commonly the one to blame; in fact, as I look back on it now, I am sure I was always to blame; for I should have had the wisdom to give way on the non-essentials, and by a little restraint and gentle talk win my wife over to my way of thinking. But instead of that I feared I should sacrifice my dignity as head of the family by yielding. So sometimes I went to business without my good-by kiss, and two people were made miserable all day.

But my little wife had an inspiration—most women have when things come to the breaking-point—and the next time our argument was drifting near the danger line, she turned aside the collision by this womanly suggestion, "Howard, dear, let's quarrel to-morrow!" This was a proposal for an armistice. What husband could refuse? "All right," I said, "we will put it off until to-morrow," and we laughed and talked of other things. But to-morrow did not come. Indeed, to-morrow never comes; it's always a day ahead; and if we can only keep our quarrels till then, there will be no more heart-broken little wives at home and fewer "blue" husbands at the store or office. "Let's quarrel to-morrow!" —N. H. Junior, in *Evangelist*.

A JAPANESE BABY.

After all the festivities connected with birth and marriage, a quiet, undisturbed life begins for the baby, a life which is neither unpleasant nor unhealthful. It is not jolted, rocked or trotted to sleep; it is allowed to cry if it chooses, without anybody's supposing that the world will come to an end because of its crying; and its dress is loose and easily put on, so that very little time is spent in the tiresome process of dressing and undressing. Under these conditions, the baby thrives and grows strong and fat, learns to take life with some philosophy, even at a very early age, and is not subject to fits of hysterical or passionate crying, brought on by much jolting or trotting, or by the wearisome process of pinning, buttoning, tying of strings and thrusting of arms into tight sleeves.—Alice Mabel Bacon.

MOTHER AND SON.

The boy's first idea of a woman is his mother, and unless she fails to win his love and respect he has a chivalrous devotion to her which will cover his whole life. If mothers would give their children definite religious instructions by word and example and rule them wisely, lovingly, methodically and firmly in habits of obedience, self-control and purity and truth, boys would less often develop into uncontrolled, lawless, unchivalrous men and selfish husbands, and girls would not grow into frivolous, vain, self-asserting, fast women. Homes would be happier, the world would be raised, reformed, ennobled.—*American Woman's Journal*.

THE BOOK FOR ALL.

To look at it theoretically, we should pronounce the task of producing a universal book, adapted to all races, all centuries and all generations, simply impossible. And so it is if human productions and human powers alone are regarded. That the Bible has in it something for each and something for all, no matter what their age or degree of mental development, is not the least of the proofs that show it to be divine.

It is intelligible to the dullest, it is inexhaustible to the keenest. "It has shallows where a lamb may wade, and depths where the elephant must swim." It is the most ancient of books, yet the newest. The date of centuries is upon it, but not the decay of age. It is interwoven with every period of life and every kind of experience. It is hallowed by a thousand memories. The maiden is married by its sanctions, and in her lonely widowhood turns to it for comfort. It lies on the bed of death and on the busy bench of the workshop. The soldier, marching to the battle-field, packs it carefully in his knapsack, and the civil officer lays his hand upon it when he swears to execute his country's laws. Everywhere it finds a fitting place. And in the closet most of all it is the one essential instrument for progress.—*Christian Standard*.

WORK VERSUS WORRY.

The revolutions of a machine do not destroy, it is either friction or rust that ruins things. Men and women can endure almost any amount of mental or muscular taxation. Worry is the worm at the root—it blights life in the bud. Toil is favorable to health and longevity. We knew an old man who was regular in his habits and remarkably industrious. He was an octogenarian, and yet his years rested lightly upon him. His health was unusually good, but if from any cause he was ill, he would say, "If I can only get out and get hold of the haudles of the plow I shall soon be all right again." You can hardly put work enough upon a man to harm him. The corrosion of selfish care, the wear and tear of worldly anxieties born of avarice or unbelief, the worry and not the work, kills the masses of mankind. The patriarchs of old were long-lived. Their simple, quiet pastoral customs were quite favorable to longevity. They lived by prayer and the Word of God. "Casting all your care upon him for he careth for you."—I. Pet. v. 7.—*The Vanguard*.

THE CHURCH CENSUS.

The census report, covering the statistics of churches, which has just come from the press, contains some interesting facts. It is an elaborate work of more than 800 pages, with colored maps showing the extent of the various organized religious bodies in the various states.

There are 143 distinct denominations in the United States, besides independent churches and miscellaneous congregations. The total communicants of all denominations is 20,612,806, who belong to 165,177 organizations or congregations.

These congregations have 142,521 edifices, which have sittings for 43,564,863 persons.

The value of all church property, used exclusively for purposes of worship, is \$679,630,139. There are 111,036 regular ministers, not including lay preachers.

There are five bodies which have more than 1,000,000 communicants, and ten more than 500,000. The leading denominations have communicants in round numbers as follows: Roman Catholic, 6,250,000; Methodist, 4,600,000; Baptist, 3,725,000; Presbyterian, 1,230,332; Lutheran, 1,230,000; Protestant Episcopal, 540,000.

"FREEDOM OF WORSHIP" IN RUSSIA.

If the Savior himself should appear, poor and unknown, in a Russian peasant village, as he appeared in Galilee nineteen centuries ago, if he should speak to the people the same words that he spoke in Galilee and that are recorded in the four Gospels, he would not be at liberty twenty-four hours. He would first be handcuffed and sent to the pale of settlement by caepe as a Jew, and then, if he continued to teach, he would be rearrested and thrown into prison. If he finally escaped crucifixion at the hands of the holy orthodox church which bears his name, it would be only because crucifixion has been superseded in Russia by exile, incarceration in the "heretic cells" of remote monasteries, and deportation to the mines of the Trans-Baikal!—*George Kennan, in Century*.

A JOYFUL BELIEVER.

The day of the Lord's appearing will be a glorious day for those who are found clothed in the pure robe of Christ's righteousness. It is too common in speaking of the judgment to picture it as a day of unmixed terror—"a God in grandeur, and a world on fire!" and it is true that to the sinner it will be a day of unspeakable horror; but the believer has nothing to fear, but everything to hope from that day. The pardon he obtained by faith at the mercy-seat will then be confirmed by decisions from the judgment-seat. His Brother is his Judge, and therefore he has nothing to fear. He whom he loved above all others now occupies a position above all others, and he will share his glory with his friends. Long ago he prayed: "Father, I will that those whom thou hast given me be with me where I am, that they may behold my glory" (John xvii. 24); and now the prayer is to be fully answered, for body and spirit reunited and glorified, he says to them: "Come, ye blessed of my Father, inherit the kingdom prepared for you from the foundation of the world."—*Robert Boyd, D.D.*

THE DIVINE PRESENCE.

Sometimes there comes to the Christian, in illness or trouble or danger, a sickening sense of disappointment. It seems as if his Lord had failed him. He gropes blindly in the dark and finds nothing. Only terrifying visions fill his mind. But patience; shortly the darkness lifts, and he sees that even what affrighted him was the Lord's coming, only he came in an unusual way. When Christ walked on the sea the disciples "were troubled, saying, It is an apparition; and they cried out for fear."

There is one story continued through the ages. To the three in the fiery furnace, to Daniel in the den of lions, to Stephen dying the martyr's death, to the sisters at the grave of Lazarus, to Mary in the garden, to the disciples walking with sad heart to Emmaus, to all fearful ones on the stormy sea of life, the Lord comes, saying: "Be of good cheer; it is I; be not afraid." Only let us wait till the first shock is past and the vision clears, to see him in the midst of the trouble, "a very present help," not far from any of us.—*New York Observer*.

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A Mountain of Dishes

confronts the average farmer's wife after all the family and the farm hands have dined. They are greasy dishes, too, and hard to get perfectly clean with ordinary soap and water. A good many farmers' wives and other men's wives, too, have discovered that the best, quickest and easiest way to wash dishes is to use

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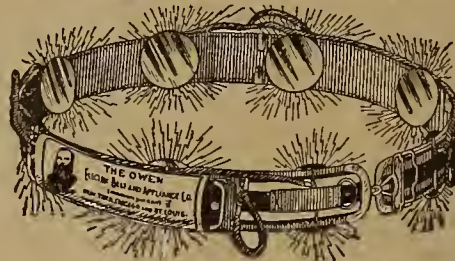
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Queries.

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 inclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Cucumber Pickles.—O. M. H., Delaware, Ohio, asks "how to barrel cucumbers for market."

REPLY:—Simply put the pickles, as soon as gathered, into a brine, using about one bushel of salt to twelve bushels of pickles. Keep the pickles under the surface of the brine by a weighted cover.

Fertilizer for Wheat.—T. L. Worley, West Va., writes: "How would a mixture of two thirds bone-dust and one third wood ashes do for wheat on thin clay soil?"

REPLY:—It will probably give you good results. Unleached hard-wood ashes are rich in potash and contain some phosphoric acid. What the mixture will do on your soil must be determined by experiment.

Treatment of Asparagus-bed.—S. F. D., Yardville, N. J.

REPLY BY JOSEPH:—Weeds should not be allowed to take full possession of the patch, so that mowing will be required. When the patch is once overrun with weeds, however, and there is danger of stocking the whole surface with weed seeds, I think I would rather run the risk of hurting the vitality of the asparagus-plants, to some extent, than letting the weeds grow. Cut them down, and cultivate the whole patch over as soon as possible.

Squash-vine Borer.—C. M. S., Argyle, Fla.

REPLY BY JOSEPH:—The enemy infesting your vines is the common squash-borer. The remedy recommended for it is to examine the vines frequently for the grubs, and cut them out carefully. I prefer to keep them out by the free use of tobacco-dust heaped up around the plants. Spraying with tobacco tea, washings, kerosene emulsion, or perhaps other solutions, freely enough so the liquid will run down the stem, and repeated every few days, will also be quite sure to destroy the eggs and grubs. Layering the joints (covering with damp soil, well firmed) to induce root growth, and thus making the plant independent from the original stem and root, is a good practice. I have frequently saved vines in just this way.

Leaching Wood Ashes.—L. T. S., writes: "Does leaching wood ashes take all the potash and phosphoric acid out of them? If kept perfectly dry, however, can they lose any of their plant-foods by age?"

REPLY BY JOSEPH:—The inquirer desired this reply by mail, and inclosed four cents, glued firmly over the text of the letter, for return postage. Like many others, however, he forgot to give name of his town and state, and now he is wondering why he receives no answer. Leaching removes most, but not all of the potash that is in wood ashes, and a portion only of phosphoric acid. Therefore, leached wood ashes usually contain one per cent, and perhaps more, each of potash and phosphoric acid. Of course, if fresh ashes are stored where they are and remain perfectly dry, they will not lose any of their plant-foods.

Storing Squashes, etc.—R. A. R., Calvert, Texas, writes: "Please state the best method of storing and keeping cushaws and pumpkins."

REPLY BY JOSEPH:—The climatic conditions in Texas are so different from ours that I can hardly give a definite answer, except that the conditions for keeping squashes and pumpkins are pretty much the same as for keeping sweet potatoes. Gather them before touched by frost, and handle as carefully as eggs. Rot will soon start in from every bruise. Don't leave them exposed to cold rains after being detached from the vines. Store in dry quarters, and at first rather warm and airy, so that the stems will dry. This is important, as otherwise rot will start in from the stem-end. Avoid dampness at all times in the rooms where squashes, etc., are stored. It is not necessary to have the temperature nearly down to the freezing-point. It is dampness that burts squashes, not warmth.

Granular Butter in Brine.—I. J. C., Sibley, Iowa, asks for a method of preserving summer butter for winter use.

REPLY:—Stop churning when the butter comes in small granules the size of wheat grains. Add cold water equal in quantity to the cream in the churn. A little salt added will facilitate the separation of the buttermilk from the butter. Agitate the churn a little. Draw off the buttermilk and water. Pour in more cold water, slightly salted, turn the churn a few times, and draw it off. The third washing may be with brine. After the water is drawn off, let the butter drain awhile. For a package take an oak cask previously cleansed and scalded out with brine. Put a layer of salt in the bottom of the cask, with a muslin cloth over it. Fill up the cask with the granular butter. Put a cloth over it, and then a layer of salt. Head up the cask and drive the hoops down tight. Bore a small hole in the head of the cask and through it pour in all the brine the cask will hold. Store it in a cool place. Occasionally add brine until it will take no more. Then plug the hole tight and let the cask remain in a cool place

until you want to sell the butter. It is then taken out and packed in ordinary tubs for market. If it is desired, it may be churned a little in fresh buttermilk, to freshen the flavor. But that is unnecessary, as the brine surrounding each butter granule has excluded the air and retained the original aroma.

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 inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. DETMERS, 1515 Neil Avenue, Columbus, Ohio.

Probably a Windsucker.—A. J. G., Eureka, Mich. Your horse, according to your description, seems to be a so-called windsucker; or, in other words, seems to have reached an advanced stage of crib-biting, in which a point of support is not any more needed.

Heart Disease.—J. T. R., Julian, N. C., writes: "My two-year-old colt, when excited or hurried, has shortness of breath, and his heart beats very fast and hard. His windpipe is very prominent. You can feel the rings on it the entire length. He has no trouble with his breathing when he is quiet or not hurried."

ANSWER:—You describe a very interesting case. My diagnosis would be: Insufficiency of the valves of the heart. If you carefully auscultate the region of the heart, and observe the sounds produced by systole and diastole, you will probably arrive at the same conclusion. No remedy, of course.

A Bad Cut.—F. W. O., Waverly, Florida. If not yet too late, carefully clean the wound, which you say is on one side of your horse's leg, between the hoof and the first joint above; see to it that the exudates, or pus, can be discharged from every point, dress the wound with iodoform and absorbent cotton, and bandage the foot from the hoof upward to above the pastern-joint. Renew dressing and bandage twice a day. If, however, the lateral cartilage of the hoof has become diseased, and a cartilage fistule has been produced, you will find it difficult to effect a healing, unless the treatment is superintended by a competent veterinarian.

Probably a Hernia.—J. C., Carbondale, Ohio, writes: "What ails my cow? The trouble is swelling of the abdomen and enlargement of the veins. The swelling extends nearly all over the belly, but is worse at the back part near the udder. She will be fresh in three months. A hard lump has formed on the right side near the udder, about as large as a pint measure. It came on so suddenly that some thought it a snake bite. She eats heartily and chews her cud."

ANSWER:—What you describe is probably an abdominal hernia, caused by external violence—butting by another cow, or some similar accident. Whether anything can be done will depend upon the size of the hernial opening. If the same is small, a good, sharp liniment—oil of cantharides, for instance—applied a few times, applications to be three days apart, will probably effect a

closing of the hernial opening and consequently a cure. If no cure is effected by the time the cow has to calve, it will be advisable to put at that time a strong bandage around the body of the cow just over the hernia, so that the unavoidable straining will not cause an enlargement of the hernial opening. If it is not a hernia, probably an abscess will develop. If such should prove to be the case, the abscess must be opened and be properly dressed, according to circumstances, as soon as plain fluctuation makes its appearance.

A CHANCE TO MAKE MONEY!

It seems strange that people will not improve their opportunities; they all want to get rich, but have not enough enterprise to succeed. I believe any man or woman can clear \$10 a day in the Dish Washer business, as it is just booming now; but not one in 500 has push enough to enter the field and reap the harvest. I have been in the business over a year, and have cleared over \$20 every day, without canvassing any. I have examined all the Dish Washers, but none equal the Climax. Address the Climax Mfg. Co., Columbus, Ohio, and they will tell you how to proceed, and you can do well in city or country, as every family wants a Climax Dish Washer. When we know of opportunities like this, I think it our duty to inform others, as this is a chance for all to make money honestly and easily. A READER.

I have found your patterns the most satisfactory of any I've ever tried.
MRS. L. R. LAUREN, Topinabee, Mich.

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Our Miscellany.

FOR THE BEST.

Keep on hopin' for the best;
When the sun goes down the west,
You jest wipe your weepin' eyes—
Purty soon you'll see him rise!
Twinklin' through the dark an' dew—
Waru't the suushine made for you?

Keep on hopin' for the best;
When the dark comes, take your rest;
When the mornin' breaks, jest take
All the suushine they can make!
Tbere's a livin' line o' blue
In the stormiest sky for you!

Keep on hopin' for the best;
Pin the roses on your breast!
In the woods the violets blow,
Chirpin' sweet the sparrows go;
By the good Lord all are blest—
Keep on hopin' for the best.

—Atlanta Constitution.

THE product of the wax-tree of the Andes cannot be distinguished from beeswax.

THE Onchidium, a species of shell-less snail (slug), has innumerable eyes on its back.

THE power of herculite, a new explosive, is almost beyond belief. A half pound of it will move thirty tons of stone.

RURAL labor in some regions is so cheap in winter that a farmer with a small crop of grain can have it flailed out cheaper than he can have it threshed by steam.

THE new churches in the new town of Enid, O. T., have no bells yet, and the town fire-bell is rung every Sunday to announce the hour of religious services. This must be very suggestive to sinners.

THE Pacific ocean covers 67,000,000 of the 188,000,000 square miles which compose the earth's surface, and the Atlantic covers 31,000,000 more. Thus these two oceans comprise more than half the area of the globe.

THE population of London is said to be 5,948,300, and increasing at the rate of 105,000 a year. The city, therefore, has a population of about a million and a half more than Scotland and a million more than Ireland.

A NEW project for the sanitation of the sewers of the City of Mexico, at a cost of about \$25,000, calls for the building of some twenty-five windmills in different parts of the city, to rotate paddle-wheels in the sewers and quicken the current to one meter per second.

A FRENCHMAN has constructed an electric walking-stick, of which the knob contains a small electric lamp in a thick glass bulb, the battery being two cells of a peculiar shape down the cane itself. The lamp gives sufficient light to read a newspaper in a train or to light oneself up-stairs at night.

THERE is in New York City a policeman who has managed on pay never exceeding \$1,200 a year, and without opportunity for unlawful gains, to put one son through a famous college and to graduate him in medicine; to get another a commission in the navy, and to send two daughters to one of the best women's colleges.

THE San Franciscans are apprehensive that the commercial supremacy of their city will ere long be challenged by the city of Los Angeles, which is growing rapidly. In the first nine months of this year over nine hundred buildings were put up there, or more than have been put up in San Francisco in any recent year. Los Angeles has also taken away a good deal of the trade of San Francisco.

THERE are a number of new co-operative schemes in the market, which is already overstocked with things of the kind. The most noticeable of these are the Altrurian Colony, at Santa Rosa, California; the Pacific Co-operative Company, at Portland, Oregon; the Single Tax Settlement, at Baldwin, Ala.; the Car-builders' Plant, near Topeka, Kansas; and the Co-operative Farmers, at some place not yet chosen.

SERUM for the treatment of diphtheria has been obtained so far in France from old hack horses. The French government now proposes to give the Pasteur Institute the first choice in the selection of horses condemned as no longer fit for the French cavalry service. It takes from six to eighteen mouths to prepare a horse to furnish the serum used in the latest cure for diphtheria.

SOME of the forty or fifty state agricultural colleges make special provision for students wishing to work their way through college. Such students work daily on the experimental college farm and receive current wages. There are many free scholarships in these colleges, and board and lodging are cheap, so that a working student finds that his labor goes far toward paying his way. Tutoring pays better, however, and very clever men sometimes earn from \$1,000 to \$1,500 per year in helping through their duller fellows. Such opportunities, however, are found only in the great colleges, and are few. At one of these institutions one successful young lawyer of New York City is said to have earned \$2,000 in a single year tutoring while yet an undergraduate.

I think your patterns far superior to any I have ever used. Am delighted with them, and so are my neighbors.

METTIE LEWIS, Camden-on-Gauley, W. Va.

AGRICULTURAL PROGRESS.

"It would be possible to-day to put logs of wood into one end of a factory and to take out from the other end a printed book, stitched and ready for the covers, without a single human hand touching the fabric of the paper from the beginning to the end of the process." So writes Edward Atkinson, in "The United States of America." He is discussing the progress of the industrial arts, and looking forward to what we may expect to see at the next universal exposition. Of progress in the most primitive of all civilized industries—the cultivation of the soil—he says:

"The beginning of civilization has sometimes been fixed at the date, whenever it may have been, when man first set apart a lot of land, fenced it in or appropriated it, and then applied the force of a domesticated animal to his aid in the production of food. One can imagine how it was at the very beginning, when some one barnessed a bullock to a pointed stick, attached by a cord to the horns, beginning to plow.

"That primitive method of plowing still survives in some parts of the world. The fellahs of Egypt could be brought to an exposition, who still make use of the appliances of agriculture that are pictured upon the walls of the pyramids, and from the pointed stick, which may be taken as an example of the beginning of civilization itself, the whole development of the mechanism of agriculture could be brought before the eye in one building.

"The last example might be a great, combined machine that has been applied by its inventor in the valley of the San Joaquin river, of California, to the production of wheat. By means of this mechanism the wheat-field is plowed, harrowed, seeded and rolled down in a single process. In the autumn the plows are detached and a harvester worked by the same steam-power is substituted—threshing, winnowing and putting the wheat into bags in a single operation.

"The cost of the labor of man which is applied to the direction of this mechanism is less than one dollar an acre in each year. The whole cost of the labor, aside from the maintenance of the capital, is less than four cents on a bushel of wheat. The product for three hundred days' labor of one man, corresponding to a year's work, has been in some seasons over 1,500 bushels.

"The wheat is carried to the seaboard, loaded upon steamships and moved to London to feed the hungry workmen of Great Britain, whose customary loaf, called the quarter loaf, weighs four pounds. There is no coin in existence in Great Britain small enough to stand as a symbol of the labor cost—the proportionate part of the wages paid in California—of producing wheat enough for that quarter loaf. There is but one coin in use in Great Britain, and that is seldom seen—the farthing—which would represent the cost of moving the wheat required for each quarter loaf from the field in California half way around the globe to the market in London.

A LITTLE OF THE BEST.

Verses are the potent charms we use
Heroic thought and virtue to infuse.

A house well built of first-class brick will outlast one constructed of granite.

The 250,000 Indians of the United States hold 90,000,000 acres of land, exclusive of Alaska.

The love for one, from which there doth not spring wide love for all, is but a worthless thing.—Lowell.

Lieberkahn estimates that the extent of respiratory surface in the human lungs is not less than 1,400 square feet.

Measurements of human hair prove that its fineness depends much on color, and that it varies from the 250th to the 600th part of an inch in diameter.

A little boy, on returning from Sunday-school, said to his mother: "This catechism is too hard. Isn't there any kittychisms for little boys?"—*Tu-Bits*.

"What do you do with your corn?" he said
To the hard-worked farmer man.
"We eat what we can," the toiler replied,
"And what we can't eat we can."

—Arkansas Traveler.

The name "Sample Room" for a saloon long ago gave place to "Cafe," but a Pittsburg purveyor of ardent beverages advertises his establishment as "Thirst Parlors."

I once heard an old lady remark, "I like to see a man think a good deal of his home, but when he has to stay out all night to brag about how happy a home he has, it is almost carrying affection too far."

It is important to place small particles of camphor gum with your new silverware, to prevent it from tarnishing. It is important to see that the silver is never washed in soap-suds, as this will give it the white appearance so very undesirable.

But oh! my gentle sisters, oh! my brothers,
These thick-sown snow-flakes tell of toil's release;

These feebler pulses bid me leave to others
The tasks once welcome—evening asks for peace.

Time claims its tribute; silence now is golden;
Let me not vex the too long suffering lyre;
Though to your love untiring still beholden,
The curfew tells me—cover up the fire.

—Oliver Wendell Holmes.

IRON FILINGS AS A FERTILIZER.

G. W. Prescott, of Higbland, who took the medal for the best box of packed oranges at the late state citrus fair, has been experimenting with iron filings in his young orchard. Being master mechanic of the Santa Fe system in southern California at San Bernardino, he knew more about iron filings than he did about guano or any other fertilizer, and knowing that a certain amount of iron in the soil was essential to a healthy growth of the tree and the production of fruit, he put five pounds of this material around each tree, and as a result he has a highly colored orange, where before he had a pale colored fruit. The cost is insignificant. A thousand trees on ten acres will require 5,000 pounds of filings, which cost \$4 per ton—\$10 for the ten-acre orchard. Of course, this application of iron is not intended to supersede all other fertilizers, but simply to supplement them in order to give a good color to the fruit and enable the grower to put an attractive orange on the market, and incidentally to assist him occasionally in winning a gold medal. The railroad shops at San Bernardino can furnish one ton per day of this material, and other shops can also assist in supplying the demand.—*California Producer*.

A REMEDY AGAINST FLIES.

"I never use window-screens," said a wise housekeeper the other day, "because I have a fancy that they shut out all the air in hot weather, and beside, they serve to keep the flies in the house equally as well as to keep them out."

"But I never see a fly in your house," said her friend. "How do you manage it? For my part, I must confess that screens or no screens, my summer measas to me one long battle with the little pests."

"My remedy is a very simple one," said the good housekeeper, "and I learned it years ago from my grandmother, when I used to watch her putting bunches of lavender flowers around to keep the flies away. My method is simpler. I buy five cents' worth of oil of lavender at the drug-store and mix it with the same quantity of water. Then I put it in a common glass atomizer and spray it around the rooms wherever flies are apt to congregate, especially in the dining-room, where I sprinkle it plentifully over the table-linen. The odor is especially disagreeable to flies, and they will never venture in its neighborhood, though to most people it has a peculiarly fresh and grateful smell."

"I shall certainly give it a trial," said the other woman.—*Philadelphia Press*.

HOW THEY SHOOT THE NILE RAPIDS.

Arab boys are expert swimmers, and, like boys in general, are fond of displaying their skill before strangers if only they are rewarded by some small coin. Mr. Eden tells how they shoot the rapids of the Nile.

Seating themselves astride of a log of wood about six feet long and buoyant enough to support them waist high out of the water, they ride it with the seat and gesture of a jockey, and with both hands and feet keep it straight with the line of the current.

The fall is shot with an ease and grace that does away with the sense of danger one would expect to feel at seeing a man hurried along amid such a boil and turmoil of waters, but once at the bottom they have a hard struggle to induce their horses to turn out of their course. To do this, they avail themselves of the impetus acquired by the log in its shoot, and throwing themselves full length upon it they seem, with a sudden stroke from the left leg and arm, to drive it and themselves out of the current.

To fall in this would be dangerous even to Arab swimmers. Immediately below lie the ugly rocks, on which the heavy stream breaks with fearful violence.—*Family Magazine*.

THE SUFFERING OF SUSPENSE.

Wabash—"How is your wife this morning, Parlezvous?"

Parlezvous—"Oh, moche ze sem; maybe leedle verse. I am so unhappy! Eef she die I shall be settle in ze miud. Ze suspense is terrifique."—*Truth*.

EVERY day there is made in the United States one glass of beer for every man, woman and child in the country.

MERCER county farmers have gone into the business of extracting poison from bees. The venom is said to be a remedy for rheumatism, ague and dropsy.

THE SEA-SHELL.

"Listen, darling, and tell me
What the murmur says to thee,
Murmuring 'twixt a song and a moan
Changing neither tune nor tone."

"Yes, I bear it—far and faint,
Like thin-drawn prayer of drowsy saint;
Like the falling of sleep on a weary brain,
When the fevered heart is quiet again."

"By smiling lips and fixed eye,
You are hearing more than song or sigh;
The wrinkled thing has curious ways—
I want to know what words it says."

"I hear a wind on a boatless main
Sigh like the last of a vanishing pain;
On the dreaming waters dreams the moon,
But I hear no words in the murmured tune."

"If it does not say that I love thee well,
'Tis a senseless, ill-curved, worn-out shell;
If it is not of love, why sigh or sing?
'Tis a common, mechanical, useless thing."

"It whispers of love—'tis a prophet shell—
Of a peace that comes and all shall be well;
It speaks not a word of your love to me,
But it tells me to love you eternally."

—George MacDonald.

OUT OF THE ORDINARY.

In France it is against the law for pharmacists to give medical advice.

According to English insanity returns, sixteen cases in 1,000 are caused by love affairs.

A laughing-plant grows in Arabia. It obtains its name from the effects produced by eating its seeds.

An average of 3,000 umbrellas are constantly in the lost-parcel office of the New York elevated railroad.

A house which has recently been built in Boston possesses no closets, the architect having forgotten them.

A skeleton of an extinct animal has been unearthed in Shelbyville, Cal., which has both horns and tusks.

A patent has just been taken out for glasses and mugs with a quicksilver thermometer, in order to enable the drinker to determine which temperature of the liquid will be most agreeable to his taste and most beneficial to his health.

SOLEMN TRUTH.

One business man met another on the street. The second man seemed downcast, and had a look as if he were ashamed of himself.

"What is the matter?" asked the first man. "Well, to put it briefly," said the other, "I have been speculating in stocks."

"Indeed? Were you a bull or a bear?"

"Neither; I was an ass."

HOW SOUND TRAVELS.

In day air at ninety-two degrees, sound travels 1,142 feet per second, or about 775 miles per hour; in water, 4,900 feet per second; in iron, 17,500 feet per second; in copper, 10,378 feet per second; and in wood, from 12,000 to 16,000 feet per second.

SHEEP ranchers in many parts of Oregon and other northwestern regions are getting discouraged over the decreasing value of sheep and the increasing value of land, and at a recent meeting of ranchers in Oregon it was suggested that they should drop sheep and go in for raising coyotes. Coyote scalps are worth \$6 each, while sheep are worth anywhere from \$2.50 down. Then a ewe will raise only one or two lambs in a season, but a coyote will easily raise a family of five or seven. The arithmetic and logic of the matter are easy.

The attention of our readers is invited to the advertisement of B. H. Kirk & Co., 172 Washington St., Chicago, in this issue. This firm makes a big reduction in the price of their 15 jeweled Elgin and Waltham watches to start a rapid movement for turning a large stock into cash. Note their advertisement, and write them for additional particulars, but be sure and mention this paper when you write.

CRIMSON CLOVER

SEED THAT GROWS.

New crop. American grown. Tested Seed, 50 lbs., \$3.65; 25 lbs., \$2.00; 10 lbs., 90c., including bags.

VAUGHAN'S SEED STORE,

NEW YORK, 26 Barclay St., CHICAGO, 34 and 36 Randolph St.
SEND FOR PRICE LIST. TURNIP SEED, Etc.

FOR SALE

\$100 BICYCLE FOR \$75

We have left one new bicycle which we will close out at a bargain. It has diamond steel frame, steel tangent spokes, 28-inch wheels with wood rims and single tube pneumatic tire; ball bearings throughout; full set of tools, etc., etc. Weight, twenty-seven pounds. Manufactured by the Hickory Wheel Co., which is a branch of the Pope Co., thus insuring a high-grade wheel in every particular.

SHIPPING DIRECTIONS.—The wheel will be shipped by express, C. O. D. sixty-five dollars, if ten dollars is sent with the order, to cover express charges both ways, in case it is not accepted; or if full amount, seventy-five dollars, is sent with the order, the wheel will be sent by express, charges paid by us.

Address FARM AND FIRESIDE, Springfield, Ohio.

Smiles.

A BROKEN HEART.

I.

A little china figure
On a little bracket sat,
His little feet were always crossed,
He wore a little hat.

II.

She took him up so gently,
And with such a charming air
His china soul was melted quite,
And loved her to despair.

III.

One day, whilst being dusted,
In his joy he trembled so,
To feel her little fingers, that,
Alas! she let him go.

IV.

She gathered up his fragments,
And she told a little lie,
Expounding to her mistress how
The cat had made him die.

THE ROOF SAVED HIM.

The IRISHMAN who went up in
the hotel lift without
knowing what it was, did
not easily get over his sur-
prise. He tells the story in
this way:

"I went to the hotel, and says I, 'Is Mr.
Smith in?'"
" Says the man with the sojer cap, 'Will yer
step in?'"

"So I steps into the office, and all of a sud-
dint he pulls a rope, and the walls of the
building began running down to the cellar.

"Ocb, murther," says I, 'what'll become of
Bridget and the childer which was left below
there?'"

"Sez he, 'Be aisy, sor, they'll be all right
when yez come down.'"

"Come down, is it," says I, 'and it's no office,
but a heathenish balloon that yez have got me
into.'"

"And wid that the walls stood stock still,
and he opened the door, and there was I with
the roof just over my head, and, begorra,
that's what saved me from going up to the
hivins entiorely."

SAFER THAN LIGHTNING-RODS.

Each day adds some new virtues to the long
list of those already credited to the pneumatic.
The latest of these is that the wheels of a
bicycle, being encircled by a band of india-
rubber and dry air—which is a perfect insula-
tor—the rider is completely insulated from the
earth, and consequently is impervious to the
attacks of the electric fluid. Thus, day by
day it becomes more and more a fact that life
without a pneumatic tire is neither safe nor
worth having. Any one who suffers from
nervousness during a thunder-shower has
now only to go into a barn or the cellar and
seat himself upon the saddle of a pneumatic-
tired bicycle to be perfectly safe from light-
ning stroke. As the chances of a man on a
bicycle being struck by lightning have been
carefully calculated to be about one in a
billion, the Wheel adds, "There will, of course,
be some pessimists who will deny that this
newly discovered virtue of the pneumatic as
a lightning insulator amounts to very much."

MOTHER'S LITTLE BIRD.

"Mana," said a bright-eyed little hoy of
three or four years of age to his mother the
other day, "I can't make out how you find out
things about me. Why, I never do anything
at all without your finding it out. How is it
done?"

"Ah!" replied the mother, "you see how very
hard it is to conceal anything from mama,
especially when mana has a little bird that
watches and whispers when anything is going
on."

To this remark Johnny made no reply, but
later on in the day his mother observed him
busily engaged in the garden with a few
bricks and an old tile.

"What are you going to do, Johnny?" she
inquired.

"Make a bird-trap," replied the young hope-
ful. "If I can't catch the one that's been do-
ing this whispering, my name isn't Johnny."

A DESERVED COMPLIMENT.

DeGozzom—"Miss Freschoe's face is as
pretty as a picture."
Miss Ehrwyus—"It is a picture, hand-
painted. She did it herself."

A HEALTH RESORT VARN.

An epitaph is rather to be believed than a
summer resort advertisement, says the Golden
Rule, yet what both lack in truthfulness they
sometimes make up in interest. The pheno-
menally healthy nature of Lynton, in
Devon, England, may, or may not, be under-
stood from the following story, which is
quoted in one of our exchanges:

"Recently a visitor began to talk to an old
man at Lynton, and asked him his age, where-
upon he said, 'I am just over seventy.'"

"Well," said the visitor, 'you look as if you
had a good many years to live yet. At what
age did your father die?'"

"Father dead?" said the man, looking sur-
prised. 'Father isn't dead; he's up-stairs put-
ting grandfather to bed!'"

CALLED.

"Mr. Sorghum," said the senator's wife,
"when you were elected, you said that you
felt that your country had called you."

"Did I?"

"Undoubtedly. How do you feel about it
now?"

"The same as ever. I still feel that my
country has called me—down."—Washington
Star.

A NEW DEFINITION.

Tommy—"Paw, what is an egotist?"

Mr. Figg—"He is the man who thinks he is
smarter than any one else."

Mrs. Figg—"My dear, you have that wrong.
The egotist is the man who says he is smarter
than any one else. All men think that way."

—Indianapolis Journal.

BOSTON GIRLS DON'T TALK ABOUT THEIR
NEIGHBORS.

Miss Lakeside—"Look at that old man with
the bald head."

Miss Beacon Street—"How vulgar, my dear!
You should say, 'Observe that senescent gen-
tleman with the decollete hang!'"—Philadel-
phia Record.

WORLDLY HAPPINESS.

The owner of a German menagerie keeps
caged together a lion, a tiger, a wolf and a
lamb, which he labels "the happy family."
When asked confidentially how long these
animals had lived together, he answered,
"Ten months, but the lamb has to be renewed
occasionally."

A NEGLECTED FIELD.

Ruyter—"I am at work on a new dialect
story."

Schreiber—"Is that so? What dialect are
you using?"

Ruyter—"That which is spoken by the
American college students."—Vogue.

A GENTLE HINT.

The bashful suitor—"May I kiss yo' cheek?"

The coy maiden—"Ef yo' do I'll scream."

The bashful suitor—"Oh, sho!"

The coy maiden—"But don't yo' dar' to kiss
me on de mouf, yo' hateful thing, so's I kain't
scream."—Judge.

A CHANGE.

Jolliman (coming on a visit)—"Hello, Biggs,
old man! How's the old woman?"

Biggs (despondently)—"Sh! Not so loud.
She's a new woman now."—Puck.

DO YOU WANT TO STOP TOBACCO?

YOU CAN BE CURED WHILE USING IT.

The habit of using tobacco grows on a man
until grave diseased conditions are produced.
Tobacco causes cancer of the mouth and
stomach; dyspepsia; loss of memory; nervous
affections; congestion of the retina, and
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In those old days of the lost sunshine
Of youth—when the Saturday's chores were
through,
And the "Sunday's wood" in the kitchen, too,
And we went visiting, "me and you,"
Out to Old Aunt Mary's?

We cross the pasture, and through the wood
Where the old gray snag of the poplar stood,
Where the hammering "red-heads" hopped awry,
And the buzzard "raised" in the "clearing" sky
And lolled and circled as we went by
Out to Old Aunt Mary's.

It all comes back so clear to-day!
Though I am as bald as you are gray—
Out by the barn-lot and down the lane,
We patter along in the dust again,
As light as the tips of the drops of the rain,
Out to Old Aunt Mary's!

And then in the dust of the road again;
And the teams we met, and the countrymen;
And the long highway, with sunshine spread
As thick as butter on country bread,
Our cares behind and our hearts ahead
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| Shakspere, | Coleridge, | Shelley, | Hood, |
| Keats, | And many others. | | |

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As poetry is the *cream of literature*, and as *this* is the cream of poetry, this magnificent work may properly be called diamonds of thought in settings of gold. Fine pictures of some of the most popular poets are also given.



Why, I see her now in the open door,
Where the little gourds grew up the sides and o'er
The clapboard roof! And her face—ah, me!
Wasn't it good for a boy to see—
And wasn't it good for a boy to be
Out to Old Aunt Mary's?

And, O my brother, so far away,
This is to tell you she waits to-day
To welcome us—Aunt Mary fell
Asleep this morning, whispering, "Tell
The boys to come!" And all is well
Out to Old Aunt Mary's.

JAMES WHITCOMB RILEY.

The above is an illustration and poem from "Gems from the Poets." Many of the poems are long ones, occupying one, two and three pages, while a great number of the pictures cover a whole page. In the book they are printed on much finer paper, and are a great deal more beautiful than the above picture shows. Each page is 7 1/4 inches wide and 10 inches long.

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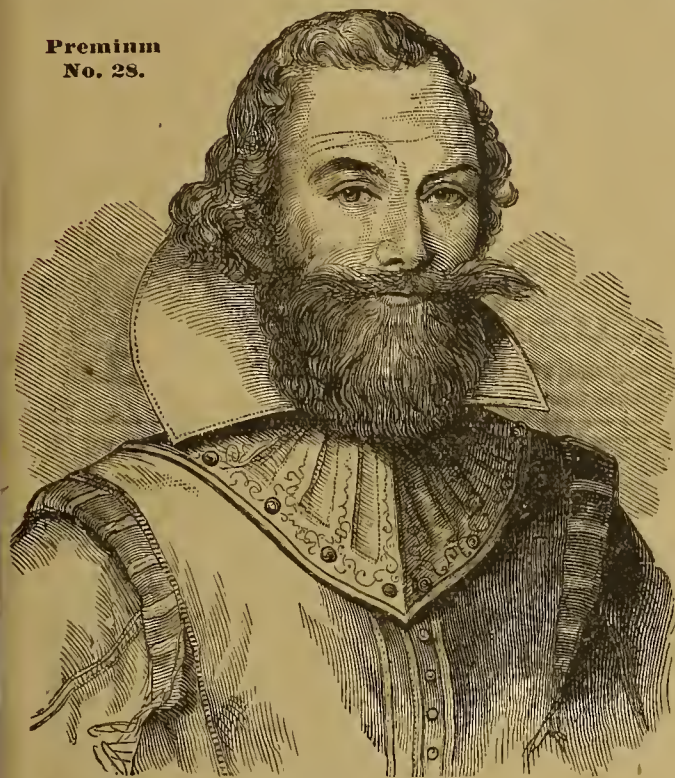
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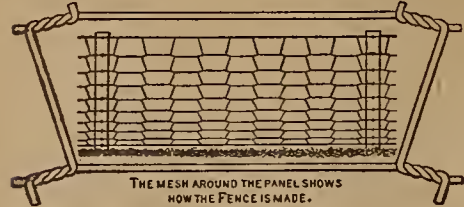
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VOL. XVIII. NO. 22.

AUGUST 15, 1895.

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confidence and credit, and the result would be the withdrawal of 97½ per cent of our entire currency, and the paralysis of business would immediately follow. Banks would be raided by their depositors. Creditors would seek to enforce their debts before the reduction of the standard to the silver basis. No extension of debts would be given to anybody except where made payable in gold at increased rates of interest. Long-time debts are in gold. The amount to be paid on them would not be reduced. Indebtedness not payable in gold would be collected at once, or the property owned by debtors taken from them. Merchants would fail, manufactories close, workmen be idle, farm products without a market, and poverty and distress be found on all sides.

"I do not believe that a president would ever approve such legislation if elected upon a platform with a Congress pledged to pass it. The calamitous effects following such an election would bring to them the prayers of the very men who elected them, appealing for the defeat of such legislation. But if such a law should pass it would not be until the latter part of 1897. Then a general adjustment to the new standard would be necessary. Prices being temporarily reduced on account of the panic, it would be some months before the actual effect could be told and the real value of 412½ grains of silver be determined. During this time business would stagnate on account of the uncertainty as to what was the real size of the new measure—the new standard of value. This trouble would more or less affect business permanently because the commercial value of silver bullion has become uncertain, has ceased to be stationary, on account of the few countries now using it as a standard money, and on account of the uncertainty as to the volume of its probable production.

"The picture is not overdrawn. When I contemplate it, there is but one source of comfort—it is an abiding confidence that with twelve months of full, free discussion the American people can be relied upon to overwhelmingly defeat any party which proposes to bring such disasters upon us."

Instead of free silver at 16 to 1, which means silver monometallism, a contraction of the currency and a temporary and permanent injury to business, which has been described, the secretary urged the necessity for a sound currency consisting of gold, silver and paper, but every dollar kept as good as any other dollar. This would allow the coinage of all silver which could be held at an equal exchangeable value with gold.

THE following figures of wool production in the United States are given by the Philadelphia firm of Justice, Bateman & Co., extensive buyers of wool from all parts of the country:

	Pounds of wool.
1890.....	309,000,000
1891.....	307,000,000
1892.....	330,000,000
1893.....	364,000,000
1894.....	328,000,000
1895.....	264,000,000

According to these figures, the production of wool in this country declined from 1893 to 1895 one hundred million pounds, over 27 per cent. As American wool pro-

duction is declining more rapidly than production is increasing in other countries, the world prices of wool are now rising. Foreign wool growers are profiting by the sacrifice of sheep in the United States and rejoicing in free access to our markets.

Although Texas has the largest number of sheep, Ohio leads all the other states of the Union in the production of scoured, or clean, wool. The condition of the sheep industry in Ohio illustrates the condition of the industry in the whole country. From 1894 to 1895 the number of sheep in Ohio decreased nearly one half million, or one sixth the number in the state one year ago. During the current year, over two hundred million pounds of wool will be imported, and American gold must go abroad to pay for it.

NEW interest seems to be centering about the good-roads movement. Probably this is due in some measure to the fact that bicycles are coming more and more into use. It is only a question of time until every public thoroughfare of any importance will be constructed, first, with a view to making it passable for bicycles and rubber-tired carriages, which are being introduced in every part of the country. Already, in some cities, more capital is invested in bicycles than in carriages or wagons, and the young men and women of the country are taking unto themselves wheels.

Another thing which will have considerable influence on the roads of the country is the branching out of the electric lines. These electric railways, which in a few years will connect the important towns of the country, will carry a great deal of the farmers' produce into the towns, so that there will not then be the same occasion for heavy traffic that there is now.

Any one who has traveled abroad knows the pleasure which comes to the wheelman, as he travels over the compact and evenly constructed roads of England and the Continent. While they are immeasurably behind us in everything which pertains to agriculture, they do have splendid roads.

You know the German people as a nation are very thrifty. They don't allow much waste in any quarter. Along their public highways are planted different varieties of fruit-trees—pears, apples, plums, etc.—grown in one or two rows on each side of the road. How beautiful those roads are! The trees produce shade, which takes away that glitter and glare, as well as softens the heat, which make our gravel roads very disagreeable to travel on during the hot months.

In many quarters of our country maple or walnuts have been planted for miles along the public roads, and how welcome such a stretch of road is to the traveler, and how inviting it must be to the hot and weary horse. If it were only for the shade, trees should be planted along every main highway. But wherever we can combine utility with beauty and comfort we should do it, so why not plant the more thrifty fruit-trees along our public roads?

IT is claimed that this year's corn crop will be the largest ever grown in the United States. Conservative estimates place the yield at two and one half billion bushels. At only thirty-five cents a bushel the money value of this one magnificent crop of grain would be \$875,000,000, a sum larger than the public debt of the United States. But the grain is only one half the food value of the corn-plant. The fodder, if all saved and utilized as food for farm stock, would return as much money as the grain. This would make the total value of this year's corn crop \$1,750,000,000, a sum more than \$100,000,000 greater than the stock of money in circulation in the United States. But of the fodder part of this great crop it is safe to say that not more than one fourth will be utilized. Over \$600,000,000 worth of food for farm stock will go to waste.

Every acre of corn fodder used on the farm will release at least two tons of hay for market. It is worth, therefore, what the two tons of hay will bring in market. The short crop and high price of hay will force attention to the enormous waste of stock food, and cause more corn fodder to be used on the farm this year than ever before.

IT is not a wise thing to predict future high prices for any farm product and advise growers to hold their crops. But the actual condition of the wheat crop in this and other wheat-exporting countries certainly justifies calling attention to the probability of higher prices. According to the most reliable estimates of the world's wheat crop for 1895, present prices are lower than they ought to be. It is the customary thing for buyers of wheat to use every means to keep the price down until the bulk of the crop passes into their hands. As many growers are obliged to sell as soon as the crop is threshed, there is always a rush of wheat to market at this season of the year. Large receipts favor the buyers, and are used as a lever to force prices down. The present situation is certainly in favor of the farmer who can hold his wheat until the usual after-harvest rush to market is over. There is hardly a possibility that future prices will be lower than present, and every probability that they will be higher.

SECRETARY MORTON has abolished free seed distribution. The free seed bureau of the Agricultural Department passed out of the useful stage of existence years ago, but congressmen were reluctant to give up the privilege of sending their rural constituents packages of free seeds, and refused to make a reform demanded by the times. Although the law providing for free seed distribution still remains, Secretary Morton has abolished the whole business by requiring the law to be fulfilled to the letter. First he procured an opinion from Attorney-general Olney that under the law he was authorized to purchase only such seeds as are "rare and uncommon to the country, or such as can be made more profitable by frequent change from one part of the country to the other." When the bids for furnishing the department with seeds were opened, it was found that they did not come up to the requirements of the law, and they were all rejected. Consequently, the department now has no seed for free distribution.



IN his series of addresses on finance in Georgia, Secretary Hoke Smith discussed the proposition for the free, unlimited, independent coinage of silver at the ratio of 16 to 1. Quoting the language of another, he said: "I oppose this proposed legislation because I favor all its professed objects and oppose all of its real effects."

Describing its real effects, he said: "Free coinage at the ratio of 16 to 1 means the use of no coin but silver; a new standard of measure equal in value to the present commercial value of the bullion now put into the silver dollar; a new dollar worth approximately half as much as the present dollar, and the measure of all values by this new standard.

"The immediate effect of the election of a president committed to such a policy would be the separation of the gold and silver dollar, the gold dollar going to a premium of about two for one. We would lose at once \$678,000,000 of gold now in circulation and in the treasury. The greenbacks and treasury notes, \$375,000,000, which would still remain outstanding, would be hoarded in the hope that a free-silver bill, if passed at all, would soon be repealed. This would take place immediately after the election of a president in November, 1896, and probably even after the nomination by either of the great parties of a free-silver candidate. The new president could not be inaugurated until March 4, 1897. During the six months or more before it would be possible to pass free-silver legislation, the contraction of the currency just described would precipitate the most serious consequences. Those owning gold obligations would put a strain upon the remaining silver currency and bank notes to buy gold to meet their gold obligations. The currency, consisting of checks and bills of exchange amounting to 95 per cent of our entire currency, would go out of use in consequence of loss of

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Postage-stamps will be received in payment for subscriptions in sums less than one dollar, if for every 25 cents in stamps you add one-cent stamp extra, because we must sell postage-stamps at a loss.

The date on the "yellow label" shows the time to which each subscriber has paid. Thus: 1Jan96, means that the subscription is paid up to January 1, 1896; 15Feb96, to February 15, 1896, and so on.

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When renewing your subscription, do not fail to say it is a renewal. If all our subscribers will do this, a great deal of trouble will be avoided. Also give your name and initials just as now on the yellow address label; don't change it to some other member of the family; if the paper is now coming in your wife's name, sign her name, just as it is on label, to your letter of renewal. Always name your post-office.

FARM AND FIRESIDE,
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.

The following letter fully explains itself, and we advise those seeking information on alfalfa culture to avail themselves of the opportunity to get it so kindly furnished by Mr. Irish:

EDITOR FARM AND FIRESIDE—Dear Sir.—Applications for the pamphlet, "Alfalfa: How and Where to Grow It," have been so numerous that the supply is exhausted; but if any farmer desirous of cultivating the plant will send me a description of his farm, its general slope, character of the soil, distance from the surface to the ground-water below, etc., I shall be glad to give him by letter such information and advice as will insure his success.

Yours very truly,
CHAS. W. IRISH,
Chief of Irrigation Inquiry, United States Department of Agriculture.
Washington, D. C.

The following interesting article on the area of land devoted to fruit culture in the United States is from *Green's Fruit Grower*:

"While there is so much said about the extent of fruit culture in this country, my opinion is that the reader will be surprised to learn how small is the proportion of American soil devoted to this industry. In order to give a faint idea, I have drawn a map, which is here given, in which I have attempted to mark the area of land in the United States devoted to fruit culture, as well as to the leading staples, waste land, etc. I have not attempted to be exact, knowing that it was practically impossible to arrive at any absolute data on the subject. In constructing this map I find it difficult to mark a strip sufficiently small to indicate the territory devoted to fruit culture. The strip shown on the map as that devoted to fruits is too large, but it is the nearest approach that the artist could construct.

Our readers will be surprised at the extent of waste land, as shown in space marked No. 1 on the map, and yet there is no doubt that as large a proportion of the United States is covered by forests, mountains, desert, swamps, rocky and other lands which come under the head of waste land, although forests are not properly such.

No. 2 is devoted to the various spring crops, such as oats, barley, flax, buck-wheat, and other crops than those named on the map.

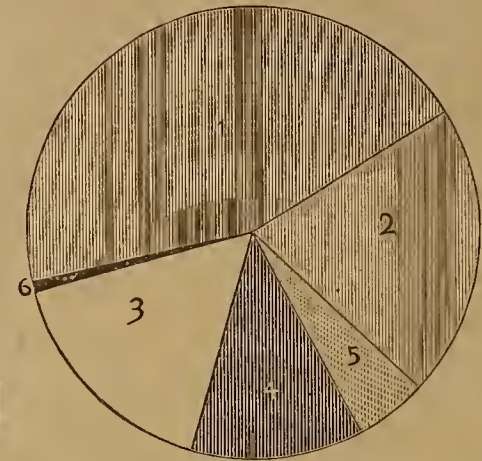
No. 3 is intended to indicate the proportion of land devoted to wheat culture. While wheat is considered our leading staple, corn very closely rivals it, if indeed the corn crop should not prove to be quite as valuable as the wheat crop.

No. 4 is intended to represent the amount

of land in this country devoted to corn growing. One reason why corn does not figure so extensively in our statistician's reports is that so large a quantity is consumed on the farm.

No. 5 represents the amount of land in the United States devoted to growing cotton. I suspect that possibly too much territory is allotted to this staple.

The smallest division of all (No. 6), the dark space, is intended to represent the



LAND DEVOTED TO FRUIT CULTURE IN THE UNITED STATES.

amount of land in the United States devoted to fruit culture. This shows at a glance that fruit culture in this country is in its infancy, for surely a land famous the world over for its success in every line of fruit culture, both north and south, east and west, the amount of land occupied by that industry is insignificant. It will need no prophet to foretell that in the years to come a much larger area in this country is to be devoted to fruit. But you ask, What are we to do with it? My reply is, that in the first place our population is increasing largely, and this will be one avenue for consumption; in the second place, our people will be led to consume much larger quantities as prices get within their reach; in the third place, we will adopt methods of canning and preserving not now known or not now practiced, by which our fruits can be consumed in every country of the world. At present the United States is supplied with dried fruits, such as raisins, figs, currants, prunes, largely from other countries. We are also importing largely, lemons, oranges, pine-apples, bananas and other tropical fruits."

The accompanying illustration shows a very convenient form of ladder for gathering fruit. It may be made of any desired length.



The supports hinged at B shut closely against the sides when desired.

NOTES ON RURAL AFFAIRS.

Bee-keeping as a Missed Opportunity. Undoubtedly there are many among my readers just like me in this respect; that is, they like good honey, but do not enjoy contact with the bee's business end. I have had large numbers of colonies of bees right under my eye for many years, have learned the most successful ways of managing them, but being afraid of the little busy-body, with its sharp and fiery-pointed ways, I had never gotten beyond the simple operation of hiving a swarm, in practice. One July day, a few years ago, a swarm of bees lit in one of the maples in the street in front of my dwelling-house. As there was nobody about ready or willing to hive

the swarm, I felt morally bound to do it myself. I got an old, unused box-hive from a neighbor, and with the help of my long section ladder and a wash-line used as pulley rope, I managed to get the five-swarm from its rather elevated position in the maple top to the ground and into the hive. The latter at night was placed behind the barn, and there it stood unattended for years, of no benefit to anybody, and considered of little value. When it swarmed, the swarm either left for parts unknown or was captured by neighbors.

Bee-keeping for Farmers. There are thousands of farmers all over this country who are the possessors

—by no means proud—of a few stands of bees, and who reap just about as much benefit from this valuable property as I did until this spring. At the same time, every good colony of bees could be made to yield an annual income of \$5, more or less, and this with very little trouble; in fact, with less trouble than it would require to raise the same amount of money from any other farm stock. Can we afford to let such an opportunity go by unused? There is a place for a few stands of bees on almost every farm, and perhaps on every rural home, no matter how modest or limited in acreage. The few dollars for honey, or the honey itself on the table saving sugar, butter, etc., and affording such an excellent, enjoyable and wholesome article of diet, will come very acceptable in these times of low prices. I was very much impressed with this idea when I saw one of my neighbors (a young man, by no means a professional bee-keeper, and who, just having begun housekeeping, has only two colonies of bees) take off a crate of fine honey from one of the hives, with another almost ready to come off from the second hive. When we had some of that honey, sent to us as a present and sample, on our table, and I thought of my own neglected colony of bees, I felt ashamed of myself, but enjoyed the honey just the same.

Modern Hives. Of course, you cannot expect to raise good, salable honey, and plenty of it, in the old, clumsy box-hives. It is useless to undertake it. If you cannot make or buy improved hives (and they can be had cheap enough now), you might as well let bees alone, and let other people have benefits which you might have enjoyed very easily yourself. Hive your young swarm in one of the modern hives, and you can put on the surplus-cases at any time when you think they are needed. With the exercise of a little care there is no more need of being stung in this work than of being bitten by a mad-dog. Modern hives, of course, have movable frames. These are calculated to give to the bee-keeper a chance to examine the combs, the general condition of the colony, and perhaps to change queens, cut out queen-cells, extract honey, and so forth. I do not expect that an ordinary farmer, who is not also a professional bee-keeper, will undertake to engage in any such jobs. Nor is there any need of it. The frames can be wedged in so as to be tight and stationary, yet in shape for taking apart for the purposes of examination and manipulation should they ever be desired.

A Rude Transfer. The great trouble with my colony of bees was the fact of their being in a common box-hive. I did not know what to do with them, there being no chance of putting on a modern surplus-case, and I afraid of taking a great deal of liberties with the hive. But something had to be done, and I resolved to do it at all hazards. I got some modern hives, surplus-cases all ready to go on, a bee-smoker and a bee-veil. With the smoker you can keep the bees in subjection. The veil, covering head, especially face and ears, gives confidence.

My first step was to set the old hive, open at the bottom, upon the new one, open at the top, in order to give the bees a free connection between the two hives. The new hive was set close to the old one, and in the evening I lifted the old hive (and a heavy lift it was) off the bottom board, and set it upon the other, after removing cover and honey-board from the latter. The space at the back not covered by the old hive was then closed up with a piece of board. A few days later the bees had become used to their new location and enlarged opportunities, and had begun to work in the new hive. So one nice

day I lit the smoker, put on the bee-veil, and by means of smoke, and by hammering on the top of the old hive, drove the larger part of the colony, and the queen among them, into the lower (new) hive. Then the old hive was taken off and placed upon an old table standing near by. Next I proceeded to demolish the old hive and cut out the comb. There was plenty of brood and honey. Part of the worker brood I managed to fit into two frames, but could succeed in getting only one into the new hive.

The bees have worked lively ever since, and I am now the fortunate and surely proud possessor of a strong colony of bees, which will give me quite a little honey yet this season. Had I transferred my bees last year in the same way, I could already have had a twenty-four-pound case or more of choice honey this year. As it is, I put on the surplus-case a couple of weeks ago, and before long will have all the honey I want on my table. And I am anxious for more bees. Shall probably buy some this fall. Besides yielding honey, bees perform another important service. They carry pollen from one flower to another, and in this way become an important factor in making trees and bushes fruitful. The fruit grower should never be without a reasonable number of colonies.

I have told all this to show, first, that any owner of a rural home, large or small, misses one of his opportunities if he fails to keep at least a few stands of bees, and secondly, that an intelligent person can do a great many things that he thinks to be outside of his sphere or ability, if he will only make up his mind that they have to be done. Where there is a will there is usually a way.

Stone-meal Again. My desire to be conservative, and surely not too positive before I know all the facts, has prevented me before this from using the strong language in regard to the stone-meal fraud which I certainly felt suited to the occasion. A German writer in *Rural New-Yorker*, treats this fraud far less gingerly than many of us writers have done on this side of the water. The agriculturists of Germany, he says, have been fighting this fraud for years.

"Rust, mildew and the potato-beetle would seem to be minor calamities when compared with the harm worked on the farmers' purse by the insidious wiles of the discoverer of stone-meal. The agricultural societies, masters of Granges and government officers for chemical analysis have all publicly exposed, in word and print, the absurdity of the discoverer's claims, and the fraudulent price demanded for the stone-meal; yet all these efforts combined have not been able to stop the sale of this worthless trash to a class of small farmers least able to endure being robbed. The operations are generally commenced by sending out samples which have invariably been 'doctored' with a certain amount of valuable commercial fertilizers, so as to give it a standing in ease it is analyzed or applied to a plot." In one of the analyses made at Karlsruhe, stone-meal (mineral fertilizer) proved to contain .23 parts of one per cent of phosphoric acid and .63 of one per cent of potash. The fertilizing value of the article is worth only a fraction of a dollar.

Removing Seed-ends. The advice is often given, even by good authorities, but evidently on theoretical grounds alone, to remove the seed-ends of the potatoes before planting. The Michigan station has made some comparative trials. The result of the experiment agrees with that obtained at this and other stations (and by myself also) several times before. Maturity is not hastened and productiveness is not increased by removing seed-ends. On the contrary, figures show an increase in yield for those planted normally, because, since the ends were not removed, there was more seed, and because the buds at the seed-end are stronger than those toward the stem-end. The opinion is held by botanists that the seed-tip is equal to about one good eye. It is folly, therefore, to remove the seed-tip in planting potatoes; all the more so, since in some varieties other eyes seem to be largely impotent, while those at the seed-end are stronger and better. I myself have for years considered the seed-end of the potato the best part for seed, and if I were to throw any part away, it would be the stem-end. T. GREINER.

Our Farm.

WEEDS—THEIR INFLUENCE IN AGRICULTURE.

The FARMER has no greater enemy to contend with than weeds. From early spring until the frosts of approaching winter, they dispute the possession of the ground with the crops the farmer grows. Before the planted crop is above ground the battle for supremacy commences, and the thrifty farmer who would win the prize in the end must "the battle ne'er give o'er."

It may seem out of season at this late date to discuss weeds, after the cultivation has about all been done, but it is at this season of the year that great damage may be done by a little neglect in looking after the stragglers that may have escaped the hoe and cultivator, through inattention or otherwise. It is at this point, many times, that the trouble of the next year commences. During harvest-time farmers have their time and attention almost wholly absorbed in the work at hand, and then the enemy steals a march, and an irreparable amount of damage is done, not only to the growing crop, but to future crops.

There are certain weeds that do not seem to make much of a start until late in the season, and on account of their slow growth at first, may be unnoticed in a hill of corn or potatoes. The boys, too, often think that a wee small weed will not amount to much; but a shower of rain, with the warmth of midsummer, will cause them to spring up with almost incredible vitality and quickness.

In this section of Ohio we have two weeds that give us a great deal of trouble, if a continual warfare is not kept up from first to last. These are commonly known as lamb's-quarter and redroot. They produce seed in such abundance that one plant, if allowed to ripen its seeds, will pollute acres. Another pest—worse, however, in wet seasons—is what is known as smartweed. It also produces seed in abundance, and a field once infested requires years to eradicate it.

A good many years ago, during a very wet season, a field planted in corn on my farm was overrun with it, and in spite of the best efforts, some of it went to seed. Ever since then, when this field has been growing a cultivated crop, the smartweed shows forth with an impudence that is exasperating. This year the field is in potatoes, and the smartweed still lingers here and there, but it seems to be rather discouraged and inclined to surrender.

The amount of vitality possessed by such weed seeds is truly amazing. Every odd time should be utilized in harvest and other times in cutting and pulling out such scavengers that appear in the growing crop.

Why is it we see so many fields, from which wheat or other grain crops have been taken off, overrun with ragweed or other noxious weeds? Many farmers allow such weeds to grow the latter part of the season on fields on which clover and timothy have been seeded, to the detriment of these grasses, robbing and impoverishing the soil of the elements that should produce useful and profitable growth.

The mower could very profitably be run over all fields a month or so after the grain has been taken off, being careful to do so before the weeds have ripened their seeds enough to grow. The mower should be set high enough to not injure the grass by cutting too close. If cut at all, say three or four inches above the surface, it not only destroys nearly all weeds, but cuts off the stubble that would otherwise get into the hay the following year, and the clipping also tends to thicken up the clover and timothy.

It is certainly no credit to any farmer to allow weeds and trash to accumulate along fences, but I do believe it is vastly more excusable than to allow them among his growing crops.

I must confess—writers in agricultural papers do not often make a confession like this—that from having a large acreage, and being in the fight to conquer in the field and my determination to master there, I have allowed some intruders along fences; but having reduced my acreage, I intend very soon waging a warfare along the borders also, and shall not rest content until the enemy is brought into subjection, if not entirely conquered.

Another weed very common with us is what is known as purslane. This robber seems to defy drought and the most unfavorable conditions to plant growth. It will cover the ground in a very short time,

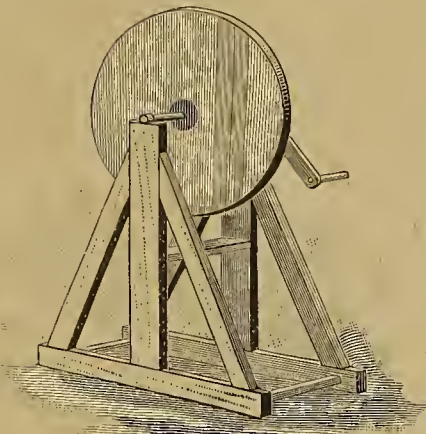
and is so prolific in seed-producing and matures so quickly, that it is almost impossible to eradicate it. If chopped up with a hoe into fragments and the pieces left partially covered with moist soil, they will take root, and instead of destroying it, it will multiply and be a worse pest than at first. It should be entirely rooted out, with the root turned upward to the sun; even then, when a lot of it is thrown together it is so tenacious of life that it will not "yield up the ghost."

The point I wish to impress on my readers is that the weeds that start early in the season are not those that do so much harm as those which escape at the last cultivation. It will always pay to look over the fields after the harvest is over; and it should always be remembered that one weed destroyed or kept from going to seed one year is equivalent to the destruction of a multitude the following year.

Richland county, Ohio. J. H. PALM.

GRINDSTONE-FRAME.

A short time since I saw a grindstone-frame that "took my eye," and I send you



GRINDSTONE-FRAME.

a rude drawing of it. All the other frames I ever saw in common use were in the way of the man who held the tool to the stone.

J. F. THISSELL.

FARM THEORY AND PRACTICE.

VALUE OF OBSERVATION.—MR. T. B. Terry, writing in the *Practical Farmer*, says:

"For some years I have noticed in the spring that one could see in our wheat-field where the potato rows had been by the increased growth of wheat. To-day, with wheat a foot high, one can readily trace where the rows were on parts of the field, but not all over. It is most noticeable when you stand at a distance on higher ground. The ground was made entirely level before seeding. Any little ridge there might be where the drills were, were scraped off. The seed was evenly drilled, but the wheat of a strip about half the width of a potato row is better than on the other half, and sometimes decidedly so. Whether it is better where the drills were, or between the rows, where more tillage was given during the season, I cannot tell."

One would have supposed that as careful a farmer as Mr. Terry would have taken pains before this to learn whether the ranker wheat was growing where the potato rows were or in the middles. Professor Sauborn, commenting upon Mr. Terry's statement, writes:

"Such observations are usually valueless, for there is no comparative study of the causes by noting those that gave rise to the effects, leaving all to conjecture, which is apt to be according to some preconceived notion."

It would seem that a report of such observations is far from valueless, in that it calls the attention of farmers to matters that they should try to study out for themselves. To-day I doubt not that we have greater need of being aroused to close observation on our farms than we have of specified facts poured in upon us and left undigested. In all lines of work the winner is the one who is trained to help work out his own problems, rather than he who has a ready-made stock of facts. In agriculture varying conditions modify the results we may expect from the application of theories propounded by others, and every farmer should become a close observer and depend in part upon his own study. In some soils and in some seasons the well-firmed middles would probably have the best wheat, while in other soils the potato row, loosened by the digger and then firmed with the roller, would grow the best wheat. The farmer who knows his soil should be the best judge in such a matter, but too often he is careless, or is

guided by another who works entirely under different conditions. We want the experience of others for comparison and suggestion.

RYE IN WHEAT STUBBLE.—The acreage of wheat next year will be increased by reason of the failure of seedings to grass last fall and spring. There is quite general complaint of partial failure, at least of clover in the wheat stubble. Where some clover-plants stand, and there are few weeds, as is the case in droughty sections, I have found it a good plan to drill rye in the stubble without any preparation. The drill-hoes do not destroy much of the clover, and the fresh earth gives a chance for a catch of timothy, if wanted. The rye, sown at the rate of three pecks to the acre, protects the grass and furnishes pasture for the next spring. If not pastured close until the rye ripens, hogs can be fattened upon it in the field. In this way it is possible to get a stand of grass without breaking the ground, if the soil is not too hard-packed or foul with weeds.

USE STOVER INSTEAD OF HAY.—Timothy hay stands at the head of the list in the market as a coarse feed for stock, and yet for farm feeding I do not regard it as comparable to clover hay when rightly cured, nor so desirable as corn fodder (stover) for milk cows, sheep, or horses that are not at hard work. Timothy is in demand in city markets because it is easily transported and handled, and consumers are accustomed to its use. On the farm where corn is grown, and where clover hay can be made reasonably free from dust by extra care, timothy may be dispensed with in great degree. At prevailing prices for hay there is no stock to which timothy can be fed at a profit, and those who have fodder should prepare to save and use it to the best advantage. The first step in this direction is to cut the corn as soon as it is dry enough to put into shock. When the corn is dry enough to crib, it should be husked out, and the fodder tied in bundles. Where there are no machines for shredding the fodder, and one lacks the power to cut it, the fodder can be put into the mow or stacked, and then fed long without half the inconvenience many suppose. The mangers should be long, and there should be a basin at the side of the barn to receive the butts. When fed long, the fodder from an acre of medium thick corn will furnish enough coarse feed for a horse during the winter; and when shredded, or cut, a less quantity is sufficient.

SEEDING TO GRASS.—The acreage in meadow has been reduced by failures in seeding, and it is probable that hay will command a good price a year hence. Instead of reseeding land to wheat with timothy this fall, it may pay to sow timothy alone. This was never the case when wheat brought eighty cents to a dollar a bushel, but with the probable increase in acreage of wheat, due to a small crop this year and to reseeding to grass, and with a prospect of very cheap wheat a year hence, I incline to try timothy alone on a portion of the land to be seeded. If it be sown early on a well-prepared seed-bed, a fair crop can be harvested next year. When one has not natural wheat land, and cannot expect a big yield per acre, a new meadow promises as much profit as wheat, and less labor when teams are busiest in spring crops.

DO YOUR COWS PAY THEIR BOARD?

With the price of feed at figures seldom reached, it is fitting that the farmer should inquire of himself if his cows are paying for their board. Through observation, experience and practical tests with the aid of a Babcock milk-test, I am led to believe that fully one third of the cows in an average community will not pay for their care and feed in an average year, and that in this year of short crops such as general throughout the state of Ohio, it is quite probable that two thirds of the cows now on the farms of the state will not pay their way.

It is important, therefore, that the poor cows be culled out as soon as possible, and the easiest way this can be done is to put them to a strict test. You might churn each cow's milk separately and thus find her value; but it is much easier to weigh the milk of each cow, take samples of the same and have it tested on a Babcock machine. Where a number of cows are kept, it would pay the farmer to purchase a machine of his own, but where he does not care to do this, let him take samples to some

one who has a machine and have their value ascertained.

Do not depend upon guessing at the quantity of milk any more than to guess at its quality. We have too long depended upon guesswork for the welfare of our pocket-books. You may guess a favorite cow to give five or six gallons of milk per day, but if you weigh or measure it you will be more likely to find it three or four gallons. Then exercise care in taking the samples to secure reliable results. Some imagine that all milk is about the same, that the first part of the milking is as rich in butter fat as the strippings. To test this point I took samples from the morning's mess of one cow, and found the first to test 2.2, while the last was 10.2. The entire mess from a given cow should be first well stirred, and the sample then immediately taken. It is also important that both milk and acid be measured with exactness, and the readings very carefully made, otherwise the results may be altogether unreliable. As an illustration of the unreliability of careless tests, I mention the case of a farmer who delivers milk at a factory near me. One morning it tested 3.4 per cent butter fat, which he believed to be too low. The following morning it tested 4.6, and on the third morning he was credited with 7. Each time the test was made by a different man. Now, no one believes this farmer's milk gained 3.6 in butter fat in forty-eight hours, while upon the same feed and under the same care. Some one was careless in taking the sample, or in making the measurements, or in reading the results.

Do not make the test too soon after a cow is fresh to test her value. A heifer was tested before she dropped her calf and the test showed 2 per cent. A few days after the calf was born it tested 3.6. At the end of four weeks it tested 5.4. It is generally supposed that the fairest test is made at the end of three months from calving.

Do not be satisfied with merely a cream test, for some cows will raise a good quantity of cream, but of inferior quality. Several of those for whom I have tested said that certain of their cows showed by the cream test only a small quantity of cream at the end of twelve hours, but at the end of thirty-six hours they showed more cream than any other in their herd. Such milk has invariably tested low by the Babcock test, and the reason is found in the fact that there is not enough butter fat in it to make the necessary difference in specific gravity between the cream and skim-milk to raise the cream in less than thirty-six hours.

Since putting in a Babcock test I have set aside the first Saturday in each month to test milk for my neighbors, and others who care to know what kind of cows they are feeding. Some very good cows have been found, but quite a number of poor ones. Some cows have been receiving credit for the butter that others less valued have produced. One lady who brought samples was very much surprised when told that her favorite cow, a large Holstein, only tested 2.2, while an animal of less value, with a little Jersey blood in her veins, tested 4.4 and was giving at the time the same quantity of milk per day. But with true business spirit she remarked after some minutes of consideration, "Well, our best cow is now for sale."

Unless a cow tests 4 per cent or more she must give a very large flow of milk, or she is unprofitable; yet I have not tested any herd excepting my own which has not resulted in finding one or more below 3.2, and in several instances as low as 2.

Let us get rid of the poor cows before feeding them another winter on high-priced feed. Do not ask the good cows to pay for their own feed, the feed of the poor ones, and then put a little profit in your pockets besides. Better to secure more profit from fewer cows on less feed by sending the poor ones to the butcher's block. But remember one thing, however, and that is, when you have found out your poor cows, do not attempt to sell them to your neighbors as good butter cows. In buying a cow, test both the quantity and quality of her milk before making the purchase. JOHN L. SHAWVER. *Shady Nook Farm.*

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Our Farm.

NOTES FROM MY GARDEN.

CLOSE CROPPING IN THE GARDEN.—The doctrine of the need of close cropping in the garden is an old one—a strug, indeed, on which I have harped right along, almost ad nauseum, so that every reader of FARM AND FIRESIDE should now thoroughly understand it. In order to make the most of the garden, and do it with the least bother from weeds, we should let one crop follow another in rapid succession. It is a pleasing theory that the land should be covered with a thrifty vegetation all summer long. I say it is a theory. In practice it is not always an easy task to keep the land thus covered and looking at its best. With the soil as dust-dry as it is at present, and as it has been for weeks, and rains almost entirely failing us, it is easy enough to ripen up one crop, perhaps even prematurely—for lack of moisture—but it is not so easy to start another crop.

For instance, I have tried to plant cucumbers after early peas, taken great pains in preparing the hills to make the soil very firm under and above the seed, and yet the seed lies in the soil and refuses to germinate. It would be perfectly useless, at this time, to sow turnip or spinach or other small seeds in my garden. Like the cabbage seed that was sowed weeks ago (for late crop, directly in the hills), all these smaller seeds would remain dormant in the soil until rain comes; or if they did start, make puny, weakly plants that also are waiting for rain to start into free growth.

And yet we must find a way to get at least a portion of these later vegetables into growth. How to manage in regard to celery I have already explained in an earlier issue. With turnips, etc., in order to have at least a moderate supply, we may resort to the method of raising plants in a box, and then transplant them, giving water freely.

SQUASHES AFTER PEAS.—The early peas can be cleared off the ground by July. There is a long season yet before us, and we can let almost any crop follow after the peas. I usually prefer to let this crop be squashes, melons or cucumber. But the plants must be ready in good time. It will not do to sow seed in open ground, after the peas are off, except in the case of cucumbers. The latter, grown from seed after that time, will come handy for late pickles. The squash and melon plants, however, must be started in boxes or pots, and then put out as soon as you can make room for them in the peas. I have even hoed out hills in the pea rows, before the picking season was all over, and set my plants, boxes and all. But in a dry season like this, even then the plants are slow to take hold of the ground and to make a thrifty growth, unless we put an occasional bucketful of water or washing-suds around the hill. With some pains, however, we can have the soil soon adorned and finally covered with running vines and reap a good crop of vine fruits after a full crop of peas.

STARTING PLANTS IN POTS.—I have been using my wooden plant-boxes altogether for starting these vine plants; but the gardener at the Geneva (N. Y.) experiment station has given me a new idea. He now starts cucumber, melon and even lettuce plants in thumb-pots, and then plunges the pot right where he wants the plant. The root of the plant grows through the drainage hole in the bottom and into the soil below, and the plant grows right along. All these vine plants are very impatient of interference. They do not like to have the soil disturbed, and if it is, they invariably suffer, often wilting very badly. The soil in pots is pretty safe from disturbance. Of course, only one plant is allowed to the pot. Mr. Wm. Thompson (the gardener of the station) sinks the pots in the soil so they are entirely out of sight. In most cases the plants will emit roots from above the pot, also.

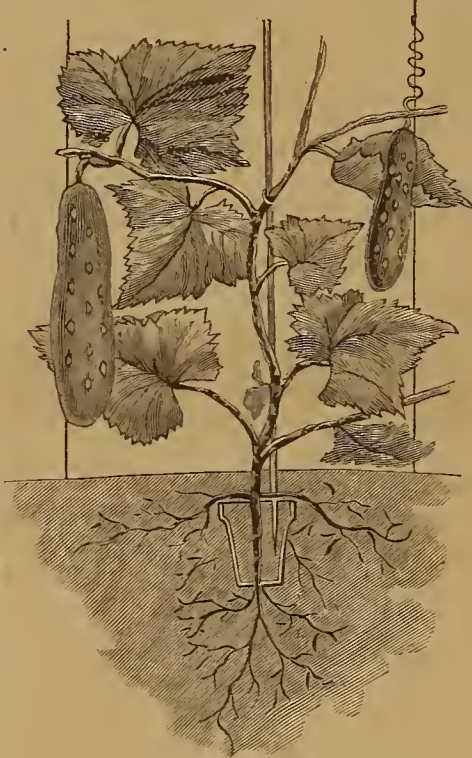
All the cucumber and melon plants in the forcing-houses at Geneva, as I saw them late in June, were standing in thumb-pots and doing remarkably well. Am now trying the same plan with various vegetable plants.

LETTUCE IN POTS.—Early last spring I took a notion to grow my greenhouse let-

tuce in plant-boxes. While small, the boxes (four-inch cube) can be placed closely together, and when the plants need more room, the boxes may be spread further apart, soil being filled in between them. In this manner, one can always have good plants in readiness to fill out the whole space of the greenhouse, and thus make the most of one's greenhouse facilities. I think I shall like the idea of using small pots in place of the boxes. They take still less room, and are easily plunged into the soil of the greenhouse bench. The great advantage that lettuce grown in this way has over the lettuce grown directly in the bench soil is that the plant can be taken up, pot and all, the root being cut off below the pot, and kept for an almost indefinite time without wilting, provided the soil in the pot is kept wet.

I think that we might use this potting device for starting lettuce, endive and perhaps other plants, to be grown outdoors when we have a rainless season like the present is here. The pots can be placed closely together, in a lightly shaded frame, and kept well supplied with water, so that the plants are enabled to make a good share of their growth, whether it rains or not. When they need more room, they can be plauted out, pot and all, and possibly we may have plenty of rain then, or if not, we can water them.

THE NEED OF IRRIGATION.—Right in this particular spot the land and crops are still suffering badly from lack of moisture. The moderate rain of June 20th and 21st is still the only one since winter deserving the name of rain. Cisterns are mostly dry. Wells fortunately hold out well, and give



SETTING OUT PLANTS IN POTS.

all the water that may be required. In consequence of the continuous dry weather the farmer's pocket-book is also liable to suffer. But this is not the only time we have suffered serious inconvenience and loss by drought. A long dry spell sometime in midseason, usually during July and August, and perhaps in September, has been the rule. And yet, why should gardeners located like ourselves allow themselves to be cheated out of one half of their crops every year when there is a chance of irrigation? The river—or creek, as the case may be—is close by, and a full supply of water always at command. A windmill to pump the water up into tanks, from which it can be carried over the garden in pipelines, is easily put up at moderate cost. A few hundred dollars invested in this way may serve to turn an unprofitable business (unprofitable in the dry season) into a highly profitable one. The professional gardener should consider an irrigating plant one of the most necessary of his equipments. Without greenhouse, and without water facilities, he will find himself hampered all the while.

T. GREINER.

Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

INQUIRIES ANSWERED

BY SAMUEL B. GREEN.

Spraying Trees in Poultry-yard.—E. H. East Norton, Mass., writes: "Will spraying plum-trees with Bordeaux mixture be injurious to hens or chickens running in the orchard? I have a poultry-yard in the orchard."

REPLY:—The Bordeaux mixture will not hurt your chickens if used in reasonable quantities on your trees.

Trees Dying.—C. E. S., Bushnell, Mo. It may be due to borers in the trunk near the roots, or to woolly-aphis on the roots. Better examine trunk and roots carefully.

Rank Growth, No Fruit.—W. F., Philadelphia, Pa. It is more than likely that you are using too much nitrogenous manure, which causes a rank growth at the expense of fruit. Better stop using hen manure and apply only high-grade muriate of potash at the rate of 150 pounds per acre. Hen manure is very rich in nitrogen, and is not desirable for trees on good soil.

Trimming Grape-vines.—J. O., Isabel, Ill., writes: "I put out one hundred Concord grapes last spring a year ago. I had them tied up to stakes this spring; I let two canes grow. They had grown eighteen inches this spring, and then were frozen to the ground. They are coming out again under and at the top of the ground. Will they be of any account? Tell me what to do with them."

REPLY:—Cut off all the sprouts but the two best from each vine, and tie them to stakes. They will make good plants.

Imperfect Grapes—Pear-tree Not Growing.—J. E. D., Anniston, Ala. When small grapes are formed on a bunch in among large ones, the reason probably is that the small ones have not had congenial pollen. This can be remedied by planting near by such a variety as Concord or Worden.—The pear-tree is either in poor soil or affected by insects. Better examine it carefully at the base of trunk and roots as well as branches, and see what injury you can find.

Filberts.—A. S. H., Casky, Ky. I do not know of a single productive plantation of the European filbert east of the Rocky mountains. They act as yours do—bloom profusely, but fail to set nuts. This is probably due to the flowers being injured by the spring frosts. The best stock to start with is our native kinds, and improve them by selection. They are easily propagated by suckers, which they produce freely. The suckers should be somewhat thinned out from bearing plants, as if allowed to grow they seem to hinder the productivity of the plant.

Pinching New Growth of Raspberries.—C. C. D., Greenville, Pa. It is very doubtful if anything is gained in amount of fruit produced, in the case of red raspberries, by pinching the new growth. In the case of black raspberries, I think there is some gain from pinching. Of course, when pinched several times the canes become stock, and support themselves without further aid. In the case of Earhart, I should allow the shoots, or part of them, to grow without pinching, and think your chances for full fruit would be increased thereby. However, I have not been very well pleased with this variety.

Prunes Dropping.—J. G., Trenton, Ill. This trouble is quite likely due to a lack of potash in the soil, but may be due to some fungous disease or insects. Would like to have you send me two or three specimens, including the stems of each. The application of potash can do no harm and is very generally a great help to all fruit crops in the eastern states, and I suggest that to spread a peck of hard-wood ashes around the tree; or perhaps you can more easily get two pounds of muriate of potash for the same purpose. Either will answer.

Lack of Color in Strawberries.—I. L., Weston, Mass. I do not know of anything that will be certain to give color to a berry like Timbrel. It is my opinion that an excess of potash and phosphoric acid, rather than nitrogen, in the soil is most conducive to high colors in fruit. For instance, on rich land (as the term is generally used) the Baldwin apple is often somewhat light in color, while on poor land (as the term is generally used) it is often a deep red all over. I suggest that you use largely of potash in manuring your strawberries. Ammonia is only valuable as a fertilizer for the nitrogen which it contains, and would be apt to hinder rather than increase high coloring. I have no faith in iron filings for this purpose, and believe our soils contain all the iron needed by plants, which is a very small quantity.

Borers and Kerosene on an Apple-tree.—J. L. H., Salem, Mass., writes: "I have a valuable Baldwin apple-tree that I would not part with for considerable, its shade being worth even more to me than the large quantities of apples it bears. For three or four years past it has been infested with borers. To exterminate these, I have used kerosene; I also used some soft soap as a wash for the outside of the tree. This year we are not troubled with the borers as yet, but the bark of the tree has loosened about the trunk to an alarming extent. I am unable to say whether the use of the kerosene or the soap had anything to do with this or not. Can you suggest any remedy? Does it not injure a tree to have the bark peel off?"

REPLY:—The kerosene remedy is almost as bad as the borer. The soap did no injury. Clear kerosene in large quantities is very injurious to plant growth. A good way would be to cut off some branches of the apple-tree (scions) about one half of an inch in diameter, cut the ends beveling; cut through the healthy bark below and above the diseased part on the tree and spring in the scions, which should be a little longer than the distance between the cuts on the tree, so they will hold in place. The sap can then circulate through these scions. Put these scions about six inches apart. Do this at once, and then pile earth up over the whole wound, so that the wood will not dry out. If you do not put in the scions, be sure to pile earth around the trunk and keep it there for several years, anyway.

Strawberry and Raspberry Seedlings.

—J. R. M., Glenwood. Sow the strawberry seed at once in boxes where they will have the best of care. They will then come up quickly and make good-sized plants by fall, if transplanted to a rich bed when large enough to handle. Sow the raspberry seed at once, or in late autumn, in boxes or beds, and they will come up in the spring. It is a good plan to have the seed exposed to frost during winter, but not absolutely necessary. I sow raspberry seed in boxes, put it in a frosty cellar until February and then bring it into the greenhouse. In this way I get a big growth in one season. I transplant to open ground when one year old. Raspberries seldom bear until three years old, but strawberries often bear a little the second year from seed, and very well the third year.

Ants and Twig-blight.—H. R. S., Milford Square, Pa. Spray the holes with Paris green and water, at the rate of one ounce to two gallons, forcing it into them as much as possible. Better treatment would be to use Bordeaux mixture, to which has been added Paris green in the proportion given for its use in water. The Bordeaux mixture would tend to prevent the decay of the wood while the healing process is going on, and the Paris green will kill the ants. This girdling by ants is a new trouble, and this treatment is indorsed by the highest authority. I have never had this pest injure my trees, but have seen it recently very destructive in eastern Massachusetts. The dying off of the branches is probably due to what is called twig-blight, and not to the work of ants. The branches should be cut off as soon as they show the disease. Sometimes twig-blight will kill the whole tree. I think if the work of the ants is prevented, the trees will stand a good chance of recovering. However, some varieties are much more liable to be killed by blight than are others, and soon succumb to the disease.

"Heeling In"—Moonshine—Plum-curculio.

—G. P. P., Kearney, Mo. I think it desirable for planters to get their trees in the fall, "heel in" (bury) root and branch in autumn and set them out in the spring. Fall planting is also desirable if the trees are laid flat on the ground in autumn and covered with earth. In this case they should be raised in early spring.—The moon has nothing whatever to do with the growing of crops on this earth, so far as mortal man has been able to discover.—The plum-curculio is a little, black-snout beetle, about three eighths of an inch long. If early some spring morning you spread a sheet under a bearing plum-tree and then jar it a little, the curculios will fall, and can easily be gathered. It is because during the cool part of the day they are dumpy. This, then, is a good remedy, and if the trees are jarred once a day while the curculios are abundant you will soon thin them out. Another remedy is to spray the fruit with Paris green and water, at the rate of one pound to about 200 gallons of water. If used stronger than this it is liable to burn the foliage. The objection to the latter remedy is that in rainy weather it is not effective. Will refer in detail to remedies for this pest in a future number of FARM AND FIRESIDE.

In a State of Bankruptcy



—is the condition of our system if the liver becomes inactive so that the germs and poisons can accumulate within the body. Keep the liver and bowels active and we're in a condition of healthy prosperity and have sufficiently well invested capital to draw upon in the

hour of need. The liver filters out the poisonous germs which enter the system. Just so surely as the liver regulates the system, so do Dr. Pierce's Pleasant Pellets regulate the liver. Keep this in mind, and you solve the problem of good health and good living. The "Pleasant Pellets" have a tonic, strengthening effect upon the lining membranes of the stomach and bowels, which effectually cures Biliousness, Sick Headache, Costiveness, or Constipation, Indigestion, Loss of Appetite, Bad Taste in Mouth, Sour Risings from Stomach, and will often cure Dyspepsia. The "Pellets" are tiny, because the vegetable extracts are refined and concentrated. Easy in action, no griping as with old-fashioned pills. As a "dinner pill," to promote digestion, take one each day after dinner. To relieve the distress arising from over-eating, nothing equals one of these little "Pellets."

Mrs. MELISSA ATWATER, of Sleuben, Washington Co., Me., writes: "As regards

the little 'Pellets,' I think I could not do without them. I do not like to be without them in the house. I have spoken very highly to friends and neighbors of them, and many are taking them through my advertising them. I will say they are the best pill I can take, especially for an after-dinner pill, I think they have no equal."



MRS. ATWATER.

THE ANNUAL MEETING OF THE NATIONAL EDUCATIONAL ASSOCIATION.

During the month of July there convened in the city of Denver, Colorado, the thirty-fourth annual session of the great National Educational Association.

A vast army of over 8,000 teachers was present, and the meeting was one of the most successful in the whole history of the association. The teachers came from every nook and corner of this great Union, and there were numerous representatives from Canada. The object of this great meeting was to consider one of the most important questions which concerns the people of this country—the complete and right education of all the children of all the people.

The association was divided into numerous sections, and there embraced the whole field of education, passing from the kindergarten through the entire range of all the various grades of school, college and university organization.

Most prominent among the numerous topics discussed were: "The relation of music to other studies;" "The duty and opportunity of the schools in promoting patriotism and good citizenship," and "The importance and necessity of manual training in our public school system."

Concerning these topics we present the readers of FARM AND FIRESIDE the following notes:

THE IMPORTANCE OF MUSIC IN OUR PUBLIC SCHOOLS.

This subject was discussed by Sarah L. Arnold. Among other things she said: "Observe a class in music. See how the success of the exercise depends upon their working together; how they sing in unison, in perfect time and tune; how they are learning the more difficult harmony, where the failure of one part brings inevitable discord to all, where the success of the whole rests with each individual. Estimate, if you can, the value of such unison, and higher still, of such harmony in the discipline of the school, where one of the great lessons to be learned is the power of working together, the talent of keeping step, the secret of co-operation.

"Again, follow the pupils into the school-room after a free, noisy recess; watch the transition from the uncontrolled movement of the playground to the quiet attention of the school-room through the medium of song. Differences are forgotten, quarrels are healed, license gives way to self-control, roughness to gentleness, under the influence of song. If teachers but knew how to use the song, we should hear less of the rod.

"Again, music develops in a marked degree the power of concentration and the habit of attention, which are essential to study. Compared with the attention demanded by simple reading, this exercise is difficult. It demands attention of the highest order, a concentrated power of attending to one's own business, which must inevitably tell favorably upon all the other phases of work. But again, and quite as surely, music helps in special as well as general lines. It should aid the physical as well as the mental powers. Physically, it should make the pupil possess a pair of healthy lungs, with the knowledge of how to use them to the best advantage in keeping himself strong and active."

INDUSTRIAL EDUCATION OR MANUAL TRAINING A NECESSITY OF THE TIMES.

Prof. Robinson, of the Denver manual training-school, discussed the above topic and made the following points:

"The problem of living and working has never been brought face to face with so many difficulties as to-day. The last fifty years have been years of progress and industrial revolution so great and unexpected that the human race has found it difficult to keep pace with the changes.

"Man adapts himself but slowly to new conditions. Not long since, every household was a factory, and boys and girls were taught the elements of various trades.

"The apprentice system then in force made it possible for any one so desiring to learn a trade in a regular way; now the home industrial duties are reduced to almost nothing, and the apprentice system is a thing of the past.

"The boy designed for a profession must have a professional training, but for the ordinary boy there is little or no opportunity to gain any knowledge of his life's work.

"In the case of the girl who by nature must be a home-maker, there is little opportunity to fit herself for her work.

"The remedy for this state of things is to establish schools in every community where hand-training for boys and educa-

tion in the economy of the household for girls shall be the main features of the course of study."

THE ETHICS OF PATRIOTISM.

Perhaps this subject elicited more general discussion than any other. It is evident that the teachers of our schools are patriotic, and are mindful of the great lessons of love for country that should be taught the children and youth of America. Without being able to give credit, I present the following thoughts of different members of the association:

The word patriotism is derived from a root that signifies "to protect," and in its secondary sense to feed. To protect and to provide are the fundamental ideas of patriotism. These were at first exercised by the patriarch or father of the family. With the spread of civilization this idea of patriotism has taken on a broader meaning.

The original idea was essentially selfish, in a narrow sense. Gradually the idea has broadened, but it has been, and still is, essentially selfish. The extended notion of patriotism has gradually become more altruistic, embracing the whole world of man, while holding a warmer place in the heart for the country where one lives.

The motto now is not "My country against the world," but "My country for the world." To live for one's country is the highest patriotism. To lay aside prejudice and teach truth is the teacher's opportunity. Our external displays are nothing; our flag is nothing unless it stands for justice and liberty.

The new patriotism will recognize in a substantial way the mutual obligations which grow out of the interdependence of men in society. Fair dealing must be its supreme characteristic, and it must be imbued through and through with the spirit of the Golden Rule.

By this standard will the patriotism of men be measured. Are they willing for the public good, for the country's sake, to sacrifice private interests of time and money and thought? To sink partizan prejudices, and to unite with all other men similarly inclined in an alliance offensive and defensive for good government? Will they vote? Will they attend caucuses and primaries? Will they take municipal offices? Will they serve on juries? Will they fight the saloon and gambling interest on their own ground? Will they fight the spoils-men in their own party? Will they demand and fight for it, first, last and all the time—clean men and clean measures? It is the duty of schools to teach and cultivate this broad, all-comprehending patriotism. It will be our business to teach that our foes are of our own household; that idleness, intemperance, luxury and extravagance may destroy a people; that a venal ballot and a corrupt judiciary may throw down in a night all the bulwarks of good government.

WILLIAM R. LAZENBY.

THE COW-PEA.

I notice many inquiries for information about the great southern land-renovator, the cow-pea. It is the clover of the South, and almost universally planted. Varieties are as numerous as the potato. The Unknown, or Wonderful, just now seems to lead, and it is truly a wonderful pea, of luxuriant growth and very prolific. The seed is large, clay-colored. A field of this pea will cover densely the land occupied, and to a depth of two or three feet. The seed-pods are from eight to ten inches long. I sow the seed about the first of June, as the late-planted give a greater yield of peas. Planted earlier, say as soon as all danger of frost is out of the ground, they make greater vine, but the yield of peas will be much less than late-sown peas.

The clay-pea, another favorite, is a running variety, rather poor yielding sort. The "whip-o'-will," a bunch pea, speckled seed, prolific. This variety is largely used for planting in corn at the last working. Of the many varieties, only a few are used as table-peas, the White Mush, the Lady and "Crowdu."

The advantage of the cow-pea over clover as a soil-renovator is cheapness and quicker results, accomplishing in twelve months as much as clover will in three years, and no loss of the use of the land while the renovating process goes on. The seed is cheaper and free of all obnoxious weed seeds. The cow-pea is of quick growth, covering in a few weeks with a dense shade the land occupied. They may be sown broadcast or drilled, or may be sown in the corn middles after that crop is "laid by," forming a complete mulch which keeps the field moist. My experience has been that the cow-pea, like other crops, does best on good soil, but it will grow on

very poor soil, soon enriching it. The vines and half-ripe pods make excellent hay when properly cured. Sown broadcast on fairly good soil, it will yield more hay than red clover; and in my opinion of much better quality. The main point in the curing is to preserve the leaf, which may be easily done by giving plenty of ventilation while curing. The vines should be removed from exposure to sun as soon after mowing as possible, it being only necessary to expose them long enough to wilt the leaves. My usual way of curing them is in rail pens, floored, commencing with a layer of the vines two feet deep, then a few rails laid across and another layer of vines, and so on until the pen is as high as wanted. A very good plan is to plant a 6x6 post with three-inch augur-holes two feet apart, first one side of the post and then two feet above on the other side, and thus to the top, so the poles will be on different sides; when the stack is complete, cap with hay. If the entire stack is left to stand in the weather, the outside will soon crust over to a depth of four inches, and the inside will be found to be ensilage, pure and simple. For milk cows no better feed can be had than this hay. It is a milk and butter producer. When our dairymen of the great West discover its value for this purpose, the cow-pea will be largely grown wherever climate will permit.

W. E. COLLINS.
Issaquena county, Miss.

CORRESPONDENCE.

FROM CALIFORNIA—GROWING SUGAR-BEETS.
—The growing of sugar-beets has become an important industry in this state. In the vicinity of Anaheim and Buena Park in Orange county alone, nearly 3,000 acres were devoted to the sugar-beet culture this season. This crop from start to finish involves much labor. The seed, which is grown in France, is furnished by the Chino Sugar Company at ten cents a pound, and is sown in drills, in March or April, a thorough preparation of the soil being needful. About ten pounds of seed per acre is used. When the young plants are well up, the ground is rolled. As the weeds begin to appear, the beet cultivator is employed. This cultivates to a shallow depth four rows at a time. Next follows the spacing, which is done with a hoe, and when completed, leaves the beets in clumps, about six inches apart. When this process is finished, the beets are thinned and weeded by hand, the laborers traveling the length of the rows on their knees. Afterward the cultivator is again brought into use, as needed, until the leaves become too large for a horse to pass between the rows. Under favorable conditions, a beet-field in June presents a beautiful appearance. However, weeds grow in these fields with astonishing rapidity, and if cultivation is neglected, they soon overshadow their more desirable neighbors. Such a field had an easy-going rancher, who also looks on the bright side of things. When accosted by a friend with "Hi there, man, see the weeds in your beets!" he cheerfully drawled in reply, "Oh, they don't cut no figure; see the beets in the weeds." In July and August the crop is ready to harvest. Two kinds of plows are in use for digging beets; one has two iron bars, one passing each side of the row, which force the beets out of the ground; but the better implement is the one which passes beneath the beet, cutting off the tap-root. As soon as dug, the beets are topped by hand with knives, thrown in piles and loaded into wagons with large beet-forks. Although wide tires are universally used, the heavy loads, cut up the roads badly, and the sandy places between field and shipping station are often strawed. Last season the beets were either hauled in barrels or loaded into the car by means of a net placed in the wagon. This season a device called the "Carroll dump" is exclusively used here. Under this system each wagon is fitted with a box about two feet deep, with sides sloping out over the wheels. This box sets high, and its near side is fitted to let down with hinges. These boxes hold about 5,500 pounds, an average four-house load. Where the cars are loaded, a long, bridge-like platform is erected, with an inclined sbelf reaching over to the car, which is similar to an ordinary coal-car. After weighing, a sample for testing—about a bushel—is taken out. It may be mentioned here, however, that the word bushel is never used in California. The load is now driven to the proper place upon the platform, the side let down, and two men upon a stationary platform by means of a lever give about three racks to that part of the platform upon which the wagon stands and the load slides into the car. This method of unloading costs the growers eighteen cents per ton. One hundred

and fifty tons are at present unloaded at Buena Park daily. The beets are shipped to the sugar factory at Chino, San Bernardino county. This is the largest beet-sugar factory in the United States, and, in fact, the only one which manufactures a finished article of sugar, the others making raw sugar only, which is afterward sent to a refinery. This factory has a capacity of 1,000 tons of beets per day. Six thousand acres of beets are grown in its immediate vicinity. Petroleum is used for fuel, it being piped fourteen miles from the Pucate oil-wells. Thirty thousand gallons are burned daily. The sugar-beet crop of 1895 is exceptionally fine, both as to quantity and quality, the average yield being fourteen tons per acre, with an average test of sixteen per cent sugar. The Chino Sugar Company pays \$3.50 per ton for beets testing twelve per cent, and twenty-five cents additional is paid for every per cent above that. Therefore, beets testing sixteen per cent bring \$4.50 per ton. Beets testing less than twelve per cent are not wanted. A few fields near Buena Park have yielded twenty tons to the acre, while some have tested twenty-two per cent sugar. None shipped from this point up to date have tested less than thirteen per cent. In 1894 the crop was badly injured in exposed sections by high winds early in the season, which cut or buried the young plants in sand. That California can grow the sugar-beet in perfection has been demonstrated.

C. C. D.
Buena Park, Cal.

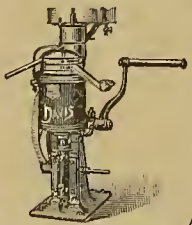
FROM ARKANSAS.—I have been farming for myself nine years. When I began I did not own a hoof of stock or a foot of land. I bought a homestead (on credit) for \$300. I moved into a log cabin containing cracks wide enough to pitch a dog through. I got a young horse to break and feed for his work. I have had some cloudy days along the way, yet there have been some very bright ones. At times I could scarcely see my way out, but keeping constantly in mind the proverb, "Where there is a will there is a way," I worked on. Finally the mists cleared away. Now I am out of debt, have thirty-five acres under a good fence, in a high state of cultivation, five acres in orchard, a good little barn (28x44), a span of good young mules and wagon, three fine milk cows and other cattle, and a poultry-house and 100 hens. I have paid out \$1.50 for medicine in the nine years. Sharp county, Arkansas, is in the heart of the stock range. The country is rough and hilly. Everything grows to perfection. Fruit and vegetables do well. Society is dull and the market poor, but both are advancing and prospects are good. The country is settling fast. I wish other good people would come. Land is cheap.

Highland, Ark.

S. B. S.

PROFITABLE DAIRY WORK

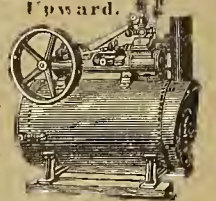
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Wilson's Fall price-list for 1895 now ready. New and improved varieties of Seed Wheat, White Rye. Small fruits, Strawberry plants, Asparagus roots and other things for fall planting. ADDRESS SAMUEL WILSON, MECHANICSVILLE, PENNSYLVANIA.



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Our Farm.

THE POULTRY YARD.

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

CARE OF CHICKS.

THERE is much loss among chicks, and yet much of the loss is due to the lack of suitable accommodations for the hens when they come off with broods. The hen is expected to raise the chicks, but she is seldom assisted, unless during prolonged and very stormy weather. There are days when the chick will thrive better on the open ground than elsewhere, and there are times when they require the judgment of their owner, rather than be left to the guiding instinct of the hen.

It does not cost a great sum to provide suitable runs for the chicks. Boxes of any kind may be used for the hen to retire into at night, and each box should be closed as soon as the hen goes in for the evening, or the little chicks will be carried off by cats or rats. If the box is left open, the chicks will be tempted to venture out very early in the morning, and if the run is so constructed as to permit them to go outside of it, as is frequently the case, the unprotected chick is doomed. This is always possible, as the runs are intended to confine the hen, the chicks having full liberty. It is early in the morning that the cat becomes a depredator among the broods, and we can vouch for the fact that it is the cat that plays with the chicks during the day which eats them at night, when she believes she is unobserved.

Construct the runs so that they may be moved daily, and keep the bottom of the box covered with dry earth or sand, cleaning it often. It is better to feed chicks often, about every two hours for the first ten days, rather than to give too much at a meal. The food may be varied. There is no secret in the feeding of chicks. Simply give them anything they will eat, and they will thrive. Dryness is essential. Never allow them to be exposed to dampness. Many drawbacks may be avoided with a little extra care, and now is the time to make preparations.

LATE HATCHING.

As soon as the weather turns cold there is loss in raising chicks, as they are easily affected by dampness and low temperature. It will pay to hatch chicks from now on, as there will be a demand for them all the time, at high prices. If any of the hens show an inclination to sit, let them do so. A hen that is permitted to hatch a brood will produce more eggs when she begins to lay than if her desire was not gratified. It is a waste of time and eggs, however, to hatch chickens only to lose them. Prepare a place for hens with broods, so that they will be protected and the chicks will thrive. A brood of chicks hatched late in the fall and sold about Christmas-time would fall more than the value of a year's laying of eggs; but to raise them is difficult, and they must have the best of care. The most important matter is warmth. Keep them warm, and the food may be of anything they will eat. Work devoted to raising chicks will bring a good return.

POULTRY AND EGGS PAY.

Every year demonstrates that the egg market is never fully supplied. We are compelled to import eggs to keep pace with the demand, and if the western farmers are unable to make poultry pay, because of the disadvantages of location and markets, there is nothing in the way of the farmer who has markets all around him. It is creditable to farmers that they may produce a large proportion of the poultry and eggs that are sold in the large cities, but there is room for more production. The obstacle in the way of success is that the poultry does not receive the care bestowed on larger stock. In all experiments made with cows and poultry, on the same proportion of land, the poultry gave the greater profit, and yet the profits could be made larger. Fifty hens are not too many on one acre of ground, and the average profit should be one dollar per hen a year. This is fifty dollars per acre profit. The cow will not give such a large average in proportion. A flock of good hens, however, if well managed, should average more than a dollar each. More eggs should be obtained in winter. If each hen produced only one dozen eggs additional during the whole winter, it

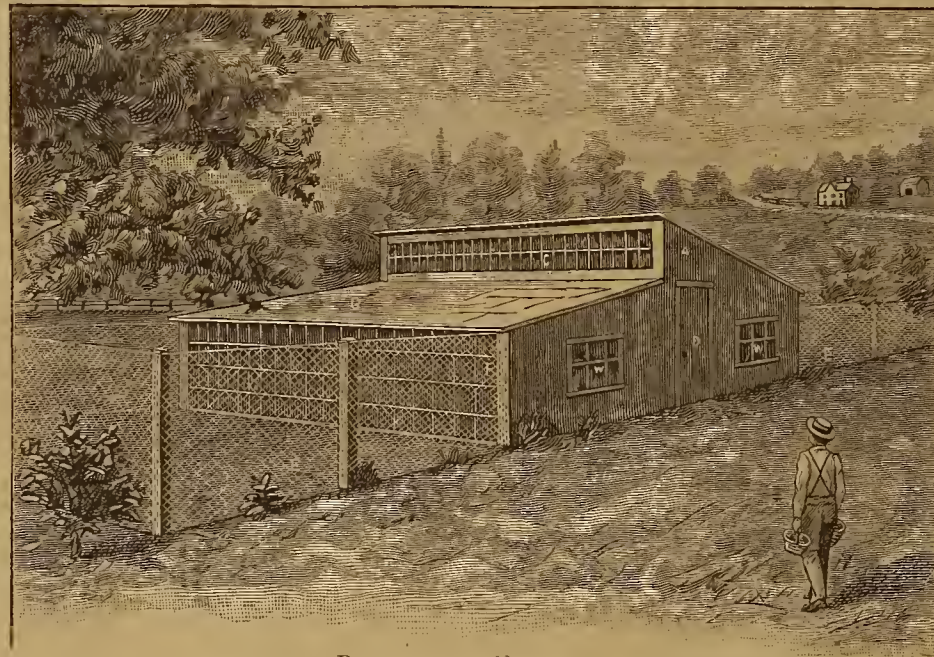
would make a large difference in the profits. The point is to determine to secure this addition, and to do so the farmer should be willing to give his whole attention to a large flock, if he can do so by disposing of some stock that may be unprofitable. It means a different system from giving the poultry over to women to manage. The way to make poultry pay is for the farmer to take hold, and when the snow covers the ground, to do for the hens the same as for the animals.

PIGEON-PENS.

The best results from pigeons, when squabs for market are desired, is to make wire-covered runs for them, keeping them confined. This may appear strange to some, but experience has shown that when pigeons are allowed their freedom there is quite a heavy loss from hawks, cats, boys, and even "sportsmen." When kept in wire runs the sexes must be equal, as an extra male will break up the matings. Pigeons pay a larger profit than hens, if kept in runs, but the yard and house must be kept clear of lice. It is unfair to neighbors to let the flock fly wherever the birds prefer, but by confining them a more satisfactory result is secured, and no damage is done others.

BROODER AND HEN-HOUSE.

The combined brooder and hen-house, from Mr. George Curtis, of New York, is intended to give a design of a poultry-house (A) and a brooder-house (B), the door (D) being in the center, WW showing the windows, and EE being the yards. C is the glass front of the poultry-house and F the glass front of the brooder-house. Both are fourteen feet wide, twenty feet long, and ten feet at the peak. It may



BROODER AND HEN-HOUSE.

be mentioned that when a brooder-house and hen-house are combined, great care must be used, as lice or disease in one apartment will be carried to the other.

BARN-YARDS AND POULTRY.

It is best to give the hens free range, but they should never be allowed in the barn-yards and stables, as it is as important to have a place for the hens as for the horses and cattle. It is not creditable to farmers that their hens lay in the horse-troughs or haymows. If the poultry-house is clean, and suitable nests are provided, there is no necessity for the hens laying elsewhere. In favor of the hens, it may be mentioned that they often resort to the barn because the poultry-house is infested with lice. The barn-yard, however, is not the proper place for poultry, but for larger stock.

MEAT FOR A FLOCK.

It is not advisable to feed meat alone to fowls, unless they have a forage where grain and grass may be plentiful, but as we have been asked how much meat or bone should be given daily, we will state that one ounce a day for each fowl of lean meat is considered about the quantity, but if forage is good and plentiful, and an allowance of one pound of meat to twenty hens, or half a pound of pounded green bone, will answer.

BRAN FOR POULTRY.

Never feed ground food in summer, but use meat or ground bone. If ground food is used at all, it is best to allow ground oats and bran, as they contain a greater and more uniform proportion of the elements that compose eggs, and one meal a day, consisting of about half as much as the hens should eat, will be found ample during the summer season, as the hens can then secure food for themselves.

INSECTS AND POULTRY.

As orchards are the abode of insect enemies, the hens will perform invaluable service if allowed a free opportunity to do so. No orchard is put to full use without having poultry, as it will cost nothing extra to allow the hens to use it. If the hens are turned out in the morning, and no food given them, and close observation is made, it will be found that in a short time they will have full crops, and the greater portion of this food will be insects, which cost nothing at all. There is no necessity for feeding hens when they can secure their food, and they will be more serviceable if compelled to search for their food than when liberally fed.

USING STUBBLE-FIELDS.

One farmer in New Jersey grows a crop of peas on a plot of ground and then seeds it down to buckwheat. When the buckwheat is ready he turns on the hens, and they have fine work over the field. The stalks are allowed to remain on the ground all winter, being raked off and burned in the spring. They are considered a protection to the soil. Occasionally millet is grown in place of buckwheat. It may be considered a wasteful method, but the farmer can easily demonstrate that he can buy up a lot of hens, turn them on the plot to fatten, and make more money than with a crop, the labor being but a very small item.

SALT IN THE FOOD.

Salt must be used very carefully in the food, as too much of it will cause loss, though it will not be harmful if the food is seasoned slightly with salt, especially when bowel disease has resulted from the use of grass early in the season. Fowls

drink freely of water, but the excess is passed off with the solid matter. If they partake of too much salt, they have intense thirst, and cannot drink enough water to dilute the salt properly, and the result is death. Rock salt, and especially that from fish or pork, will be readily eaten by hens sometimes, and for that reason it should never be thrown within their reach.

SECURE CLOVER HAY.

Get some second-crop clover hay, and have a supply on hand for the winter. In proportion to its cost, it is the cheapest egg-producing food that can be used, as five pounds of clover (valued at five cents) would be sufficient for fifty hens. It need not be fed more than once a day, and is given warm in the morning, being cut fine, sealed over night and sprinkled with bran and meal just before it is fed, two quarts of ground grain being used with five pounds of clover.

CORRESPONDENCE.

TO PREVENT LICE.—In your issue of July 1, 1895, on page six, I read a recipe for chicken-lice. Allow me to offer you another, which I have used for years, with more than gratifying results. Spread tobacco-stems, or strippings, on the floor of the house and in the nests, when hens are sitting. S. R. New Orleans, La.

INQUIRIES ANSWERED.

Overfeeding.—Mrs. L. T., Sandy, Oregon, writes: "My hens droop, stagger, and some die. The trouble occurs mostly in summer and fall."

REPLY:—Probably due to overfeeding or allowing too much grain food during the warm weather.

Poultry-house.—I. T. R., Cortland, N. Y., writes: "What is your opinion of building a stone poultry-house on the south side of a hill, having glass and board roof?"

REPLY:—Such a house should be warm in winter and cool in summer, and can be used with advantage.

Probably Injured.—E. B. L., Monroe, N. Y., writes: "I had a fine hen that drooped two days, turned her head under, and finally died. What was the cause?"

REPLY:—Probably an injury from some cause. The symptoms given apply to many cases arising from different causes.

Games.—W. A., Cromwell, Illinois, writes: "How many breeds of Games are in existence, and which are the best layers?"

REPLY:—The Indian Game and the Show Game are the only recognized kinds, but there are nearly a hundred strains of Pit Games, though they are not bred to color or standard. Games are fair layers and excellent table fowls.

Hens Dying.—M. E. W., Hancock, Md., writes: "My hens stand around, refuse to eat, are very poor, and die in a week or ten days. Some of my neighbors have the same difficulty."

REPLY:—It may be due to several causes, among them roup, but the probability is that lice are at fault. Clean the poultry-house, dust hens with insect-powder, and rub a small quantity of lard on their heads.

Cutting Off the Combs.—A. L. D., Plain City, Ohio, writes: "I notice that the large comb of the Leghorn is considered an objection. Can the comb be cut off, and if so, at what age?"

REPLY:—It can be done, as with games, and is known as "dubbing." Use a sharp knife, cut off the comb and wattles, and wash the head with strong alum-water. It is performed when the chick is about three months old.

Loss of Late Chicks.—Mrs. M. B., Pringhar, Iowa, writes: "My late broods of chicks are dying with a white diarrhea. I have fed them the usual way. My neighbors' chicks are affected the same way."

REPLY:—Roup in young chicks shows such symptoms, though it is possible that the large head-lice may be at fault. Treat for lice, and dust the coops and yards well with air-slaked lime. Add a teaspoonful of liquid carbolic acid to each gallon of the drinking-water.

MORE MILK

and healthier cattle if your cows are well protected. Use in the construction of all out-buildings



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MANN'S BONE CUTTER on trial. Try it before you pay for it. Nothing on earth will **MAKE HENS LAY** like Green Cut Bone. Ill. catlg. free if you name this paper. **F. W. MANN CO., MILFORD, MASS.**

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Our Fireside.

THE COURSE OF TRUE LOVE.

I met her in the early spring,
And followed her for months thereafter;
But when I tried to hint of love,
She answered me with naught but laughter.

Then, all at once, she'd grow more tame,
But when I to her side had hurried,
She'd pout and say she never could,
Was ever mortal man so worried?

I sent what books I dared; I walked
Through miles of mud, and who can tell, oh!
My anguish when I rang the bell
And found her with the other fellow?

For weeks I never was the same
Two days, was cold or boiling over;
I'd think of suicide, and then
She'd look at me—I'd be in clover.

At last I settled down to work
(I'd grown to like the way she used me),
And every Sunday night proposed;
She every Sunday night refused me.

At last the tide began to turn,
Her "noes" each Sunday night grew weaker,
Until one night, the party changed,
The house now had another speaker.

ENVOI.

And now she tells me, with a kiss,
She loved me all the time (the sinner I)
And held off just because she longed
To see how hard I'd try to win her.

—Tom Masson, in Waverly.

HER BROTHER'S KEEPER.

BY CARRIE BLAKE MORGAN.

CHAPTER I.



It was evening in the lonely valley of Lost river. The season was early summer, and the pink afterglow of a June sunset was in the west, tinting the silent waters of the stream and touching into bolder relief the rough exterior of a settler's cabin that nestled on the sagebrush plain.

But there was neither color nor light in the troubled face of the young girl who presently came out of the cabin and stood, with shaded eyes, looking anxiously away toward the foot-hills. Once or twice she half turned and bent her head, as if listening to sounds within the cabin. At length, far off across the valley, a moving flock of sheep was observed, and the girl turned away along a well-worn path leading to an inclosure that served as a sheep-corral, a few rods distant from the house. Here she let down the bars with a deftness that betrayed familiarity with the task, and then awaited, as patiently as she could, the slow approach of the flock.

The shepherd, a slender youth of eighteen, was whistling merrily, pausing only at intervals to call out some brief command to his dog. His whistling suddenly ceased when he drew near enough to discern a strange horse tied in front of the cabin door. At the same moment he caught sight of his sister anxiously signaling him to hasten.

"What's the matter, Jean? Who's here?" he called. The girl skirted the flock, and came close to him before she answered. Her face was very pale, and her lips trembled as she spoke.

"Tom, mother's had another stroke to-day!" "Oh, Jean!"

The boy stood for an instant as if stunned, all the distress in his sister's face reflecting itself in his own.

"Was it bad?" he asked. "Is—is she—"

"She is just barely alive, and that is all; she can't move or speak. Oh, Tom, it's awful to see her!"

The two, scarcely more than children in their trouble and loneliness, looked at each other helplessly.

"Jean," faltered the boy, "I must go to town for Doctor Black. Whose horse is that?"

"The doctor is here now; that is his horse," answered the girl. "Mother was stricken down this morning, soon after you left, and I ran all the way to Jordan's; I didn't know what else to do. Mr. Jordan went to town for the doctor, and Mrs. Jordan came home with me. We've worked all day with mother, but couldn't help her any. The doctor only came an hour ago, and somehow I'm afraid he doesn't know much."

"Sh! there he is," whispered Tom, and they both turned and hurried down the path to the house.

The doctor, who was a very small, elderly gentleman, came out of the house, and stood awaiting them. His look was very grave, as he said:

"Children, I can do nothing for your poor mother; she will never be any better. She may lie for weeks, months, or even years, as she is now; or she may pass away at any moment. I have left some soothing medicine, and written directions for her diet; that is all

I can do. Care for her faithfully and tenderly. Above all, remember that while she is powerless to speak or move, her sight and hearing remain, and are perhaps intensified. Let her see only cheerful faces and hear loving words in her helplessness. Hers is a most unfortunate case; but it is what I have feared ever since she had that slight paralytic stroke a year ago; I tried to prepare you for this, you will remember."

After adding a few more parting injunctions, the kind-hearted doctor mounted his horse and rode away.

Tom went into the house, but Jean stood still, leaning against the hitching-post, and seeming to gaze after the doctor. She was, however, as unconscious of his receding figure as of the tinted clouds above the horizon, or the river, shimmering like a silver ribbon through the valley. She saw that dear form stretched silent and motionless on yonder bed, and the anxious eyes following her about, trying to express something that the mute lips could never speak.

She was still standing there when Tom came out again, followed by Mrs. Jordan. This lady, kind of heart, but faulty of judgment, felt called upon to condole with the unfortunate children after a fashion peculiarly her own:

"No use tellin' me there's no such thing as luck," she began, in a tone of doleful conviction. "Only last month, when I heard about the rustlers stealin' ten head o' your cattle, I says to Jordan, says I, 'Well, if ever there was an unlucky set it's them poor McDonaldses; an' fer my part I'm sorry fer 'em from the bottom o' my heart. Jest think,' says I, 'what all they've gone through since they come here three years ago an' took up their claim. First an' foremost,' says I, 'McDonald himself was weakly, an' had to hire the most o' his fencin' an' plowin' done. Then the timber fire come, that very first fall, an' burnt up all his cord-wood, an' he caught his death o' cold fightin' the fire, an' was in his grave fore Chris'mas. The winter, too, was an uncommon hard one, an' the snow so deep that a lot o' their stock died fer want o' feed. Then the gophers come in droves an' et up most o' their spring wheat; an' on top o' that, Mrs. McDonald had that stroke o' paralysis, an' is likely to have another most any time that'll be the end o' her. An' now,' says I, 'even the tarnation cattle thieves can't let their little band o' stock alone.' Jordan, he loved as you was an unfortunate lot; an' when you come fer me to-day an' said your mother'd had another stroke, I jest says to Jordan, says I, 'There, what did I tell you? There's nothin' but trouble an' bad luck fer them McDonaldses whichever way they turn. Now,' says I, 'the mother's done fer, unless she could have a better doctor than there is in these parts, an' she can't, 'cause it'd cost a hundred an' fifty dollars to bring a decent doctor from Boise, an' where's them poor kids goin' to git a hundred an' fifty dollars? Now,' says I—"

"Mrs. Jordan," interrupted Jean, suddenly turning her white, miserable face upon the woman, "do you think we could get a doctor from Boise City for a hundred and fifty dollars?"

"Why yes, child, you could if you had the money; an' I jest wish I had it to give you. That's what it cost ol' man Sommers, up to the Bend, to git Doctor Sampson from Boise, an' he—"

"Could a good doctor do anything for mother?" interposed Tom, eagerly.

"Well, now, there's no tellin' fer certain, of course, but it's my belief that ol' Doctor Sampson could help 'er, if he couldn't cure 'er. I b'lieve he'd git 'er so she could speak an' move 'er limbs a little, anyway. But land sake! I'm leavin' 'er alone all this time! I must go in. You go to bed, poor dears, an' try to sleep. I'll take good care o' the poor mother till mornin', then I'll have to go home; but I'll send Mandy down to stay a few days an' help you along."

The woman again entered the cabin, and the brother and sister were alone.

"Jean," said Tom, hesitatingly, drawing nearer and touching her arm, "Jean, don't you think we ought to have Doctor Sampson?" "Yes, Tom."

The words came quietly enough, but Tom, with his hand on her arm, felt her trembling.

"We'll have to take your money, Jean, the money mother's been saving up to send you to Aunt Sarah's. But I suppose you can't go now, anyway?"

"No, Tom."

"I'm so sorry, Jean. It's hard for you to give that up, ain't it?"

Jean winced, as though a blade had pierced her heart.

"Don't, Tom!" she exclaimed, shrinking away from the half-caressing touch of his hand. "I can't talk about it to-night. Tomorrow we'll write the letter and send the money; but—leave me alone now; I—I—can't bear it."

Tom's face shaded, but he answered, good-naturedly, "All right, Jean," and turned away.

At that moment a long, piteous wail came on the night breeze from the direction of the sheep-fold. It was old Guard, the shepherd-dog, who had been left to drive the sheep into the corral by himself, which task, by dint of much hard work, he had accomplished faithfully. But putting up the bars was not in his line, and so he had patiently lain down and guarded the gap until the thickening shadows of coming night had warned him that he was forgotten, and prompted him to send forth his

protest. Tom responded at once, saying to Jean, as he started down the path:

"Go to bed, Jean; I'll be back soon."

But Jean did not go to bed. There was a tumult raging in her heart, and while it lasted there could be no rest for her. She knew a place, a nook among the willows that fringed the river's bank, where she had whiled many a lonely hour away, dreaming dreams and building fair cloud castles for herself. She quietly but swiftly ran through the sagebrush to the river.

How dark it was! The frogs were croaking their dismal dirges. Now and then a lonesome little night-bird chirped to its mate. Jean sought her favorite haunt, cast herself prostrate on the ground and gave free vent to the tears that had burned her eyelids all through that trying day.

Jean McDonald was not a weak girl; she seldom gave way to tears. There was a strain of sturdy Scotch blood in her veins, and ordinary trials and disappointments were never allowed to break down her self-control. But her grief sprang now from a twofold source, and she sobbed aloud in the double anguish of a great sorrow and an equally great self-pity. In that hour the girl was giving up something almost as dear to her as life—the hope of an education.

Soon after Mr. McDonald's death, a maiden sister of his, living in San Francisco, had offered to take Jean and give her a full course at a good seminary, if her mother would provide her with suitable clothing and pay her traveling expenses. Jean was wild with delight until practical Tom sat down and figured out how much ready cash was involved in the proviso.

"It'll take two hundred dollars," he announced. "Dance away, Jean; you'll have plenty of time to rest and cool off while we're saving up that much. It'll take two years, the very best we can do, and maybe three."

Now two years had gone by, years of hard work, rigid economy and many disappointments, and only one hundred and fifty dollars of the required amount had been saved. But Mrs. McDonald had decided that Jean should go to San Francisco in September.

There had already been as many as three shopping excursions to the little town fifteen miles away, and all through the beautiful spring days Jean had been busy with needle and thread, preparing her simple but neat school outfit. How many bright day-dreams she had worked into the seams, hems and ruffles of those garments!

"I'm going to learn *everything*, mama," she had often declared. "While I'm gone you will prove up on the claim; then when I come home we'll sell out and go to Boise, and Tom shall study surveying, as he wants to, while I earn our support by teaching."

Even the widowed mother had smiled and ventured to hope that the fair prediction might be verified. And now, in one dark, dreadful moment, all hope had vanished. During those first hours of the shock Jean McDonald suffered the keenest pain her young life had ever known.

But even in that wild abandonment of her grief there was the layen of method and common sense and thoughtfulness for others. She was half-conscious all the time that in giving way to her grief she would get a fuller control of herself before meeting her mother's anxious, yearning eyes. Hers was not a devout nature, but when the first violence of her grief had exhausted itself, she lay quite still, and gazing up into the star-lit heavens, said:

"Dear God, if I am never to know anything, never to have anything, and never to be anything, the sooner you take poor mother and me out of this world the better it will be for us all. But while you see fit to leave us here, help me, oh, *help* me to bear my grief and disappointment, and to live for mother more than for myself!"

As if in answer to her appeal, a full, golden moon slowly arose above the eastern horizon, seeming to send her a benediction of peace.

Heavy-hearted, but tearless and calm, she arose and went toward the house. When she had disappeared, a clump of willows parted, and Tom stepped out into the moonlight and looked after her.

"Who'd have thought she cared like that?" he muttered. "Jean would never cry that way if her heart wasn't almost broken. Oh, I've got to make up to her in *some* way for this! But I can't do it without money; I've got to have extra money—money of my own—and I don't see but one way—"

Suddenly he paused and turned his face toward the river. His ear had caught the measured dip of oars in the water. He stepped back among the willows and stood still until a small boat, containing a solitary figure, rubbed against the sandy-bank, and a low whistle sounded from the lips of its occupant. Tom softly echoed the whistle, and stepped forward. Then the man spoke:

"All alone, Tom?"

"Yes."

"Well, what's your answer, yes or no?"

For just a moment Tom hesitated; then he answered:

"It's yes."

The man sprang ashore and grasped his hand.

"Good for you, Tom! I don't know another fellow in the valley we'd dare trust, and we need help badly. Of course, you understand that you must keep mum. What are you

going to tell your mother and sister if they ask questions?"

Tom admitted that he did not know.

"Well, you must invent something pretty quick, to shut their eyes up," said the man.

"It'll be hard to manage Jean," said Tom, doubtfully. "She's sharp as steel; she'll know there's something up."

"That's all right; let her suspect as much as she pleases, so long as she doesn't get an inkling of the truth," said the other, sternly. "So now it's a bargain, Tom," he continued, stepping back into his boat. "We'll expect to see you up there the first dark night; you won't go back on us now, will you? I know it's hard work, but there's money in it, my boy, remember that."

"I'm not likely to forget it," responded Tom. "I'm not going into it for love, I can assure you."

The man laughed, as he bent to his oars and shot his boat out into the stream. Tom watched him until the dark outline of man and boat was lost in the distance, then he went slowly and thoughtfully to the house.

CHAPTER II.

True to her word, Jean lost no time in writing the letter that was to summon Doctor Sampson from Boise City to her mother's bedside. She did it, in fact, with a feverish haste that she afterward had cause to regret. The money so hardly earned, so badly needed for other things, might have been saved. But Doctor Black's words, "She may die at any moment," rang constantly in the girl's mind, and made her feel that she must leave no possible loophole for delay. So her letter was an unqualified summons, backed by an express money-order for one hundred and fifty dollars.

In due course of time the physician came.

In all their after lives the sister and brother never forgot that day. It dawned in hope, but waned in despair. The physician's face clouded the moment he beheld his patient; but he worked faithfully with her for hours, only to be compelled at last to tell the children he could do nothing to improve her condition.

"I cannot say there is immediate danger of death; she may live for a considerable time in her present state, but there can be no assurance; the end may come at any moment."

"Doctor Black told us that much for five dollars," said poor Tom, ruefully, after the distinguished physician had ridden away.

Jean was obliged to conceal her despair.

"Now, you're not to worry, mama, dear," she said, bending down to kiss the pallid face. "You've had the very best doctor in all Idaho to see you, and he says you may be spared to us for a long, long time yet."

Jean kissed her again, and stroked her whitening hair; then, with an almost superhuman effort, crushed down the anguish in her own heart and sang a merry song that her mother loved, while she moved about preparing the evening meal.

Tom, listening outside, marveled at her self-control.

"It seems like the brunt of this trouble's got to fall on Jean," he mentally soliloquized.

LOOK OUT FOR BREAKERS AHEAD



when pimples, eruptions, boils, and like manifestations of impure blood appear. They wouldn't appear if your blood were pure and your system in the right condition. They show you what you need—a good blood-purifier; that's what you get when you take Dr. Pierce's Golden Medical Discovery.

It carries health with it. All Blood, Skin and Scalp Diseases, from a common Blotch, or Eruption, to the worst Scrofula, are cured by it. It invigorates the liver and rouses every organ into healthful action. In the most stubborn forms of Skin Diseases, such as Salt-rheum, Eczema, Tetter, Erysipelas, Boils and kindred ailments, and with Scrofula, in every shape, and all blood-taints, no matter from what cause arising, it is an unequalled remedy.

SCROFULOUS ABSCESSSES.

Mrs. BELLE SWEENEY, of Flat Top, Mercer Co., W. Va., writes: "About four years ago I

took scrofula, and did everything that doctors and others prescribed, but only got worse. Several abscesses formed about my neck and breast, discharging a quantity of matter. I got so weak I could scarcely walk about the house. I read all the medical works I could get hold of, and, among the rest, read some of your works. You described my case, and recommended Doctor Pierce's Golden Medical Discovery with his 'Pleasant Pellets.' So I procured some and commenced using them and soon began to mend. In six months my sores were all healed up. I am forty-five years old and believe I am as stout as I ever was in my life. I used about one dozen bottles of the 'Golden Medical Discovery' with the 'Pellets,' and used nothing else after I began using your medicines."



MRS. SWEENEY.

"Right or wrong, I'm going to earn some money for Jean; and I know what I'm going to buy for her, too."

It seemed a pitiless satire of fate that out of one great trouble another should be already growing for poor Jean. But so it was.

The cabin consisted of two rooms and a loft. The latter afforded a sleeping-place for Tom, and was reached by means of a rude stairway leading up from the kitchen. For light and ventilation it depended on a small, square window in one gable, the sash of which was hinged in a way to admit of its being swung upward and fastened to a rafter whenever fresh air was desired.

One evening Jean found Tom making a ladder.

"What is it for, Tom?" she asked.

"Oh, I've been thinking for some time that we ought to have a ladder. In case of fire, you know, it might come handy."

"Why, yes," said Jean. "I never thought of it before, but it is a good idea." And she returned to the house without suspecting that Tom had any hidden motive in making it.

Jean slept on a pallet, close beside her mother's bed, and waking at regular intervals throughout the night, she kept careful watch over her mother.

One night, having done a washing during the day, Jean was so tired that she could not go to sleep. After tossing and turning for nearly an hour, she was startled by the sound of footsteps outside the house. Rising softly, not to disturb her mother, she went to the window and peered out. There was no moon, but the sky was clear, and the glow of stars enabled her to discern a human figure just disappearing within the shadow of the corral and stables. Her heart began to throb violently, but she stood still and watched. One, two, three minutes passed, then the dark figure reappeared leading Zero, Tom's mare.

"Rustlers!" gasped Jean, running swiftly but softly from the room and up the stairs. "Tom! Tom!" she called, in a frenzied undertone, as she made her way across the dark loft toward Tom's bed. "Oh, Tom, the rustlers are stealing Zero!"

As she approached the bed, which was near the window, she saw that Tom was gone. She sprang to the window and leaned out. She could not discern the horseman, but the receding hoof-beats told her he was already well away on the trail that led to the mountains. Suddenly her eyes rested upon something beneath the window—something dimly outlined in the starlight. It was Tom's new ladder, reaching from the ground to the window-sill.

Jean sank back upon the edge of the bed, and sat there a long while thinking. Finally she went cautiously down-stairs, and finding her mother had not been disturbed, dressed herself, wrapped a shawl about her shoulders, and opening the door, stole out and around the house and sat down at the foot of Tom's ladder to await the return of Zero and the rider. For she knew now that it was Tom, and not a horse-thief, who had taken Zero from the stable. Tom had deceived her. He had given her an untruthful answer about the ladder. Instead of going to bed, as soon as he thought they were all asleep, he had crept down the ladder and ridden away into the night.

Where had he gone? What could be his errand, that he must be so shy about it? She recollected now that he had been away from home at night pretty often recently, and had stayed out very late on several occasions, for she had been awakened on his return by his efforts to ascend the rickety stairs. She had spoken to him, and tried to find out what kept him from home so late, and he had given confused, evasive replies, though she had not thought about it at the time. She had told Tom that there was no need of his going to the Bend for the mail and supplies oftener than once a week, and that he should not stay away from home late enough to cause his mother uneasiness. He had looked annoyed, but had promptly agreed that mother should not be worried by any act of his. In order to spare his mother, without sacrificing his own selfish inclinations, he had resorted to secrecy and deception.

Trying vainly to solve the problem, and wounded to the heart by the thought of Tom's being deceitful, Jean bowed her head on the lowest round of the ladder and sobbed forlornly.

"Oh, Tom!" gasped the girl, awakened by his return before day, "where have you been?"

For a moment Tom did not reply. He was about to answer, with assumed unconcern, "Oh, just down to the Bend," but something in Jean's voice warned him that a straightforward course with her would be wiser; so he said:

"I can't tell you, Jean, where I've been. Go away now, and don't wake mother, and let me get a couple of hours' sleep."

"Oh, Tom!" she said, entreatingly, "tell me why you deceived me about the ladder, and why you stole off in the night like a—sneak? What does it mean, Tom?"

"Jean," said Tom, and the girl felt a new ring of firmness in his voice, "I can't tell you where I have been, and I don't want you to ask me. But about the ladder—I made it because you told me I disturbed mother coming in late."

"But, Tom, dear, why need you go and stay away nearly all night like this? I—I can't think what it means."

"Well," said Tom, "I'll tell you one thing it

means—it means money for us, Jean, and I guess you'll have to admit that we need some pretty badly."

"Money!" echoed Jean, "money that has to be gained by stealth, at dead of night! No, no, Tom, we don't need such money as that!"

"Oh, bosh! the money's all right. You don't understand, Jean, and I can't explain. For pity's sake go to bed and leave me alone."

"But, Tom, if everything is all right, why can't you explain to me?" persisted the girl, tremulously.

"Because I've given my word not to! There now, let me alone, can't you? And see here," added the boy, with sudden sternness, "don't you breathe a word of this to any living soul, Jean, or you'll get me into trouble."

Jean returned to her hard pallet with a heart full of foreboding and dread. This new blow had come from such a totally unexpected source. If any one had told her only yesterday that Tom would wilfully add even a feather's weight to her load of sorrow and care, she would have scorned to believe it possible. Yet now, as she lay sleepless through the long hour that intervened before dawn, some words her mother had spoken a few weeks before her illness came to her with peculiar vividness.

"Tom is a good boy," Mrs. McDonald had said, "but," and she hesitated a moment, "I wish he did not look quite so much like his Uncle James."

This enigmatical remark she afterward explained to Jean, in confidence, by telling her that her Uncle James had, when about Tom's age, fallen into evil company and "gone to the bad," bringing trouble and disgrace to his parents and relatives.

"And if I should die, Jean," she had added, impressively, "remember, I leave Tom in your hands. Be your brother's keeper, my girl; stand by him always, in the face of all the world, no matter what he may do, for mother's sake."

Jean had promised. And now it seemed to her that the time was already at hand in which she must redeem her pledge. The poor mother was worse than dead in her helplessness, and Tom was— She dare not finish the thought!

The gray light of dawn was in the cabin, and rising, she went out and sat on the kitchen door-sill, watching the sun come up, and striving not to think.

She did not call Tom that morning, but waited patiently until he came down of his own accord, which he did about an hour later than usual. The sheep were bleating plaintively to be let out of the corral. Tom looked very tired and moody, and Jean was pale and silent as she put his breakfast on the table.

In the midst of the meal a horseman rode up, dismounted, and put his head in at the open door. It was their nearest neighbor, Mr. Jordan, who lived two miles away.

"Tom," he said, after nodding to Jean, "was you out after the rustlers last night?"

Tom colored instantly, and voluntarily glanced at Jean.

"Rustlers?" he echoed. "Why, are they around again, Mr. Jordan?"

"Well, rather," responded the man. "They was around last night to the tune of about forty head of horses an' as many cattle. They got my whole band of yearlin's. An' now, Tom, if you wasn't out last night, how is it that my men found your mare, all saddled an' bridled, away up the mountain trail this mornin'?"

"I didn't say I wasn't out last night, Mr. Jordan," said Tom. "I said I wasn't out after rustlers. I didn't know there'd been any rustlers about; but I was out last night, and Zero got away from me. I came home on foot without her."

"What was you doin' up the mountain trail, Tom?"

"Business of my own took me there, Mr. Jordan," was the boy's brief reply.

Mr. Jordan looked at him keenly and curiously for a moment. Then he stepped inside, laid his hand on Tom's shoulder, and said, kindly:

"Tom, you don't need to tell me your business if you don't want to; I know you're a good boy; but everybody don't know you's well's I do, an' you'd better lay low if you don't want to explain what took you up the trail last night. It's knowed that the rustlers went up that way with the cattle. It's been found out, too, that Jack Prang's one of 'em. Sam Pierce, that young deputy sheriff from Halex, follered 'em, an' he says if he could have kep' out o' sight he'd a follered 'em all night; but they saw him, an' one of 'em sbot at him three or four times. He's ready to swear it was Prang. He returned the fire, an' is purty sure he wounded Prang. He says there was about six of 'em, mostly young fellars, an' he thought he recognized some of 'em, but won't mention no names till he's certain. We'll have to catch Prang first, then the names of the whole gang'll come out. You don't want your name mixed up with 'em, Tom. I know, so be careful, my boy. The whole country's excited, an' nobody knows who to trust. Pierce is lookin' for Prang with a posse of men. If he's caught he'll be tried, convicted an' hung in short order. I'm goin' to join the posse myself, an' must be off. Good-by. You'll find your mare hitched out yonder at the corral."

Mr. Jordan mounted his horse and rode away. Tom got up from the table and went out without meeting Jean's anxious eyes.

CHAPTER III.

Mr. Jordan had not exaggerated the situation when he said the whole country was excited and up in arms against the horse and cattle thieves, or "rustlers," as they are called in the West. The settlers had so long suffered from the periodical raids of the miscreants that the limit of endurance had at last been reached, and they were now resolved upon the extermination of the whole band.

Pierce, the plucky young deputy sheriff, had seen and followed the rustlers on their last raid, and had recognized Jack Prang, a well-known character, who kept a low liquor saloon at the Bend. This gave the settlers the clue necessary to decisive action. A posse of fifty men had quickly come together, and with young Pierce at their head, had started on the trail of the thieves.

In the meantime the people awaited developments. Probably the most anxious among these was Jean McDonald; but while others were longing for the capture of the thieves, Jean was praying that for this one time the guilty might go free. For into Jean's poor little overburdened heart a terrible fear had crept, and was hourly striking deeper root.

If there had been any one to whom she could say a word, any one to smile at her fancies or offer even a conjectural explanation of the things that puzzled and troubled her, the cloud might not have seemed so impenetrable. But there was no one. After Mr. Jordan's call, Tom carefully refrained from all reference to the rustlers, and, in fact, avoided conversation with his sister so far as lay in his power. As the days passed without the outlaws being caught, Tom tended his flock as usual, but nearly every night stole down the ladder, and rode away along the trail.

Jean knew this. She could not help listening and watching. When the sound of Zero's hoofs had died away in the distance, the girl would creep back to her pallet, trembling and fear-stricken, pressing her burning eyes to keep back the tears, lest a sob should escape and trouble the poor mother. At last, when worn out, she would sleep and wake by turns, and a broken thread of dreams, worse than the reality, would make night wretched. If Tom had been a little more observant of his sister, he would have observed how thin and care-worn she grew.

The pursuing party had recovered the stolen horses and cattle, but not the thieves. They brought a bit of news that caused renewed excitement. It was that Prang had really been so badly wounded by the deputy sheriff on the night of the raid that he had not been able to go on with the others. It was known by certain signs that he had slowly and cautiously made his way back toward the valley, and it was the general belief that he was then in hiding somewhere along the river or in the ravine, awaiting a chance to steal to his home. A vigorous search of the valley was at once instituted, more than a hundred men participating, and excitement ran high.

But the search was in vain; no further trace of Prang was discovered, and at the end of a week a standing reward of five hundred dollars was offered for information leading to his capture, dead or alive, and the searching party disbanded and returned to their respective homes. All were convinced that the fugitive, with the aid of confederates, had escaped to some safe retreat.

Jean was probably the only one who did not readily arrive at this conclusion. She secretly feared that the outlaw was lying concealed in some gorge of the mountains or foot-hills, subsisting upon food stealthily carried to him. When a suspicion of the identity of the confederate forced itself upon her, she struggled against it with a terror most pitiable. She had found a small basket concealed in the loft, beneath Tom's bed, in which were crumbs of bread and meat; and a night or two later she had accidentally come upon the boy as he stood before the cupboard hastily stowing food into the same basket. When he was gone that night, she had searched for this basket in the loft, and had not found it. Poor Jean! It seemed as if "no hinge nor loop to hang a doubt upon" was left to her.

At length there came a day when Tom's conduct underwent a sudden change. He had been out one night, as usual, and returned long after midnight, and Jean expected to see him come down in the morning yawning, heavy-eyed, as of late was always the case. But instead, he slid down the rough banister, and landing in the middle of the little kitchen, caught Jean about the waist and waltzed with her two or three times around the cook-stove, almost taking her breath away. This was so like the light-hearted Tom of happier days that the girl's eyes filled with tears, and her lips quivered when she tried to smile. Tom chuckled her under the chin consolingly.

"Never mind, Jeannie girl," he said, "it's a long lane that has no turn."

The boy was overflowing with excitement, and holted his breakfast in a way that threatened dire injury to his digestion. When he had finished, he went in and kissed his mother and talked to her in a cheerful, hopeful strain for some time. Then he came out and danced a "double shuffle" on the kitchen stoop, winding up his performance by standing on his head in a patch of hunch-grass near the door. But that last feat was disastrous, for, as he assumed the inverted attitude, a buckskin purse, heavy with coin, slipped from his pocket and struck the ground with a resounding eling!

Jean, who had followed him to the door and was watching his antics with the ghost of a smile, turned pale at sight of the purse. Instantly Tom was on his feet, and his face crimsoned as he stole a swift glance at Jean; he snatched up the purse and ran down to the corral. Three minutes later he rode away on Zero along the valley road.

For an hour the poor sheep pleaded in vain to be let out to pasture: then one of the Jordan boys came, and told Jean that Tom had "gone to town" and had sent him up to mind the sheep.

"Gone to town!" she echoed. "What has taken Tom to town?"

But the boy could not enlighten her.

Where had Tom got all that money, and why had he gone to town? These were the questions that tormented the anxious girl throughout the long, lonely day. Not even the evening and Tom's return brought any solution, for though the boy was still in the most exuberant spirits, he skilfully avoided any allusion to his sudden trip to town, or to the wealth he had accidentally displayed.

When he had finished his evening work, he found Jean in her favorite place on the kitchen stoop, watching the sun go down. He paused and gazed at her intently for a moment, struck for the first time by her pale, thin face and sad eyes. Some tardy quail of conscience seemed to strike him; he turned suddenly, went around the house, and came back dragging the ladder, which he ostentatiously knocked to pieces before her eyes, carrying the pieces into the kitchen for fuel. Jean interpreted the act as a wordless pledge that he would renounce his night roaming, and despite the many doubts and misgivings that still beset her, she slept more peacefully that night than she had since the construction of the ladder.

Early one morning a few days later, so early that Jean's work was not yet done, and Tom had not started out with the sheep, a light, one-horse wagon rattled up to the door and Mrs. Jordan, its sole occupant, descended from the high spring seat.

"Here, Tom," she called, cheerily, "put my horse in the stable, will you? And give him a good wisp o' hay, please, fer I've come to stay all day, an' he'll need it."

Then she went into the house and volubly explained her errand.

"Some o' the girls down to the Bend 've got up a buckleberryin'," she said. "'Twasn't settled till late last night, er you'd a heard of it sooner; fer I said to Jordan, jest the minute I got wind of it, says I, 'Jean McDonald's got to go to that berryin'. That girl,' says I, 'is doin' the work o' two women, an' stayin' to home there, mopin' an' grievin' over 'er poor mother till she's wearin' away to skin an' bone, an' has no more blood in 'er than a white pine stick. It's contrary to natur', says I, 'fer a young critter to be kep' like that, an' I'm goin' to roust 'er out o' there fer one day, anyhow.' So here I am, Jean, goin' to stay all day, an' take the best care in the world o' mother; an' you've got jest about an hour to git ready, fer the girls'll be along. They're comin' up the river in a small boat, goin' to tie up the boat here an' walk up to the Jago canon. Mandy's goin', an' Edith Warren, an' Elly Jenkins, an' Sue Robbins, an' I don't know who all. There'll only be one boy in the crowd, an' that's Jeff Warren. Mis' Warren's sendin' him along to do the rowin' an' take care o' the girls. I hope you'll have a good day fer it, but I don't altogether like the looks o' the sky off there in the southwest."

In vain Jean protested that she was not prepared and could not go.

"Oh, git out!" said Mrs. Jordan, with characteristic inclemency. "You jest put on a clean gingham, an' let me eurl your hair an' tie it with a bit o' ribbon, an' you'll be the sweetest an' purtiest girl among 'em all. As fer the picnic dinner, I've looked out fer that. When I fixed up Mandy's basket, I says to her, says I, 'I'm goin' to put Jean McDonald's name in the pot, 'cause I can't git word to 'er in time fer her to fix anything.' La! Mandy's most tickled to death to thiuk you're goin'. So now jest brush 'round an' git ready. Can't you see by your mother's eyes that she wants you to go?"

"Do you wish me to go, mother?" asked Jean, wistfully, and there was no denying that the loving eyes brightened into an eager yes.

"Of course you ought to go, Jean, after Mrs. Jordan coming all the way up here and taking so much trouble," interposed Tom, who had come to the open door in time to hear the lady's closing argument.

Jean finally consented to go, and began her simple preparations. She preferred to remain at home. Her heart was heavy, and could not all at once throw off its load and attune itself to merry-making.

"Child, what alls you? You go about as if you was dressin' fer a funeral," complained Mrs. Jordan, following her into the kitchen. "Come now, chirp up an' be cheerful, fer your ma's sake! Don't you s'pose she remembers how you used to dance 'round when you was gittin' ready fer a picnic? An' can't you understand that it makes her feel had to see you like this?"

Yes, Jean could understand, and she tried her best to "ebirk up" and look glad and happy. Presently Tom put his head in at the door.

"Most ready, Jean?" he asked, cheerfully. "They're coming."

(Concluded in our next.)

Our Household.

MY SHIPS.

If all the ships I have at sea
Should come a-sailing home to me,
Weighed down with gems and silk and gold,
Ah, well! the harbor could not hold
So many sails as there would be
If all my ships came in from sea.

If half my ships came home from sea,
And brought their precious freight to me,
Ah, well! I would have wealth as great
As any king who sits in state,
So rich the treasures that would be
In half my ships now out at sea.

If just one ship I have at sea
Should come a-sailing home to me,
Ah, well! the storm-clouds then might frown,
For if the others all went down,
Still rich and proud and glad I'd be
If that one ship came home to me.

If that one ship went down at sea,
And all the others came to me
Weighed down with gems and wealth untold,
With glory, honor, riches, gold,
The poorest soul on earth I'd be
If that one ship came not to me.

O skies! be calm. O winds! blow free.
Blow all my ships home to me.
But if thou sendest some a-wreck,
To never more come sailing back,
Send any, all, that skim the sea,
But bring my love-ship home to me.

—Ella Wheeler Wilcox.

HOME TOPICS.

MUSHROOMS.—The delicious meadow mushroom is in season now, and in many parts of the country may be gathered by the bushel. There are so many ways of cooking mushrooms that one does not soon tire of them and they are nutritious and wholesome.

BAKED MUSHROOMS.—Select large mushrooms. Peel, cut off the stocks close to the top, place them tops down in a pie-pan, sprinkle with pepper and salt and lay a bit of butter on each mushroom. Bake in a quick oven, basting with the melted butter and liquor that forms in the pan. Bake them about fifteen or twenty minutes, and serve on a hot dish.



A CASE FOR PHOTOGRAPHS.

BROILED MUSHROOMS.—Peel large mushrooms and remove the stems. Broil them on a wire broiler over bright coals or a gas fire; turn them once. When done, lay them on a hot plate, season with pepper and salt, pour a little melted butter and lemon-juice over them, and serve very hot.

CREAMED SALT MACKEREL.—One is apt to become tired of fresh meat in hot weather, and a little salt fish will often

tempt the appetite. Soak the fish all night in a large panful of water. Be sure and lay the fish in with the skin side up. In the morning, take it out of the water, wipe with a dry cloth and broil it over a clear fire. Lay on a hot dish and pour over it a cream sauce made as follows: One cupful of milk, one egg, two teaspoonfuls of but-

ter, without assistance. It is not necessary to have an elegant side-saddle to do this. I have known many graceful riders who never rode any but a man's saddle.

A farmer's daughter ought to learn to drive. I do not mean simply to hold the lines while a gentle old horse jogs along over a smooth, straight road, but to turn,



BUREAU-SCARF.

ter, and one of corn-starch rubbed smooth with the butter. Season with pepper and a very little salt. Heat the milk to boiling, thicken it with the butter and corn-starch; when boiling, pour the sauce over the beaten egg, stirring it well, and then pour it over the fish.

GIRLS ON THE FARM.—Girls on the farm often repine at their lack of opportunities for education, and yet they may learn many things freely which city girls must

back, guide and control a spirited team or a frightened one with strength and judgment. She ought also to be able to harness and unharness one or two horses in the right manner, so it will not take a man an hour to rearrange the harness for use again. It is a standing saying that a woman always unfastens every buckle when she tries to take off a harness.

I remember before I had learned to unharness a horse well I one day drove to my sister's, and her husband being away, I took off the harness. I was determined to show him I could do this without unfastening every buckle. The result was that when he came home one of the first things he asked was, "Maida, how did you get Nance out of her harness? Did you melt her and pour her out?" However, I persevered until I could harness and unharness a horse as well as a man could.

It is not only a convenience to be able to do this kind of work, but sometimes more than that. I remember once when a young girl of seventeen harnessed two horses to a buggy, every man in the neighborhood being at an election, and drove five miles after a doctor, thereby doubtless saving a life.

Fathers, it will pay you to give the girls a chance to learn these things and opportunity to practice them. Then in case of an emergency she can drive the reaper or mower and thus save a crop which might otherwise be lost or injured, because help failed at a critical period. Then let the girls have a horse, not only when you want an errand done, but for their own pleasure and to take mother for a drive. It will do them all good, and you, too, and we will not so often hear farmers' daughters say, "I'll never marry a farmer." Whatever tends to make life on the farm more pleasant is a good investment.

MAIDA McL.

TOMATO PRESERVES.

Scald and peel carefully small, pear-shaped tomatoes, not too ripe; prick with a needle to prevent bursting, and put their weight in sugar over them; let them lie over night, then pour off all the juice into a preserving-kettle and boil until it is a thick syrup, clarifying it with the white of an egg; add the tomatoes and boil until they look transparent. A piece or two of ginger-root, or one lemon to a pound of fruit, sliced thin and cooked with the fruit, will improve it.

BUREAU-SCARF.

The material is cream scrim, which comes in double and single widths. The double width, at sixty cents a yard, makes two. The sides and ends are first simply hemmed, after which the pattern is worked in holbein work in bright gold silk, the other part of the pattern in cream nun's cotton, rather coarse. The scarf illustrated is the work of a lady in Sweden. The edge is finished with coarse lace.

COMPLETELY PARALYZED.

PHYSICIANS ARE ASTONDED BY A PECULIAR CASE—A YOUNG MAN STRICKEN WITH LANDRY'S PARALYSIS AND YET RECOVERS.

(From the Times, Philadelphia, Pa.)

Stricken with Landry's Paralysis and yet cured. That means but little to the average layman, but it means a miracle to a physician. Such is the experience of O. E. Dallimore, now a resident of Madison, N. J., and a rare experience it is.

"Yes, it's true that I had Landry's Paralysis," said Mr. Dallimore to a reporter, "or else the most celebrated physicians of London were mistaken.

"It was on the 15th of March, this year," he continued, "when I was in New York City, that I first felt the symptoms of my trouble. I experienced difficulty in going up-stairs, my legs failing to support me. I consulted a physician, who informed me that I had every symptom of Locomotor Ataxia, but as the case developed he pronounced it a case of Landry's Paralysis, and knowing the nature of the disease, advised me to start for my home and friends. I gave up my work, and on April 1st started for London, Ont. A well-known physician was consulted, but I grew rapidly worse, and on Saturday, April 7th, several eminent physicians held a consultation on my case and informed me that I was at death's door, having but three to six days to live; still I lingered on, by this time completely paralyzed, my hands and feet being dead, I could hardly whisper my wants and could only swallow liquids. Oh, the misery of those moments is beyond all description, and death would really have been a welcome visitor.

"Now comes the part that has astounded the physicians. Rev. Mr. Gandy, a clergyman who visited me in my last hours, as he supposed, told me of the marvelous cures of paralysis that had been performed by Dr. Williams' Pink Pills for Pale People. I started to take the pills about April 28th, and a week after that felt an improvement in my condition. There was a warm, tingling sensation in the limbs that had been entirely dead, and I soon began to move my feet and hands; the improvement continued until May 28th, when I was taken out of bed for a drive and drove the horse myself. By the beginning of July I was able to walk up-stairs alone and paid a visit to Niagara.

"Slowly but surely I gained my old health and strength, leaving Ontario for New York on October 11th and beginning my work again on October 26, 1894. Cured of Landry's Paralysis in eight months." To confirm his story beyond all doubt, Mr. Dallimore made the following affidavit:

Sworn and subscribed before me December 3, 1894.

AMOS C. RATHBUN,

[SEAL.] Notary Public.

Dr. Williams' Pink Pills contain all the elements necessary to give new life and richness to the blood and restore shattered nerves. They are for sale by all druggists, or may be had by mail from Dr. Williams' Medicine Company, Schenectady, N. Y., for 50 cents per box, or six boxes for \$2.50.

RIPE CUCUMBER SWEET PICKLES.

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

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

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

SPICED TOMATOES.

Take red and yellow pear-shaped tomatoes, prick two or three times with a fork, sprinkle with salt, let stand over night, pack in a glass jar and cover over with vinegar; prepared as follows for a half-gallon jar:

1 pint of vinegar,
1 teaspoonful of cloves,
1 teaspoonful of cinnamon,
1 teaspoonful of allspice,
1 teaspoonful of pepper,
1 tablespoonful of sugar.

The spices should be ground. Let this come to a boil, then pour it into jars and seal immediately.

A CASE FOR PHOTOGRAPHS.

Now that the photograph-album has been set aside, something to take its place is suggested in our illustration. It is made of cardboard, covered inside with thin silk and outside with either art linen or bolting-cloth over silk, painted in water-colors.

FERN-LEAF LACE.

ABBREVIATIONS.—K means knit plain; n, narrow; p, purl or seam; o, over; oo, thread over twice; ooo, throw thread over three times; sl, slip; s and b, slip and bind; tog, together; st, stitches; * and **, repeat to and from.

Cast on 40 stitches and knit once across plain.

First row—Sl 1, k 2, ooo, k 2, oo, p 2 tog, k 6, ** o, k 1, o, * k 1, sl 1, k 1, pass the sl st over the one just knit; k 1, (oo, p 2 tog, k 1) twice, n, k 5, o, k 1, o, k 1, n, k 1, oo, p 2 tog, k 2 st, turn.

Second row—Sl 1, k 1, oo, p 2 tog, k 1, p 11, (k 1, oo, p 2 tog) twice, k 1, * p 10, k 1, oo, p 2 tog, k 3, p 1, k 4 st, turn.

Third row—S and b off 3 st, k 4, oo, p 3 tog, k 6, ** o, k 1, o, * k 2, sl 1, k 1, pass the sl st over the one just knit, k 1, (oo, p 2 tog, k 1) twice, n, k 4, o, k 1, o, k 2, n, k 1, oo, p 2 tog, k 2 st, turn.

Fourth row—Repeat the second row to *, p 11, k 1, oo, p 2 tog, k 5 st, turn.

Fifth row—Repeat the first row to *, ** k 3, sl 1, k 1, pass the sl st over the one knit, k 1, (oo, p 2 tog, k 1) twice, n, k 3, o, k 1, o, k 3, n, k 1, oo, p 2 tog, k 2 st, turn.

Sixth row—Repeat the second row to *, p 12, k 1, oo, p 2 tog, k 3, p 1, k 4 st, turn.

Seventh row—Repeat the third row to *, ** k 4, sl 1, k 1, pass the sl st over the one knit, k 1, (oo, p 2 tog, k 1) twice, n, k 2, o, k 1, o, k 4, n, k 1, oo, p 2 tog, k 2 st, turn.

Eighth row—Repeat the second row to *, p 13, k 1, oo, p 2 tog, k 5 st, turn.

Ninth row—Repeat the first row to *, ** k 5, sl 1, k 1, pass the sl st over the one knit, k 1, (oo, p 2 tog, k 1) twice, n, k 1, o, k 1, o, k 5, n, k 1, oo, p 2 tog, k 2 st, turn.

Tenth row—Repeat the second row to *, p 14, k 1, oo, p 2 tog, k 3, p 1, k 4 st, turn.

Eleventh row—S and b off 3 st, k 4, oo, p 2 tog, k 11. Repeat from ** in the first row.

Twelfth row—Repeat the second row to *, p 15, k 1, oo, p 2 tog, k 5 st, turn.

Thirteenth row—Sl 1, k 4, oo, p 2 tog, k 11. Repeat from ** in the third row.

Fourteenth row—Repeat the second row to *, p 16, k 1, oo, p 2 tog, k 2, ooo, k 3 st, turn.

Fifteenth row—Sl 1, k 3, p 1, k 3, oo, p 2 tog, k 11, o, k 1, o. Repeat from ** in the fifth row.

Sixteenth row—Repeat the second row to *, p 15, p 2 tog, k 1, oo, p 2 tog, k 8 st, turn.

Seventeenth row—S and b off 3 st, k 4, oo, p 2 tog, k 1, n, k 7, o, k 1, o. Repeat from ** in the seventh row.

Eighteenth row—Repeat the second row to *, p 14, p 2 tog, k 1, oo, p 2 tog, k 5 st, turn.

Nineteenth row—Sl 1, k 2, ooo, k 2, oo, p 2 tog, k 1, n, k 5, o, k 1, o. Repeat from ** in the ninth row.

Twentieth row—Repeat the second row to *, p 13, p 2 tog, k 1, oo, p 2 tog, k 3, p 1, k 4 st, turn.

Twenty-first row—S and b off 3 st, k 4, oo, p 2 tog, k 1, n, k 8. Repeat from ** in the first row.

row to *, p 10, p 2 tog, k 1, oo, p 2 tog, k 5 st, turn.

Twenty-seventh row—Sl 1, k 2, ooo, k 2, oo, p 2 tog, k 1, n, k 2, o, k 1, o. Repeat from ** in the seventh row.

Twenty-eighth row—Repeat the second row to *, p 9, p 2 tog, k 1, oo, p 2 tog, k 3, p 1, k 4 st, turn.

Twenty-ninth row—S and b off 3 st, k 4, oo, p 2 tog, k 1, n, o, k 1, o. Repeat from ** in the ninth row.

Thirtieth row—Repeat the second row to *, p 8, p 2 tog, k 1, oo, p 2 tog, k 5 st, turn.

Repeat from the beginning of first row for the length required.

ELLA McCOWEN.

FERN-LEAF INSERTION.

Cast on 21 stitches and knit once across plain.

First row—Sl 1, k 1, oo, p 2 tog, k 1, n, k 5, o, k 1, o, k 1, n, k 1, oo, p 2 tog, k 2 st, turn.

Second row—Sl 1, k 1, oo, p 2 tog, k 1, p 11, k 1, oo, p 2 tog, k 2 st, turn, and repeat every alternate row the same.

Third row—Sl 1, k 1, oo, p 2 tog, k 1, n, k 4, o, k 1, o, k 2, n, k 1, oo, p 2 tog, k 2 st, turn.

Fifth row—Sl 1, k 1, oo, p 2 tog, k 1, n, k 3, o, k 1, o, k 3, n, k 1, oo, p 2 tog, k 2 st, turn.

Seventh row—Sl 1, k 1, oo, p 2 tog, k 1, n, k 2, o, k 1, o, k 4, n, k 1, oo, p 2 tog, k 2 st, turn.

Ninth row—Sl 1, k 1, oo, p 2 tog, k 1, n, k 1, o, k 1, o, k 5, n, k 1, oo, p 2 tog, k 2 st, turn.

Repeat from the first row for the length required.

ELLA McCOWEN.

ABOUT THE HOUSE.

IN THE DINING-ROOM.—A pretty and serviceable spread for the dining-table that is kept constantly laid may be made from fine bleached flour-sacks. Sew four, six or eight together by laying one side over the other, turning in the edges and stitching on both sides so there will be no raw edges. Put a half-inch hem all around, and brier-stitch the hem and each seam with yellow, red or black wash embroidery-cotton. Yellow is the prettiest, but black is at the present the most fashionable.

A CORNER CUPBOARD.—If one has not sufficient cupboard-room, a set of shelves fitted into one corner of the dining-room is a convenience that may be made very attractive by covering the shelves and the space between with red or black cambric, and tacking a two-inch valance of red leather to the front of each shelf with brass-headed tacks. A rod and curtain will keep them fairly free from dust, but if one's best dishes are put on these shelves, the curtain may be pushed to one side. Pretty cups, either china or silver, should be hung on brass hooks screwed into the under side of the shelves. The table lamps and vases may be set upon the upper shelf, and the whole become a thing of beauty as well as a needed convenience.

IN THE KITCHEN.—Crushed egg-shells are the nicest things in the world to clean pots and pans or any cooking-utensils to which the food may have stuck or scorched. In one well-ordered kitchen that I know of is a box on purpose for egg-shells, and into it they all go, to be convenient when needed. Two or three of them crushed and briskly rubbed over the inside of any cooking-vessel will clean it better and more quickly than a wire dish-cloth, beside scouring or polishing as nicely as if sand were used. After use in this way, the shells are fine and in good condition to be fed to the poultry as a help toward supplying shell material, with no danger of their learning the abominable habit of egg-eating.

TO CLEAN NEW POTATOES.—Every woman dislikes to prepare new potatoes for use on account of the unsightly brown stain left upon her hands. But this may be prevented by putting the potatoes in a deep vessel with plenty of water and a few broken pieces of bricks or small, sharp stones, and with a paddle, smooth stick or large spoon, stirring them rapidly about. If the potatoes are smooth and regular, the entire quantity will be perfectly cleaned in less time than one could scrape a half dozen. If they are rough and uneven, the eyes will have to be cleaned by scraping them or by rubbing with a damp cloth, but in either case it requires much less time, and leaves no stain upon the hands. If too old to clean in this way, rub them briskly with a coarse cloth—flannel preferred—and they may be more easily and

quickly cleaned than by scraping, and without staining the hands.

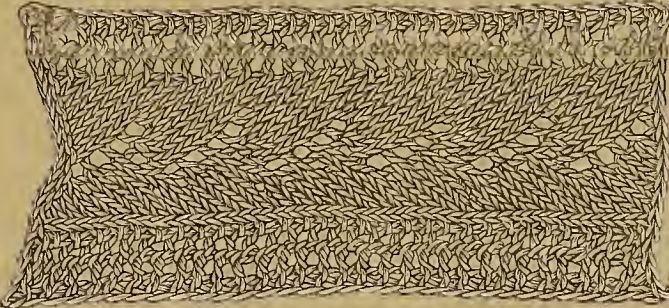
Highest of all in Leavening Power.—Latest U. S. Gov't Report

Royal Baking Powder
ABSOLUTELY PURE

quickly cleaned than by scraping, and without staining the hands.

THE TOILET.—Weak salt-water makes an excellent bath for tired eyes, and may be used either cold or hot, as circumstances seem to demand. It is also an excellent tonic for the hair, and may be applied as often as once a week if rubbed thoroughly into the scalp, but the hair itself should be wet as little as possible.

SALT-WATER BATHS.—These baths are said by all physicians to be highly beneficial, and scores of persons are annually sent



FERN-LEAF INSERTION.

to the seaside for the good to be derived from them; but few persons know of the help to be obtained from a salt-water bath taken in their own home. To the bath-water add enough common table-salt to give it a strong salty taste. Follow the bath by a brisk rubbing, and one will be both surprised and delighted at the refreshing, exhilarating effect. It seems to act as a tonic to the entire system, resting and rejuvenating the tired body in a most pleasant manner.

TO CLEAN THE TEETH.—As good a dentifrice as one can get, and one within the reach of all, is common salt. The teeth should be regularly cleaned once a day by rubbing them lengthwise, or up and down, not crosswise, with a soft, damp cloth dipped in fine table-salt. This readily removes stains or discolorations from the teeth, imparts a fine, even brilliant polish, and renders the gums firm and pink, as well as helps to sweeten the breath. The teeth should also be lightly and easily brushed with a soft brush dipped in weak salt-water after each meal, and the mouth rinsed out with salt-water.

TO REMOVE VEGETABLE OR FRUIT STAINS FROM THE HANDS.—The juice of a lemon or of a ripe tomato will remove the stain on one's hands caused by green apples or by onions. If the stain is very deep, it may require two or three applications, but if the juice is thoroughly applied before the stain has been set by washing the hands in soap-suds, it will effectually remove it. If the stain has been set by soap, it will have to wear off. Washing the hands thoroughly and completely in fine, damp corn-meal will materially assist the wearing-off process, and every toilet-table should be supplied with fine corn-meal.

To remove the stain caused by any other fruit than apples, as soon as one is through handling the fruit, wash the hands in clear water, dry lightly, and immediately, while the hands are yet damp, hold them over the fumes of an old-fashioned sulphur match. Repeat the process, if necessary, as it is only the phosphorous fumes, not the burning match itself, that removes the stains. CLARA SENSIBAUGH EVERTS.

A CONVENIENCE.

What to do with that chair was a question. The legs were good, although the back and seat showed unmistakable signs of wear. At last a bright idea dawned into the mind of the owner. Ere long the unsightly chair was changed into "a convenient convenience."

The back was sawed off, the legs varnished, a denim cover (not cushion) embroidered in a conventional design adorned the seat. A large covered Japanese work-basket was placed upon it, and the whole was set in a corner conveniently near the sewing-machine.

In the basket was to be found everything necessary for sewing, besides whatever garment needed to be made next. These garments were usually all cut out and

basted preparatory to being "run upon the machine" and finished, although sometimes the uncut material was placed therein. Or perchance a dainty bit of fancy work or hemstitching would find a place there.

And still the owner was not satisfied. A place must be conjured up for the clothes which required mending. A search was instituted, and another chair was found. This time not merely the back, but also the legs were decidedly weatherbeaten. The back came off. A bright cushion was placed over the seat, a pretty curtain was strung on a wire, which was fastened under the flounce of the curtain. And here, snugly tucked from the inquisitive gaze of the world, was placed, after each washing, the articles that needed mending.

Its place was a variable one. There being no sewing-room proper, it was at times in the kitchen, at other times in the bedroom, or again in the sitting-room; but wherever it was, it was also undoubtedly a great convenience, for by means of the wires wound around the legs it was made to do duty as a mending-receptacle, and still could be used as a backless chair.

ELLA BARTLETT SIMMONS.

PICCALILLI.

- 2 dozen large cucumbers, chopped,
- 2 quarts of small onions, whole,
- 1 peck of green tomatoes, chopped,
- 1 dozen green peppers, chopped,
- 1 head of cabbage, chopped.

Sprinkle one pint of salt over this and let it stand over night, then squeeze out very dry. Put in a kettle

- 1 gallon of vinegar,
- 1 pint of brown sugar,
- ¼ pound box of mustard,
- ½ ounce of turmeric-powder,
- ¼ ounce of cinnamon,
- 1 tablespoonful each of allspice, mace, celery seed, and a little horse-radish.

Cook the mess slowly two hours, then add two hundred small pickles just as it is to come off the stove. Add the mustard last, as this thickens it and it is apt to burn.

Pears'

It does nothing but cleanse.

It keeps the skin soft.

No alkali in it; nothing but soap.



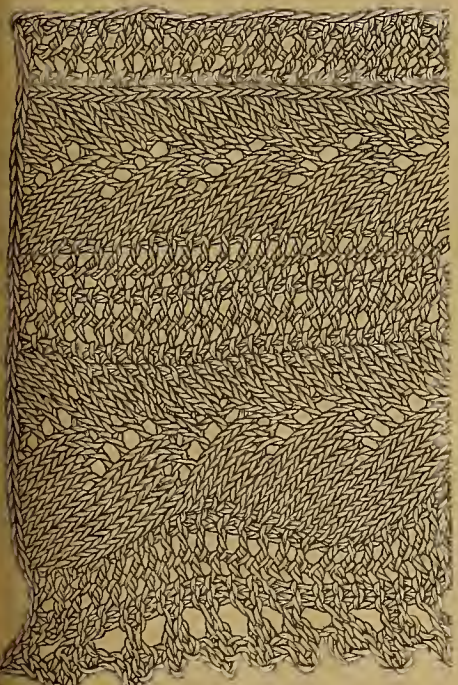
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I find your patterns a perfect fit, and want three more.

MRS. G. A. KNOWLES, Troy, Maine.



FERN-LEAF LACE.

Twenty-second row—Repeat the second row to *, p 12, p 2 tog, k 1, oo, p 2 tog, k 5 st, turn.

Twenty-third row—Sl 1, k 2, ooo, k 2, oo, p 2 tog, k 1, n, k 6. Repeat from ** in the third row.

Twenty-fourth row—Repeat the second row to *, p 11, p 2 tog, k 1, oo, p 2 tog, k 3, p 1, k 4 st, turn.

Twenty-fifth row—S and b off 3 st, k 4, oo, p 2 tog, k 1, n, k 4, o, k 1, o. Repeat from ** in the fifth row.

Twenty-sixth row—Repeat the second

Our Household.

FRIENDSHIP.

Dear friend, I pray thee, if thou wouldst be proving

Thy strong regard for me,
Make me no vows. Lip service is not loving;
Let thy faith speak for thee.

Swear not to me that nothing can divide us,
So little such oaths mean;
But when distrust and envy creep beside us,
Let them not come between.

Say not to me the depths of thy devotion
Are deeper than the sea;
But watch, lest doubt or some unkind emotion
Embitter them for me.

Vow not to love me ever and forever,
Words are such idle things;
But when we differ in opinions, never
Hurt me by little stings.

PROMISCUOUS PARAGRAPHS.

WITH all the writing and talking about the World's Fair, I have yet to see or hear a repetition of the mottoes on the Peristyle. Well I remember the brilliant day that I peered through the dazzling sunshine, reading with difficulty, word by word, the grand sentiments which enhanced the interest of that place, but which I am convinced were generally disregarded. Not until recently did I learn who composed them; but since I know that their author is President Eliot, of Harvard, my judgment of their excellence seems commended.

On the side toward Lake Michigan, at the top, was this:

The Wilderness and Solitary Place
Shall be Glad for Them.

Below was the following dedication:

To The Bold Men,
Their Names Remembered or Forgotten,
Who first Explored through Perils Manifold
The Shores, Lakes, Rivers, Mountains, Valleys,
Plains,
Of This New World.

To me, the finest touch in that sentence is the phrase, "Their names remembered or forgotten."

On the inner side of the Peristyle was as follows:

Ye shall know the Truth, and the Truth shall make you Free.
To the Pioneers of Civil and Religious Liberty,
But bolder they who first off-cast
Their moorings from the habitable part
And ventured chartless on the sea
Of storm-engendering Liberty.

* * * *

Since suffrage has been granted to women in Colorado, an estimable editor has written his sentiments that women of the West are finer, stronger, more heroic than their eastern sisters. He attributes this to the discipline they had in the pioneer experiences of a new country. I admit that they may be more aggressive in the attitude

ascribe all their literary success to their wives. Madam Lie is the same age as her husband. They were betrothed at nineteen, married at twenty-six, and are now sixty. In Norway during the past generation it has not been considered good form for women to take public credit for their talents. If you have read Ibsen's plays, you have a correct idea of how society there has been ruled by conventionality. How sweet must be the feeling of a wife whose husband says, as does Jonas Lie, "She might well have her name on the title-pages of my books as my collaborator. In all that is finest and best of my writings, she has her part."

* * * *

Perhaps too much has been made of those supreme relations, the lover and the sweetheart, the husband and the wife. Too much, I mean, at the expense of other relations. All the stories tell of love and tend to marriage. The most versatile authors have not overlooked less passionate loves, but do not readers need to have their attention directed and their taste cultured to some other and equally worthy emotions? Could not an excellent story be written about a man who was, first of all, a good brother? Could not a woman be a heroine because of her excellence as a sister? Shakspeare has one character which represents the highest ideal of a daughter, Lear's Cordelia. Edna Lyall has written a story (it is only one of hers which is always in the library) to show a son's devotion to his father. Passionate love between man and woman, at the best, is half selfishness. The love that "seeketh not her own" has a wider sphere and a purer source.

GARI LEON.

OBSERVATION.

"Mama, do you know what this piece of paper used to be?" asked my seven-year-old son, as he sat on the floor mending a ripped place in the carpet.

"No," said I, absent-mindedly, for I was busy with my work.

"Well," said he, "it was once a little cotton-seed; you know it was made from old rags, and they were made from cotton, and the cotton-plant was once a little seed."

"Why, yes, of course," said I, now very much interested in the train of thought which I saw he had been following.

"Let us look in the encyclopedia and find out something about the manufacture of paper."

And very interesting to this young reasoner did the investigation prove to be.

At another time his attention was directed to the divisibility of matter by a piece of string he was dissecting, as he noticed that each minute thread was made up of still smaller ones.

With what little effort can a child's attention be directed in channels which will call forth his reasoning powers, thus

place at the table by the conversation being directed to articles in daily use there, such as salt, pepper, spice, etc. The sources from which salt is obtained and its various uses would be very instructive and interesting to our boys and girls, and to many older ones likewise. And who would not enjoy an imaginary journey to far-away Ceylon and other countries where "spicy breezes blow," to learn about the spices which add so much to our savory dishes? To this day the delightful sketches which I read long ago in the *Golden Hours* when a little girl, of the nutmeg and other products of these tropical islands, linger pleasantly in my memory.

Let us guide and direct our children in habits of observation; and oftentimes those objects which seem dull and commonplace will, in the light of investigation, seem marvelous and beautiful.

MARY VIRDEN SHUTT.

CENTERPIECE OF DRAWN-WORK.

The centerpiece, when completed, should measure twenty-five inches square, and should be made of linen lawn. Turn and hemstitch the two-and-one-half-inch hem first, to keep the goods from fraying at the edges. One half inch from the hemstitching draw the threads for the border, which is one and one quarter inches wide. Knot-stitch the threads on both sides all around, then knot them together in bunches of four, as illustrated. Buttonhole the two raw edges of the open squares in the corners and fill in with fancy stitching.

Next leave a plain strip one and one half inches wide on all sides and measure the inside edges of this strip into spaces of three fourths of an inch. Then draw the threads forming the squares, thus making the entire body openwork. Fill in the stitches, making the spiders with the last thread used. All raw edges must always be buttonhole-stitched, and this can be done the best before the threads are cut. The centerpiece should be lined with colored goods to correspond with the other table decorations.

GRACE MCCOWEN.

AVE ATQUE VALE.

We must play our parts, love,
On life's stage, you know;
Hide our broken hearts, love,
From the footlight's glow,
While fate wields the baton,
Till the music stops,
Till we get our wages,
When the curtain drops.
Though the music sinking
To a minor key
Makes the world the vast playhouse
Sad for you and me,
Duty is our prompter,
Answer to her calls—
And we shall get our wages
When the curtain falls.

—*Pall Mall Budget.*

TABLE-CENTER.

Use fine linen for material, working the edge with Roman floss or twisted silk; the latter being much in favor, as the filo is so very tedious. The strawberries and leaves are worked in colors. It is a very satisfactory design when finished.

TOO MUCH OF A GOOD THING.

I have a friend who has the neatest, prettiest little home of any one around. Should you enter her house you would instinctively say, "How beautiful! How richly furnished!" Upon closer inspection, however, you would decide that although everything was beautiful, nothing was expensive, and what would further surprise you would be the exceeding simplicity of it all.

Herein lies the charm. Nine houses out of ten have too many things in them. There can be "too much of a good thing." If extravagance is displayed in anything, it is in my friend's picture-frames. (The pictures, and beauties they are, are all her own work.) Having handsome pictures and frames, the necessity of numberless meaningless drapes and throws is done away with.

She has many fancy articles packed away, because she says the rooms of the house where they are now living are too small to accommodate them. She has made a care-

ful study of her various rooms and arranged everything especially suitable for those definite places. Everything is in perfect accord with its neighbor. Nothing is present to detract from the appearance of the whole.

She says: "Many an otherwise tasteful apartment is spoiled by the presence of just one article of furniture which is not in keeping with the others." Let the furnishings be inexpensive, if necessary, but if there be no detracting element, the gen-



CENTERPIECE OF DRAWN-WORK.

eral appearance can be that of beauty, if not elegance, and your house will be pronounced "well furnished."

ELLA BARTLETT SIMMONS.

WALKING.

A Delsarte teacher, who is peculiar in knowing something of Delsarte's system of expression, says that women can improve their walk without a teacher, though they can't learn about walking from print. The proper length of the step is twice the length of one foot, and is measured from the hollow of one foot to the hollow of the other. Now, take a piece of tape and sew on it bits of flannel at intervals twice the length of one of your feet, stretch it across the longest room you have at your disposal, and you are ready for practice. Maybe you don't know that each foot should cross the same line with each successive step? It should—that is very important—so now you must walk your tape and set one foot and then the other right over one of these bits of flannel, letting the flannel come just under the instep. Do this and turn your toes out well and swing your leg from the thigh, and you are far on the road to a beautiful walk.

IN COLONIAL DAYS.

How many of our readers are familiar with the following words? Yet they were all of good usage in colonial days: Allibonies, balcony, bishops, baths, horsehair bonnets, mushmellon bonnets, whalebone bonnets, wagon bonnets, bechive bonnets, flap breeches, slit breeches, Franklin's (broadcloth breeches, lined with leather), iron busks, whalebone busks, conch-shell buttons (Washington had a set), byram caushets, cork-rumps, cushloes, cuttanees, cue de Paris, chuckloes, dannador, dickmansoy, everlasting, florettes, flaps, great coat, gray, durey, gulix, roll-up stockings, issinghamis, huckabacks, Job's tears, kit-isols, lemonees, morning gowns, moree, naffermany, nun's petticoat breeches, saxlingham, side-locks, skimmers, small-cloths, splice, clim'd soosus, spectacles, hollow-breasted stays, pack-thread stays, stiffeners, tandems, ticklenberg, tout-pies, thrumbs, turketts, oiled linen, shagreen and turtle-shell.

TO DISTINGUISH THE GENUINE.

One of the easiest and most trustworthy modes of determining whether a supposed diamond is genuine or false is as follows: Pierce a hole in a card with a needle or pin, and then look at it, using the stone as a lens. If the supposed diamond is genuine you will see but one hole; if false, two will appear. With an imitation stone you may also see the lines on the skin of your finger; with a true gem you cannot.

I like your patterns very much. They seem like a godsend to poor people.

Mrs. S. W. CRAWFORD, Jefferson, Ohio.

Your patterns are a great attraction. It is an inducement to take the paper for them alone. LUCINDA SIGLER, Manchester, Tenn.



TABLE-CENTER.

of their heroism, but quiet, patient endurance of things intangible and unpicturesque is as great a virtue (though a quiet one) as the more vocal and active duties of the explorer. In fact, the quiet heroines are the greatest, for they persist in heroism without the stimulus of applause.

* * * *

The three greatest writers of Norway are said to be Bjornson, Ibsen and Jonas Lie. The last is one of those authors (like John Stuart Mill and Alphonse Daudet) who

developing habits of thought and observation which will be of inestimable value to him in after years, and at the same time serve to keep mischievous thoughts from the young, susceptible mind.

The mothers who have not given much attention to the subject will be surprised to find how many little occurrences in every-day life furnish a topic which is at once instructive and entertaining to the young minds growing up around them.

How many pleasant talks might take

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No. 6311.—GIRLS' FROCK. 11 cents. Sizes, 6, 8, 10, 12 years.



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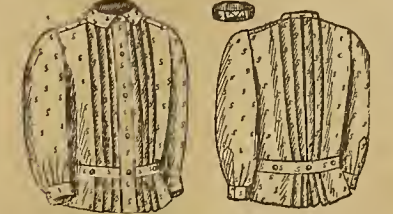
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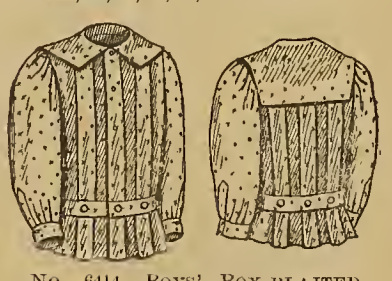
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No. 6428.—BOYS' REEFER. 11 cents. Sizes, 4, 6, 8, 10 years.



No. 6433.—LADIES' BELTED ETON JACKET. 11 cents. Sizes, 32, 34, 36, 38, 40 inches bust.



No. 6414.—BOYS' BOX-PLAIED SHIRT-WAIST. 11 cents. Sizes, 20, 22, 24, 26, 28 inches breast.

Our Sunday Afternoon.

THOUGHTS IN A WHEAT-FIELD.

In his wide fields walks the Master,
In his fair fields, ripe for harvest,
Where the evening sun shines slantwise
On the rich ears heavy bending;
Saith the Master: "It is time."
Though no leaf shows brown decadence,
And September's nightly frost-bite
Only reddens the horizon,
"It is full time," saith the Master,
The wise Master, "It is time."

Who shall know the Master's coming?
Whether it be dawn or sunset,
When night dews weigh down the wheat-ears,
Or while noon rides high in heaven,
Sleeping lies the yellow field.
Only, may thy voice, good Master,
Peal above the reapers' chorus
And dull sound of sheaves slow falling,
"Gather all into my garner,
For it is my harvest-time."

—Dinah Mulock Craik.

THE NEW FUTURE.

THE expression is a peculiar one. It caught our attention as we glanced through a monthly called the *King's Messenger*. After placing before us as the impending events, the coming of Christ, the resurrection of the body and the glorification of the children of God, the writer thus defines the meaning of the expression: "The new future is Christ's. He is to elevate man to partake of its service and glory. This he is now doing. His work of development is marvelous and glorious, going on to perfection, more and more unto the perfect day. He is now to repair and restore. Sin is to be destroyed. The redemption which is in Christ Jesus is to be perfected. What we lost in Adam is to be regained in Christ. The original plan is to be resumed and realized. We are to talk with God, to live in Eden, to eat of the trees and bring forth the fruits thereof. The children of God are to be purified and prepared, the family of God is to be complete, and the work of salvation finished.

"Our Jesus is to come again, and when he comes, this dark and tangled web of life will be unraveled, his dear ones will hear his voice, and the same power that raised up our Elder Brother will raise his loved ones from their graves, and 'we which are alive and remain shall be caught up to meet the Lord in the air, and so shall we ever be with the Lord.' We know that in everything relating to the future there is great mystery. We cannot judge it by the past—for it will be altogether new; we cannot argue, nor debate, nor explain; we cannot form a correct idea: all we can do is to trust and believe. We are on the eve of the time when all things are to become new; when the crowning work of the Holy Spirit will be accomplished; when he will bring us into harmony with himself, and we will be like Jesus, for we shall see him as he is. The new future is upon us."

This pointed outline meets our view of the future that awaits the people of God. If anything, we are also convinced that we can form "a correct idea" of the outline of coming events. In fact, we believe our brother editor has given it himself. When he says "the original plan" concerning man and his world "is to be resumed and realized," he strikes the key-note of the whole matter. Blessed "times of restitution" are coming. He who as our Redeemer has brought back man and his forfeited estate is to bring back made perfect and glorious what sin has marred and defiled. Dear reader, get ready for the new future. It is drawing near. It will, we believe, soon be ushered in.—*Messiah's Herald*.

READ GREAT BOOKS.

Canon Farrar says: "Read great books; enrich your mind with noble sentiments." The truly great books are good books, and no young person can afford to read any other than good books. The curse of thousands of young people to-day is the reading of little books—books which are little because they contain small ideas of manhood, of citizenship, of society, of personal honor, of righteousness. There are many popular books which are interspersed with little flings at Christianity, with caricatures on personal piety and with shy suggestions that the Bible is a book behind the times. Remember that the devil never advises any young person to read the really great books. He is too selfish to do this.

Remember, also, that the devil is greatly

interested in books, and that in the sort in which he is exceedingly anxious to have the young people interested. And forget not that when the adversary cannot get young people to read his little books, he prefers that they read small books, good so far as they go, instead of the great books full of solid thought on high subjects. Why? Because the little books cannot furnish strong mental discipline, cannot develop large intellectual power, cannot rightly equip the mind for the best service for God and humanity. If Satan cannot prevent a young person from becoming a Christian, his next best scheme is to try to have the young person remain as little and inefficient a Christian as possible. This is satanic sharpness. Now, we all know that it is vastly easier to read a good little book than it is to read a good great one; but the very effort required in reading a great book—one far beyond our comprehension in some respects—is invaluable as a mental discipline, to say nothing of the moral influence of the book upon us. And be sure to read the great Bible.—*Young Men's Era*.

LITTLE SINS.

Many a brave man who outlived storm after storm of shot and shell died at last from the ravages of things bought of his own sulter, while others came home to marry death at the altars of dissipation. Hundreds of men who have borne the great trials of life with a spirit of sweetness and resignation that made their lives appear to others great Gibraltars of grace, have in the retirement of home got mad in a minute simply because the milk was sour or there was too much flour in the gravy. Multitudes of Christian women, who have passed through the deep waters of affliction with a spirit of unbroken peace and a trust in God that grew stronger and stronger as the sky became blacker and blacker, have gone down so deep into the cave of gloom that it seemed as though the very sun itself had become a great black iceberg, just because the hired girl could not fry potatoes to suit them, or "that boy" would not ever wipe off his muddy boots when he came into the parlor. And people who had made a solemn covenant with themselves and God that they would praise the Lord at all times though the heavens should fall, have got clear out of patience because somebody happened to talk too long or pray too loud in the prayer-meeting. No, it is not the great dragon sins that come out against us and slay us, as we go marching happily on our way toward God, but the little, insignificant and contemptible viper sins that steal upon us while we sleep, and poison us with their sting. Mosquitoes drink more blood than lions.—*Ran's Horn*.

A TAP-ROOT.

No one ever saw a black hickory-tree blown out of root. The hurricane may twist it off or break it down, though even that seldom occurs, but it cannot drag it out of the ground. The reason is that this tree, while it sends out plenty of surface roots, always sends a strong tap-root straight down into the solid subsoil, and lays hold of the foundations of stone or clay or hardpan, as the case may be. There are other trees—the beech, maple and ash—which interlace the surface with a web of roots, but in a storm, especially if the ground previously has been water-soaked, over they go! A Christian is not safe and reliable unless he has sent a tap-root down into the hard, strong foundations of Christian doctrine. Surface roots of sentiment and emotion have their uses, but they are not good for much, either in a dry time or in a tempest.

DANIELS OR JONAH'S.

No one can choose his duties. He must accept or reject those which Providence presents. There is no third course. He may shut his eyes to the light, and try to persuade himself that some things more pleasant, and not these painful, difficult things, are what is required of him. But it will be of no use. They will remain duties just the same. If they come to him in the order of God's will, his only hope of true peace and prosperity lies in manfully performing them. He will not, by endeavoring to flee, escape the pain or the trouble from which he shrinks. Pain and trouble are inevitable to everyone who lives. But one may very easily lose the consolation, the high support, the glorious thrill of joy, the developed character, the ennobled manhood or womanhood, which come only to him or her who stands firmly in the place allotted and holds bravely till

death the post assigned. Genuine heroism may be shown in humble homes. Daniels and Jonahs—alas! many more of the latter than the former—are seen on every side. To trust in God and do the right remains, amid all changing fashions, the one path to lasting renown.

HOW TO USE THE BIBLE.

Successful Bible study depends very much on how the Bible is used. Some practical suggestions on this point are contained in the following:

1. Have for constant use a small portable Bible with complete marginal references.
2. Carry a Bible or Testament with you.
3. Mark freely with ink upon it promises such as Isaiah xli. 13 to Christians, and invitations to unconverted (Rev. iii. 20 and xxii. 17). Brief notes may be written upon the margin.
4. Do not be satisfied with simply reading a chapter thrice daily, but study out the full meaning of at least one verse a day.
5. Study to know the whole truth contained in a single incident or a single miracle—when and why written, how it applies to self, and how to use it for others.
6. Study to know what for and to whom each book of the Bible was written.
7. Believe every word of the Bible.
8. Learn one verse of Scripture each day. Verses from memory will be wonderfully useful in your work for the impenitent.
9. Study how to use the Bible to lead a soul to Christ.
10. Set apart fifteen minutes each day for studying it; this little will be grand in result.
11. Read the book as if it were written for yourself only.
12. Always ask God to help you understand it, and then expect he will.—*Religious Telescope*.

PLEASURES AND AMUSEMENTS.

In regard to the lawfulness of certain pursuits, pleasures and amusements, we may confidently say that whatever is found to unfit you for religious duties, or to interfere with the performance of them, whatever dissipates your mind or cools the fervor of your devotions, whatever indisposes you to read your Bible, or to engage in prayer, wherever the thought of a bleeding Savior or a holy God, of the hour of death or of the day of judgment, falls like a cold shadow on your enjoyment, the pleasures which you cannot thank God for, on which you cannot ask his blessing, whose recollections will haunt a dying-bed, and plant sharp thorns in its uneasy pillow—these are not for you. These eschew, in these be not conformed to the world, but transformed by the renewing of your minds. Never go where you cannot ask God to go with you; never indulge in any pleasure which will not bear the morning reflections.—*D. Guthrie*.

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The habit of using tobacco grows on a man until grave diseased conditions are produced. Tobacco causes cancer of the mouth and stomach; dyspepsia; loss of memory; nervous affections; congestion of the retina, and wasting of the optic nerve, resulting in impairment of vision, even to the extent of blindness; dizziness, or vertigo; tobacco asthma; nightly suffocation; dull pain in region of the heart, followed later by sharp pains, palpitation and weakened pulse, resulting in fatal heart disease. It also causes loss of vitality.

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Dr. ISAAC THOMPSON'S EYE WATER Afflicted with SORE EYES

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 inclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Coal Soot.—R. H. W. R., Massachusetts, writes: "Please tell me whether the sooty substance, of which I send sample, is of any value to put on a lawn. It comes out of tubes where I burn hard coal. It has a slightly acid taste."

REPLY BY JOSEPH:—I am unable to tell, but think the material contains a small percentage each of nitrogen and phosphoric acid. You can easily find out its value as a lawn fertilizer by making a few trial applications.

Drying Sweet Potatoes.—S. L. G. B., Bethlehem, Ga., writes: "I would like to have more information on the drying and grinding of sweet potatoes. Where can I secure it? Also, what are the best points at the North to which to ship sweet potatoes?"

REPLY BY JOSEPH:—Anybody can dry sweet potatoes. Peel, slice and dry in an ordinary evaporator. To grind the dried article, for putting up in a commercial way, probably will require a strong mill. Prof. F. W. Massey, of Raleigh, N. C., experiment station, may be able to give more information. New York City is probably as good as any place to which to ship sweet potatoes.

Squashes Rotting on Vines.—Mrs. C. E., Caledonia, N. D., writes: "Can you tell me what ailed my squashes last year, and if I can do anything to prevent it this year? The vines grew large and luxuriant, but after the fruit had set, and sometimes when large enough to weigh three and four pounds each, the squashes ceased to grow, and after a day or two rotted on the vines. Variety, Sibley, or Pike's Peak, planted on rich, well-drained soil."

REPLY BY JOSEPH:—I do not know the cause of the trouble, unless it be a disease caused by some sort of rot fungus. In any such case people should go to Washington for aid. Address the Department of Agriculture, Washington, D. C., giving a full description of the trouble. In most cases the experts of the department will be able to give full information.

To Kill Morning-glories.—F. F., Gatesville, Texas, writes: "Can you tell me how to kill wild morning-glories? I have some scattered over a one-hundred-acre field. People say the morning-glories grow from seed, and never can be killed. I have about seventy-five to one hundred wild morning-glories in all. Is there any way to kill the roots? I keep them from going to seed, but so far they always come out again."

REPLY:—Thorough cultivation of the land when it is in corn will keep them in check. The cultivation must be commenced as soon as the corn is planted, and kept up until late in the season. As you have comparatively few plants, we will suggest a method for experiment: Dig down around the vine one or two feet below the surface, cut off the vine and pour some coal-oil on the root.

Bugs in Beans.—C. E. S., Bushnell, Mo., writes: "What way can I keep bush-beans over winter, so as to keep the bugs from eating them? I put them up in bottles, put ashes over and cork them up tightly, but the bugs get in, anyway."

REPLY:—The bugs do not get into your beans, but they come out of them. They are in the beans when you put them away. These bugs are called weevils. The eggs are laid when the beans are still green and very small, and do not hatch out until taken into the house. If you will put your beans in some tight vessel, as a barrel, and then set on top of them a shallow dish containing about a pint of bisulphid of carbon (which is much like gasoline in many respects), and cover the whole over until the bisulphid evaporates, all the weevils will be killed without injuring the appearance or germinating quality of the beans. It is the vapor that kills them. This material should not cost over \$1 per gallon. It must be kept away from fire, as it is explosive.

HALF RATES TO COLORADO.

On August 11 and 12 the North-Western Line will sell excursion tickets to Denver, Colorado Springs, Manitou and Pueblo and return at half rates—one fare for the round trip—tickets good for return passage, leaving Colorado points August 20 to 25, with privilege of further extension until September 1. For full information apply to agents of connecting lines, or address C. Traver, T. P. A., Marine National Bank Building, Pittsburg, Pa., or F. M. Snavely, T. P. A., 127 The Arcade, Cleveland, Ohio.

A BOUNDLESS STUDY.

The subject of natural history is almost boundless. It is defined in Webster as a description and classification of objects in nature and the phenomena which they exhibit to the senses. Its field is as broad as the surface of the earth, as deep as the waters of the sea, and as high as the sky. "Beauties and Wonders of Land and Sea" includes the most curious natural history objects in the world, illustrated by over 1,000 pictures. See offer on another page.

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 inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. DETMERS, 1315 Neil Avenue, Columbus, Ohio.

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

Small Lumps.—F. M., McLees Mills, Pa. I have no means of knowing what you mean.

A Leaking Teat.—K. E. T., Sabetha, Kan. Probably the muscular fibers in one teat of your mare are morbidly relaxed or paralyzed. Nothing can be done, but it may be that it will be all right with the next colt.

Dry in One Teat.—W. P. J., Cambridge, Neb. If your cow is dry in one teat the best you can do will be to leave that teat alone. If the other teats are properly cared for the cow will yield nearly as much milk from three teats as from four.

Dog Distemper.—G. W. B., Bealeton Station, Va. What you describe is the advanced or nervous stage of dog distemper, too far progressed to admit recovery, although a slight improvement may yet be possible. Be that as it may, your dog, at any rate, is worthless, and if you are fond of a good dog, it will be best to procure another one.

Umbilical Hernia.—G. H. B., Forum, Ark. What you describe is an umbilical hernia; but as your colt is yet very young there is no need of an operation just yet. Watch the columns of FARM AND FIRESIDE, and before long you will find a description of the operation (repeatedly described in past numbers), and then preserve the paper or clip out the article.

Ringbone.—J. J. C., Aroma, Indiana. An article on the treatment of ringbone and spavin will again be published in November, but not before, because it is of no use to undertake it until a good frost has terminated the fly season, simply because until then it is impossible to procure for the animal under treatment the perfect rest indispensable to success.

Lung-worms.—W. C., Maunie, Ill. Your pigs, it seems, are troubled with lung-worms (*Strongylus paradoxus*). Nothing can be done to remove them, but you can protect such of your pigs as are not yet infected with the worm-brood by separating them from the sick ones, and by keeping them on dry and clean ground destitute of mud-puddles and pools of stagnant water, the developing places of the worm-brood.

Chronic Diarrhea.—A. T., Quiney, Ill. If your calf, aged six months, and reduced to skin and bones, has been affected with diarrhea for a long time, and has, as you say, almost entirely lost its appetite, its chances of recovery will be very slim. If you are of a different opinion, the best you can do will be to consult a local veterinarian, who can examine the animal, inquire into all the conditions affecting and surrounding the same, and take his measures accordingly.

Epizootic Ophthalmia.—C. H. S., Colony, Kansas. What you describe is epizootic ophthalmia, or an infectious inflammation of the cornea, a disease quite frequent among cattle at this season of the year. It usually terminates in recovery, provided no ulceration in the cornea takes place. If it does, blindness will be the result. In the beginning, an eye-water composed of a solution of corrosive sublimate, one part, in distilled water, one thousand parts, will be useful. Besides this, it will be advisable to protect the cattle as much as possible against intense light and heat, and against dust and flies.

May be a Melanotic Tumor.—L. J. McG., Pottsgrove, Pa. What you describe may be a small melanotic tumor. If it has a plainly developed neck it can be easily removed by an elastic ligature, and if not, but has distinct outlines, it can be excised. Every veterinarian knows how to perform these simple operations. There is only one difficulty concerning melanotic tumors. If one or more make their appearance on the surface of the body, there are very often others in interior parts, which cannot be seen, and of course are inaccessible. Still, if not irritated, they seldom cause any trouble.

Lung-worms and Scab in Sheep.—J. W. S., Kantner, Pa. Your sheep, it seems, are suffering from lung-worms (*Strongylus filaria*). There is no way to remove them, but you can protect your lambs, if not yet affected, by keeping them away from all low and wet places and pools of stagnant water, particularly if the same have been frequented by the snotty sheep. It will also be advisable to separate the yet healthy animals from the diseased ones. Losing the wool is either a symptom of some skin disease, most frequently of scab, or of some cachectic disorder, and caused by defective nutrition. Ask an experienced flockmaster to examine your sheep, and follow his advice.

Bloody Milk.—C. A., Marsh Hill, Pa., and E. C. S., Haley, Tenn. Bloody milk seems to be a frequent complaint. It is due to various causes; namely, congestion of the mammary glands, especially when the cow is in heat, external violence or injuries, a lax constitution, etc. The rational treatment consists in removing and avoiding the causes. Where the constitution is too lax on account of too much sloppy food, want of exercise, too warm a stable, foul atmosphere, etc., the remedy will suggest itself. Gentle but frequent milking is essential in all cases. If E. C. S. wants to make his cow dry, he must feed dry food that is not too nutritious, avoid all kinds of food that has a tendency to increase the milk production, milk not oftener than is necessary to prevent garget, and apply to the surface of the udder an ointment composed of gum camphor, one part, and soft soap, six parts.

Probably an Aneurism.—J. J. B., Phoenixville, Pa., writes: "I have a dog that on coming from his kennel for exercise will run very strong, but in a few minutes will get slower and lose all control of himself, falling on his side, where he will lie rigid from two to three minutes, when he will get up, apparently all right, having but the one spell whenever taken out."

ANSWER:—Your dog, it seems, suffers from a serious disorder in the organs of circulation, probably consisting in the presence of an aneurism or of another obstruction, which yet permits a sufficient supply with blood to the various parts, as long as no extra demands are made by any one of them, but prevents the same, and consequently seriously interferes with the process of nutrition, as soon as any part or parts, by extraordinary exercise of their functions, the muscles, for instance,



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make demands for a greater or more rapid supply. Nothing can be done but to keep the animal quiet, and to prevent extraordinary exertions.

A Splint.—J. L. S., Fort Branch, Indiana. What you describe is simply an exostosis, commonly called "a splint." If you see to it that weight and concussion are equally distributed upon all parts of foot and leg below the knee, in motion as well as at rest, either by proper shoeing or by judicious paring of the hoof, the splint will gradually grow smaller, and will more or less disappear. If this does not satisfy you, and you desire to use medicines, you may rub in, once every day, on the splint a little gray mercurial ointment (not more than of the size of a small pea), but the rubbing in must be very thorough.

Luxation of the Patella Upward.—J. F. F., Johnson Crossing, Ala. What you describe is a luxation of the patella upward, a dislocation, in which the patella, or knee-pan, is caught (gets stuck) on the upper angle of the inner condylus of the femur, or thigh-bone. It occurs most frequently in weakly colts with a sloping pelvis and insufficient angle in knee and hock joints. The luxation itself is brought about by awkward movements and particularly by getting up and down. I would advise you to feed your colt well with good and highly nutritious food, so as to strengthen its muscles, and to let the same run out, or to keep it in a spacious, loose box, and not in a narrow stall. If this should prove to be insufficient to prevent further luxation, not at once, but in the course of a few weeks, you will have to keep the animal standing for a week or two, and at the same time, by applying a blister to the outside of the stifle-joint and below the knee-pan, to remind the animal that the knee-joint must be very carefully used.

Drenched with Oil.—F. W. H., Mancelona, Mich. When your horse, on the advice of your neighbor, was drenched with oil, a part of it, very likely, passed down into the lungs, and caused there a fatal foreign-body pneumonia, while the other part, which reached the stomach, thoroughly interfered with the process of digestion. Oil should never be given to a horse. You say you had a veterinarian to make a post-mortem examination, and still inquire for the cause of death. I find it very strange that he only looked at the root of the tongue and did not make a thorough examination and investigate the cause of death.

Undoubtedly Mistaken.—J. F. H., Duluth, Minn., writes: "I have a Jersey heifer that I raised. I have some savage neighbors that have been drugging her for nearly a year. She jumps and kicks when I milk her. Her bag is hot, and her milk has a sickly, feverish smell when milking, and her breath also. She is gentle every other way. She is to calve in six weeks. Can I give her anything to counteract or help her, so I can dispose of her? She don't seem sick, and her milk don't taste bad."

ANSWER:—You surely must be mistaken. I will not deny that there are some bad people in this wicked world, but they cannot make a

gentle cow or heifer behave in an ugly manner while being milked, neither by drugging her (a very dangerous undertaking, anyhow), nor by any other means. In the dark ages, when people yet believed in witchcraft, and when supposed witches were burnt at the stake, such erroneous ideas may have been entertained, but those times have passed long ago. What you complain of is simply due to fear; the cow is afraid, and most assuredly has experienced some rough and unpleasant treatment while being milked, which she cannot forget, and necessarily associates with the milking, regarding it as a part of it. Try to gain her confidence, milk her in the most gentle manner, talk to her, and don't lose your temper if she for some time continues to be afraid, and to act in an ugly manner. With animals, it often takes a long time to free themselves from a fixed idea. If you do not succeed in gaining her confidence, it may be best to have her milked by somebody else of whom she is not afraid. The abnormal heat of the udder and the feverish smell are also the effect of excessive fear.

A Crippled Horse.—J. E. F., Guthrie, Okla., writes: "Please tell me what to do for my horse. He is now seven years old. When three years old he had a fistule, which was cut out. Two years ago he ran away and hurt this same shoulder in the joint. I got a veterinary surgeon to examine him. He went to work and roveled him in two places over the shoulder-joint. I then turned him into pasture for six months; then began to work him light, but have had no satisfaction in doing so. His shoulder-blade is mostly bare except the skin; there is a lump about the size of a pigeon egg behind the shoulder-joint, and seems to be on the muscles. The foot on this leg is bad, hard inside, and I make him stand in a puddle when convenient. I showed him to a veterinarian the other day. He said he thought he could cure him, but would not charge me anything unless he did so. All I would have to do would be to pay for the medicine, about twelve dollars to start on. Of course, he wants to sell medicine."

ANSWER:—The veterinarian (?) you consulted wanted to get twelve dollars out of you. Such men ought to be prosecuted for attempting to obtain money under false pretenses. As to your horse, the shrinking of the muscles, etc., is probably caused by radial paralysis, and if this is the case, a final recovery, though it may take a year, will not be impossible, if the horse is well kept, exempted from work, and given voluntary exercise. As horses are very cheap just now, you will have to decide yourself whether it will pay you to follow the advice just given. Nothing whatever can be accomplished by the use of medicines in such a case. The "lump" of which you speak is probably nothing but a projecting portion of the spine of the shoulder-blade, which merely projects on account of the shrunken condition of the muscles. It is barely possible that some of the last cervical and first dorsal nerves, which form the plexus from which the nerves of the fore leg proceed, have been destroyed or been seriously injured when the fistule operation was performed. In that case the horse will remain a cripple.

Our Miscellany.

In proportion to their size, spiders are seven times stronger than lions.

CHINA has a war god to whom they have burned incense from times immemorial and who has over 3,000 names.

THE amount of air that a man will inhale in twenty-four hours will fill seventy-eight hogsheads and weigh fifty-three pounds.

FIVE hundred volts of an electric current is considered dangerous to human life, but death depends largely upon physical conditions.

ARCTIC explorers who have found themselves in the midst of an aurora describe it as producing a cooling, prickly sensation and a very exhilarating effect.

THE most valuable clock in the world is one that was made by the hands of Louis XIV. of France. It is now owned by a member of the Rothschild family, who bought it for \$168,000.

INVESTIGATIONS of raindrops lead to the conclusion that some of the large drops must be more or less hollow, as they fall, when striking, to wet the whole surface inclosed within the drop.

ONE OF THE NICEST and best Tonics and anti-acids for dyspeptics is Dr. D. Jayne's Tonic Vermifuge.—When used in conjunction with the Sanative Pills, it rarely fails to be effective; while its moderate price brings it within the reach of every one. Sold by all Druggists.

ROSA BONHEUR'S paintings are scattered all over the world, and not many galleries have more than one or two specimens. It was therefore noted as a curiosity that at a recent art exposition at Frankfort-on-the-Main there were no fewer than nineteen of her paintings.

THE general diffusion of elementary education in Bavaria is evident from the fact that of the 26,383 recruits for the army levied in 1893, only six were unable to read and write. In France 6.43 per cent of the recruits of the same year did not know the letters of the alphabet.

THE influence of forests in protecting the water supply is well illustrated in the case of Greece. In ancient days she possessed 7,500,000 acres of forest. To-day she has hardly 2,000,000 acres, and the scarcity of water and other injurious climatic effects are traceable to the destruction of the trees.

A COTTON-PICKER which may revolutionize the whole process of gathering cotton has been invented by Eli Whitney, of New Haven, the grandson of the famous Eli Whitney who invented the cotton-gin. By means of this machine, which is called the Whitney harvester, the work of 100 men can be done by two men and two horses.

It is an interesting fact that while American wood-engravers have been almost driven from their chosen field of book and periodical illustration, they have brought their art up to its highest point, and the best of them are still struggling to do better. Half a score of the best American wood-engravers are perhaps more truly artists than any of their predecessors on this side of the Atlantic.

It is a great mistake to peel potatoes before cooking them. The skin, like the bark of all medicinal roots, is the richest part of the tuber. Potatoes baked are more nutritious than prepared in any other form, because the valuable mineral salts are held in solution by the pellicle of the skin. If it is desired to remove the skin, it should be done by rubbing with a rough cloth, which preserves the true skin.

MANY species of bacteria are capable of doubling their number every hour. In this case, in the short space of twenty-four hours a single bacterium would increase to a number but little short of 17,000,000; to be exact, in forty-eight hours the offspring of this minute germ, which is not more than 1-15,000 of an inch in length have increased to the surprising number of 281,500,000,000, their bulk being sufficient to fill a pint measure.

THE largest steel plate ever rolled, not only in this country, but in the world, was turned out recently by the Wellman Iron and Steel Works, at Chester, Pa. The dimensions of the plate are 450 inches long by 130 inches wide, and one and one fourth inches thick. It is intended as a rudder-plate for one of the new "ocean greyhounds" contracted for by the International Navigation Company with the Messrs. Cramp, the Philadelphia ship-builders.

It is pretty well established now that water, so far from generating malaria, may really prevent its polluting the atmosphere. The germ may grow in soils even slightly moist, but a thin layer of water evenly distributed over such soil may prevent the escape of the germ into the atmosphere. In the same way a thick growth of grass with matted roots may be impervious to the germ and keep it beneath the surface, where it can do no harm.

ENGLISH discipline with the cat-o'-ninetails seems more severe than its survival in Delaware. The cat in the peach state has nine tails of leather, each with a knot, and the law sentences the convict to so many lashes upon the bare back, "well laid on;" but the sheriff is the judge of what constitutes a proper laying on, and his strokes are usually gentle. It is their repetition that reddens the skin of the victim, and it seldom happens that a single blow is of sufficient force to leave a noticeable mark.

NOT A BIT SEASICK.

Upon a recent homeward-bound trip was a gentleman of not widely extended ocean experience, who heretofore had made only pleasant summer trips—trips when the ocean was as the proverbial mill-pond for the greater portion of the time, with a storm such as the winter brings forth unknown.

"Are you a good sailor?" he asked of his nearest companion at dinner the first day.

"Reasonably so," replied the other. "Are you?"

"Yes, indeed. I couldn't get sick."

"Sure of that, are you? For my own part I've made a great many voyages in all parts of the world. I have never been seasick yet, but I don't think I ever stepped on board a steamer without having the thought that this may be my turn."

The first speaker turned at this and winked at the others at table, as much as to indicate, "Well, we won't see much of our friend if we have rough weather." The others replied with a smile, as if they endorsed his views.

The first and second day until midnight passed pleasantly. Then the ship began to pitch and roll, and well it might, for it had struck the track of a cyclonic storm, and the next morning it was in the midst of the storm itself. When the traveler who feared that "this might be his time" found his way to his seat, he discovered that his companions were missing.

"It was rather a hard night, steward," he said. "A great many passengers sick, I suppose?"

"That they are, sir," answered the steward.

"All of this table sick, sir, but you, sir."

"What! Mr. Blank, also?" asked the voyager in mock surprise, as he mentioned the name of the person who couldn't get sick. "Well, I'll have to go and see him later."

A few hours later he found his way to the cabin of the superior sailor, who was groaning wretchedly, when not imploring some one to knock him on the head and throw him overboard.

"Why, how is this, Blank? You seasick?"

The victim made an effort to collect himself. Evidently he recalled the foolish remark of the first day.

"Oh," said he, "I'm not seasick. It's only a slight nausea. You see, it was this way. My tooth-brush was a bit old. In cleansing my teeth this morning a loose bristle caught in my throat and nauseated me. To be sure, I'm not quite myself yet in the stomach, but it isn't seasickness, I assure you, and now go away, won't you, old man? I don't feel like talking."

Four days later Mr. Blank pulled himself together and got on deck, very pale, very weak and very dejected.

"Ah, Blank, I'm glad to see you around again," remarked his acquaintance. "By the way, how's that tooth-brush with the loose bristle?"

"D—the tooth-brush," muttered the man. It upset me completely, and I suppose everyone thinks I was seasick. But I was not, I can assure you; it was only those confounded bristles."—*New York Herald.*

A MARINE WONDER.

One of the marine wonders of the world is the great Barrier Reef of Australia. This stupendous rampart of coral, stretching in an almost unbroken line for 1,250 miles along the northeastern coast of Australia, presents features of interest which are not to be equaled in any other quarter of the globe. Nowhere is the action of the little marine insect, which builds up with untiring industry those mighty mountains with which the tropical seas are studded, more apparent.

By a simple process of secretion there has been reared in the course of countless centuries an adamant wall against which the billows of the Pacific, sweeping along in an uninterrupted course of several thousand miles, dash themselves in ineffectual fury. Inclosed within the range of its projecting arms is a calm inland sea, dotted with a multitude of coral islets, and presenting at every turn objects of interest alike to the unlearned traveler and the man of science.

Here may be witnessed the process by which the wavy gelatinous mass hardens into stone, then serves as a collecting ground for the flotsam and jetsam of the ocean, and ultimately develops into an island covered with a luxuriant mass of tropical growth. Here, again, may be seen in the serene depths of placid pools extraordinary forms of marine life, aglow with the most brilliant colors, and producing in their infinite variety a bewildering sense of the vastness of the ocean.—*London Public Opinion.*

WONDERFUL GOLD-LEAF.

The process by which gold is made into thin leaves is called gold-beating. As yet the use of machinery for this purpose is very limited, nearly all gold-leaf being beaten by hand.

First the gold is cast into oblong ingots about three fourths of an inch in width and weighing two ounces each. These ingots are passed between polished steel rollers and flattened out into ribbons of about an eighth of an inch in thickness. The ribbons are softened by heat and cut into pieces an inch square.

One hundred and fifty of these pieces are placed between vellum leaves, one piece above another, and the entire pile is inclosed

in a double parchment case and beaten with a sixteen-pound hammer until the inch pieces are extended to four-inch squares. They are then taken from the case, and each square is cut into four pieces. The pieces thus obtained are then placed between the gold-beater's skin—a delicate membrane prepared from the large intestine of the ox—made into piles, inclosed in a parchment case, and again beaten, but with a hammer of lighter weight.

Still the leaves are not thin enough, and once more each leaf is cut into four pieces and again beaten. This last quartering and beating produces 2,400 leaves, and the thickness of each leaf is about one two hundredths of an inch. Gold is so malleable that it is possible to obtain a still greater degree of thinness, but not profitably.

These thin leaves are taken up with wood pliers, placed on a cushion, blown out flat and carefully cut into squares three and one fourth inches in size. The squares are placed between the leaves of paper books, which have previously been rubbed with red chalk to prevent adhesions of the gold, each paper book containing twenty-five squares or leaves of gold, and in this form the leaf is sold, not by weight, but by superficial measure.—*Philadelphia Times.*

THE DUTY OF KICKING.

Mark Twain takes the ground that Herbert Spencer has so forcibly defended. It is the duty of every man to his neighbor to kick—kick at every petty imposition; kick at every act of insubordination, impudence, surliness, on the part of employees. Kick at the laxity which permits a beast to spit and smoke in the public vehicle. Report the conductor who refuses to eject the ruffian. Kick to the manager when the usher is rude; to the superintendent when the clerk is inattentive; to the highest available authority when an injury is done. It is not good nature that prevents kicking among us; it is an attempted fraud to try and make it appear so. Mark Twain calls it timidity. Perhaps it is, but that is not its full name. It is cowardice, downright, abject cowardice, mingled with indifference to duty, one's neighborly rights, and sheer indolence.

Of all the Englishman's qualities the most genuine and beneficent is his blank refusal to submit to imposition. He never "lets it go; what's the use?" He makes a point of finding a use. He is not amiable, but he is just, and his services to his fellow-men are much more substantial than would be a few pleasant remarks. It is for the want of a spirit of "kicking" that our public service is so universally lax, that indeed we have so much in our daily life and experience to kick about. It is the friction that attends a practice that leads to improvement. Let the loafer, the negligent official, the impudent clerk, the insolent corporation, learn in every instance that good manners, civility and decent service are attended with less friction and pleasanter consequences than their opposites, and we shall have more of the former and less of the latter.—*Commercial Advertiser.*

AN ANIMAL THAT LAYS EGGS.

One of the oddest of the many queer and unique creatures that inhabit the antipodean wilds is an animal about the shape and size of the American raccoon. He is not a curiosity on account of his shape or size, or because he resembles the coon and lives in Australia, where all nature is topsy-turvy, but because of a remarkable habit the female of his species has of laying eggs and hatching them after the manner of birds. This queer egg-laying animal, the only creature of the kind on earth, so far as the zoologists know, is called a platypus. It inhabits the deep forests of the river bottoms of both Australia and New Zealand, and, it is said, has many of the characteristics which distinguish the beaver tribe. The platypus is not a common animal even in its native haunts, and it is yearly becoming scarcer because of the war which the natives wage against it on account of its peculiar egg-laying habits. They have a superstitious dread of the harmless little animal, because its habits deviate so widely from those generally noted in fur-covered, four-footed creatures.

A TRADITION OF ORANGE-BLOSSOMS.

Like all familiar customs whose origin is lost in antiquity, the wearing of orange-blossoms at a wedding is accounted for in various ways. Among other stories is this legend from Spain:

An African prince presented a Spanish king with a magnificent orange-tree whose creamy, waxy blossoms and wonderful fragrance excited the admiration of the whole court. Many begged in vain for a branch of the plant; but a foreign ambassador was tormented by the desire to introduce so great a curiosity to his native land. He used every possible means, fair or foul, to accomplish his purpose, but all his efforts coming to naught, he gave up in despair. The fair daughter of the court gardener was loved by a young artisan, but lacked the wealth which the family considered necessary in a bride. One day, chancing to break off a spray of orange-blossoms, the gardener thoughtlessly gave it to his daughter. Seeing the coveted prize in the girl's hair, the wily ambassador promptly offered her a sum sufficient for the desired dowry, provided she gave him the bunch, and said nothing about it. Her marriage was soon celebrated, and on the way to the altar, in grateful remembrance of all her happiness, she secretly broke off another bit of the lucky tree to adorn her hair. Whether the court gardener lost his head in consequence of the daughter's treachery the legend does not state, but many lands now know the wonderful tree, and ever since that wedding-day orange-blossoms have been considered a fitting adornment for a bride.

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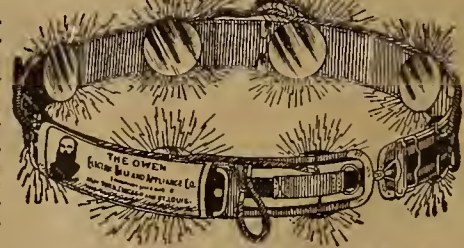
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Smiles.

A LITERARY LESSON.

When you get a bright idea
For a story or a rhyme,
Don't just set it by, to simmer
In your think-tank, for a time!

Oh, this age is one of hustle!
Bright ideas are all about;
It's no matter who first gets 'em,
If you're first to give 'em out.

WHY WE ARE SAD.

I SAW a painful sight to-day," said
Mr. Junius, as his wife handed him the toast.
"Well, there," cried Mrs. Junius,
uplifting her hands, "now don't for pity's sake go telling me any of those horrid stories about poor people falling off buildings and breaking their legs, or at least their ribs, and then having pieces put in the paper. I mean pieces that you read, and not, of course, pieces of their legs, for that wouldn't be good sense; but I do think that there are so many such things in every paper you pick up, and it just fairly makes my blood run cold, or at least that's what people call it, but I don't suppose it's any colder than it usually is, and now for the land's sake, Julius, don't sit there so long saying nothing, for don't you see how nervous I am, but tell me what was the sight you saw that was so awfully painful."

And while his wife was stopping for an instant at the blind crossing, Mr. Junius softly answered:
"It was a window-sash—one of those new-style ones, you understand, with little diamond panes in it."

Mrs. Junius promptly threw off the air-brakes and pulled the throttle wide open, but Mr. Junius by that time was out sifting the ashes.—Rockland Tribune.

THIS SIDE UP.

We saw Jake nailing up a box the other day containing some articles which he intended sending by express. From the nature of the contents we knew it was essential that the box should not be inverted on the passage, so we ventured the suggestion to Jake to place the much-abused "this side up," etc., conspicuously upon the cover. A few days after we saw Jake.

"Heard from your goods, Jake? Did they get there safely?"
"Every one broke," replied Jake, sullenly.
"Lost the hull lot. Hang the express company!"
"Did you put on 'this side up,' as we told you?"
"Yes, I did. An' fur fear they shouldn't see it on the river, I put it on the bottom, tew—confound 'em!"

A METALLIC DISCRIMINATION.

A young lady with a touch of tonsillitis was consulting the family physician.
"That is nothing serious," said he. "I'll touch it up with a little nitrate of silver and you will be all right."
The young lady looked a bit doubtful.
"Oh, it won't hurt," remarked the doctor, reassuringly.
"I wasn't thinking of that. Papa might object."
"Why, what possible objection can he have?"
"I heard him tell mama the other evening that he was opposed to silver. Couldn't you use nitrate of gold. Silver is so common and cheap, you know, and I am sure papa wouldn't object then."—San Francisco Post.

SCRUPULOUS STAYBOLTS.

"Clara," said Mrs. Gratebar to little Clara Staybolt, who had come in to play with the Gratebar children, "how is your mother to-day?"
"Well, she's better," said Clara, "but the doctor says she's very much dewilliamitated."
"Whatever under the canopy do you mean by that, Clara?" asked Mrs. Gratebar.
"Well, the doctor said debilitated," said Clara, "but father says we musn't say Bill, we must always say William."—New York Sun.

MONEY FOR WOMEN!

In these hard times ladies as well as men should improve every opportunity to increase their bank accounts; and any man or woman can make from \$10 to \$20 a day, if they will only try. I have not made less than \$20 clear, any day the past year, and I had no experience and not very good health. My husband assisted me evenings. I put notices of the Dish Washer in the papers, but do not canvass any. I have examined particularly all the Dish Washers made, and find the Climax decidedly the best. Address the Climax Mfg. Co., 36 Starr Ave., Columbus, Ohio, and they will tell you just how to run the business. Every family wants a Climax Dish Washer, and will buy as soon as they get a chance, as you can wash and dry the dishes in two minutes without wetting the hands. A READER.

HER GIFTED DAUGHTER.

Not long ago a woman who had become suddenly rich went to the city nearest her home to do some shopping. She had heard much about souvenir spoons and proposed to buy some. She asked for a dozen in one of the leading jewelry-stores.

"A dozen souvenir spoons?" repeated the clerk in surprise. "Er, what kind of spoons did you say?"

"Maybe you don't know me," she said, noting his surprise, and thinking that it was occasioned by the size of her proposed purchase, she added, "I am Mrs. Suddens, of Valley Town. We keep a team. Yes, I want a dozen souvenir spoons, to eat souvenirs with, you know. My daughter makes beautiful souvenirs!"

THEN.

"How long," asked the young man, "do you think the women's sleeves will continue to increase?"

"As a general rule," replied the bald-headed philosopher, "it is not within the province of the human intellect to foresee the course of fashion. But in this case I think it is safe to predict that as soon as the sleeves get so high that it will be impossible for one woman to look over them to see what the other woman has on they will come down."—Cincinnati Tribune.

MIGHT JUST AS WELL HAVE IT.

At Frank's house they had quince jam for supper, but Frankie had been ill, and his mother said to him:

"Frank, you cannot have any jam. It will make you sick, and then you might die."

Frank took this like a little man until he saw his mother help herself to jam a second time. Then he pushed his plate slowly toward the forbidden dish and said with deliberation:

"Well, if you are going to die, I might as well die, too, ma. Gimme some of it."

A DEPARTURE.

"I guess," said the man with a political boom, "that it's time for me to attract some attention; to show a little originality and bring myself into the popular mind on a conspicuous footing."

"How are you going to do it?" inquired his wife.

"I'll go away from home and admit to the newspaper men that my visit has some political significance."—Washington Post.

HER STRENGTH OF MIND.

He leaned soulfully nearer.
"And could you," he whispered, "think of another?"
She cast down her eyes in sweet confusion.
"Really," she faltered; "two plates already—er—if you insist—thank you. Yes; strawberry flavor, if you please."

PLACING THE BLAME.

Father—"Tommy, stop pulling the cat's tail!"
Tommy—"I'm only holding the tail; the cat's pulling it."—Life.

TITBITS.

Bragg—"When it comes to cooking, my wife is right at home."
Wagg—"That's where my wife cooks, too."
"My papa knows more'n your papa," said Jack.
"I know he does," said Tom. "My papa says your papa knows it all."
"Ah, goo! Ah, gah! Bgib, gib, bah, bah!" said the baby.
"By Jove, isn't that wonderful!" exclaimed the delighted father. "If he hasn't got our old college yell of '91 I'm a ghost."

Wife (to unhappy husband)—"I wouldn't worry, John; it does no good to borrow trouble."

Husband—"Borrow trouble? Great Caesar, my dear! I ain't borrowing trouble; I've got it to lend."—Colorado Sun.

"What is that place down there?" asked she (on her voyage).

"Why, that is the steerage," answered he.
"And does it take all those people to make the boat go straight?"

"Laura writes from home that she has bought a wheel," said Mrs. Figg to the aunt with whom she was spending the summer.

"I'm glad to hear that the old fashion is coming in again," said the old lady. "I allow I'll have to come up and teach her how to spin."

"I hear you have a Vassar graduate for a cook," said a Gothamite. "Isn't it rather expensive?"

"Not very," replied Harlamite. "She works for her board and clothes."

"Why, how does she come to do that?"

"She's my wife."

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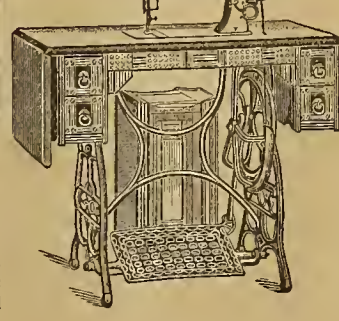
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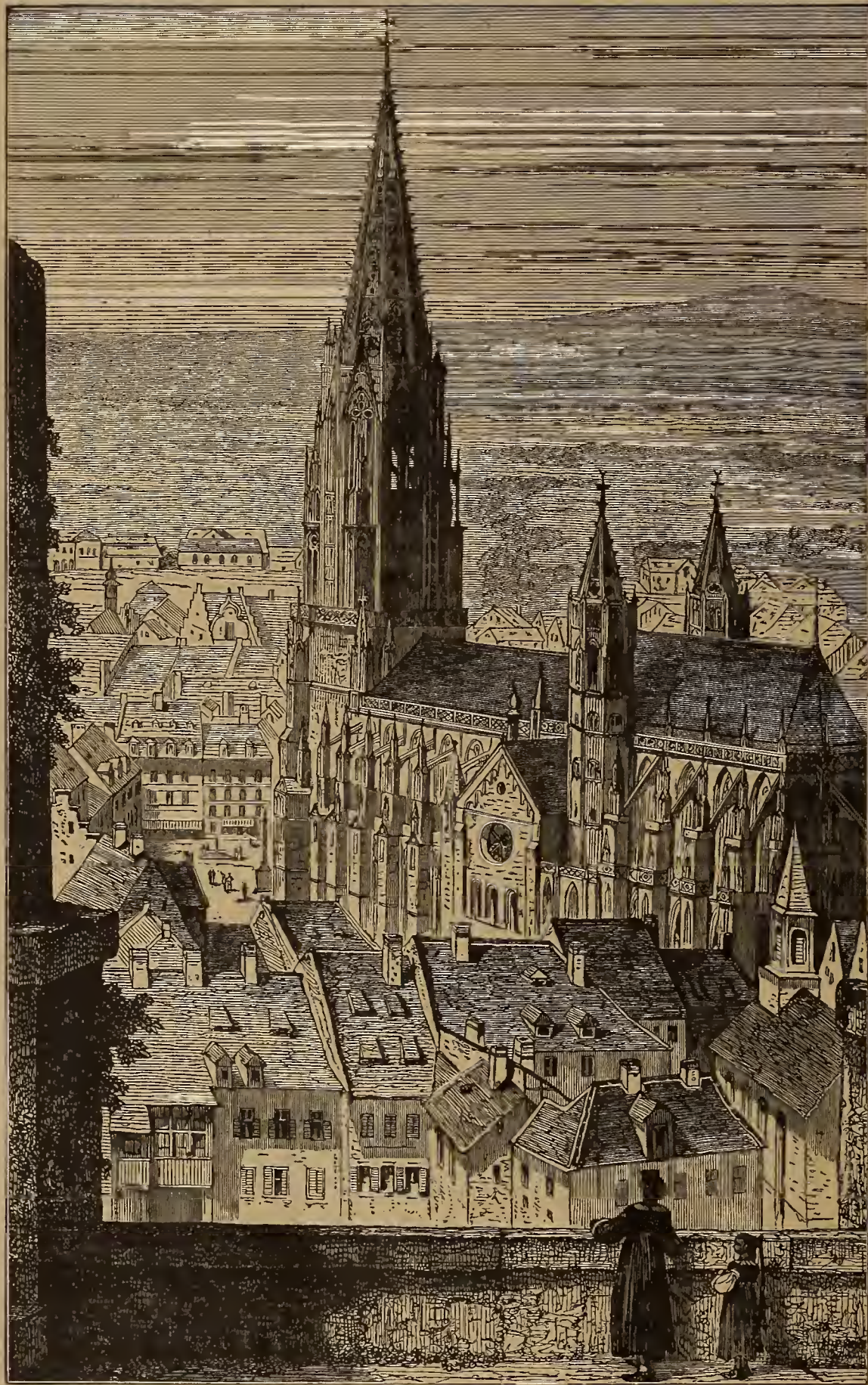
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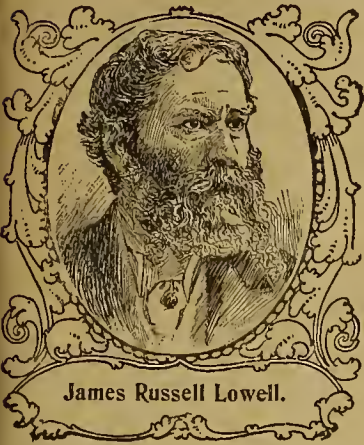
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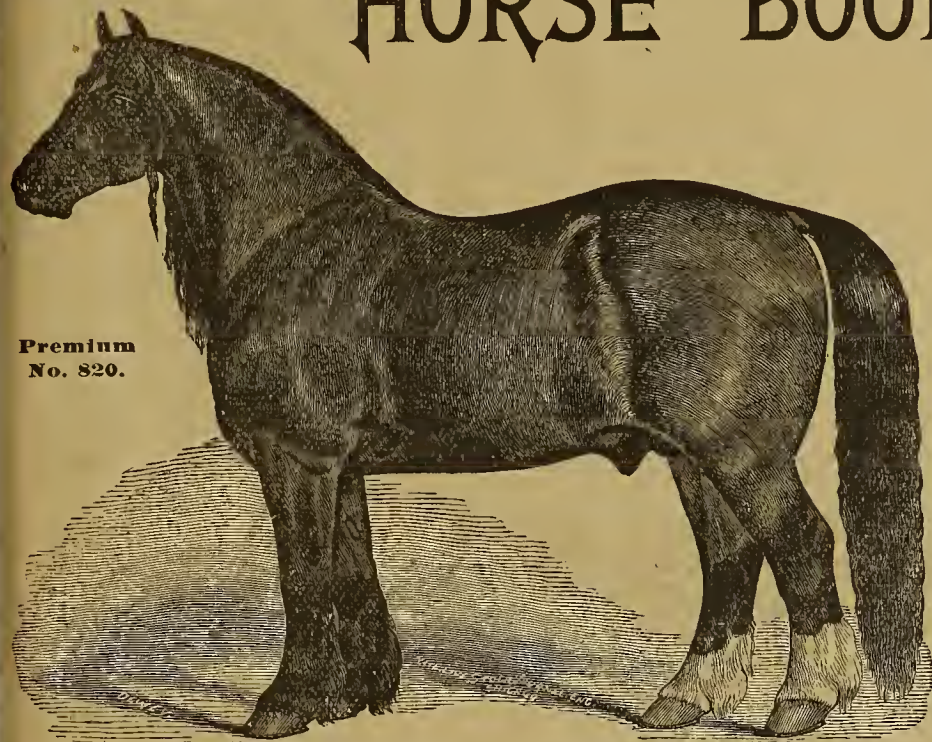
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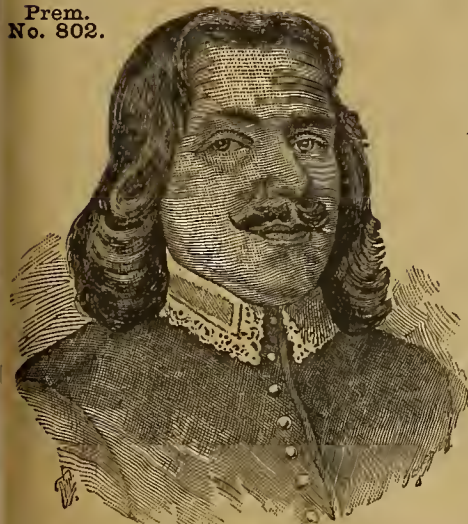
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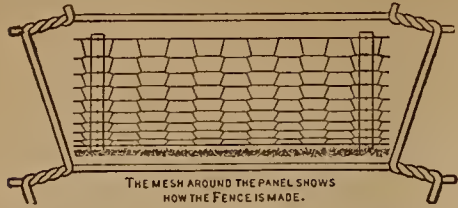
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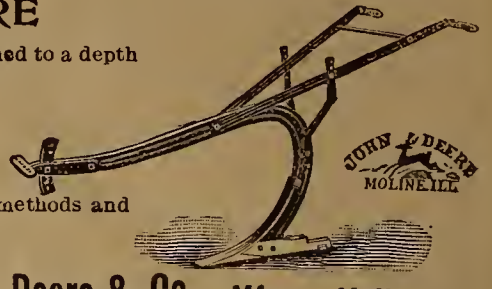
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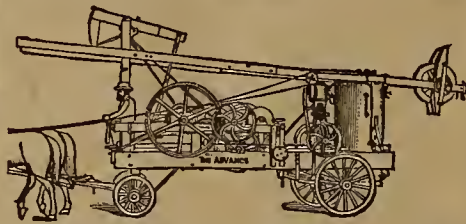
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FARM AND FIRESIDE



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For two thirds of the year

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"What can be accomplished by irrigation has been demonstrated in northern Colorado, the garden spot of the West, if not of the world. * * * If the men who followed Fremont over the sands of this sun-dried sea could get but a glimpse of the glorious country as it is to-day, great would be their surprise. Where then the cheerless wind swept through the sagebrush; where the horned toad and the rattlesnake hurried from the trail; where half-starved wolves seemed to hang on the edge of the world and cry in the night for something to die where nothing could live, bright June roses bloom to-day. The broad canal sweeps down the plain, and the music of running water comes up from every roadside and mingles with the music made by the meadow-lark. The winds are softer now, and bring to the traveler at the palace-car window the sweet fragrance of the fields, and the scent of apple orchards already in bloom. The busy farmer is making furrows in the brown fields where the seed is sown. The lazy cattle are cropping the clover, leaving the white blossoms for the bees, already busy in the honey harvest. The farmer's wife bustles about, setting hens and onions, and settling little disputes between the children. Crooked-legged calves caper in the corrals, and soft-furred colts with bushy tails follow the farm wagons down the dusty road.

HOWELL E. JACKSON, associate justice of the United States Supreme Court, died at West Meade, Tenn., August 8th, aged sixty-three years. He was born at Paris, Tenn. In 1856 he graduated from the law school of Cumberland University, and began the practice of law. During the war



HOWELL E. JACKSON.

he held office under the confederate government, and at its close he resumed the practice of law. He was twice appointed judge of the state supreme court. In 1880 he was elected a member of the Tennessee legislature, and in 1881, by the combined votes of Democrats and Republicans, he was elected United States senator. In 1886, before his term had expired, President Cleveland appointed him judge of the United States Circuit Court for the district including Tennessee, Kentucky, Ohio and Michigan. In 1893, President Harrison appointed him to fill the vacancy in the United States Supreme Court left by the death of Justice L. Q. C. Lamar. This appointment, deprecated from a political standpoint, was made on grounds of personal fitness and high professional character. Justice Jackson was an upright man and an able jurist. His last appearance upon the bench was at the rehearing of the income tax case last May.

gaining year by year a strong position, a well-recognized place and a future destiny that was to redound to the honor and glory of those whose whole energy and interest were wrapped up in its work—equally as high an honor to the profession—we regret exceedingly the unfortunate circumstances that led to its closure. Most of all are we pained to learn that the question of its expense as a department was one of the chief causes that loses to the profession this well-founded institute of learning, because no state could be said to have greater interests at stake in the live-stock industry than Ohio, and no school was destined to turn out a better corps of men calculated to solve these all-important questions for her people than those schooled at this institution.

"After ten years of faithful work in establishing the veterinary department, we understand that the purpose is to strengthen the departments of law, pottery and astronomy. We were not aware that these branches of learning so far outranked in importance in Ohio what is so much more closely allied to the chief interests of her people; namely, agriculture."

SPECIAL ANNOUNCEMENT.

We take this occasion to announce that we have just purchased the good will and subscription list of *The Clover Leaf*, of South Bend, Ind. All subscribers to that paper will receive FARM AND FIRESIDE regularly up to the date their subscription to *The Clover Leaf* expires.

Adding the circulation of *The Clover Leaf* to the already phenomenally large list of FARM AND FIRESIDE, will give us a total circulation of not less than 310,000 copies each issue.

We wish also to say that we shall use greater efforts in the future than ever before to make FARM AND FIRESIDE a necessary visitor in every farm-house in the land.

MAST, CROWELL & KIRKPATRICK.



IN McClure's for September is an interesting article, entitled "The Opening of an Empire." The writer, Cy Warman, says:

"The irrigated farm is the only 'sure-thing' farm on the face of the earth. Here a man may, for the small sum of one dollar an acre, make it rain or shine on any or all of his acres when he wills. An irrigated farm never wears out.

"There are farms in New Mexico that have been irrigated for two hundred and fifty years, and they are to-day as good as new. The Pima Indians of Arizona, we are told, have cultivated the same lands for five hundred years, and nothing has been applied but the water which freshened and fertilized the fields.

"If all Colorado's gold, silver, lead and copper mines were closed forever, it would not be half so hard on the state as would be the failure of her fields to produce. The drying up of her irrigating canals would cost the people four dollars for every dollar they would lose by the closing of all the silver-mines in the state. Even the residents have but a faint idea of the wonderful resources of the state and the fertility of the soil.

"If we can add seventeen million acres to our cultivable domain, we shall increase our capacity for supporting a farming population as much as though we had absorbed one third of the cultivated land of the United Kingdom, or one fifth of that of France, or one fourth that of Germany, or all the cultivated land of Sweden, Norway and Greece put together. We can annex a Canada of our own without asking anybody's leave, and have a million acres to spare. We can have within our own borders as much cultivable land, in addition to our present two hundred and eight million acres, as Australia and Holland combined have under cultivation."

ACCORDING to statistics collected by the Indian bureau, there are about 247,000 Indians in the United States. Of this number, 189,000 are self-supporting, and only 58,000, or less than one fourth, receive rations from the government. Last year the Indians raised over 11,722,000 bushels of wheat, 1,373,000 bushels of corn and considerable quantities of other agricultural products. They sold over 30,000,000 feet of lumber. Last year the total value of the products of Indian labor sold, independently of what they consumed themselves, amounted to \$1,220,000. These statistics will modify the current notion that the Indians are almost entirely dependent on the government for supplies of food, clothing and other necessities.

FROM a very few avenues of work for women, many have now sprung up, and the woman who is obliged to step into any of the industries for a livelihood—and we contend it is never from choice—has now better openings and is more protected than ever before. Some years ago women did suffer social ostracism by entering a business life, but now that it is so general, the woman dignifies the position she occupies. It would be a day to be thankful for when housekeeping could be put on a par with other lines of work, but it is to be feared the day is distant; and yet of all employments it is the most healthful, but the long hours and continuous work will not soon make it a position to be sought for. Women all over the country are shirking it themselves and hoping for anything else for their daughters, while those who must have help are obliged to put up with the poorest kind. A good housekeeper in any house is a boon.

COMMENTING on the change recently made in the veterinary department of the Ohio State University, Dr. Hoskins, editor of a veterinary journal, says: "Established almost wholly through the untiring efforts of Prof. H. J. Detmers, upon a broad scale, a thorough curriculum, and

THE indignation of Christendom has been aroused by the recent massacre of Christian missionaries in China. The missionaries have appealed to their home governments for protection, and the affair has become an international one. The condition of things in China certainly justifies foreign intervention for the protection of the lives of missionaries. The government of China is no more capable of defending itself against mobs in the interior of the country than against a Japanese invasion. Indeed, it would have advanced civilization if Japan had overthrown the Manchu dynasty and reconstructed the government of China. Unless European nations prevent, the present dynasty will probably soon be overthrown by internal revolutions. No foreigner would be safe in China during the period of civil strife. The recent outbreak is only a premonition of what is liable to occur, and furnishes sufficient cause for proper intervention by England and the United States.

IN remarkable contrast to the man bachelor is the girl bachelor in the way she spends her money. Many of them are cultivating themselves in music, art and elocution, more with a view to self-improvement than as a means of livelihood. In some of our small towns the numbers are on the increase of girls who carry on some postgraduate course of study. The boys should not be behind in this. The money put into tobacco and game-playing, united to the energy displayed, also would bring many of our young men to higher walks in life.

ACCORDING to a recent statement of the Treasury Department, the excess of imports over exports during the month of July was nearly \$17,000,000. The expenditures of the government during the month of August ran about fifty per cent above the receipts. With the balance of trade against us, and government expenditures larger than receipts, the export of gold and withdrawals from the gold reserve fund is not a deep financial problem.

FARM AND FIRESIDE.

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When money is received the date will be changed, which will answer for a receipt.

When renewing your subscription, do not fail to say it is a renewal. If all our subscribers will do this, a great deal of trouble will be avoided. Also give your name and initials just as now on the yellow address label; don't change it to some other member of the family; if the paper is now coming in your wife's name, sign her name, just as it is on label, to your letter of renewal. Always name your post-office.

FARM AND FIRESIDE,
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.

Russian Thistle. Farmers should be on the lookout for Russian thistle. It has appeared in many new localities, particularly along railway lines from the Northwest.

Drainage and Subirrigation. The accompanying cuts are designed to show how some swamps have been converted into garden spots. There are hundreds of thousands of similar tracts of swamp land, varying in size from a few square rods to many acres, where the natural conditions are favorable for such improvement. Briefly, these conditions are loam, or muck, soil overlaid with gravel resting on a bed of impervious clay, and an outlet for drainage, as shown by Fig. 1. It is the basin of clay that holds the water and makes the swamp. The first work is to tap the bed of gravel by a ditch through the clay rim of just sufficient depth to lower the water-level to five or six feet below the surface, as shown by Fig. 2.

In draining a swamp of this kind, the object is not to remove all the water, but only to lower the water-level to a point that will permit cultivation of the surface soil. The drains, of course, should be sufficient to remove quickly surplus water from rainfall. In rainy seasons the drains



FIG. 1.—DRAINAGE AND SUBIRRIGATION.

keep the water-level below danger to the growing crops. In dry seasons the reservoir of water under the reclaimed swamps supplies by capillary attraction all the moisture needed by the growing crops. The cultivator stirs the surface soil during the drought, and the underground reservoir does the rest. It is a system of drainage and subirrigation combined, and a very simple and inexpensive one.

Excessive droughts have forced attention to the subject of irrigation. A few progressive farmers and gardeners have observed the conditions under which many swamps are formed, and have turned them to good account. They have

converted waste into productive land, and at the same time adopted irrigation. The cuts are not fancy sketches. They illustrate what has actually been done, and what may be done with innumerable tracts of land that are now unproductive.

Smut in Wheat and Oats. of your readers kindly furnish me with small quantities of oats badly smutted, wheat infected with loose smut and wheat having stinking smut, each and all of which should be one year or more old? We do not know accurately how long the various smuts retain their power of germination, and I wish to make some tests relative to the same. Samples—one pint or less—can be sent by mail at the rate of one cent per ounce. I wish seed of varying ages; especially samples known to be four, five, six or more years old. Please put your name and post-office address on the outside of the package.

I might add that two of the above smuts are easily and wholly preventable—that of oats and the stinking smut of wheat. There is no known remedy for the loose smut of wheat. Hot water of 133° Fahrenheit temperature, and immersion between twelve or fifteen minutes, kills the spores that adhere to the seed, and thereby absolutely prevents smut in the crop. A solution of copper sulphate, or bluestone, will, as is well known, accomplish the same purpose. But the seed is more or less injured according to the strength of the solution. The hot-water treatment was recommended by Jensen, of Denmark, and has been tested by several American experimenters. My assistant in the Kansas state agricultural college (Mr. W. T. Swingle) and I first took up the matter in this country, and we urge its practice by all farmers. To keep the water at about 133° Fahr.—not allowing it to go above 135° nor fall below 130°—is easily done by adding hotter water as needed. Arthur, of Indiana, however, recommends that the water in the vessel be heated to 140° Fahr., and when the seed is dipped in the temperature falls rapidly. It is to be taken out in a few minutes, when the temperature falls to 130°. This, no doubt, will kill most of the smut. It must be remembered in either case that the seed must be dipped in cold water or cold water poured over it at once. Then it is to be spread out on the barn floor to dry.

W. A. KELLERMAN.

Ohio State University, Columbus, Ohio.

NOTES ON RURAL AFFAIRS.

Mosquitoes and Flies. There is hardly an exaggeration in the popular expression, "worrying to death." Continued worry is terribly wearing on the nerves, and therefore on the tissues of the body, and consequently is liable to shorten life. Continued worry leaves its unmistakable traces in a person's features, gait and carriage. Often the cause of such continued worry consists in trifling things, little annoyances more than real injuries. A single mosquito-bite is not worth mentioning, yet I have been in swamps where the mosquitoes

made life almost unbearable. I can hardly imagine a worse torture than to be exposed to their merciless stings; unprotected, and I am sure that a person bound in such a manner that it is impossible for him to fight his tormentors would actually be killed by them in a comparatively short time. To protect ourselves from the mosquitoes we used bee-veils, and washed hands, face, neck, etc., frequently with strong carbolic soap.

Losses Caused by Flies. Now watch cattle in open pasture on any warm summer or autumn day. Their actions betray their suffering. The poor animals have not a

minute's rest. Their fly tormentors are at them at all times, except possibly in the night. Cattle will rather go hungry in the daytime, and try to hide in and among the bushes, than to be exposed to the flies without any protection. Often they feed almost entirely during the night, when flies give them a rest. But the little tormentors do not simply annoy; they also suck the cattle's life-blood, and cause sores besides. Who will doubt that this is terribly wearing on the poor cattle? They must inevitably fall off in flesh, and the flow of milk be materially reduced. I would not undertake to compute or even estimate the fearful losses to cattle and dairymen, and the country at large, from this source. They surely amount to millions upon millions annually. Indeed, there seems to be hardly any single phase of cattle management, in feeding or otherwise, that could have greater importance, or greater claim to the earnest consideration of all stock owners, than the protection of their animals from flies. Far too little attention has been given to this phase of the business. The person who will devise some practical means of protecting stock effectively against the fly nuisance must be called a benefactor, both to the animals and their owners. He will cause two pounds of flesh to grow where



FIG. 2.—DRAINAGE AND SUBIRRIGATION.

one only is growing now, and two quarts of milk to flow where only one is flowing now.

Means of Protection. I cannot bear to see my stock suffer in the pasture, as many people let their's suffer. Besides, I do not like to find the milk supply so materially diminished. Advertisements which I found in the papers, holding out absolute immunity from the fly pest, led me to look a little more closely into the nature of the nostrums recommended as fly-protectors. In our stores I found on sale a "Mexican fly-exterminator," put up in flat tin boxes, a substance looking very much like the patent wagon-grease, done up in nearly the same style. A half-pint box is twenty-five cents. Evidently the fly-repelling substance in it is a tar preparation. It repels flies to some extent, but hardly enough to pay for putting it on.

A firm in Chicago advertises fle-og-on-oil as a fly-repelling preparation, offering to send one can, with flexible dressing-pad, express prepaid, on receipt of one dollar and fifty cents. This is the advertised price of a gallon of "shoo-fly," another anti-fly preparation offered by a Philadelphia firm. From the wording of the advertisements I should think that the two preparations are very nearly the same. I forwarded my check for one dollar and fifty cents to the Chicago firm, and soon received a pint can of the oil, and pad, but had to pay express charges on the package. Whether the firm thus violates their promise in dealing with all customers or not, I do not know. But surely the price is many times too high to make the stuff available for the general farmer. It is some sort of oil flavored with a tar or carbolic acid preparation. In justice to the firm, I will say that they offered to refund the express charges when I wrote to them about it, and also stated that they would bring the price down to a reasonable figure. I think twenty-five cents per can would be nearer right than one dollar and twenty-five cents.

Now, as to its effectiveness as a fly-protector, I can say the stuff helps some, and undoubtedly is a good application for sores, or scurfy places, etc., on beasts, or man either. It does not keep the flies entirely off, nor does it seem to keep them off at all, except for awhile. Its liberal and frequent use undoubtedly would make life more bearable to "critters" during the hot season. The same, however, may be said of various other things. In the

last number of the Philadelphia *Farm Journal* I found a good word for "shoo-fly," from the well-known agricultural writer, Waldo F. Brown. The advertised price of this article is much less than that for fle-og-on-oil; namely, one dollar and fifty cents per gallon. This seems to be more reasonable, and yet Mr. Brown, whom I addressed for more information, wrote me, one July 31st, as follows:

"The 'shoo fly' is a liquid, smelling of tar and carbolic acid. It is too expensive, and I wrote them to that effect. I am now using fish-oil and carbolic acid. It will keep flies off while I milk, but the cows come in at night covered with them again. I have not seen the testimonial in *Farm Journal*, as they published it, but I am sorry I gave it, for the 'shoo-fly' costs too much. I am still experimenting with other things."

Other Fly-Repellers. At the experiment farm in Guelph, Ontario, a mixture of seal-oil (one quart) and carbolic acid (one tablespoonful) is used for the purpose of keeping flies off horses and cattle. Undoubtedly most of the advertised nostrums are com-

pounded chiefly of similar ingredients. Some cheap oil furnishes the body, while carbolic acid, tar or some petroleum product is added to give the smell and flavor objected to by the flies. Ordinary kerosene or coal-oil will answer in an emergency, but it must be put on lightly and judiciously. An emulsion will perhaps give better satisfaction, as it can be used without fear, and applied without inconvenience. In one of the last issues of the *Country Gentleman* I find the following paragraph relating to this subject, from the pen of highest authority, H. Stewart:

"I would recommend to try crude petroleum emulsion, made with soap as the kerosene emulsion, which I have found a perfect antidote and a great comfort to the cows. But it must not be used until after the milking, or the butter or cheese, as I know, will acquire the odor of it. A large carriage-sponge is a quick means of applying it to the cows. Applied to horses, it keeps off the pestilent wood-fly which torments the ears. A fifty-gallon barrel of the crude oil can be procured for the price of five quarts of the preparation Mr. W. F. Brown is using. Before this I used Lawford's thymocresol sheep-dip, which is a petroleum product, I believe; but the crude oil is much cheaper, and quite as effective."

As I said before, the subject is a most important one. To protect our stock effectively from flies during summer and autumn would be an achievement well worth a great deal of trouble and some expense. Kerosene emulsion is cheap, and may not be troublesome to use. If any one among the many readers of FARM AND FIRESIDE can suggest a better plan than any of those named, to accomplish so desirable a result, we will be glad to hear from him.

I am just in receipt of a note from the "fle-og-on-oil" people, in which they put the blame on an errand-boy, "who forgot to pay the express charges in many instances," and stating that they discharged the boy. They also say that they have put the price of a can of "fle-og-on-oil" down to one dollar, express prepaid. I have given all the facts about anti-fly preparations, so far as I have been able to get them, and must leave it to my friends and readers what means they will choose to protect their poor animals from their blood-thirsty tormentors. At any rate, I hope that every stock owner will make an effort in this direction, not only for humanity's sake, but also for the sake of protecting their own interests, and their profits in stock-keeping. T. GLENER.

Our Farm.

FACTS CONCERNING CRIMSON CLOVER.

CRIMSON clover, which is now regarded as the best distinctive name for it, is also known as German or scarlet clover. Delaware, in proportion to its size, leads all other states in acreage and the production of seed. This clover is about as hardy as the common red clover. It is an annual, and if allowed to go to seed, the roots die, just as those do of wheat, oats, barley and similar grains. It is not like the common red clover, a biennial plant. If sown in August or early in September along the fortieth degree of latitude, it will blossom in the spring two or three weeks earlier than the red clover sown the spring before. Crimson clover grows during the mild winters which are common in the cotton-growing states, as well as where the latest-maturing varieties of dent corn can be grown. It perfects its growth so early in the spring that it can be followed by any quick-growing trucking crop, or one of Indian corn. It is a two-crop plant.

Its real value as a weed destroyer is underestimated. Where the land is plowed and harrowed soon after harvest, it will cause the weed seeds to grow; then if the ground is reharrowed and seeded with crimson clover, the weed growth will be checked, most of the common weeds will be effectually destroyed, and an abundant supply of fall pasturage provided for.

The advantages of this clover as a winter covering for the silicious soils that are so badly injured by surface washing and erosion during the winter are of the greatest value. Its fine, fibrous roots hold and assimilate the soluble nitrates that would otherwise be leached out during the winter rains.

For sandy lands, there is no better crop than crimson clover; in fact, it thrives well on all well-drained, light soils. It is not a satisfactory crop on lands that are too poor to grow a fair crop of field beans or the cow-pea. It grows well on soils that are deficient in lime, but a top-dressing of thirty to forty bushels per acre just after seeding would be highly beneficial.

A crop of this clover was plowed under early in May as a green manure, and a crop of potatoes was planted, which yielded nineteen bushels per acre more than where an application of manure equal in value to the cost of the clover seed was applied. The New Jersey experiment station is authority for the statement that "the amounts of phosphoric acid and potash contained in the growing crop, as early as April 24th, are more than sufficient for an average crop of white potatoes, sweet potatoes, tomatoes or the cereals, or is equivalent in phosphoric acid to 200 pounds of South Carolina rock superphosphate, and in potash to over 600 pounds of kainite." Also, that the amount of organic matter contained in the crop—2,687 pounds—is also equivalent to that contained in ten tons of manure.

One of Delaware's most progressive farmers informs me that his practice is to produce two fodder crops of crimson clover each year. At the last working of his tomato crop—about the middle of August—he sows broadcast from twelve to fifteen pound of crimson clover to the acre and works it in with the cultivator. The growing clover does not interfere with the tomato crop. The spring following, when the clover attains a height of about twenty inches, he cuts from ten to twelve tons per acre to put in his silo. The same land is then plowed, fertilized, and planted with ensilage corn, and when this is taken off, the land is reseeded with crimson clover for green fodder and ensilage purposes the following spring. Should the soil be dry at the time of seeding, the roller is used. He recommends the use of Breed's weeder—which is now made in sections—when it is desirable to sow the seed between the rows of field-corn after it is laid by.

If sown early, crimson clover can be pastured in the fall, which will be of advantage if it is to be pastured in the spring before it is allowed to head out for plowing under for green manure, for growing a crop of field-corn, potatoes or tomatoes. If the soil be poor, one of field-peas can be substituted.

Crimson clover may be grazed two or three weeks in the spring, and then produce a fair crop of nutritious hay. A field sown with this clover last year was pastured very closely—so closely that it could not bloom—but this year, when cut in May, it yielded a fine crop of hay.

The yield of hay usually ranges from one

and one half to two tons to the acre, and when grown for seed the yield is eight to ten bushels per acre. The common clover-huller can be used for getting out the seed, by using just enough of the concaves to knock off the heads and adapting the mesh of the screens to the size of the seed.

The comparative value of this clover for hay is shown by the fact "that a yield of 2.66 tons of dry hay per acre, contained in each ton 83.6 pounds more digestible matter than was found in red clover, and that over 66 per cent of the increase consisted of the most valuable compound, protein."

Where the soil is somewhat thin, the application of 350 pounds of acid phosphate and 125 pounds of muriate of potash to the acre, at the last harrowing preceding the sowing of the seed, is very desirable. Or other needed fertilizers, especially such as contain phosphoric acid and potash, can be used to good advantage.

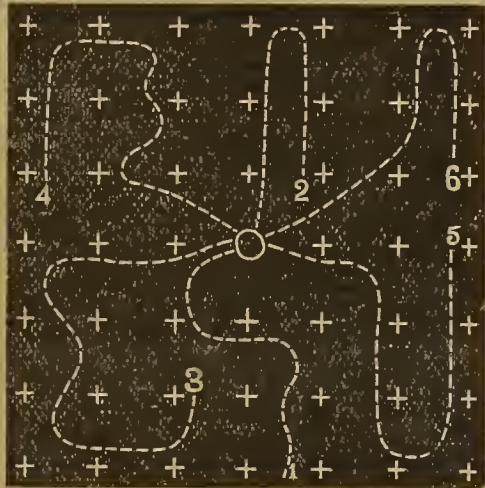
Crimson clover is destined to become an almost indispensable factor in farming operations in the South Atlantic states. Its broad leaves are the ample recipients of large quantities of nitrogen from the ever bountiful supply in the atmosphere.

Crimson clover is a farmer's helper and mortgage-lifter in more than a sixteen to one ratio, and its cultivation ought to be, and no doubt will be, largely increased.

W. M. K.

SYSTEM FOR CUTTING CORN.

Have a system in cutting corn; it saves lots of steps. I cut corn once in the same field with a fellow who was not any quicker in the motion than I was, but in spite of all I could do he would cut a third more corn in a day than I could. I watched him, and discovered he had a



system, a regular method for cutting and putting up his shock; he went exactly the same round of steps for every shock. I had no system; after I got my shock started I cut my armfuls here and there, just as it happened. I learned his system and stuck to it, and I was surprised to see what a difference it made. I have drawn a sketch showing the plan. In this section corn is always planted in rows both ways, and in cutting, a square 7x7, 49 hills, is put into a shock. The dotted lines show the course taken in cutting up a shock; the zigzag lines are where I cut two rows by stepping back and forth. It takes six trips to cut a shock. I don't believe it is possible to cut a shock a square of corn with a fewer number of steps. MILES E. MILLER.

Kinderhook, N. Y.

PICKED POINTS.

The know-how, supplemented with the do-it, is the sum and substance of agricultural or any other success. A neighboring poultryman hatched 456 chicks with a home-made incubator last winter, raised every one of them to broiler age, and sold them for forty to sixty cents apiece.

Hay, wool and sheep are good property to hold just now for an advance in price. Boston is the great wool market of the country. The latest report from that city says: "Another week of heavy sales and advanced prices, which is encouraging to growers. Sheep are looking up." Hay buyers are running the highways and byways of the state of New York, seeking to make contracts. When there is great call for any farm product, then is the time to "wait a little" before selling.

I know a philosophical gardeuer, and his philosophy is correct. At a farmers' meeting, he said weeds were gardeners' best inanimate friends. He said the main thought of most was to keep the weeds subdued, and to accomplish it, the soil has to be stirred often, and this frequent stir-

ring and letting in air, light and sunshine was just what the crops require for their best development; that were there no weeds, not one in ten would stir the soil often enough. He went to a field one morning and observed the weeds getting pretty rampant. He took off his hat, bowed and said: "Good morning, weeds; excuse my delinquency. I had no idea my potatoes were calling so loudly for me to stir the soil;" and now he calls weeds his "friendly monitors."

August is the month to cut timber to prolong its durability. When the leaves are matured the wood contains less moisture than at other times. If trees are cut then, the stumps and roots are less liable to send out sprouts than if cut at other times. I was reared amongst the Mohawk Dutch. They generally entertained the belief that if trees were cut in August when the moon sign is in the heart, it was sure death to stumps and roots. When the sign was in the heart for two successive days, as it was this year, they have been known to work all of the two days and intervening night cutting green wood growth from bush lots. But these people believed all the moon signs, no matter how much science disproves the theory.

A medical authority truthfully sounds the praises of onions. They are excellent blood-purifiers. Boiled onions used frequently in a family of children will ward off many diseases to which the little ones are subject. As an external application they are successfully used in cases of croup and earache. They are good for the complexion, and a lady who has a wonderfully clear, fine complexion attributes it to the liberal use of onions as food. People troubled with wakefulness may be assured a good night's rest often if just before retiring they will eat a raw onion. When troubled with a hard cough, if a raw onion is eaten, the phlegm will loosen almost immediately, and can then be easily expectorated.

Is "water-witching" on a par with the moon theory in regard to planting crops and some other matters? I think more than half of my farmer acquaintances have firm faith in this as an occult or hidden science. Everyone of them can cite cases and furnish what would be considered sufficient legal testimony of its truth in a court of law, that a forked twig or branch of a peach-tree or witch-hazel shrub in the hands of some persons will twist down and point unerringly to the location of a stream of water hidden beneath the surface; and by the violence of the "twist," or otherwise, about the number of feet from the surface to the water is indicated. Even so astute a person as Dr. Peter Collier, director of the New York experiment station, hinted in the *Country Gentleman* that there might be truth in the theory. I am open to conviction, and will believe as soon as I can see satisfactory tests. GALEN WILSON.

FARM THEORY AND PRACTICE.

PREPARING LAND FOR WHEAT.—Where beans ripen in time for wheat seeding, their cultivation forms a first-class preparation for it. When I saw that one field, intended for meadow, had lost its stand of timothy and clover this summer, I started the breaking-plow for beans. This was in June, and the early plowing was just the thing for wheat this fall. It cost no more to plow, roll and harrow than in August, except that teams were busier; and the two cultivations we gave the beans while growing are no more work than land should have when fitting a good seed-bed for wheat and timothy, or either alone. Consequently, I can charge against the bean crop no more than cost of seed, planting, harvesting and threshing. There is also the advantage that if the beans had not been grown, the chances are that the plowing would have been much later, and the preparation not quite so good.

USING THE ROLLER.—A plank drag does work that no other implement can do so well, but it does not take the place of a land-roller in preparing a firm seed-bed. Each has its uses. When breaking ground in the summer, a roller should be used just before noon and before night to crush the clods thrown up by the plow during the half day. This is one of the hardest things to do faithfully that I have ever tried. We do not like to unhitch and hitch to the roller so often, or there is a land to be finished, and the first thing we know, the

plow is one day ahead of the roller. It may look well enough after being rolled, but afterward, when harrowing, we see that it was a mistake not to press the earth down when fresh. If this is done, any ground that is not too dry and hard to plow may be pulverized so well without rain that a single shower afterward will let us fit it for the drill. The plank drag grinds up small clods better than a roller, but for firming land and for pressing clods into the loose earth so that a shower will moisten them, the roller is a necessity.

WHEAT TILLAGE DOES.—We do not harrow land merely to firm and settle it for a good seed-bed. There is no doubt that stirring a soil makes it richer in available plant-food. While I make no pretensions to a knowledge of the way in which this occurs, experience and science stand together in the claim that tillage increases the productive power of land. Wheat does not make as heavy demands on the soil as some other crops, and plenty of tillage on quite ordinary land will insure a pretty good crop, if the soil is well drained and is not so clayey that it runs together when fine, if beating rains occur. The disk harrow gives good tillage, letting the air enter the soil, sifting the fine earth down, and bringing clods to the surface. For thorough preparation of land for wheat, the breaking-plow, roller, disk harrow and plank drag make a good outfit of implements.

CORN GROUND FOR WHEAT.—In loamy soil corn leaves land in good shape for wheat; but where there is more clay, and in thin soils, wheat does poorly after corn. As wheat must be seeded as soon as the corn is cut, leaving little time for any preparation, and as the corn-stubbs are in the way, I have thought that the bad results from wheat after corn in clay soils is partially due to the scarcity of available plant-food. If there were time to stir the soil two or three times, at intervals of a week, before seeding to wheat, I would expect better results. Corn is a gross surface feeder, and in a compact soil there does not appear to be enough nutriment left for the young wheat-plant at the start. The disk or spring-tooth harrow in the middle does not do very thorough work, and outside of the black loams of the country we have learned to expect only two thirds of a crop of wheat off corn land. It would probably pay to delay seeding a little, and stir the soil more before seeding. I have tried the plan of running a two-horse cultivator crosswise the field first, letting the shovels miss the stubbs, and then using the disk harrow lengthwise, straddling each row. This plan is tolerably satisfactory.

WHEAT AFTER POTATOES.—My best results with wheat are off potato land. The early digging of the potatoes, and the opportunity to cut the land thoroughly with the disk harrow and to roll, enables one to fit the ground in nearly a perfect manner. As soon as the potatoes are off the field, a disk harrow is run over it, lapping half at each cut, and in a few days this cutting is repeated at right angles to the first one. With a harrow that throws the earth outward, the surface is left smooth enough for the roller, which packs it ready for drill, if not too dry. Wheat is often sown too deep, especially when the ground is loose. I prefer to sow late rather than before a needed rain comes. The rain not only furnishes moisture, but compacts the soil. Then a depth of one to one and a half inches is sufficient for wheat. I prefer an eight-inch drill, with the hoes run in line, and no rolling or dragging after the seeding, if there is sufficient moisture to bring the wheat up. DAVID.

Makes the Blood Pure

This is the secret of the cures by Hood's Sarsaparilla. Read this: "I am so glad to write that I am now in perfect health, and it is all because Hood's Sarsaparilla made my blood pure. My

HEALTH BROKE DOWN

With troubles peculiar to women, my nervous system was shattered and I had to take my bed. The physician said there was little hope for me. A neighbor told of wonderful cures by Hood's Sarsaparilla and I decided to try it. When I had taken 3 bottles, I could sit up and now I am perfectly well and strong.

Hood's Sarsaparilla

has done all this for me." MRS. C. F. FADFRER, La Plata City, Colorado.

Hood's Pills cure habitual constipation. Price 25c. per box.

Our Farm.

NOTES FROM GARDEN AND FIELD.

THE ONION-MIDGE.—A few days ago one of our western friends sent me some onion-tops that seemed to be affected with the minute insect called the onion-midge, or onion-thrip. This feeds on the outside of the leaves—not only onions, but other succulent plants—and I have known it to do considerable damage sometimes. Frequently the real cause of the trouble with the onions is overlooked, and people think the plants are affected by a kind of blight. On the other hand, we sometimes find on mildewed plants small insects, about the identity of which one is entirely at sea. They may be mere scavengers that were attracted to the plants by the injury already done them through the interference of blight.

But what can one do for the real onion-midge? Fortunately, this is rarely so numerous as to ruin a crop. Prof. Osborne, of the Iowa experiment station, has given a description of the pest in a bulletin recently published by that station. The insect is mentioned as the "western onion-thrip." The remedy which he recommends above all others is the kerosene emulsion, which will surely kill all the thrips with which it comes in contact. Several thorough applications will undoubtedly be necessary to show good results. Badly affected plants had better be pulled up and burned.

POTATO-SCAB.—A reader in Tompkins county, New York, writes that his experience proves there is no such disease as potato-scab. Soil rich with manure is full of angleworms, and these gnaw the tubers and cause scab. This is an old bone of contention. A great many people believe that wireworms, and perhaps other worms or grubs, are the true cause of scab, and the truth is that these pests often eat into the tubers and cause a scabby formation. But we can make the soil so alkaline, by applications of ashes, muriate of potash, lime or other alkaline substances, that all earthworms would be driven away or killed, and yet the potatoes would be pretty sure to be covered with scab all over. It is now a well-established fact that there is a fungus which causes scab, and that this fungus flourishes in alkaline soil. Sour soil usually gives us clean tubers. By all means use seed that is free from scab, and if possible, even then disinfect it by soaking for ninety minutes in a weak solution of corrosive sublimate. Our friend says that common salt is a good preventive of scab, and recommends to sprinkle a tablespoonful into each hill before planting and two tablespoonfuls to the hill after planting. This treatment will not prevent the scab disease. It may drive earth-worms away, however.

REMEDY FOR DAMPING OFF.—A Michigan reader recommends scattering a few handfuls of fresh, fine soil among seedling plants in flats or on the bench. This will prevent their dying down, and give strong, stocky plants. The great mistake made with such seedling plants, usually, is that they are left standing several times more thickly than is desirable or proper. The consequence is that the soil is overshadowed (usually overwatered, too), and shut off from sun and air, gets sour and moldy. The first thing to do is to pull up the plants, so that each one has the space required for its well-being. These crowded plants usually grow up tall and slim, and watery, with little root, and as soon as some trouble befalls that little apology for root, the plant is gone for good. Timely thinning will make the application of fresh soil to the surface unnecessary, as the surface between the plants may be stirred with a small hook or spoon. But when plants have grown spindling, a new covering of fresh soil on top will bury the lower end of the stems and make the plants appear shorter and stockier, and induce the formation of new roots from the buried portion of the stems. Application of water from below (subirrigation) instead of from overhead, will also surely prevent the disease known as damping off.

ONION-PLANTS DYING.—Many persons have told me of the dying of their Prize-taker seedlings in flats or hotbeds—from the top-end down. Usually, we have thought the plants were "damping off." In my experience, the cause has usually been

an altogether different one; namely, dryness at the roots. If we use deep flats, it takes more water than most people suppose, to keep the lower stratum of the soil damp. In many cases, even where we think we have applied water in great abundance, I find the layer of soil near the bottom almost dust-dry, while the surface appears wet. The consequence is that the plants languish and sometimes die. That this is the true state of affairs can be easily proved. Just put a flat sown with onion seed in the usual manner, a trifle slanting, so that one side is a little higher than the other. Then note the thrifty growth of the plants in the lower end, and the yellowish, sickly color, and perhaps the dying down of the tops, in the higher end. Then turn the flat so that the heretofore lower end comes on the upper side, water again in the usual manner, and then note how the sickly plants will revive and catch up with the others, while the latter are gradually becoming yellowish and sickly.

DRYING SWEET POTATOES.—Some time ago I referred in these columns to the new idea of drying sweet potatoes, and perhaps putting them on the market, ground up to a powder or meal, and boxed in the same manner as oatmeal and other cereals are put up. There is little doubt in my mind that the idea is practical. And yet I have not heard that any move has been made in this respect. Sweet potatoes are easily dried, either in the sun, in a kiln or in a regular evaporator. All that is necessary is to peel and slice them, when they are ready for drying. Neither can there be any great difficulty in grinding the dried product. I believe this would not only make good material for pies, but also many other palatable dishes. Who among our readers will give us more information on the subject from practical experience?

CAULIFLOWER GROWING.—A Massachusetts correspondent tells me that he has some fine cauliflower-plants. Last year a good many heads, when about two thirds grown, commenced to turn brown, and finally black. The cauliflower flourishes in rich soil and in a damp, moist atmosphere. Dry summer heat does not agree with it, and when the soil is not excessively supplied with humus, and moderately with moisture, the plants will refuse to form good heads. Consequently, we must make our crop early in the season, to have it in perfection before the summer heat and drought, or in the fall, after the summer heat is past, and make the soil very rich, besides giving it the very highest cultivation.

T. GREINER.

Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

FRUIT-TREES NEED ATTENTION WHEN IN OR OUT OF BEARING.

One has but to examine the foliage of almost any of our fruit-trees in midsummer to discover something is really necessary to the welfare of our fruit. The leaves are the lungs of the plant, and without favorable facilities for breathing, so to speak, the growth and vigor of the plant will be retarded. It takes two years to raise an apple, a pear, a peach or a plum. The first year the buds are set and matured; the next year those buds, after expanding into blossoms in the spring, are developed into fruit during summer and fall. A certain amount of energy is required that the blossom-buds may be formed, and this often accounts for the alternate heavy and light crops of fruit on certain trees. The strength of the tree is required to mature the fruit, and the fruit-buds for another year are not formed, and only a small growth of new wood. The healthy tree when resting a year regains its vigor, sets new buds, and is prepared to raise a crop of fruit on the following year, to say nothing of having matured a fair growth of wood. A tree that is suffering heavily from mildew, leaf-blight or the devastation of insects can no more mature a full crop of healthy buds to bloom the succeeding spring than the tree that is loaded down with a heavy crop of maturing fruit. Hence, it is important that each one should know what disease his various trees are subject to, and spray accordingly, sparing no pains to keep them healthy on the off year as well as when in full fruit. Many people have the erroneous idea that it is not necessary to spray, except when the tree is maturing fruit. The nurseryman understands this, and the sooner the public does, the better.—E. W. Allis, in *North American Horticulturist*.

INQUIRIES ANSWERED

BY SAMUEL B. GREEN.

Borers.—A. D., Ozone Park, N. Y. The borers that have worked into the heart of the tree cannot be reached, unless with wire or by forcing Paris-green water into the holes. They will not be apt to cause any serious trouble, as they are probably almost done working.

Transplanting Gooseberry-bushes.—A. E. B., South Dakota. Gooseberry-bushes may be transplanted in fall or early in the spring. I prefer to plant in the fall, since if the work is left until spring the plants are liable to be started when set out, which often gives the plants a serious set-back. Plant five feet apart each way in rich, retentive, moist (not wet) land.

Apple Pomace as a Fertilizer.—A. C., Walkerton, Ind. Apple pomace is a poor fertilizer, but it can often be used profitably for manure if it can be gotten with little labor or expense; and when well rotted, as it must be in this case, it is undoubtedly far better than fresh pomace. I think when hauled onto light soil or composted with stable manure, it will be put to the best purpose.

Pear-blight.—A. P. G., Telford, Pa. There is no known remedy for what is called "fire-blight." It is caused by a vegetable parasite, which from the fact of its living in the tissues protects it from all exterior remedies. This is probably the blight you refer to. The proper treatment is to cut off and burn the diseased parts as soon as they are seen. There is another blight somewhat similar in its effects to "fire-blight," but it is caused by an insect. If you are in doubt as to which it is, send specimens to FARM AND FIRESIDE.

English Walnuts.—G. H. W., Allentown, N. J., writes: "Do English walnuts come true from seed? And in planting an orchard, would you trust seedlings? Can they be successfully budded or grafted? Which is the better method? At how early an age should they begin bearing, and what kind of soil is best suited to them?"

REPLY:—English walnuts come very nearly true from seed. They are sometimes grafted, but it is customary to depend on seedlings. The age at which they commence to bear depends on soil and variety; perhaps when the trees are ten years old would be the average time at which they commence to bear.

Cherry-trees Sprouting.—W. A. W., Cottonwood Falls, Kan. If the trees are budded on Mahaleb cherry-roots, which may be obtained from any of the larger nurserymen, they will not sprout much. But budded trees are not nearly so long-lived as seedlings or suckering plants, and although these may be more troublesome about sprouting, yet they are the best to plant. It is my opinion that the extra time spent in cutting out suckers does not ent much of a figure compared with the improvement in the trees when on their own roots. Budding or grafting should be avoided whenever it is possible to get trees on their own roots.

Cranberry Culture.—M. A. P., Anna, Ill. Such a place as you describe might grow cranberries, but is very poorly adapted to them. The plants are grown from cuttings or sets, which can be bought of nurserymen. Webb's "Cape Cod Cranberries" contains many useful hints. It can be bought of Orange Judd Co., New York, for fifty cents. The Department of Agriculture, at Washington, D. C., has published a very good bulletin on the subject, which can be had for the asking, if the edition is not exhausted. Cranberries have not succeeded on the prairie soils of the West, but are found almost, if not quite, entirely in the granite sections of the country.

Plant-lice.—J. W. G., Camp Douglas. I think your apple-trees are infested with lice and not by mites; but they ought to be leaving the trees by this time. If they still are troublesome, you should spray the under side of the leaves with kerosene emulsion, made as follows: Soft soap, one quart, or hard soap, one fourth pound; two quarts hot water; one pint kerosene. Stir until all are thoroughly mixed, and then add water until the kerosene forms one fifteenth of the whole compound. Kerosene emulsion may also be made with sour milk, as follows: Sour milk, one gallon; kerosene-oil, two gallons; warm to blood heat and mix thoroughly. Dilute ten times with water.

Trimming Blackberries.—Scotch Grove, Iowa. The old canes should be cut out and burned, since they are done fruiting. I think you would do well to spray the new growth with Bordeaux mixture, made of five pounds of lime, five pounds of sulphate of copper (blue vitriol) and fifty gallons of water at once, and repeat when wood is ripe. Do the same thing when canes are uncovered in the spring, and again after the growth starts. You had better try the mixture on a few plants first, to see if it injures the leaves, as it will do so to the new growth of some varieties, in which case it should be diluted. I do not like Western Triumph, but prefer Nemaha, Older and Ohio, and believe them much healthier.

Injury from Spraying.—E. B., Harrison City, Pa., writes: "I sprayed peach-trees loaded with peaches about one half inch in diameter, with four pounds sulphate copper, three pounds lime and four ounces Paris green to forty gallons of water; or rather, I commenced when blossoms fell, and continued until peaches commenced to color (July 1st, Alexander peach), at intervals of about two weeks, and when about one half inch in diameter, about two thirds fell off, together with a great many leaves, leaving some branches

nearly bare. What fruit remained was fine, and no rot of any account. I sprayed for rot and insects. That was according to directions for peaches, and material was well stirred, but I put it on until all the leaves and limbs were wet. Why were they damaged?"

REPLY:—The foliage of peaches and plums is very susceptible to any free copper salts that may be in solution, and is much more liable to injury than foliage of apples. I think the experience of the past year shows that it is safest to have large excess of lime in the Bordeaux mixture. I think you should use at least as much by weight of lime as you do of sulphate of copper and Paris green.

Strawberry Culture—Borers.—C. J., Adrian, N. Y. Prepare the ground as for a first-class crop of corn. Set the plants early in the spring, as a rule, but in case of a bome garden, it might be a good plan to set the plants in August if they are to be carefully looked after. Plant sixteen inches apart in rows three feet apart. In buying plants, be careful and get either perfect-flowering kinds or kinds that supplement each other.—There is no remedy for the borers that work in apple-trees, except to cut them out as soon as they are noticed in the trees. Painting the trunks and larger branches of the trees with soft soap and lime is a preventive, to some extent. You should at once dig out all the borers from your young apple-trees, covering the wounds with grafting-wax or blue clay mud, and paint the trunk with the soft soap and lime recommended.

Blueberry—Dewberry.—A. A. F. T., Tusculumbia, Mo. So far as I know, neither the blueberry nor huckleberry have ever been transplanted very successfully on any considerable scale. They are difficult to make live, and generally, while they may live several years after being transplanted, they do not yield fruit to amount to anything. And yet I have seen plants of several kinds of blueberries and huckleberries bearing profusely at Arnold arboretum in a small way as specimens, so that I know if sufficient care is taken the work may be done with success. I have raised seedling blueberries several times, by crushing the fruit and allowing it to ferment for several weeks before sowing, but the plants grow very slowly. I think the same treatment best for huckleberries, although it is unlikely that your white huckleberry will come true from seed. I think you had best take up the plants about the time the maple leaves begin to fall, and plant where they are to grow, breaking up the clumps, saving all roots possible and planting under conditions as nearly as may be like those in which they now grow.—The dewberry is easily grown in the garden, often successfully. I have a fine crop of Lueretia dewberries this season, which is the first I have had for several years. I lay this year's success to the fact that there are blackberries close to them, as they have flowered profusely for several years, but have not set fruit. They should be planted about four feet apart in rows seven feet apart. Any rooted plants will do well enough for sets, as they grow very easily. In spring, trim off about one half of the new growth and mulch with hay to keep them from getting dirty, or tie to trellis.



A "RUN-DOWN,"

"tired out" woman who complains of backache, headache, loss of appetite, extreme lassitude and that "don't care" feeling is pretty sure to be suffering from "Female Weakness," some irregularity or derangement of the special functions of womanhood. Very often womb troubles set the nerves wild with affright and as a result the woman suffers from sleeplessness, nervousness, nervous prostration, faintness and dizziness, irritability and indigestion. In all cases of irregularity or suspended monthly function and in all those nervous diseases depending upon local causes, Dr. Pierce's Favorite Prescription will restore you to perfect health. Instead of the exhaustion and feeling of weight and dragging down in the abdomen, you feel fresh and strong. For young girls who suffer from irregularities, for the hard-working woman who suffers from catarrhal inflammation of the lining membranes causing a constant drain upon the system, there is no prescription used by any physician which can equal in results Dr. Pierce's. For over thirty years Dr. R. V. Pierce, chief consulting physician to the Invalids' Hotel and Surgical Institute of Buffalo, N. Y., has used his "Favorite Prescription" in the diseases of women which had long been his specialty and in fully ninety-eight per cent. of all cases, it has permanently cured.

Mrs. JOHN M. CONKLIN, of Patterson, Putnam Co., N. Y., writes: "I am enjoying perfect health, and have been since I took the last bottle of Doctor Pierce's Favorite Prescription. I took five bottles of it. Never expected to be any better when I commenced taking it, but thank God, I can say that I am glad I reached my home. I had falling of the womb, and flowing caused by miscarriage, and was very weak when I commenced taking your medicines. I was cured by taking five bottles in all—two of the 'Favorite Prescription' and three of the 'Golden Medical Discovery.'"



Mrs. CONKLIN.

THE AGRICULTURAL COLLEGES AND EXPERIMENT STATIONS IN COUNCIL.

The annual convention of the Association of Agricultural Colleges and Experiment Stations was recently held in the city of Denver, Colorado. It was a notable gathering, bringing together men who are making a practical and scientific study of every department and detail of agriculture. Although it was the ninth meeting of the association, it was the first time it has been held west of the Mississippi. About forty different states and territories were represented, and the papers presented and the discussions that followed will constitute an important contribution to the literature of this branch of industrial education.

The growth of the agricultural colleges within the last quarter of a century has been very rapid, and it has taken a place in the educational system of the western states of commanding importance. There has never been in this country a lack of institutions where what is known as the higher education could be obtained; but there has been, until recently, a lack of institutions where a good English education, accompanied by instruction and training in the practical industrial arts, could be secured. This want the "land grant" of agricultural college has supplied, and these institutions are becoming more and more popular, and their influence is being felt among the classes who have neither the time, means nor inclination to pursue a course of study in the older classical and literary colleges.

The want has been the more pressing in those states where agriculture and horticulture are the dominant industries, particularly in those sections where farming and gardening by irrigation demand a higher degree of skill and intelligence.

The two broad, general subjects considered by the convention were, first, methods of teaching agriculture, horticulture and the mechanical arts, and second, methods of investigation and experiment. Under the latter head, one of the objects kept in view is to co-ordinate the work of the experiment stations. For example, the representatives of the different stations consider various conditions of soil, climate, water supply, etc., and so arrange the work that there will be no unnecessary duplication where the conditions are practically the same. They also discuss methods of investigation, try to find out, as far as possible, what the farmer most needs to know and how to best help him. The object being to systematize the work, and to aid and develop every branch of agriculture.

METHODS OF INSTRUCTION IN AGRICULTURE.

The discussion of this subject was opened by Professor Thomas F. Hunt, of Ohio, who said, among other things, "While I am unalterably committed to instruction in technical agriculture, I would prefer a man well educated in Greek to conduct a farm for me to a man poorly educated in agriculture. All our methods of instruction should recognize that the agricultural student needs especially to be trained in habits of thought. For this reason textbooks in the hands of a live teacher are better than lectures. Methods of instruction are modified by the fact that it is not desirable to teach students that which they know already. For example, nearly all of our agricultural students need to be taught how to judge cows, while few or none of them need to be taught how to milk them.

"By growing small plats for the purpose, we may teach students how to judge the character and varieties of corn, but generally speaking, it would be wasting their time to teach them to cut or to husk it, for they are already familiar with these operations. We may teach students the manual operations of butter and cheese making, the laying out and leveling of drains, the laying of tile, etc., but usually not those of plowing, sowing or harvesting.

"In language, mathematics and some of the sciences, the amount, the method, and the place in the curriculum, and the preparation necessary before entering upon them, is well recognized by educated people. We should work toward a similar result in agriculture. It is a go-as-you-please race. The besetting sin of agricultural instruction was its total lack of uniformity. There was no recognized system which could be followed along definite lines."

Professor W. M. Hays said that in the state university of Minnesota there was a "high school" of agriculture and a college of agriculture. The former consists of a course of three or four winters of about six months each. At the end of the course the student returns to the farm, or if he desires

to continue his studies in agriculture, he enters the four-year course.

In the agricultural "high school" women are admitted as well as men. Cooking, dairying, sewing, gardening, etc., are taught. Among the practical branches taught are road-making, fence-building and the proper construction of farm buildings.

Laboratory work in dairying was of such a character that the student was at once enabled to take up the work at home. Another feature of the work was the detailing of students in groups to take charge of the meat-house and butcher-shop of the institution. Each group in turn bought, killed, dressed and preserved all the meat, including poultry, to supply a table for three hundred persons. The students were also taught how to judge and select good milk cows and other animals. It was the purpose of the "high school" course to make farmers, of the four years' college course, professional agriculturists.

Professor W. W. Cooke, of Colorado, spoke in favor of the four-year college course in agriculture. He maintained that the agricultural college ought to be something more than a mere farm school. The idea of manual training in agriculture by compulsory labor system would have to be given up. Technical training of greater educational value must take its place. The time of the student was worth too much to compel him to do the ordinary manual labor of the farm, with which he was usually familiar.

President Clute, of the agricultural college of Florida, said that methods of instruction in agriculture and horticulture had not been reduced to a pedagogic form. The laboratory method should be employed, using the farm, orchards, garden, greenhouses, etc., as laboratories. He looked upon this work as the exact kind of normal training needed in agriculture and horticulture.

The quicker we get over the idea that a boy who comes to an agricultural college should be hoeing and plowing, and cleaning stables, in order to learn agriculture, the better it would be.

Professor Davenport stated that the field of agriculture was so large it was impossible to cover it all. A small portion of accurate knowledge well hammered in and nailed down is better than the whole thing just skimmed over.

In the same general line of discussion, Professor W. R. Lazenby, of the Ohio State University, said that one fundamental difficulty in teaching agriculture and horticulture is because of the variation of conditions. You can tell a student how to measure and lay off a piece of land, how to build a bridge, or how to make a dynamo, but no one can tell why of two equal areas of soil of the same chemical composition, and apparently of the same mechanical structure, one will yield a generous and the other a scanty harvest. We cannot tell why two fruit-trees of the same variety, receiving the same treatment, one is barren and the other fruitful. Another difficulty is the fact that we have little experience to guide us. We are beginners, and must develop methods for ourselves.

Too often agriculture and horticulture are taught under the guise of the sciences closely relating thereto. All the science in the world, while it might powerfully help, cannot of itself fit any young man or woman to become a skillful stock breeder, dairymen, fruit culturist, florist or landscape gardener. Agriculture and horticulture are arts, and must be taught as arts, whose true substantial base is science. In teaching these arts, three things must be kept in mind; namely, technical training, acquisition of knowledge and intellectual culture. Taught in such a way as to serve these three distinct ends of education, a course in agriculture or horticulture will give just as good training and culture as any other course of study.

WILLIAM R. LAZENBY.

HOW TO GET RID OF MOLES.

While the naturalist insists that the mole lives on insects alone, the practical farmer and gardener knows by experience, usually accompanied by a ruffled temper, that the mole not only destroys plants, such as asparagus and the grasses on the lawn, by severing the roots, but actually eats into and partly destroys vegetables that are in the way of its progress.

A "subscriber" has recently written to the Atlanta Constitution that he caught a mole and kept it in confinement, feeding it on corn, potatoes, pindars, and on meat, both raw and cooked. The mole seemed to have an appetite much like that of the

common house-rat. He insists that zoologists are mistaken when they say a mole will not eat vegetables, and proposes to send his well-fed mole to the Atlanta exposition.

In looking for remedies other than mole-traps, I find that nearly seventy years ago Hon. Jacob Rush stated that if a hole is made in the mole runs or burrows with a pointed stick, and a small piece of codfish is placed therein and the hole carefully covered with a lump of dirt, the moles will leave the garden. Other remedies, such as planting the castor-bean in different parts of the garden and grounds, are said to drive them away.

In Vol. XV. FARM AND FIRESIDE, June 1st, page 12, an Oregon subscriber's plan is to open their runways, pour in a little coal-tar, and then cover the places tightly with shingles or pieces of boards, so as to prevent the dirt from falling in or admitting any light. The very common remedy recommended in Vol. V. FARM AND FIRESIDE, page 274, is to make pellets of flour and corn-meal the size of a marble and put into each one a grain of strychnine, drop them in the mole runs and carefully cover. The Paris green remedy given in Vol. VII. FARM AND FIRESIDE, page 252, is that of using a quantity of Paris green as large as a grain of wheat in place of the strychnine.

Many kinds of mole-traps have been invented. Vol. X. FARM AND FIRESIDE, page 233, and Vol. XI., page 255, show two home-made traps. Patented mole-traps are now quite numerous, and are largely advertised in the agricultural papers.

Probably the best and most satisfactory method of destroying the mole is by means of fumigation. A plan formerly recommended was to pulverize three ounces of saltpeter and add to it half a teaspoonful of capsicum (red pepper), and water enough to dissolve the saltpeter. Narrow strips of paper were then put in the liquid, then taken out and dried. To use it, each strip was rolled up, lighted at one end and placed in the burrows, the openings to which were covered so as to exclude the light.

Following this and similar preparations, is the use of the bisulphid of carbon, a most offensive liquid, which evaporates quickly and destroys all insect life, as well as such animals as the woodchuck, gopher and mole, if used in tightly closed burrows. Put two tablespoonfuls of the fuma bisulphid of carbon on a bunch of rags, tow or waste and place it in the burrow, carefully covering and closing the runs so that the noxious gas cannot escape. The bisulphid of carbon can now be procured from nearly all druggists.

W. M. KING.

EXTRACTS FROM CORRESPONDENCE.

FROM MICHIGAN.—Corn promises a fair yield where it has been well cultivated. Feed for next winter will be very short. Since the late rains many acres are being planted in turnips. Pastures were so completely dried up that many farmers have been feeding their stock, but the promise is that this need not long be continued.

H. C. P.

FROM VIRGINIA.—Reliance is located in the northern part of Warren county. It is surrounded by some of the best mineral springs in the South. On less ground than an acre are seven flowing mineral springs. The L. D. college is located here. It is considered one of the best schools in the South. We have no saloons. From the belfry of the college we have a magnificent view of the valley. Reliance would make a good home for a poet. If you do not believe it, come and see for yourself. Good land is for sale here on terms to suit purchaser. Farm wages are from \$10 to \$16 per month, board and washing. Carpenter wages are from \$1 to \$1.50 per day and board. Tobacco growing is getting to be one of the chief industries of this place. Reliance has a new, large packing-house.

J. H.

Reliance, Va.

MOUNT GILEAD, Morrow Co., Ohio, June 17, 1895. We have tested 3 remedies advertised in Hoard's Dairyman, for protecting animals against the torment of Flies and Vermin: Verdict, enclosed find order for 12 gallons "Shoo-Fly."

WILLIAM WOOD & SON.

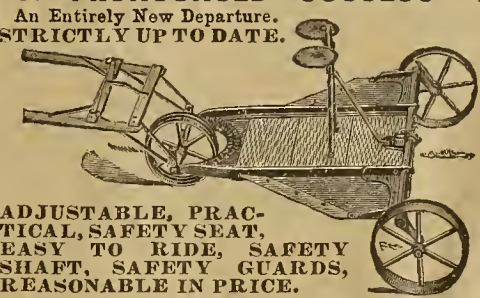
MOUNT GILEAD, Morrow Co., Ohio, July 1, 1895. We are so much pleased with "Shoo-Fly," send 9 gallons more (making 21), immediately. Draft enclosed.

WILLIAM WOOD & SON.

SHOO-FLY MFG. CO., Philadelphia, Pa. (See July Advertisement.)

DAIN THE BEST, THE CHEAPEST, THE STRONGEST, THE MOST DURABLE STEEL CORN CUTTER.

A PRONOUNCED SUCCESS---THE VERDICT IS UNANIMOUS.



ADJUSTABLE, PRACTICAL, SAFETY SEAT, EASY TO RIDE, SAFETY SHAFT, SAFETY GUARDS, REASONABLE IN PRICE.

Mention where you saw this advertisement.

SEED WHEAT.

Wilson's Fall price-list for 1895 now ready. New and improved varieties of Seed Wheat, White Rye. Small fruits, Strawberry plants, Asparagus roots and other things for fall planting. ADDRESS SAMUEL WILSON, MECHANICSVILLE, PENNSYLVANIA.

CARRIAGES, BUGGIES, HARNESS and Bicycles, at Factory Prices. Work guaranteed and 20 to 40 per cent saved. Our goods received the highest awards at the World's Fair. Our 1895 Mammoth Illustrated Catalogue is free to all. It shows all the latest styles and improvements and reduced prices. It has 200 pages and is the largest and most complete catalogue ever issued. "A" Grade, \$67.50. Write to-day. Send for it. It's free. Alliance Carriage Co., Cincinnati, Ohio.



If you have FIVE or more Cows a Cream Separator will save its cost each year of use. Beware of imitating and infringing machines.

Send for new 1895 Catalogue.

The DeLaval Separator Co.

Branch Offices: ELGIN, ILL. General Offices: 74 CORTLANDT ST., NEW YORK.

CALIFORNIA COLONY.

Desirable families only. Small capital necessary. Five to forty acres in each farm. One acre keeps a cow and calf the entire year. Poultry profitable. All kinds of fruit. Vegetables planted and harvested 365 days in the year. Perfect irrigation. No malaria. Main railroad. 150 miles from San Francisco. Schools, etc. Over 500 people now settled. Fastest growing colony in California. B. MARKS, Box 175, Omaha. Mention this paper.

GET A MOVE on you and come to the garden spot of the South Fayette County, West Tenn, where Northern farmers are locating in its genial climate. Write A. J. Rooks, Sec., Somerville, Fayette Co, Tenn. Mention this paper.

CRIMSON CLOVER WESTERN HEADQUARTERS

The largest stock, the best stock, Indiana grown seed. We have just printed an exhaustive treatise on this crop. Every farmer should read it. It will save him from disappointment. J. A. Everitt, Seedsman, Indianapolis, Ind. Mention this paper.

FRUIT EVAPORATOR THE ZIMMERMAN

Different sizes and prices. Illustrated Catalogue free. THE BLYMYER IRON WORKS CO., Cincinnati, O.

FRUIT EVAPORATORS and CIDER MILLS.

BEST, CHEAPEST and Most Reliable on the market. Catalogue free. WM. STAHL EVAPORATOR CO., QUINCY, ILL. Mention this paper.

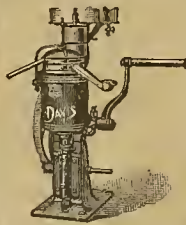
CRIMSON CLOVER SEED THAT GROWS.

New crop. American grown. Tested Seed, 50 lbs., \$3.65; 25 lbs., \$2.00; 10 lbs., 90c., bags included, with full instructions.

VAUGHAN'S SEED STORE, NEW YORK, 26 Barclay St., CHICAGO, 84 and 86 Randolph St. SEND FOR PRICE LIST. TURNIP SEED, Etc.

PROFITABLE DAIRY WORK

Can only be accomplished with the very best of tools and appliances. Cream Separator on the farm you are and better the skimmed uable feed. make no mis-Davis. Neat, catalogue Agents wanted DAVIS & RANKIN BLDG. & MFG. CO. Cor. Randolph & Dearborn Sts., Chicago.



Our Farm.

THE POULTRY YARD.

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

FEEDING ON FARMS.

THE slightest change in the food may be the turning-point to laying. It is certainly gratifying to know that farmers who raise poultry at the present day have changed the methods in vogue a quarter of a century ago. The time has been when poultry was not considered deserving of any attention at all from the farmer. It was as much out of his line as baking bread or sweeping the rooms of the dwelling-house. The hens were allowed to go anywhere on the farm in winter; but they remained near the cattle, seeking food wherever they could find a morsel. Sometimes the farmer's wife, with her sympathy for helpless creatures, would laboriously wend her way through the snow to give her pets a mess of corn; but so far as the farmer himself was concerned, he did not consider them worthy of notice. The farmer, however, never overlooked the returns. He would naturally wonder why the hens did not lay, but though he really had no right to expect something from nothing, yet he would lay the fault to the refusal of the hens to produce eggs rather than to their inability to do so. As the pure breeds began to be developed, the farmer took some interest in poultry, and gradually the hens have been given better treatment.

At the present day, the farmer is more prone to make his mistakes in overdoing the work and in using but little judgment in feeding. He feeds liberally, but depends too much on grain. A slight change in the food will sometimes accomplish much. When the hens have been given corn exclusively they require something that is radically different. Lean meat or a ration composed of bran and linseed-meal may start the hens to laying, simply because such foods are just what they require. Grain is deficient in mineral matter, and also abounds largely in starch. Foods that contain less starch and more mineral matter and nitrogen will be a change that will cheapen the cost of the food, because more eggs will be the result.

Corn is not favored as a summer food, because it is too heating and too fattening; but there is an advantage in feeding corn to fowls that are intended for market. Do not attempt to fatten fowls on nothing but corn, as they may suffer from indigestion. Let the fowls receive three meals a day, and of a variety of anything that they will eat, allowing a mess of chopped grass or clover, and give the corn at night, as much as the hens will eat. Every other day give a mess of equal parts of bran and ground oats, with a gill of linseed-meal in the mixture for a dozen hens. Keep the poultry-house clean, and the fowls will fatten rapidly.

COMPELLING THE HENS TO SEEK FOOD.

There can be opportunity to save expenses by allowing the hens to seek most of their food on the range. It is not advisable to compel them to secure the whole of their food, as they may not always be able to find a sufficiency, but it is best to induce them to seek as much food as possible.

Just what should be allowed a flock in the summer season depends as much on the location as anything else. Give the flock free access to a grass-plot on which a large proportion of clover grows, and the hens will find a great variety and in large quantity. There are many different kinds of insects, and they attack nearly all plants. No matter how small they may be, the hens will consume a large number. They will also keep themselves busy scratching wherever they can find a worm of any kind. This means that the hens not only save the farmer from loss of crops, but also save the food that would be required if the hens did not satisfy themselves when on the range. There is also a greater variety of food on the range, and the exercise and freedom in the open air keeps the hens in good health. It is more often the case that the hens are overfed than underfed, and if the farmers will give one meal only in summer, on the evening of each day, the hens will thrive well. They will need but little help if they are given an opportunity to assist themselves.

Eggs are always more plentiful in summer than in winter, and this is due to the advantages possessed by the hens on the range, as well as the warmth of the season.

The cost of eggs is much less in summer, and yet the cost can be made to exceed the receipts if the hens are overfed, as they will lay fewer eggs and consume more food than they require. There may be some who keep their fowls confined, but even then they will thrive much better if made to work and scratch for all they receive.

SHELTER FOR SITTING HENS.

Put the sitting hen in an open shed or any other location. Use soap-boxes for nests, open at one end, so that the hens must walk in on the eggs. Make a yard of lath, four feet long, two feet high and two feet wide, inclosing the box, the end of which should be open, so as to permit the hen to come off or on at will. Provide food, water and a dust bath for each hen, with a cigar-box in which oyster-shells, ground bone and ground charcoal, mixed, are placed. The dust bath is important. Simply scoop out a place in the ground floor and fill it with fine coal ashes, sifted. With this arrangement the hens do not disturb each other, and but little care and attention are required. The hens can dust and exercise, and they cannot leave their nests. When the chicks are hatched, these lath runs may be placed outside, so as to give the chicks a chance to forage and grow.

WHITEWASHING A POULTRY-HOUSE.

A quick mode of whitewashing a poultry-house is to use a sprayer. The hose, with a shut-off nozzle, runs from a barrel, which holds whitewash of a thin consistency, resting upon a platform on the roof. First slake the lime, add a sufficiency of water and strain it, placing the thin liquid



WHITEWASHING A POULTRY-HOUSE.

in the barrel. A gill of carbolic acid may be added to the whitewash, if preferred. The hose should enter about one and one half inches above the bottom of the barrel. The higher the platform and barrel, the greater the pressure and the more forcibly the liquid will flow. It is better, easier and quicker than using a whitewash-brush, and the work can be done in a few minutes. The design is from Mr. J. L. Weber, Chicago, Ill.

There are also small force-pumps that answer the purpose.

GRIT IN SUMMER.

As the daily foraging of fowls enables them to pick up an enormous amount of grit every day, the grit may be scarce even in summer, unless on very stony land. Sand is not a substitute for grit. Coarsely ground bone is excellent as grit and serves a double purpose. A few pounds of ground flint, which is sold by those who supply poultrymen, cost but a trifle, and should be used once a week.

When indigestion occurs, it may be due to the lack of sharp material for cutting the food. Gravel does not always answer the purpose, as the gravel may be round and not assist in cutting the grain or other food. I have had excellent results by pounding pieces of glass and giving the hens all that they will pick up. They will accept it readily, and it will not injure them in the least if not too coarse. Glass is given regularly by poultrymen who cannot easily obtain other substances as grit.

SUPPLYING SUMMER RESORTS.

Live fowls brought 14 cents per pound in New York during July warm days, and were still higher at the summer resorts. Spring chickens sold at 25 cents per pound for three-pound chicks, dressed. When getting ready for hatching next season, do not overlook the fact that there is a great demand for spring chickens and spring ducks at the summer resorts, and that the supply is not always equal to the demand. In some sections the farmers have an excellent opportunity to raise chickens at good prices, but the great mistake made is in not aiming to produce the best quality. It is true that the West produces as many choice fowls as any other section, but there is still a large field for improvement.

PERSISTENT ROUP.

It is well enough to attempt to cure a sick hen when she has roup, for then the labor of handling and doctoring her is but little, and the hen may be valuable, but as soon as the disease begins to spread, and weeks are required to make a change in the condition of the hens, the disease shall have become too persistent and incurable; every hen on the place should be gotten rid of, the yards and houses disinfected and a new flock started.

BREEDS AND LARGE EGGS.

Some breeds, such as the Minorcas and Black Spanish, lay very large eggs. I received samples of eggs last year which weighed five to the pound. They were not the ordinary large eggs that are often produced by very fat hens, which lay but few, but the hens which laid more than the

CORRESPONDENCE.

THREE EGGS IN ONE DAY.—I have a Light Brahma hen that laid three eggs in one day, in half an hour's time. She drooped around, and I noticed that she went on the nest. I thought she was sick, and on going to the nest I found an egg, formed all right. She went to the coop to go to roost, and just before she went in she laid another egg, and still another when in the coop. The last two had soft shells. She went to roost, and the next morning was all right, and is laying every other day.

Delmont, Ohio.

S. L. S.

[The hen is very fat, perhaps, and the three eggs had clustered, owing to obstruction, the hen depositing them at nearly the same time instead of during three or four days.—Ed.]

INQUIRIES ANSWERED.

Guineas.—G. S. H., De Land, Fla., writes: "Which breed of Guineas is the hardiest?"

REPLY:—The Pearl, or common variety, is the largest and hardiest.

Minorcas.—E. F. L., Salem, Ohio, writes: "Which breed is the larger, Black Minorcas or Black Spanish?"

REPLY:—They are about the same weight and also very much alike, the Black Spanish having white faces.

Overheating of Eggs.—Mrs. A. J. K., Standish, Mo., writes: "Is it possible to heat eggs in an incubator so as to make them turn white as though scalded?"

REPLY:—If the heat is 110 degrees or over for several days, there is a liability of the eggs being partially cooked.

Ducks.—M. G. M., Turner Junction, Ill., writes: "My ducks appear healthy, but seem weak in the legs. I feed them three times a day. They also have a range."

REPLY:—You have made them too fat. Feed no food at all, compelling them to supply themselves on the range.

How Many in a Flock.—J. G. H., Lebanon, Pa., writes: "How many hens should I mate with one male, and how many fowls can I keep in a house about ten by eleven feet?"

REPLY:—Ten Brahma hens or fifteen Leghorns may be with one male. A house ten by eleven feet should accommodate fifteen hens comfortably.

Indigestion.—C. D. S., Mancos, Col., writes: "My chickens droop for awhile and die. They seem stupid, livers are enlarged and combs turn dark. Otherwise they have been well all summer."

REPLY:—Probably due to indigestion, resulting from overfeeding with too much grain in warm weather. Simply withhold all food, compelling them to secure their food on the range.

Probably Lice.—J. M. J., Trenton, Tenn., writes: "My hens stand around, droop, and their combs and wattles turn pale. They sleep and seem to shiver, and droppings are watery. They have a free range and are also fed corn-meal dough."

REPLY:—The symptoms indicate large lice on the heads. Anoint with a few drops of melted lard on heads and necks. The food should be changed, allowing meat instead of corn-meal.

Hens Too Fat.—G. W. S., St. Renny, N. Y., writes: "Several of my hens have dark combs. They eat willingly, but appear to gasp as if short of breath. Only one died, the others recovering. Hens are confined, and fed middlings and poultry food in the morning, with mixed grain at night."

REPLY:—They are fat, and overfed. Give chopped grass and a mess of lean meat at night, feeding only once a day, omitting all grain.

Better than

any other: Vacuum Leather Oil. Get a can at a harness- or shoe-store, 25c a half-pint to \$1.25 a gallon; book "How to Take Care of Leather," and swob, both free; use enough to find out; if you don't like it, take the can back and get the whole of your money.

Sold only in cans, to make sure of fair dealing everywhere—handy cans. Best oil for farm machinery also. If you can't find it, write to VACUUM OIL COMPANY, Rochester, N. Y.

J. D. SOUDER, JR., Telford, Montgomery Co., Pa. 28 varieties of high scoring poultry stock for sale. Eggs at \$1.00 per 15. Fine catalogue free.

SUNNYSIDE POULTRY FARM Leghorns, Wranglers, B.P. Rocks, \$1.00 per 13; Minorcas and Red Caps, \$2.00 per 13. Circular. H. T. ANDERSON & CO., Natrona, Pa.

TRY US. We sell your Poultry, Veals, Fruits and all produce at highest prices. DAILY RETURNS. For stencils, prices and references, write F. I. SAGE & SONS, 183 Reade St., N. Y.

MANN'S BONE CUTTER on trial. Try it before you pay for it. Nothing on earth will **MAKE HENS LAY** Like Green Cut Bone. Ill. catlg. free if you name this paper. F. W. MANN CO., MILFORD, MASS.

BERKSHIRE, Chester White, Jersey Red and Poland China PIGS. Jersey, Guernsey and Holstein Cattle. Thoroughbred Sheep. Fancy Poultry. Hunting and House Dogs. Catalogue. S. W. SMITH, Cochranville, Chester Co., Penna.

Agents wanted everywhere **SYLPH CYCLES** RUN EASY Handsomest; highest grade, fastest; 16 to 22 lbs. Highest Award World's Fair. Overland Cycles, all sizes \$10 to \$15. Others \$15 up. Cata. free. Estab. 1864. House, Hazard & Co., Mfrs., 32 E. St., Peoria, Ill.

Our Fireside.

AIR-CASTLES.

Oh, the castles I built in glorious youth,
Air-castles, peopled with maidens fair;
And the songs I sang in a rhyme uncouth,
No man ever heard either words or air.

And the castles were built on the shifting sand,
With their maids more true than those I've met;
And the songs, never heard on sea or land,
Are only a sigh and a vain regret.

But if glorious youth came back to me,
And the years were a dream that have passed since then,
Still my castles I'd build by the shining sea,
And sing my unspoken songs again.

—Trevclick.

HER BROTHER'S KEEPER.

BY CARRIE BLAKE MORGAN.

CHAPTER III.—CONCLUDED.



"H, Tom, I wish you could go," said Jean, impulsively. Tom could not deny that he echoed her wish. "But there are the sheep, and no use thinking about it," he answered, with cheerful resignation. But Jean noticed that he hastened to turn out the sheep

and was well away down the valley when the merry party landed from the boat. Oh, what a happy, laughing, careless crowd it was! How they made the towering walls of Jago canon ring, when, after a two-mile walk over the sandy trail, they finally reached and plunged into its cool shadows. How tirelessly they climbed on and on up the stony banks of the dashing mountain stream, until the last glimpse of the valley was left behind, and they feasted their eyes on new scenes, and felt they were treading ground not often pressed by other feet than those of wandering cattle, or perchance an occasional solitary herdsman or prospector.

It is not in young human nature to cling to sorrow long in the face of such temptations to joy as these, and Jean ere long felt her pulses quickening, as she yielded to the magnetism of the happy hearts and inspiring scenes about her. For the first time in many weeks she laughed aloud, and her delicate cheeks caught the tint of the wild roses that bloomed beside the mountain stream.

They came at length to a level spot, temptingly dotted with buttercups and wild clover, and one of the girls called out to their leader: "Jeff, how much further are you going to take us? Why not stop here, hang our lunch-baskets on this tree, and then scatter out and begin our huckleberry hunt?"

Jeff Warren, a merry-faced youth of seventeen, paused, and glancing back with a mischievous twinkle in his eye, said:

"I'm willing to stop here. I only thought maybe you girls would be a little scary about it."

"Scary about what?" came in a chorus from the girls.

"The Jago house," said Jeff, glancing up the precipitous walls of the canon to where, on a rocky plateau two hundred feet above them, the weather-beaten gable of an old, deserted house could be seen. Involuntarily every pair of eyes followed the boy's.

All had heard of the Jago house, and knew that it was reputed to be "haunted." It had been built many years before, so the story ran, by a prospector named Jago, who had come from nobody knew where, had taken up his claim away up there among the crags, had builded himself a house and lived in it with hermit-like seclusion for about two years. Then he was discovered one day by a herdsman, hanging by his neck, dead, in the loft of his house, with every indication that he had taken his own life.

He was decently buried a few yards from his own door, and the old house had gradually fallen into decay. More than one herdsman, coming home from lonely night trips across the hills, had hinted at queer sights or sounds in the vicinity of the Jago house; and while the youth of the neighborhood had always, with praiseworthy skepticism, laughed such stories to scorn, yet the incontrovertible fact remained that the old house had been the scene of a tragic death. The additional circumstance of its having stood untenanted away up there on the lonely heights for so many years, with the bones of its unfortunate owner mouldering within its very shadow, had environed it with an uncanny atmosphere of mystery, and there was probably not one of the little party who had ever before been in such close proximity to the place.

CHAPTER IV.

Jeff watched the effect of his words, with the shadow of a grin hovering about his wide, good-natured mouth.

"If you girls say stop here, I'm agreed; I'm not afraid of the Jago house," he said, with the lordly air of a man who has "seen, the world," and has nothing to fear.

In the face of that tantalizing smile, only a few of the girls were willing to admit that

they were afraid to remain in the vicinity of the Jago house, and those few were overruled by the majority. So the baskets were hung up and the business of the day began.

Joyously sang the wild birds in the thickets and merrily tinkled the first berries on the bottoms of the little tin pails. Considerable search and scrambling for berries only added zest to the undertaking, and sharpened a dozen appetites for the feast which, before the sun had reached the meridian, was spread on some broad, flat rocks by the stream.

"It is a duty we owe to ourselves, girls, to lighten these baskets before we start for home," proclaimed Sue Robbins, the romp and acknowledged leader in every escapade. Yet, despite their efforts, the fragments of the feast were almost enough to fill a basket; which were unanimously voted to Jeff, and packed into his basket.

"Because he's a boy, you know," explained Sue, "and will eat chicken and fruit-cake the whole afternoon and all the way home."

Jeff was lying back on a bank of green moss, gazing reflectively upward. It is possible that his line of vision commanded a view of the Jago house.

"I say, girls," he cried presently, springing up with sudden animation, "I'm going up yonder to the old house! How many of you will go with me?"

A chorus of startled "Ob's!" greeted this announcement and query.

"None of us will go," said his sister Edith, promptly. "We haven't got our pails half full of berries yet."

"Then I'll go alone," said Jeff. "I'll be back by the time you have your pails filled."

"Ob, I guess not!" cried Edith. "You know ma sent you along to take care of us, and now it isn't likely we'll let you desert us and go off ghost-hunting."

"I'll tell you what we'll do," said Jeff, willing to compromise. "I'll help fill up the pails, then we'll all go up there together. What do you say? I should think you girls would want to go," he added, with sudden inspiration, "because there's an old well up there that you can tell your fortunes in."

"Oh, Jeff! How?" cried several of the girls.

"Why, don't you know how?" said Jeff, in a tone that conveyed infinite surprise at their ignorance. "I thought girls were always up in matters of that sort. The girl who wants her fortune told has to march slowly around the old well till her shadow falls straight across it from northeast to southwest, saying:

'Deep water, deep water, what is my fate?
Show me the face of my future mate.'

Then if you don't see a face reflected in the water alongside your own, why, you're going to be an old maid."

This was greeted with a burst of laughter and applause, and Jeff's proposition was warmly seconded by Sue Robbins and a few of the holder-spirited girls.

But when the pails were finally filled it was found to be three o'clock, and a gray mist of clouds had overspread the sky; the bright sunshine of the morning had vanished, and there were indications of a coming storm. Many of the girls were for starting home at once, but were overruled by Jeff. Jean recalled Mrs. Jordan's prophecy of rain, and looked doubtfully up at the patch of sky visible between the canon walls. She thought of her mother, and felt that she ought to go home; but the little procession was already in motion, headed in the opposite direction, and she fell into line.

First, there was a walk of nearly half a mile up the bed of the canon before a point was reached at which ascent was possible; and then there was only a "goat path," as Sue termed it, to guide them in their long, hard climb. Almost an hour was consumed in reaching the summit, and in that time the sky had grown very dark and threatening. Scarcely had they paused to take breath, and to look down on the valley landscape spread out beneath them, when a vivid flash of lightning rent the clouds, and rain began to fall. Dismay was pictured in every face. But Jeff nipped expression in the bud by setting off at full speed and shouting back:

"Run, girls, run! Hurrah for the Jago house!"

The girls had no choice but to follow, and a veritable stampede ensued. The distance to the old house, however, was greater than they at first realized, and before they had gained its shelter the rain was coming down in sheets, a high wind was blowing, and a darkness almost as dense as early twilight had settled over all.

It surely was not a moment for the indulgence of foolish, superstitious fears; yet it was noticeable that every voice was hushed as they approached the mysterious portals. Even Jeff and the irrepressible Sue Robbins were silent, and sensible Jean was conscious of an uncomfortable thrill at her heart as she stepped across the time-worn threshold.

The door was off its hinges and lying on the floor, and the sash had long since disappeared from the one small window; yet within, the gloom was so deep that all involuntarily paused a moment as they entered, and scanned each shadowy corner.

The room was large and square, and at one end yawned a black, stone fireplace, containing a great heap of ashes and some charred ends of sticks, which, to lively imaginations, were a startling reminder of the former owner of the place; though they were far more likely to have been left there by some belated wayfarer who had taken shelter here for a night.

But at the opposite end of the room was the object at which many a surreptitious glance was directed. It was the worm-eaten ladder and trap-door leading to the loft. None cared to be seen glancing in that direction, yet the impulse to do so was irresistible, for all had heard that somewhere up there in the black space above that trap-door there still dangled from a dusty rafter the rope-end from which a soul had been launched into eternity.

In the meantime, Jeff, with the help of some of the girls, had set the old door up in its place and propped it, to keep out the wind and rain. That accomplished, he turned to the fireplace, and producing a knife and some matches, whittled some kindlings from a bit of board, and soon had a cheering little blaze crackling and flashing out light and warmth into the desolate old room. The shivering girls waited for no bidding to draw near it, and all were soon seated, in "Turk fashion," on the floor, in a semicircle about the wide fireplace.

Outside, the storm still raged with unabated fury. The lightning flashes were frequent and blinding, and the peals of thunder seemed to make the unwilling hills throb responsive to their rumblings. Circumstances and surroundings were in league with the elements to frighten and depress the little party, and when a long time had gone by without any apparent cessation of the storm, and Jeff suddenly announced that it was five o'clock, there was a general start, and some anxious glances were exchanged.

"Why, suppose the storm should not stop at all?" exclaimed Sue.

"My!" remarked Jeff provokingly. "What a long-winded storm it would be."

"Now, Jeff, you know what I meant. Suppose it should not stop all night?"

"In that case, surely Mrs. Jordan would send Tom after us with the wagon," interposed Jean, trying to speak reassuringly, but inwardly quaking at the possible alternative of having to spend a night in the Jago house.

"Suppose Tom does come after us," said Jeff, "how'd he know where to find us? He'd look up in the sky or under the ground for us about as soon as he'd think of looking in the Jago house."

This was not to be denied.

"Well," said Jean at length, "if the worst comes, we can make a dash for home right through the storm. I don't suppose it would blow us away."

"But I'm thinking of a better plan than that," said Jeff. "Suppose I leave you girls here while I go home? I'll either meet Tom coming and tell him where to find you, or else I'll get Mrs. Jordan to let me hitch up and come after you myself."

That seemed a sensible suggestion, and after some discussion it was unanimously adopted.

"But, Jeff, you must leave us your watch. And are you sure—quite sure—that you can get back before dark?" queried Edith, nervously.

"Oh, of course. There's oceans of time yet before dark," responded Jeff, handing over his watch and buttoning his thin summer coat preparatory to breasting the storm.

When he was gone, and the door again propped in place, the girls stole furtive glances at each other as they drew closer together and added a few more chips to the fire to make it blaze. For a long time they sat in comparative silence, listening to the storm and speculating upon the probable length of time that must elapse before Jeff could return. At last, however, when Edith announced that it was six o'clock, they became restless and anxious, for the storm had not ceased, and the gloom was deepening into that of early dusk. Moreover, the fire had burned low, and as they glanced furtively over their shoulders, there was no disguising the fact that the corners were seemingly becoming peopled with groups of black shadows.

"Oh, won't somebody tell a story?"

No one seemed inclined to respond at first; but presently Sue Robbins' black eyes began to sparkle mischievously, and she announced that she knew a little story she could tell.

"But it is rather childish," she added apologetically, "and rather—rather—"

"Oh, never mind what it is," they interrupted. "Anything will do."

"Very well, then," said Sue, adding the last bit of fuel to the fire and ensconcing herself in the center of the expectant group. "Once upon a time there lived a good old lady who had a golden arm—"

"A what?" interposed Edith.

"A golden arm—please don't interrupt—an arm made of pure gold, which she wore in place of one of her natural arms that had been broken off—"

"Oh, my!" again interjected Edith.

"I mean cut off," placidly went on Sue. "She had two grandsons, who lived with her. One was a good boy, but the other was bad—awfully bad, you know—and kept trying to steal his grandmother's golden arm; but the old lady guarded it so well that he never had a chance while she lived. But finally the poor old grandmother died, and then the wicked grandson crept into the death-chamber and stole the golden arm, which he sold for a lot of money and spent it all for—for—tobacco! After that, the two grandsons could not sleep at night without stuffing cotton in their ears."

"Why not?" demanded several voices at once.

"Because," said Sue in an awesome undertone, "all night long there sounded footsteps

and weeping and moaning in the garret overhead."

As the mischievous girl reached this point in her story, she noted with secret satisfaction that nearly every head turned and stole a swift, fearful glance at the ladder in the dark corner beyond, and there was an instinctive and general drawing-up to the fireplace, in which there now flickered only a slender, uncertain jet of flame. Dropping her voice to what she considered a sepulchral pitch, Sue went on:

"Each night the sounds grew louder, until at last no amount of cotton could shut them out, and the grandsons had to just pull the quilts up over their heads and lie there, listening and trembling. At last, one night they heard the footsteps approach the head of the stairs and come stalk, stalk, stalking down the steps, and—"

Sue suddenly paused, and in an instant every girl was struck rigidly motionless in a listening attitude, for all had heard a sound in the loft above. Sue herself had heard it, and it was now her turn to throw a glance of genuine alarm toward the ladder and the old trap-door.

"What—was—that?" she whispered.

Scarcely had the words left her lips when the sound was repeated, then again and again, and it took but one terrible moment for them all to realize that it was footsteps—slow, dragging, uneven footsteps, on the loose boards of the floor above!

They all sprang up and dashed pell-mell at the door, which they grasped and flung aside with frantic hands, and as it fell heavily its sharp corner struck Jean full upon the temple. She was conscious of a keen pain, then a dizzy sensation of falling, and after that—oblivion.

When consciousness returned, she was lying prone upon the floor, all alone in that great, shadowy room. Lifting her aching head, she listened intently for some sound of her companions' voices. But no sound reached her save that of the gusts of rain-laden wind that dashed against the old house and shrieked away in the canon beneath. The fire, fanned into a brief renewal of life by a strong draft from the open door, blazed up fitfully and relieved the otherwise deep gloom of the place.

For a full minute she lay there, listening; then, just as she had nerved herself to try to rise, some slight sound caused her to lift her eyes to the trap-door in the loft. An indescribable thrill of terror ran through her as she saw that it had been lifted a few inches, and through the black opening a pair of eyes were gleaming!

CHAPTER V.

Jean sprang to her feet, but some of her clothing had been caught beneath the fallen door, and while she made frantic efforts to free herself, the trap-door in the loft was thrown wide open and a man's face appeared in the aperture. The frightened girl made no outcry, but tore desperately at her clothing, and had just succeeded in liberating herself when the stranger addressed her:



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"Miss, for pity's sake don't be afraid of me," he said appealingly. "I'm only a poor, starving cripple, and couldn't harm you if I had the will to, which goodness knows I haven't."

The voice was so weak, there was something so piteous in the appeal, that Jean paused and looked up at him. The face was haggard enough to suit the voice, its pallor being enhanced by an unkempt shock of black hair and a fortnight's growth of beard.

"Don't be afraid of me," he pleaded again. "All I want is something to eat; I'm starving. If you've a bit of food left in any of the baskets, miss, maybe you'll be kind enough to give it to me?"

Jean hesitated but an instant. No suffering creature ever appealed to her in vain, and this man, whatever he might be and mysterious as was his presence in the loft of the deserted house, was evidently in great pain and distress. Mastering her selfish fears and misgivings, she stepped back into the room and pointed out Jeff's basket, in which were the remains of the picnic dinner.

"You will find something in that basket," she said. "You are quite welcome to help yourself."

"Thank you, miss," responded the man. "But will you be so good as to hand it up to me? I can't come down the ladder; my leg is that bad."

"Have you been hurt?" she asked, hesitating.

"Yes, miss, I've been badly hurt, and I'm dying by inches for want of proper care, to say nothing of starvation."

Jean slowly picked up the basket, mounted two steps of the ladder and placed it in his hand.

"It seems strange," she said, "that you should be here, stowed away in the loft of this old house, in the condition you describe. How did you get hurt? And hasn't there been any way that you could let your friends know?"

The man paused and looked at her over the top of the basket, his thin lips parting in a peculiar smile that Jean did not like.

"My friends, such as they are, could find me easy enough if they wanted to," he answered. "But they're afraid to; they'd rather let me starve and die like a dog than risk their precious necks trying to help me."

Jean's eyes widened, and she stepped down somewhat precipitately from the ladder. The man set the basket aside and leaned down again through the trap-door.

"Young lady," he said, "have you ever heard of an individual named Jack Prang?"

"Y-e-s!" gasped Jean.

"Well," he went on, as if swayed by some desperate resolve, "I am Jack Prang. There, now, don't look scared to death. I've never done anything worse than to round up and brand somebody else's cattle and horses once in awhile. But I'm done for, all the same. They're going to hang me when they catch me, and that'll be mighty quick now. As soon as your screeching young friends reach the valley and tell their story, there'll be fifty men up here after me. But it's all right," he added, after a moment's pause. "It ain't such a dreadful thing to hang. If I hadn't decided that I had rather hang than starve to death, I'd never have let you know I was up here. There's worse things than hanging, especially when you don't have to go alone and can select your own company. I can take as many of my devoted friends with me as I choose, by simply mentioning their names; but I'll content myself with one or two. First of all, there is the young villain who promised to feed me, and hasn't been near me for a week. I'll give him a free pass to perdition."

Jean had listened in a sort of shocked silence up to this point, but she had grown paler with each word the outlaw uttered; and now she bent suddenly forward and asked huskily:

"Who—who is he?"

"Who is he?" echoed the man, as he began a ravenous attack on the contents of the basket. "Why, he's a smooth-faced, slick-tongued young sheep-herder, and calls himself Tom—"

"No, no!" shrieked Jean. "Not that name!" And pressing her hands to her ears, she turned and fled from the house, out into the night.

Instinctively she ran along the brow of the canon wall until it began a gradual descent toward the valley. The storm was now spent, but the sky was full of rapidly drifting clouds, and the slender new moon was permitted to cast but a dim, uncertain light. The girl's path was wild and rugged, and would have been full of danger to her even had she moved slowly and with caution; but she ran, with all the speed she could command, recklessly scrambling over rocky obstructions in her way, and leaping chasms that at any other time would have dismayed her. Her whole being was filled with one thought, one purpose—Tom, and how to save him!

"Be your brother's keeper always, for mother's sake," were the words that rang in her ears and spurred her on. Oh, how, how to save Tom!

By an almost miraculous good fortune she at length reached the foot-hills and struck the trail, without having encountered any more serious mishap than a multiplicity of scratches and bruises, which she was absolutely unconscious of until long hours afterward.

She had traversed the trail but a short distance when the sound of an approaching wagon reached her ear, and thrilled her with the hope that Tom was coming to meet her—

that she would see him at once and deliver her warning. But when the wagon came up, it was Mr. Jordan who greeted her and sprang down to lift her into the vehicle.

"We didn't rightly know what had become of you," he said. "The girls was most frightened out of their wits when they got to your house, an' they didn't know what had gone with you; said they hadn't missed you till they got clear down into the valley, an' they was afraid to go back on account of some harum-scarum yarn they tell about hearin' noises in the loft of the Jago house. What's it all about, anyhow? Did you hear or see anything, an' how did you come to git separated from the other girls?"

"The girls acted like geese," said Jean, with well-simulated impatience. "The noises they heard could easily have been made by rats or squirrels scampering around in the loft. The girls never waited a moment to see what it was, but tore out of the house so frantically that they knocked me senseless with the door, and when I came to myself again they were gone."

"Jest about what I calculated when I heard their yarn," said unsuspecting Mr. Jordan.

"Why—didn't Tom come to meet me?" faltered Jean.

"Oh, Tom, he took a sudden notion to help Jeff row the boat down to the bend, an' as I was young myself once, an' knowed what it was to work all the time, as Tom does, without no playtime, I told him I'd come an' hunt you up. I reckon your poor ma'll be mighty glad to see you. We tried to keep the rumpus from 'er, but I calculate she caught some of it."

"God help poor mother!" was Jean's silent prayer as she rode along, stricken mute by the knowledge that Tom was gone and she could not warn him of his impending peril. Then came the thought that possibly he had taken alarm at the girls' account of their adventure in the Jago house, and was already flying from justice. But in either case, it was still "God pity poor mother!"

Jean did some desperate thinking during that short drive home. Afterward, when the kind-hearted Jordans had taken leave and started for their own home, and the girl had soothed her anxious mother to sleep, she went outdoors and walked restlessly back and forth before the door, listening and waiting.

If Tom was ignorant of his danger, he would probably soon return, and she must warn, advise and help him escape the penalty of his wrong-doing. "For mother's sake!" she repeated over and over, desperately, to herself and the unheeding night wind.

But an hour went by, two hours, and still Tom did not come. He was gone, she told herself, out into the wide world, with the weight of a guilty conscience upon him and the stigma of crime to drag him down. She heard the clock strike ten, eleven, twelve; and she sank down at last on the door-sill, worn out with the heartache and the torture of it all.

But hark! The midnight stillness was at last broken. A party of horsemen was coming up the river road. She heard them first, then saw them dimly, advancing, looking like black shadows. She crept inside the door and knelt there, holding it almost closed, but watching and listening.

The road ran close by the corral, and not very far from the house, and she saw the midnight riders sweep by, silent, save for the muffled beat of the horses' hoofs in the sandy road. Then she crept out again and looked after them, and shrank back as from a blow when she saw them turn off at the mountain trail. She recalled the outlaw's words of a few hours before.

"There will be fifty men up here after me," he had said.

She sat down again on the door-sill and shivered in the chill night air. But it was not Tom she waited for now. It was the party of horsemen, whose return would mean the proclamation of eternal shame for her and hers.

By and by, when a long, weary time had passed, she imagined that the eastern horizon was lighting a little, and thought with dismay that a new day was close at hand—a day holding out to her the heaviest burden of her young life.

"What ever can I tell mother?" was the problem that tortured her.

Suddenly she heard them coming; only now the hoof-beats were slow and measured, in mercy to the wounded prisoner. When they were opposite the house, one of the horsemen separated from the others and trotted to the door. The familiar outline of horse and rider struck the girl with an indescribable shock.

"Tom!" she shrieked aloud.

"Great guns, Jean! what are you screaming at?" growled Tom. "The men will think you are crazy. I thought you wouldn't be asleep, and just stopped to tell you that we've got Prang, sure and tight, and the five hundred dollars is mine. Whoopla! What do you say to that, little sister? Of course, the money is as much yours and mother's as it is mine. But the girls must all have a present, because they set me on the track, with their yarn about a ghost in the Jago house. Go to bed, now; I'll be home by breakfast-time."

"But, Tom—wait a minute!" gasped the girl. "Has—has he mentioned—any—names?"

"Any names? Well, rather! He's given away two of his pals already. And what do you think? One of them is Tom Hunter, that quiet young chap that herds sheep for the Thorntons. I wouldn't have dreamed it."

Tom galloped away. Jean stood as motionless as a stone until the little cavalcade was

lost in the gloom; then she fell down in the dew-wet grass and lay there, sobbing for great joy.

Sleep! Not a wink that night for happy Jean. And oh, what a breakfast it was that smoked on the table for Tom in the morning! Jean met him at the door, with quivering lips and suspiciously misty eyes.

"Oh, Tom, dear Tom, I'm—so—glad!" she stammered.

"Glad!" echoed Tom. "Well, I should say glad! I'm so glad, I don't hardly know myself. Does mother know?"

Tom passed into his mother's room, little dreaming how widely different were the sources from which sprang his own gladness and that of his sister.

"He must never, never know; he could not forgive me," was Jean's thought. "Dear, proud, noble Tom! How could I ever have conceived so awful a suspicion of him?"

In the depths of her penitence and remorse she forgot to wonder about the mystery of the ladder, the night expeditions and the many significant incidents that had seemed to build up so strong a foundation for her doubts and fears. She would not allow herself to think of them now, nor to speculate upon them. In her new-born joy and relief, she was all loyalty to Tom. Whatever he had done, she was certain now that it was right and honorable. Tom was a McDonald, she proudly told herself, and the unfortunate resemblance to Uncle James was but skin-deep.

When, a week or two later, Tom received the five-hundred-dollar reward offered for information leading to the capture of Prang, he went to town and proudly deposited the greater part of it in the bank.

"Make it a time deposit," said Jean, "with interest, and we won't touch it, unless we need it for mother, until it can be used for you, Tom, to help you through with your surveying studies."

Tom drove to town with the wagon, at which Jean marveled a little; he was so fond of riding Zero, and she knew of no reason for his taking the wagon. But when he returned and unloaded a heavy box from the wagon, it became evident that Zero's slender back could not have borne the burden.

"What is it, Tom?" asked Jean, a little apprehensive lest Tom had been extravagant.

"Thereby hangs a tale, my sister," quoth Tom, as he dragged the box into the house and began prying off the lid with eager, trembling hands. "It's books, Jeannie girl—books for you! I ordered them from Boise, two or three weeks ago, and paid for them with my own money. Don't you recollect that day I dropped the purse from my pocket? I went to town that same day, you know, and didn't tell you what I went for. Well, it was to order these books. They're all for you, Jean, every one. I earned the money working nights for Dave Harding. You see, he has invented a new kind of quartz-crusher, and he's been awfully secret about his experiments for fear somebody would catch the idea and get in ahead of him with the patent. He had the machinery made in the East, shipped it here and smuggled it up to his claim in Meachem's gulch. Then he hired just three fellows that he could trust, and I was one of them. He wouldn't let us go near it in daytime. It took us nearly two weeks just to get it set up and in running order, so he could test it. Well, it turned out a complete success. He applied for his patent, and there's no secret about it now. But I was pledged not to tell a living soul, and that was why I couldn't tell you where I went at night. I don't know what you thought, Jean, but I did it for you because I wanted to get you the books and make up to you a little for all you had to give up. Now, let's unpack them. There's 'Chambers' Cyclopaedia,' 'Webster's Dictionary,' unabridged and latest revised, a set of Dickens' works, and a lot of miscellaneous books of travel, history, fiction and— Why, Jean! Great Scott! If you ain't crying!"

"Oh, Tom—if you knew—if you only knew!" sobbed Jean.

"Knew what?"

"How little I do—deserve this!"

"Look at mother!" exclaimed Tom, suddenly clutching his sister's arm and pointing through the open door into the inner room. "She is moving her right hand!"

It was true. The poor paralytic, who they thought would never again move a limb, was feebly waving her right hand to attract their attention.

In an instant Jean was at the bedside, on her knees, crying and laughing both at once in her great surprise and joy. True, it was only a feeble movement the poor, thin hand could make, but the next day it was stronger, and in a few days more the left hand, too, could be slightly moved. In the days that followed, it almost seemed to Jean that life held nothing more to wish for. Despite the fiat of two doctors, Mrs. McDonald slowly improved, until at last she could make some use of her arms in waiting on herself, could speak, in a whisper, a few words at a time, and was able to spend the greater part of each day in an invalid's chair, which Tom bought for her and which he proudly wheeled about with his precious burden.

For two years longer the grateful mother was permitted to remain with her children; then she passed peacefully away, and Jean and Tom went bravely out into the world and patiently worked their way to the realization of their childhood's dreams.

THE END.

A GREAT INLAND WATERWAY.

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Chicago occupies the vantage site of the largest area of resourceful land which our race can occupy. Between the great St. Lawrence valley on the north and the greater Mississippi to the south lies one pass two hundred feet lower than any other. At the heart of this pass sits Chicago. Nature has given her claim to the title that she has taken to herself—"The City of Destiny."

There was a time when, at a higher level, the lakes poured their flood of waters down the present valley of the Illinois river into the Mississippi. To-day, standing on the low summit of the watershed of the Illinois, one is but thirty feet above the rocky ledge of Niagara. Here lay the physical opportunity to renew the ancient southern outlet of the lakes, and to complete the circle of deep waterways by joining the gulf of St. Lawrence with that other distant gulf of the South.

The canal was projected primarily to insure sewerage removal. The periodical floods of the Des Plaines, which forced the city drainage to Lake Michigan, have been already diverted into a permanent channel. The sewerage of a population whose stock-yards make it equivalent to that of a city of two and a half millions will be rendered harmless by dilution and borne away. In addition, new harbor conditions will be evolved for a port already the first in the country; and the bridge problem, which has already wasted the time of hundreds of thousands, will be solved. The demands of the exposition perfected the railway service of the city. Street transit, with its network of cable, electric and elevated systems, has kept pace with growth, and terminal track elevation, abolishing railway grade crossings, has been inaugurated. The final housing of the great merchants in structures whose location and mechanical design will relieve the congested team traffic of its business streets will soon come. Chicago will be entrenched in commercial advantages without a possible parallel.

The large commercial use of the canal, aside from the practical extension of Lake Michigan thirty miles further west, involves the improvement of the Illinois to its junction with the Mississippi. This should admit the passing of vessels drawing fourteen feet of water. It is unfortunate that the government works in this really noble river could not have been planned with better reference to the future. Removal of the old dams will be imperative, and it is well that the sanitary district has authority under the laws of its creation to safeguard the new flood, and in so doing to make a proper initiative toward carrying the deep waterway to the Mississippi. The Mississippi commission—who are privileged to assist that stream in controlling itself—will have the lakes as a storage reservoir to aid their labors.—*Harper's Weekly.*

SURVIVAL OF THE FITTEST.

Attention has been called, says the *Engineering and Mining Journal*, to the disastrous results, both direct and indirect, of the enormous inroads of electricity in street-railway traffic, displacing horses, and to a lesser degree in mine haulage, replacing mules.

The effect on the farmers who raise horses and mules and the grain necessary for their subsistence, and on the railways which transport this grain, is looked at as a very serious matter. As is usually the case, however, the favorable balance is more than maintained by increased activity in other lines, due directly to the same causes. The production of copper, for instance, is enormously increased by the demands of the manufacturers of electric apparatus, and its transportation, together with the carrying of the finished products, makes an enormous freight tonnage. The auxiliary lines, so to speak, such as mica-mining, asbestos-mining, iron-mining and the metallurgical processes producing iron, steel and copper, have all received their share of the impetus due to electrical development. So, while the farmer may suffer in furnishing the supplies for horses and breeders, still he would gain in the general growth of industry requiring more men and more material of various kinds. Every improvement hastens the death of some industry unfit to survive, while it creates many new wants and increases the general prosperity.

HINTS FOR THE TABLE.

Rapid eating is slow suicide.
Plenty of time should be taken.
Fish and oysters are easily digested.
An hour or two of rest should be taken after the meal.
Mere gratification of the appetite is very likely to shorten life.
Dinner should be of a lighter nature in summer than in winter.
A quart of wheat contains more nutriment than a bushel of cucumbers.
There is a happy mean between eating everything and being squeamish.
It is not good to dine when in a state of mental or physical weakness.
Two pounds of potatoes contain as much nutriment as thirteen pounds of turnips.
Light soups, light desserts and light meats should have the preference in warm weather.
Abuse of the stomach at dinner will be repaid sooner or later by that punishment which comes to the glutton.
Vegetables and fruits are to be used most generously at that season of the year in which they naturally mature.

A FATAL MISTAKE.

A heavy storm had suddenly set in. Mrs. Day came to the door of the store and looked anxiously up the village street. She was a thin, bent woman of sixty. She shivered as the gust of sleet and rain beat on her.

"Don't think of going home now, Mrs. Day," the shopkeeper called out. "I'm sorry I have no umbrella or wraps for you; but wait, and they will send you one from home."

Mrs. Day waited, but she knew that no one at home would think of her. It grew dark and the storm increased. She ran up the street at last, reaching her home drenched.

Her son met her in the hall. "Why, mother! Could you not borrow an umbrella somewhere?" he said, drawing back lest he should be wet.

Her daughter Sue was playing on the piano in the parlor. The fire burned brightly, and the lamp threw a cheerful glow around the pleasant room.

"Dear, dear! This is too bad, mama!" she cried. "Your teeth are chattering with cold."

"I thought perhaps you would have brought me a wrap," said Mrs. Day gently, to her son.

"I never thought of it, mother; I saw you go out, too."

"You had better go to bed, mama," said Sue, "and take some hot tea." She turned to the piano again, and began "Shubert's Serenade."

Mrs. Day crept, shivering, up the stairs. She felt strangely weak and ill as she tried to take off her wet clothes. It would have been so pleasant if somebody would have rubbed her chill feet, and brought her some tea and petted her a little. Old as she was, her heart ached sometimes for comforting and caressing. A strange longing filled her heart for the husband who died so long ago.

But Sue, though she was sorry for her mother, never thought of going to help her. She sang the serenade with pathos, while Will listened with dim eyes. Both brother and sister were easily touched by a strain of music, a noble poem, or a beautiful landscape.

Yet it did not occur to either of them to look after their mother. She changed her clothes, and still chilled, went to the kitchen. It was Martha's "afternoon out," and the supper was to be made ready. She laid the table, broiled the fish, and made the tea. She remembered how she used to help her mother when she was Susy's age. How she loved to work for that dear soul! Yet Susy ought to love her, too.

"I have been a faithful mother," thought Mrs. Day, as she sat at the table looking at her handsome children.

"And you had to get the supper, mama!" exclaimed Sue. "I forgot that Martha was not to be at home this afternoon."

Mrs. Day went to her bed that night with a high fever. Martha, when she came downstairs in the morning, heard her moan. The girl had a kind heart and common sense. She ran for a physician.

When the old doctor met Sue in her pretty morning gown, after he left Mrs. Day's room, he said, sternly, "I fear your mother has pneumonia. I should have been called last night."

She cried bitterly, but she could do nothing. She never had spread a plaster or given a dose of medicine in her life. A nurse cared for her mother the few days in which she lived.

The poor woman before her death watched her children with eager, despairing eyes. She saw that they loved her; but they seemed afraid of the sick-room, and could not bear the sight of pain.

She saw now wherein she failed. She had never allowed them to hear pain or discomfort, or to feel any responsibility of life. From their birth she had waited on them, worked for them, sacrificed everything out of her great love for them.

She had never taught them, out of their love for her, to wait on her, to sacrifice a single selfish wish for her. She had ministered faithfully to their bodily wants, but she had not given to them the unselfishness, the habit of self-sacrifice which had made her own soul happy.

How many mothers make this fatal mistake, and how few know that they have made it?—*The Household.*

THE MAKING OF SHOT.

The shot-making trade has a legend which recites that back in the days when guns were shot off by lighted matches, and were swivelled to supports because they were too big and clumsy to be lifted to the shoulder, and when all shot was molded as bullets are to-day, some workmen were fastening an iron grating to the wall of a castle. They had cut the hole in the stone, and after placing the iron in the hole, poured some lead in to hold the iron in place, just as they do to-day. Some of the lead escaped and ran over the edge of the wall into the moat below. Soon afterward, the attention of the soldiers was attracted to the lead in the clear water, and dipping it out they found that the metal in falling from the height had become globules. After that, those soldiers made their bullets by sprinkling melted lead over the castle wall into the waters of the moat.

But pure lead will not always assume the globular form when melted and thrown from a height into water, so shot-makers mix with it metallic arsenic, which not only makes the lead form into spherical pellets, but adds hardness to it.

The melting is done in the top of the tower, where a large melting-kettle stands over the

coal fire. In the center of the floor is fixed a colander, with holes varying from one fiftieth to one three hundred and sixtieth of an inch. Directly under the colander, two hundred feet below, is a well of water, and all day long a shower of molten lead is falling into the water from the colander. The lead ingots are taken to the top of the tower in elevators, and the arsenic is mixed with it in the melting-kettle. One man attends to the kettle and another keeps the colander supplied with the molten metal. A pipe leads from the kettle to the colander, and the supply is regulated by a valve. The man at the colander continually skims the "cream," or scum of oxide, from the top of the lead, and sees that the lead passes through the holes freely. Near at hand is the "telltale," which shows him how the shot is running. It is a cup fixed to an endless wire which leads into the water. He sends the cup down by turning a handle, and it dips into the shot lying in the water and brings up a sample of the run. The shot is always larger than the holes in the colander, for it swells while becoming globular in passing through the air. The shot is formed in its downward flight, and the water serves not only to cool it quickly, but acts as a soft cushion, so that the shot is not flattened when it strikes the bottom. The shower of shot patters into the water, churning it to foam, and the small pellets resemble a small section of a heavy downpour of rain.

THE REMEDIAL USES OF APPLES.

In all temperate climates the apple grows freely, and might be obtained in practically unlimited quantities. That it is not more used than it is probably due to the fact that, being so plenty, it is undervalued. Yet almost everyone likes the fruit in some fashion, and it should form a part of at least two meals out of every three during the year round; for even when the fresh fruit is not in season, canned, dried or "evaporated" apples may always be had.

"Chemically," says a writer in the *North American Practitioner*, "the apple is composed of vegetable fiber, albumen, sugar, gum, chlorophyl, malic acid, gallic acid, lime and water. Furthermore, the German analysts say that the apple contains a larger percentage of phosphorus than any other fruit or vegetable. The phosphorus is admirably adapted for renewing the essential nervous matter—*leucithin*—of the brain and spinal cord. It is perhaps for this reason—though but rudely understood—that the old Scandinavian traditions represent the apple as the food of the gods, who, when they felt themselves to be growing feeble and infirm, resorted to this fruit to renew their power of mind and body."

Not only the phosphorus, but the acids of the apple are of singular use for persons of sedentary habits, whose livers are apt to be too slow of action. These acids aid the liver in its work of eliminating from the body the noxious matters, which, if retained, would make the brain heavy and dull, or in time would cause rheumatism, jaundice, or skin eruptions and other allied troubles.

The malic acid of apples, either raw or cooked, will neutralize any excess of chalky matter engendered by eating too much meat.

Ripe apples are probably the least fermentable of all fruits, except possibly the banana. For this reason ripe and sound apples may be eaten by most persons in even the hottest weather; but even the apple is safest when cooked.

We have the support of eminent medical authority in saying that the most healthful way to cook apples is to pare and core them, and bake in a moderate oven. If the apple is of a quite sour variety it may be necessary to add a little sugar, putting about a salt-spoonful in the hollow whence the core was extracted. The next best way to cook them is stewing. Contrary to common belief, apples baked in their skins are the least healthful of cooked apples.—*Harper's Bazar.*

THE TREATMENT OF OBESITY.

A new treatment of obesity has been propounded. It is based on a new theory. The victim of corpulence is fed on one pound of lean meat and one pound of fish per day, and is obliged to drink a pint of hot water every two hours. Nothing else in the way of food or drink is allowed. The theory is that the food being purely nitrogenous, the needful hydrocarbons are supplied through absorption of the excessive fat. The large quantities of hot water are for the purpose of averting the renal disturbance to which those who live chiefly on nitrogenous diet are peculiarly prone.

WHICH?

"Rabbi, who is happier, the man who owns a million dollars, or he who has seven daughters?"

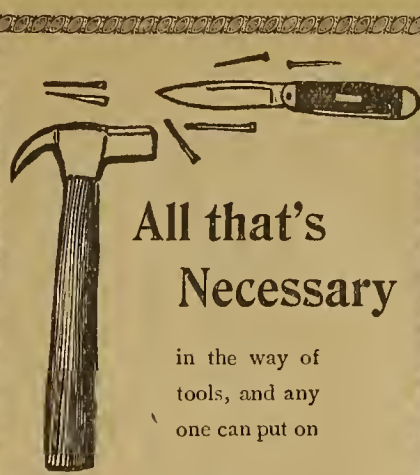
"The one who has many daughters."

"Why so?"

"He who has a million dollars wishes for more—the man who has seven daughters does not."

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Our Household.

HOME TOPICS.

PRESERVES.—August and September are busy months for the housewife who prides herself on laying in a goodly store of preserves, jellies, canned fruits and pickles for the winter. For a time, canned fruits almost entirely took the place of the old-fashioned preserves, but I find a great many people now who agree with me that while canned fruit is nice for breakfast or dinner, preserves and marmalades are liked for tea or lunch.

PEACH MARMALADE.—For this, choose ripe, well-flavored fruits. Peel the peaches, cut them in quarters, and put in the preserving-kettle in alternate layers with the sugar, using three quarters of a pound of sugar to a pound of fruit. Add a very little water in which you have simmered a dozen peach kernels to extract their flavor. Heat very slowly, and stir almost constantly to prevent burning. Boil until the marmalade is a smooth mass and looks clear. Try it by cooling a little on a plate, and if it is thick enough, put it in jars and seal. If it is boiled until it is solid, when cold it makes delicious little sandwiches for Sunday night tea or for picnic lunches, by slicing it and laying the slices between wafers, Graham crackers or thin slices of buttered bread.

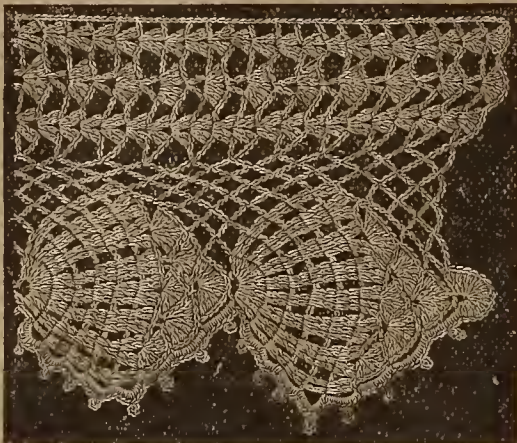
APPLE PRESERVES.—I often wonder that more apple preserves are not made, for they are not only delicious, but pretty. Boil a quarter of a pound of ginger-root, tied in a muslin bag, in a quart of water until the flavor is strong enough to suit you. Take out the ginger and add four and one half pounds of granulated sugar, then boil and skim until the syrup is clear. Add three lemons, peeled and sliced, with the seeds removed. Put in the thin yellow rind (the thick white rind of the lemon is apt to be bitter). Have ready six pounds of nice, sour apples—golden pippins, if possible—peeled, quartered and cored. Put a few at a time into this and boil them slowly until tender. Lift the pieces out carefully and put them into cans, filling each can two thirds full. Set the cans into hot water and turn the tops on loosely. Boil the syrup down until it is ready to jelly, then fill up the cans with it and seal them.

FRIGHTENING CHILDREN.—It would seem unnecessary to caution parents against

whichever she happens to think of, "will come and get you." Children brought up in this way will be cowards, afraid of the dark and of being left alone. The woods, the home of so many harmless and interesting things which children ought to be familiar with and enjoy, will be to them peopled only with terrible animals ready to devour them. True, time may destroy the most of these fears, but is it not dreadful to make them suffer so much in their innocent childhood? MAIDA McL.

SEA-SHELL LACE.

The directions for this lace appeared in FARM AND FIRESIDE, July 15th, page 11, in some way separated from the cut. We gladly make the correction for the benefit



SEA-SHELL LACE.

of those who will wonder at us putting a knitting cut with it. ED.

A PRETTY RUG.

For those who like such useful articles as home-made rugs, I will describe one which I thought was quite pretty. It was made of blue calico rags for the body, and just a sprinkling of white at the ends; the warp was white. The rug differed from the ordinary rag rug, inasmuch as the warp was arranged differently, the arrangement being to omit three strands of the warp; that is, two threads were used, then three skipped. M. D. S.

TOILET FOR YOUNG LADY, AND CHILD'S DRESS.

The material for the main dress is of silk, made in very simple style, the front of the waist and down the sleeve being laid in small tucks. The chief part of the whole costume lies in its perfect fit and the



TOILET FOR YOUNG LADY.

frightening their children if we did not know that there are many who attempt to govern their children through fear. They do not realize that they are not only causing intense suffering, but running the risk of permanently injuring the mind of a sensitive, nervous child. I have often heard mothers try to stop a crying child by saying, "If you don't stop crying, the rats, or the bears, or the old black man,"

style given by the collar. This is made of heavy cream silk, corded, and very wide lace. The neck collar must be of the same material as the dress, and the waist finish cannot be attached to the fit of a plain garment. The back especially should be perfect, as any deficiency in front can be in a measure covered by trimming, but nothing can hide a poor-fitting back.

This dress could be very attractively gotten up in some of the wool suitings. In which case, the collar might be made of velvet, or broadcloth in a light color.

The child's dress is a dainty creation in embroidered mull. The skirt is a simple, full skirt, and the waist draped over a fitted lining. Simple puff sleeves and a few bows complete it. L. L. C.

A PLEA FOR THE LUNCH-BASKET.

Among the many who depend upon the lunch-basket for their noonday repast are not only the school-children, but an army of men and women whose employment takes them to such a distance from home that it is impracticable for them to return there for the noonday meal. With these must not be forgotten the band of night workers who spend the night in the printing-room and other occupations which require night to be turned into day, requiring a midnight "snack" as others do a mid-day repast. And what would a picnic be without a lunch-basket? All these desire to know of something appetizing to supply their needs.

To begin with, a basket is the proper receptacle, as a passage of air is permitted through its interstices, thus preventing the food having a close, musty taste; and even a basket must occasionally receive a hot salt bath, followed by a rinsing in fresh hot water and drying in the sun. If clean, fresh napkins add too much to the laundry, Japanese napkins may be substituted; by all means have everything about the lunch neat and clean, else the daintiest food will not be appetizing. Not until she gives the matter serious thought does the housewife realize what a variety she can select for the lunch-basket of her boy and girl or of her husband.

China makes the basket too heavy; the little wooden butter-plates, which can be thrown away after using, are just the thing. A tiny pie baked in a saucer or patty-pan, a small tart, a diminutive rice or tapioca pudding are not hard to make, and are a welcome addition to the noon-day meal.

While it might be an expensive item to provide potted meat for sandwiches for every day in the week, there are often odds and ends that with a little "doctoring" may be made into excellent substitutes. The meat on a drumstick left from the roast or stewed chicken or turkey may be chopped, moistened with a little gravy or melted butter, seasoned, and spread on thin slices of buttered bread; or the meat may be compressed into a roll by adding egg and cracker crumbs, roasted, and sliced cold. Any cold meat, fish included, can be prepared in this way with but little trouble. Salads are of great variety, and can readily be made of scraps. White, Graham, brown or whole-wheat bread may be used in turn, with an occasional roll or biscuit. Egg sandwiches, cheese sandwiches, sweet-bread and sardine sandwiches, minced ham, tongue, ham, chicken, lobster sandwiches and many others. But we tire of these. They may be supplemented, however, by a few pickled oysters, fried chicken, deviled and hard-boiled eggs, cold sliced meats, olives, cheese and pickles. And for desserts, are there not the little suggestions already given, to say nothing of cake, cookies, gingersnaps and fruit?

While all this may at first seem to impose additional labor upon the housekeeper, she will soon find that when the habit is formed of preparing for the lunch while attending to other duties in the kitchen, all that is required is thought and system; the labor will scarcely count. And let her keep on the alert for new fancies, and they will come to her rapidly; then she can utilize them. And she will, moreover, have the sweet satisfaction of knowing that her loved one is thanking her in the heart whilst enjoying the labor of her hands. M. E. SMITH.

New Cure for Kidneys and Bladder.

We are glad to announce to sufferers from kidney and bladder diseases, pain in back and rheumatism that the new botanic discovery, Alkavis, is pronounced a positive cure for these maladies. Many of its cures are certainly wonderful, and we advise our readers to send name and address to the Church Kidney Cure Company, 418 Fourth Avenue, New York, who will send you treatment free by mail postpaid. It costs you nothing.

WASHING-FLUID.

Dear readers of the FARM AND FIRESIDE, I have a nice recipe for making washing-fluid. It costs so little, and is such a saving of labor and time, and it saves soap. You can use it in any place you would use soap.

RECIPE FOR FLUID.—

- 1 box of lye,
- 1 pound of soda ash,
- 1 lump of lime, size of fist (not slaked),
- 8 quarts of rain-water.

Put all in cold water, and let heat until all is dissolved, stirring occasionally. Let settle, pour off all that is clear in a jug or earthen jar, then add two quarts of soft hot water to the settlings, and stir; let



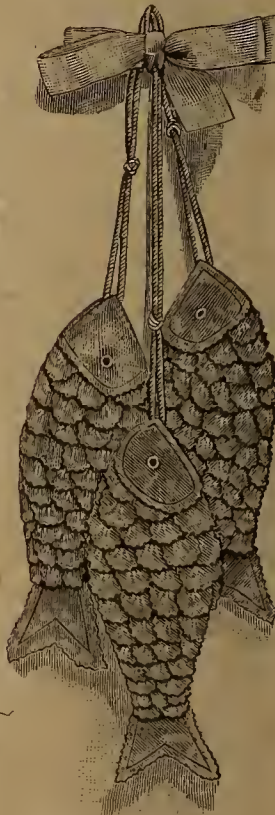
CHILD'S DRESS.

settle, and pour off. This is nice to put in the water to wash dishes or scrub floors. I put half a cupful in one pail of water to scrub with.

FOR WASHING.—When I put my clothes to soak at night, I put half a cupful of fluid in the water. In the morning I wring out the clothes, and have my boiler half full of water with one teacupful of fluid in it. I let boil, stir a few times, then take out and rub them through the rinsing-water, rinse, hang up, and my clothes are nice and white. One bar of soap will do four washings, and I have a family of five. I get my washing out and my kitchen scrubbed by eleven o'clock. While the clothes are boiling I do my morning work. I hope this will help some one. MRS. G. A. B.

ORNAMENTAL FISH.

"What strange sights we see when we are out without a gun," and although it was a water trip, we didn't catch these fish in any water. They are made of old-gold felt, the scales being pinked, and sewed to a plain side with red and blue silk in long stitches. This is then lined with a plain piece. A strap is fixed to the back of one for scissors, a needle-book on another, and the third one is used for a pincushion. They hang beside the sewing-machine.



ORNAMENTAL FISH.

L. L. C.

NEVER TOO OLD TO LEARN.

The homely old saying, that one is never too old to learn, is verified every day. Even in some branch of household duties that has been performed daily for many years, accident may teach a better method. After one had made bread for twenty years, won many premiums at independent and state fairs, been universally complimented by friends on the excellence of the bread, could one be blamed for thinking they knew most all of the wrinkles necessary to the manufacture of No. 1 salt-rising bread? Yet to such an old head came a new experience one morning.

In all previous articles upon salt-rising bread, great emphasis has been put upon the necessity of keeping the yeast warm enough; especially has the attention of hop yeast bread-makers been called to this point, as the necessary warmth for salt-rising would ruin hop bread.

One morning, after the yeast had been prepared and set in the accustomed place, other duties were unusually pressing, and a hot fire was needed; when the yeast was next thought of, it was found to have scalded on the bottom of the basin to the depth of one half inch. It was thoroughly stirred (scalded flour and all) and put back in the same place, with an additional wire screen beneath the basin to prevent quite so close contact with the warming-closet until the fire should moderate. The yeast came up nicely; I prepared the sponge as usual, but as I was still hurried (it was a busy day), I did not wait for it to rise again in the sponge, but kneaded it up into loaves; after letting those rise to double size, they were baked in a hot oven in three quarters of an hour. Each member of the family pronounced it the finest, moistest bread he ever saw. It might be just a "happen chance," I'll try the trick again; the same results followed. The bread was moister and sweeter than usual. Now the yeast gets scalded every time. Don't put it on top of the stove and cook it, that is too extreme a measure; just set it where there will be heat enough to begin to scald it in the course of an hour; stir occasionally, and as quick as it begins to stick and seem hard at the bottom of the dish, give a thorough beating and set where the heat will not be sufficient to scald any more. It certainly saves some time not to let rise in the sponge; prepare it just the same, but add more flour and mold into loaves immediately. It seems unnecessary to give explicit directions, as they have been given in full several times; if one will refer to back numbers of FARM AND FIRESIDE, he will certainly find them.

So many compliment my bread on there being no strong taste, as is quite usual with salt-rising; the secret of that is that from the time the yeast is put up in the morning until the bread is out of the oven, it is never allowed to stand and wait after being in fit condition to proceed to the next stage of affairs. It is the standing, bubbling and fermenting, waiting for the mixing, and waiting for the baking that gives that strong taste and disagreeable odor to salt-rising bread that is so offensive to some people. Wait for it to rise double its size, but don't let it wait for you until double the time.

TOILET ACCESSORIES.

It is in the little things of a woman's toilet, after all, that she shows herself. The way she dresses her neck, her hair, and numberless little dainty things.

A gentleman friend once said to me, "Who is that strange lady that has been sitting a few seats back of you lately?"

I said, "The new teacher of language in the young ladies' department of —."

"Well, I could only see her hands and the back of her hair, but her nails were so



VESTS AND CUFF-BANDS.

beautifully kept, and her hair so dainty, I knew she was a lady."

The little fichu we illustrate is made of mull trimmed with three rows of brier-stitching in white silk, and wide Valenciennes lace around the edge. This can be worn with either a white or dark dress.

With the coat and skirt suits a number of vests and cuff-bands can make a very varied toilet. Material for the embroidery and lace one comes all ready made, at

one dollar per yard. The other is made of silk and insertion run with velvet.

The design for a bodice can be worked up in many of the new materials very effectively. If of white or pale colors, it can be worn with black skirts. L. L. C.

A WOMAN TO LIVE WITH.

Although I am an old woman (as I have confessed to you), I still enjoy life. In fact, I can truly say that comparing the present with the days of my youth, then I cried, now I laugh. You may conclude, therefore, that I am happier than I was when a girl.

"Care to our coffin adds another nail, no doubt, And every grin so merry draws one out."

Having learned to laugh, although I am old, I expect to be older and grin so many grins that, for lack of nails, my coffin will fall to pieces. But remember, there are many kinds of laughter—the cynical, the silly, the good-natured. I vow that my laughter is always good-natured. All my friends know that I laugh *at* them, but I also laugh *with* them, and no one takes offense. Now, my latest cause of mirth is an old bachelor. He is not so old as I; indeed, he feels quite juvenile and frisky when he converses with me. At the same time, a girl of seventeen would call him "awfully old." You see, after all, age is a relative matter. He is—but no, it shall not be told how many years he has lived.

"Shall I never see a bachelor of threescore?" asked a merry wit-cracker, when Benedict married, after vowing for years that he would die a bachelor.



BODICE.

My bachelor is far from "threescore," so all my lady readers may regard him as a "probability."

"Come, tell me," I said, "how is it that you, good-looking, smart, well-to-do, still refuse to marry?"

You observe that I put in some complimentary phrases. You may wonder how it is that I never married, since I so well know how to flatter a man. I promise to confess my reasons in the near future.

He looked pensive for a moment, and then struck with my delicate way of saying "refuse to marry," he smiled, and said: "No one ever asked me."

"Tut, tut," I said; "if a woman so far forgot her place as to make love to you, the very fact would cause you to despise her."

"No," he answered, "not for that reason, but because if I loved her I would tell her so; it would not be necessary for her to speak first."

"But have you never been in love?" I pursued, taking advantage of my old woman's right to be inquisitive.

He is one of those men who read a great deal, and he is apt to bring in a quotation from some of the masters of literature. At this point he laughed, and said, "Oh, yes," and then recited those lines from "The Tempest:"

Full many a lady
I have eyed with best regard; and
many a time
The harmony of their tongues
bath into bondage

Brought my too diligent ear; for several virtues

Have I liked several women; never any
With so full soul, but some defect in her
Did quarrel with the noblest grace she owned
And put it to the foil.

As I am an old maid, I have spent much time reading poetry, and therefore I was able to carry out the quotation, asking him if he were looking for an angel to whom he could say:

But you, O you!
So perfect, and so peerless, are created
Of every creature's best.

"Perhaps I am," he replied, "but I do not put it in any more romantic words than to say I am looking for a woman who would be pleasant to live with."

"A woman to live with!" I echoed, saying to myself that she would be easy to find. But on second thought, the fact emphasized itself that not every woman who looks well at concert or party, talks well during a call, and behaves well before company, is the woman to live with.

"Draw her portrait," I exclaimed.

He evidently had pondered over the matter (not all the "Reveries of a Bachelor" are included in Ik Marvel's book), for he answered without hesitation:

"She must have certain qualities, and there are others she must *not* have. Indeed, I believe the negative virtues are the most important.

In the first place, she must satisfy my senses. All men are sensualists, according to their natures, coarse or refined. Love and friendship deal with persons at short range. It may not matter to me if my favorite author or politician have personal habits which would offend me. But the woman I live with must please my sight and my hearing. A charming voice—not, perhaps, a singing voice, but a charming speaking voice—she must have. A woman's voice can rouse or allay all the devils in a man. That wide-reaching rule applies here; the essential thing is not so much what a woman says as the way she says it. Then, as to looks, she must be bright and tidy; at least she must make that impression. Perhaps a man doesn't know when a woman is well dressed, but he knows when he thinks that she is."

I thought it time to put in a word, so I remarked:

"If you supply your wife with sufficient money, it will go a long way toward making her look 'bright and tidy.'"

He is a good-natured bachelor; he gave a little laugh, which showed that he appreciated the point, and proceeded:

"She must have a good appetite. Most men selfishly demand that women should like to cook, but I wish the woman I live with to have a healthy appetite, for then the cooking will be

a matter of pleasant anticipation and performance to her, and we shall both enjoy the result. Emperor William of Germany says he would rather his wife could make jam than frame a political constitution. Most men agree with him."

"Do you wish your wife to be religious?"

"Yes, but not too religious. Pious enough to be kind to everybody and to believe in heaven, but not so virtuous as to hate people less virtuous than herself. I would not have her too fond of going to 'big meeting.' I will not demand too much," he said; "you may sum up her positive traits. She must have a pleasant voice, she must be bright and tidy (that includes her house as well as her clothes), she must like to cook and she must have an amiable amount of piety."

"That sounds reasonable," I remarked.

"Now tell me what she must *not* be."

"She must not be imaginative, she must not be ambitious."

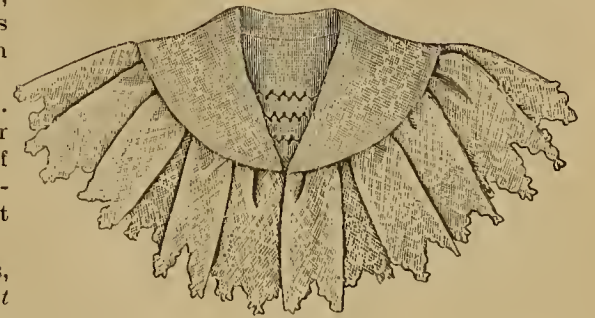
"Humph!" I ejaculated.

"No; deliver me from an imaginative woman!" he cried, with earnestness. "She will always be at extremes, either at a pitch of hilarity, from which she must descend with a reaction of despair, or she will be in the same despair because of unsubstantial misfortunes. She will lie awake all night fretting about what never happens, and she will prepare herself for disappointment by hoping for impossibilities. If a woman can have just a little imagination, just enough to embellish life, if she can imagine her husband a little better than he is, that I will allow. A French writer says that as the ostrich uses her wings merely to help her run, so a woman ought to use her imagination; just sufficient imagination to help her through this world, but not enough to carry her to the clouds."

There was much truth in what he said, and I let it pass unchallenged.

"Ambition," he continued, "seems at first glance much the same as imagination, but the latter deals with dreams, while the former is real and practical. An ambitious woman plans and works for a fine house,

showy furniture, a better carriage than her neighbor's, and, generally, she urges her husband to earn more money, to spend more, and to seek social and political office. All this makes a woman disagreeable. These affairs belong peculiarly to the husband. If he has a manly share of ambition, this inquietude on the part of his wife is quite superfluous; and if he be a spiritless sluggard, all the driving she may do will not produce the intended effect. Well," he exclaimed, conclusively, "those are her negative graces—only those two."



FICHU.

"You rogue!" I cried, "I began our talk by being full of fun, but you have made me quite serious. Your 'woman to live with' seems not impossible, but in my mind I have been testing all my friends, and I am not sure that any exactly fills the bill. I declare, she is hard to find!"

"That has been my experience," he said, "and perhaps now I have answered your question."

At this he took his hat and bade me good-day, while I called after him:

"Your ideal is excellent, but after all, 'hanging and wiving go by destiny,' and I shouldn't wonder if the woman you live with will croak like a parrot, wear her hair in curl-papers all day, and be a dyspeptic agnostic full of dreams and ambitions."

He answered with a look of reproach. Girls, his was a good ideal of the woman to live with. Are you like that ideal?

AUNT GRISELDA.

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Pears' soap takes care of the skin, and the skin takes care of the rest of us.

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Our Household.

LITTLE HELPS IN THE HOUSEHOLD.

HERE are so many little things, trifling, almost insignificant in themselves, that if known and practised, will in the aggregate make a vast difference in the work of the household.

One of the first of these little things that comes to my mind this morning, as I turn my thought toward the great army of women who belong to our FARM AND FIRESIDE band, is such a simple little thing I saw practised while visiting some old friends.

The top and bottom had been melted from a quart tin can, leaving a tin tube about six inches long and four inches in diameter. When the weekly churning was done, this was slipped over the dasher and rested on the churn-lid, thus catching all the cream that otherwise would have splashed out; and when the churning was finished there was no muss to be cleaned up, not one single drop having splashed onto churn or floor.

In another home where I visited was a molding-board about two by three feet in size, made of light lumber. At the left-hand end an inch strip had been secured, standing up above the board. At the right-hand end a similar strip was fastened to the other side, raising that end of the board a trifle. When not in use, the rolling-pin was laid on the left-hand end of the board, the strip at that end preventing it rolling off, while the strip raising the board a trifle at the other end, prevented it rolling in that direction; yet the inclination of the board was not enough to cause any inconvenience when working with it, and saved a vast amount of annoyance from a rolling-pin that would not stay in place, as the average pin has a faculty of not doing.

In the same household was a very light table, about two by three feet in size, with casters under it, so it was readily moved from place to place. When the table was to be cleared, this was rolled beside it, everything to be returned to the cupboard set upon it, then it was rolled across the room to the cupboard and the things put in place, after which it was returned to the table, all the dirty dishes piled on it and rolled out to the kitchen sink. When washed, they were returned to this table and covered with a cloth, kept for the purpose, until time to set the table for the next meal. When the meal was ready to send to the table, this handy carrier was rolled up beside the stove and each article of food, as dished, was set upon it, and all taken to the dining-table at one trip.

A stroug, flat-bottomed market-basket may be made helpful in any house as a carrier from kitchen to cellar and up again, from table to cupboard, etc., by piling in it

at the expense of her strength and nerve force, until by and by nature demands a halt, in the form of a spell of sickness, from which too often she arises but a wreck of her former self, and all because she did not plan to save herself for her family, but instead, wasted her strength in thoughtless or careless ways.

In one home the wife thought she couldn't afford a bread-box, so the bread was wrapped in an old table-cloth and laid on the lower shelf of the cupboard, where it dried out so badly that a part of a loaf or more was wasted from each baking, which if carefully saved would soon have equaled in value the price of a good tin bread-box.

Another housekeeper, not feeling able to purchase one, asked a hardware merchant for one of the straight kegs that wire nails are shipped in. This he gladly gave to her, and when it had been carefully cleaned and lined with paper, it made a convenient receptacle for the bread, that kept it from drying out. The lid of the keg answered nicely for a cutting-board.

A large tin lard-can, which any grocer will sell for a dime, makes even a better place to keep bread than the wooden keg. These cans have two covers, one to fit down over it as any cover would, another inner one, scarcely more than a large, round sheet of tin. When the can has been once opened, these inner lids are of no more use, and any grocer gladly gives them away. They can be made useful in many ways. One of them, to be used to pound steak on to tender it, is far preferable to a board, as it is more easily kept clean. They are much better than a molding-board to roll pie-crust or cookies on, or for kneading a small batch of bread. They are very nice to turn a layer cake onto when it is taken from the oven, keeping it in good shape, and it will not stick to the tin.

CLARA SENSIBAUGH EVERTS.

CANNING TOMATOES.

Where there is a scarcity of fruit, the housekeeper begins to look to the garden to see if there is anything she can make use of for sauce. Her thoughts seem to turn first to the old tomato, which can be used in a variety of ways, both ripe and green. There are so many recipes for preserving, pickling and for catchup, that I am only going to speak of simple canning as a subject that is the least spoken of.

Many people think they must use tin cans to insure perfect keeping. I have equally good or better success with the glass Mason jars, and think tomatoes thus kept can certainly not have contained any tin substance eaten from the can, which could not be very healthful, to say the least. If tin is used, it must be a bright can, and not one that has lost the tin coating by frequent usage, and if not kept too long, the cans will be emptied as bright as ever. But having tried both ways, I much prefer the glass, and keep the cans when filled in a dark cupboard up-stairs, where there is no danger of frosts.

Nothing but salt is used in tomatoes for canning—about a tablespoonful to an eight-quart panful. Let the tomatoes come to a boil, and cook perhaps ten minutes; too long cooking will make them bitter, sometimes. If too juicy, some of the water can be poured out rather than cooked out.



DOILIES IN CROSS-STITCH EMBROIDERY.

everything to be carried to a certain place, thus making one trip take the place of many.

In too many homes there is so much time, strength and nerve force wasted by useless steps that a little thought and planning might easily save to be expended in more useful ways. Every woman should consider it as much of a duty to save her strength as it is to be economical in her household affairs; but alas! too often we see housekeepers practising economy in every line, working and saving every day

Where catchup is made, the spices cover up the strong taste coming from long cooking, which is necessary to catchup if a long-keeping article is desired. I have some three years old that is as nice as when first made.

Do not let tomatoes for catchup boil but a few moments before straining out the skins and seeds; then let the juice settle, turn off the thin, watery part on top and boil down first to one half bulk, then add the remaining pulp or thicker part and boil until sufficiently thick. It will have to be frequently stirred after the pulp is added, to prevent burning down to the bottom of the kettle. For this reason it is

better to cook the thin part of the tomato first, as that does not burn much more than water would, if stirred once in awhile.

Some prefer all kinds of spices added with the vinegar and salt; others think cinnamon alone preferable. That is a matter of taste, the spices adding nothing to the keeping qualities, which depend upon the salt, pepper, vinegar and thorough cooking. GYPSY.

NOVELTIES.

Every housekeeper rejoices in plenty of table-linen and table furnishings. The revival of cross-stitch embroidery lends a very simple and easy way of decorating the doilies so much used. These are worked in dark and light blue cotton, and are made of good quality butcher's linen.



TOBACCO-POUCH.

A very nice present for one of the boys, later on, is a tobacco-pouch. This is of dull red felt lined with pongee silk. The pattern is very simple, and one side has a monogram of initials, the other side two pipes. Each piece is made separately, the edges of the silk turned in, and then the entire edge buttonholed in silk. A spray of flowers is worked up the sides. L. L. C.

SELF-SACRIFICE.

Some time ago I read an account in the Chicago Times-Herald of an interview between Frank Carpenter and Mr. Morton, our secretary of agriculture. I was highly entertained by the article and charmed with the scope of Mr. Morton's understanding of practical farm life. He spoke particularly of the condition of farm and ranch women, a subject very near my heart. Since reading the article I have been thinking and observing, and trying to deduce from my numerous scattered observations a few conclusions.

The little incident of the Indiana farmer, who with all his wealth of acres could not spare the price of a new calico dress for "mother," even though tobacco at seventy-five cents a pound was a necessity to him, was touching, and illustrative of the self-sacrifice endured, sometimes too patiently, by women both on and off the farm.

It has long been a question with me if this quality of self-sacrifice cannot be carried to excess. Cannot the wife and mother, by self-forgetfulness, expect too little? We are taught that unselfishness is a virtue; but when we consider that every quality or virtue we possess, as well as every act we perform, has its effect on those around us, does it not seem plausible to suppose that constant and indiscriminate self-sacrifice on our part will engender a corresponding selfishness in those with whom we come in contact? Few of us, indeed, have not seen evil resulting from a too fond indulgence on the part of parents who have allowed their love to overcome discretion and dissuade them from a course best suited for the good of the children. But with we mothers it is so easy and natural to forget ourselves. Self-sacrifice becomes so pleasant as to be easily overdone, and it would be hard to convince us that many of our acts which seem to us so unselfish are in reality the offspring of a selfish love for our own flesh and blood.

It is the farmer's wife and the mother of the farmer's sons who is most in danger of committing this indiscretion. All of her time is given to her household duties and to making home pleasant for "pa and the boys." She has very few of the opportunities enjoyed by women in cities to distract her from home cares. Too little of her time is given to recreation and self-improvement.

There are conscientious mothers who cannot find it within themselves to read a good book or the daily papers while there is a garment unended or a floor unswept. Would it not be better sometimes to neglect part of the routine of house work, and read a little of what is going on in the world? Johnnie may have to wear a pair of unpatched trousers as a result, but in a few years to come the trousers will be forgotten, and it will be such a pleasure, when John asks for a bit of information concerning Cleveland's administration or the revolution in Hawaii, to be able to answer him intelligently.

We mothers should strive to be more companionable to our boys and girls. Learn to talk on all subjects of possible interest to them, and feel able, when an interesting topic comes up for discussion at dinner, to express an opinion. Often, by so doing, we may encourage a taste for reading in our children, and mother will be considered something other than "an old crank," a term I once heard a boy apply to his mother.

Women, I think, are awakening to a realization of their duties to their children, aside from the ministering to their physical wants, and the time is coming when the boys will look upon mother as a boon companion, and will seek less for the company of others who may not be so well fitted for healthful, moral companionship. LUCY DE WITT.

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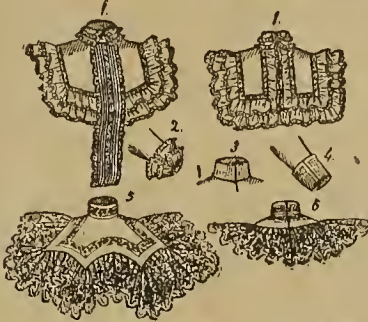
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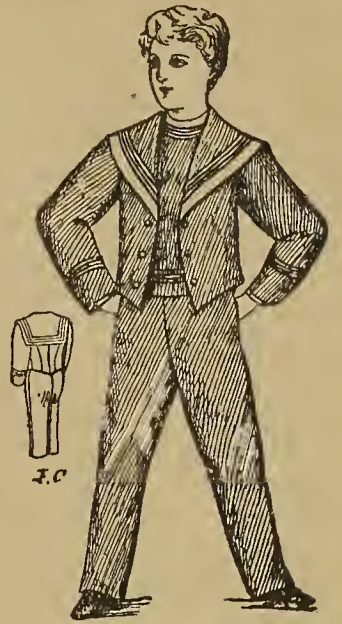
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No. 6507.—LADIES' SHIRT-WAIST. 11 cents. Sizes, 32, 34, 36, 38, 40 inches bust.



No. 6508.—GIRLS' APRON. 11 cents. Sizes, 2, 4, 6, 8 years.



No. 6480.—LADIES' EMPIRE CHEMISE. 11 cents. Sizes, 32, 34, 36, 38, 40 inches bust.



No. 6500.—MEN'S CUTAWAY SACK COAT. 11 cents. Sizes, 32, 34, 36, 38, 40, 42, 44, 46 inches breast.



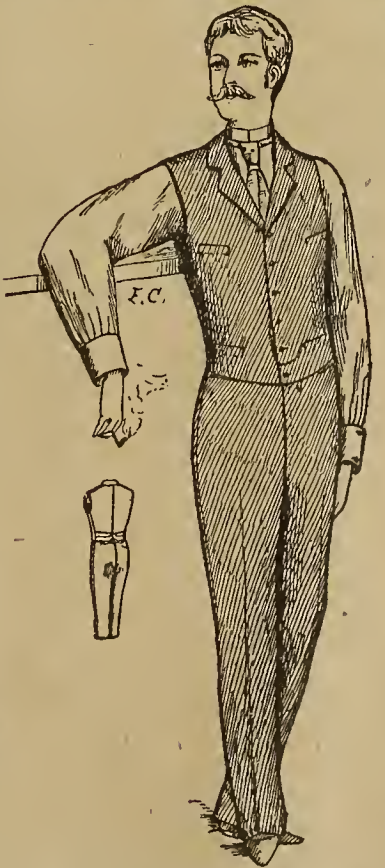
No. 6437.—LADIES' EIGHT-GORED SKIRT. 12 cents. Sizes, 22, 24, 26, 28, 30 inches waist.



No. 6463.—CHILD'S DRESS. 11 cents. Sizes, 2, 4, 6 years.



No. 6504.—GIRLS' SAILOR COSTUME. 11 cents. Sizes, 4, 6, 8, 10, 12 years.



No. 6501.—MEN'S TROUSERS AND VEST. 11 cents. Sizes, 32, 34, 36, 38, 40, 42, 44, 46 inches breast.



No. 6509.—MISSSES' SHIRT-WAIST. 11c. Sizes, 10, 12, 14, 16 years.



No. 6494.—MISSSES' NIGHTGOWN. 12 cents. Sizes, 8, 10, 12, 14, 16 years.



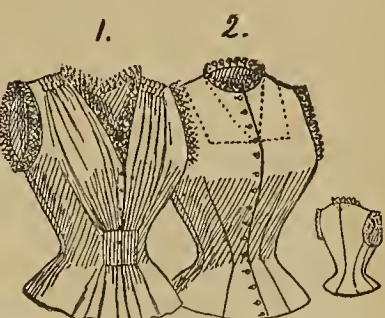
No. 6366.—BOYS' FAUNTLEROY SUIT. 11 cents. Sizes, 20, 22, 24 inches breast.



No. 6506.—LADIES' WAIST. 11 cents. Sizes, 32, 34, 36, 38, 40 inches bust.



No. 6489.—LADIES' WAIST. 11 cents. Sizes, 32, 34, 36, 38, 40 inches bust.



No. 6481.—LADIES' WAIST. 11 cents. Sizes, 32, 34, 36, 38, 40 inches bust.



No. 6365.—BOYS' SHIRT-WAIST. 11c. Sizes, 20, 22, 24, 26 inches breast.

Our Sunday Afternoon.

THE REAL AND UNREAL.

We watch the ships sail forth and sink
Where sea and sky shut out the track,
And, with a whispered prayer, we think
That some bright day will they come back.
We note the days as swift they fly,
And when one day of love has fled
We breathe a last, a fond good-by,
And count it numbered with the dead.
Yet sometimes ships come not again,
And no return the great sea gives,
While like the sunshine after rain
In dreams that day of better lives.
—Flavel Scott Mines.

CAUSES OF SUCCESS.

A SECOND lieutenant of the Sixth infantry of the United States Army, a graduate of West Point Military Academy in the class of 1891, has resigned his commission to accept the position of brakeman on a railroad. His agreement with the company is that if he succeeds he shall be promoted. It does not take much of a prophet or one deeply versed in the science of human nature to know that this young man will be promoted.

It is not often that a young man is willing to surrender a good position in order to begin at the bottom round of the ladder and "work his way up." It may be abhorrent to the boy of good family and with a college education to take a shovel and kill weeds on a railroad embankment, but it is the one who is willing to do anything honest and useful that reaches the general manager's office. From such beginnings came nearly every general manager in the railway offices.

It is said that of all the men who embark in business, only three per cent retire with a competency, but the statistics of failures show that seventy per cent of these are owing to incapacity, extravagance, bad habits and similar causes. The want of success is due to the men themselves rather than to the business they follow. It is the boy who gives up a life of ease and takes the brake-wheel of a freight-car to work his way to position and success who wins in the struggle, while the one who is satisfied with an easy clerkship, few responsibilities and a moderate salary, makes little headway in any direction.

THE POWER OF PRAYER.

No mortal can fully measure the power of believing prayer. No period of time is long enough to measure the results of the earnest offering up of prayers and supplications with thanksgiving. Prayer is a privilege which God bestows upon his faithful children. They have the opportunity of coming boldly to the throne of grace, that they may obtain mercy, and find grace to help in time of need. The answers to prayer may be deferred for many years. A prayer may start a stream of blessing that shall roll down through ages and centuries. God shows mercy to thousands of generations of them that keep his commandments to do them, and the prayers of God's people, repeated and reinforced from generation to generation by believing offspring, may flow in a tide of blessing outward and still onward until they find their wildest fulfilment in the kingdom of the everlasting God. Christian, in joy, in sorrow, in trial, in temptation, prove the power of prayer. Learn to "pray without ceasing, and in everything give thanks, for this is the will of God in Christ Jesus concerning you."

TOOK HIM AT HIS WORD.

Bad men and bad institutions did not hesitate to take advantage of the popularity of the great Christian Endeavor convention at Boston. A peculiar incident, with a characteristic ending, happened one evening during the convention, as described by a Boston paper. A South Boston saloon-keeper hung out a couple of Christian Endeavor flags, and over his door he placed the usual sign, "Welcome." One evening twenty-three of them accepted the invitation and walked in, to the surprise of the saloon-keeper. When they started in with fervor and held a rousing prayer-meeting he was speechless.

CONSUMPTION CURED.

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

RUINED TEMPLES.

Once they were beautiful beyond description, with their towers and turrets glittering in the sunlight. Now the frescoed walls are blackened and discolored by the storms of many years. The marble pillars, wonderful still with their delicate carvings, lie upon the ground, a prey to modern curiosity-seekers. Sadly we gaze upon those creations of past ages, which can never be restored to their pristine purity and loveliness.

But what of the temples of the Lord—those wonderful bodies which he has fashioned in his own likeness? We see ruins of these on every side—wrecked lives that might have been towers of strength; lives that were once pure and fair; but the world was hard, troubles came, and no one cared for their misery, so they drank a little of the fiery liquid to drown their thoughts, and down, down, lower and lower, they sank. These ruined temples are scattered all over our land, in every city and town, and we pass them by with a pitying glance and move on to sights more pleasant.

But a day of reckoning will come. The buildings of the Lord, defaced and ruined, oftentimes by the carelessness and greed of the strong, shall rise up as witnesses against the cruelty of men. It behooves the children of the Lord to hasten into the fray and fight against those who would lay the temples of God in the dust.

REAPING.

You have been very anxious to be faithful in sowing. See to it now that you are faithful in reaping. There may be standing grain—regenerated souls—in the field of your charge. Let the fruit not remain ungathered for another day. Do not wait for an evangelist to come and reap where you have sown—to bring in those who are ready now, waiting only to be helped to final decision by a word. Do not postpone the binding of sheaves until there is a general harvest-time of revival in the community; but put your arm lovingly around the grain-stalks before you—in your home, your class or your congregation—and gather them into the church granary, where they belong. This reaping work is needed in every Christian field. When it is as faithfully attended to as sowing is, then can it be said aew, "Behold the days come, saith the Lord, that the plowman shall overtake the reaper, and the treader of grapes him that soweth seed; and the mountains shall drop sweet wine, and all the hills shall melt."—*Sunday-school Times.*

NO STANDARD IN SELF.

Man needs a standard outside of himself. No one is fit to be his own, because no one is absolutely fixed, and a vacillating standard is really no standard at all. The mariner cannot depend on the ship's log. He must turn his gaze to the fixity of the heavens in order to know just where he is. Says Professor James, "We walk a beam the better the less we think of the position of our feet upon it. We pitch or catch, we shoot or chop the better, the less tactile and muscular and the more exclusively optical our consciousness is. Keep your eye on the place aimed at, and your hand will fetch it; think of your hand, and you will very likely miss your aim." Turning one's vision inward to self is a poor way of guiding one's moral course. Our only surety is in turning the gaze outward to the Eternal Standard, in whom there is neither variableness nor shadow that is cast by turning.—*Sunday-school Times.*

A CHRISTIAN.

There is a difference, and a wide one, between practising moral duties and being a Christian. Christianity is a religion of motives. It substitutes an eternal motive for an earthly one; it substitutes the love of God for the love of self. There may be, and are, many persons who practise temperance and other virtues which Christianity inculcates, but who never think of doing so because they are so inculcated. It would be as absurd to ascribe a knowledge of mechanics to savages because they employ the lever, or of the principles of astronomy to brutes because, in walking, they preserve the center of gravity, as it is to call such persons Christians. A Christian is one whose motives are Christian faith and Christian hope, and who is, moreover, able to give a reason of the hope that is in him.—*Archbishop Whately.*

A BOOK OF 1,000 PICTURES.

Over one thousand engravings were required to illustrate the contents of "Beauties and Wonders of Land and Sea." Neither pains nor money have been spared to make it a magnificent pictorial encyclopedia, authentic in its descriptions and realistic in its pictures. See offer on another page.

A GUARANTEE



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W. J. BRODIE.

1057 W. Polk St., CHICAGO, Oct. 27, 1893. THE OWEN ELECTRIC BELT AND APPLIANCE CO.: Gentlemen—Solely in the interest of others who are, or may become similarly affected with myself, I venture to offer my experience with the use of the Owen Electric Belt, and that I am actuated entirely by that motive, must be apparent from the fact that until you see my name and address recorded on this letter you had no knowledge of either. I had long been a sufferer from chronic dyspepsia and nervous prostration, contracted or aggravated by many years residence in the East Indies. About three years ago I purchased one of your Belts in the hope that its use might afford me some relief, and wore it continuously as directed for about four hours every afternoon for a month or so, and the result was perfectly marvelous. My indigestion with all its attendant miseries, nervousness, depression, irritability and insomnia, from which latter I was a great sufferer, have disappeared. I then discontinued the use of the Belt (the existence of which I had indeed forgotten), until about six weeks ago, when a recurrence of my old trouble very forcibly reminded me of it. I again put it into wear (after ceasing its use for over one and one-half years), and with the same extraordinary results, being again restored to health, strength and vigor, after wearing it for only ten days. Under these circumstances I can most emphatically recommend to others suffering from the ailments which I have endeavored to describe, the adoption of the use of the Owen Electric Belt. I had long been aware of the curative powers of electricity from what I had read on the subject, and on my return to England I purchased from Pulvermacher of Regent street, London, the combined chain bands, of which he is the patentee, for which I paid three guineas, and although I must admit that I derived some benefit from their use, I am bound to say the general result did not approach the benefit derived from the use of the Owen Belt, besides which its utility is so great an improvement in comfort and convenience; Pulvermachers' being cumbersome and complicated in adjusting to the body, besides causing from being uncovered, blisters and sores, and above all not being able to regulate the current as is the case in the Owen Electric Belt. You are at perfect liberty to make what use you think fit of this letter, and I shall be glad to answer either verbally or by letter any inquiry made from me on this subject. I am, gentlemen, Yours respectfully, W. J. BRODIE.

Mention this paper.

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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. Queries deserving 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.

Curing Tobacco.—N. L. W., Allegheny county, Pa., writes: "After tobacco is cured, please tell me what preparation is used to make chewing and smoking tobacco, and quantity used per pound of each preparation." REPLY BY JOSEPH:—Possibly one of our many readers can give the desired information. I know nothing about curing tobacco for these purposes.

Weevil in Wheat.—G. D., Pelin, N. Y. The best remedy for weevil in wheat is bisulphid of carbon. The best mode of application is simply to pour the liquid over the top of the grain and close the bin tightly. The fumes of this volatile liquid being heavier than air, will penetrate to every part of the grain. An ounce of bisulphid to every three bushels of wheat is sufficient, if used in a tight bin. This application will not injure the germinating power of the grain, and the treated wheat, after being carefully cleaned by a good fanning-mill, can safely be used for seed.

Gathering Tomato Seeds.—G. J. R., Des Moines, Iowa, writes: "Kindly tell me the best way to clean and save tomato seeds." REPLY BY JOSEPH:—The process is simple. Cut the ripe tomatoes open and press out the pulp into a suitable vessel (on a large scale, just mash, or grind the tomatoes). Let the pulp stand in warm place until fermentation has freed the seeds from the adhering pulp; then wash in clean water. The skins and pulp will come to the top, and can be poured off. The seeds will sink to the bottom, and therefore are easily cleaned, then drained and dried quickly. Store in paper sacks in a dry, cool room where safe from mice, etc.

Paris Green for Potato-bugs.—J. S., St. Louis county, Mo., writes: "Please inform me as to the proportions of flour and Paris green to be used in poisoning potato-bugs."

REPLY BY JOSEPH:—One pound of Paris green and one barrel of flour would make a safe mixture, providing that you do the mixing very thoroughly and apply the product very liberally. As flour is high, half a barrel to a pound of Paris green might answer. In that case I would simply be more economical in the use of the mixture. I prefer to apply Paris green in the liquid form, with a knapsack or barrow sprayer, using one pound of the poison to from fifty to one hundred gallons of Bordeaux mixture.

Preventing Potatoes from Sprouting.—J. S., Pond, Mo., writes: "Please inform me whether there is any process by which Irish potatoes can be prevented from sprouting."

REPLY BY JOSEPH:—If this means a process of keeping seed-potatoes in the best order, I say, the right process to accomplish this desirable result is to put them in cold storage; that is, in a building where a steady temperature of about 35 degrees Fahrenheit can be maintained right along. People having no facilities for cold storage can provide conditions somewhat similar by putting the potatoes in pits, letting the earth covering freeze, and cover deeply with straw or coarse manure, and another layer of earth to keep the frost in. For table use at home, potatoes may be dipped in boiling water for a moment and then allowed to dry, and stored in a cool cellar. Soaking in a weak solution of sulphuric acid may also accomplish the desired result.

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, 1315 Neil Avenue, Columbus, Ohio. Note.—Parties who desire an answer to their inquiries in this column, must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered under any circumstances.

Warts.—J. H. W., Scranton, Pa. Cauterize the warts on the lip and lower jaw of your dog with a stick of lunar caustic.

Somewhat Like Thrush.—E. S. W., Wooster, Ohio. Have your cow examined and treated by a veterinarian. You surely can get one in Wooster.

Hemorrhage.—S. E. B., Deshler, Ohio. Your colt, it seems, died of internal hemorrhage, but whether it was produced by the bursting of an existing aneurism or not, I cannot tell.

Rachitis.—A. McK., Heron Lake, Minn. Your pigs, it seems, suffer from rachitis. Questions like yours have recently been answered in nearly every number. Please consult them. Change the diet of your pigs; feed clover.

Hard to Milk.—W. D. R., Waco, Ky. If your cow is hard to milk, improvement will be effected, especially if the cow is young, by very vigorous milking; there is no other remedy. Do not poke the teats with knitting-needles or any other instrument. It will ruin them.

Trouble with a Cow.—P. W. M., New Canaan, Conn. Unless your cow has diseased ovaries, or perhaps suffers from tuberculosis, you will probably succeed in getting her with calf, if you can keep her for three weeks together with the male in a pasture.

Horny Scar Tissue.—A. P., Rockford, Mich. The horny formation in the long hair of the fetlock of your horse is horny scar tissue, and a result of formerly existing wounds. It is permanent, and all that you can do is to keep it clean and to see to it that no new wounds or sores (so-called scratches) will be produced.

Possibly Anthrax.—S. S., Bingham, Ohio. According to your description it is possible that your horses had anthrax, one of the most fatal of all the infectious diseases known; but even if they had not, the large quantities of linseed-oil and of croton-oil with which you drenched them would have been enough to kill any horse, because of such large quantities nearly always some gets into the respiratory passages and down into the lungs. Result: A fatal foreign-body pneumonia.

A New Fly.—C. H. A., Kilbourn, Iowa. If you have a new (?) kind of cattle-fly, send it to the entomologist of your state experiment station for examination. Common flies are often kept off if the cattle are washed with a decoction of black-walnut leaves. A solution of aloes in water and soft soap, or some diluted extract of gentiana, applied to the most troubled parts, is also effective.

So-called Sweeney.—L. M. Y., Bogard, Mo. The best treatment of such a case consists in exempting the horse from work, allowing him all the voluntary exercise he is willing to take, feeding well, and leaving the rest to time. If this is complied with, a cure may be expected in six to ten months. All the "doctoring" you did is worse than useless, and if anything, prevents recovery.

Gangrene.—H. V. V., Jerseyville, Ill. There is no worm around the tail of your cow, as you yourself will find, if you will take the trouble to examine it. What you complain of is gangrene (mortification), caused, very likely, by some external violence, such as pinching, bruising, switching, etc. The lower end of the tail will come off. Dress the stump with some coal-tar.

Capped Hocks.—L. T., Parker's Glen, Pa. What you describe is a capped hock. It is caused by bruising, and therefore often found in kicking horses. It does not easily yield to treatment, even if the horse stops kicking. The best results are usually obtained by an application of either "emplastum anglicum" or "colloidum cantharidatum." The latter is a little easier applied. Your druggist knows what they are and will tell you how to apply them.

Hemophilia.—W. H. K., Leaburg, Oreg. What you describe is a case of hemophilia. In horses, in which it is of rare occurrence, it is a dangerous, usually fatal, toxic disease, characterized by more or less profuse bleeding from the skin and the various mucous membranes. The disease, called hemophilia in human beings, is considered to be congenital, and is entirely different. I would have published your interesting inquiry if you had not scribbled it on a postal.

Bloody Milk—Probably too Much Voluminous Food.—L. V. T., Arkansas City, Ark. Please consult the answers recently given in nearly every number to "bloody milk" questions.—The panting, blowing and puffing of your other cow, when coming home in the evening, is probably caused by too large quantities of (voluminous) food. Keep her at home, do not feed her any more rough or voluminous food than she actually needs, and feed more concentrated food to make up for the deficit.

Fell Off in Milk.—T. F. M., Hunt's City, Ill. The only symptom you give is that your cow did not give her usual quantity of milk, something that happens in nearly every disease that affects cows. Perhaps your cow, which was kept in a poor pasture, suffers from indigestion. If so, keep her for awhile on a light and suitable diet, and everything will be all right again in a short time. You say she had her last calf a year ago, it is therefore possible that the fact that she is "old-milking" has something to do with it. A cow, even the best one, cannot give milk forever.

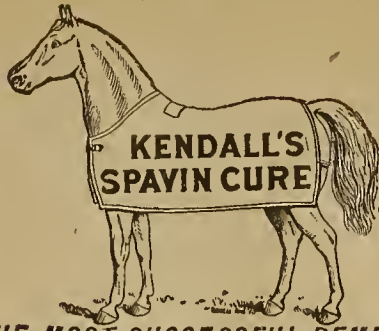
Shoulder-boil.—A. J., Baldur, Man., Can. What you describe is a shoulder-boil, produced by too much pressure by the collar. Either work your horse with a breast collar, or let your harness-maker prepare the neck collar in such a way that it cannot press upon, or even come in contact with the sore place. Horses will get worms if they are allowed to graze on low, swampy land, or to drink stagnant water containing the worm-brood, and the poorer their condition the sooner they will become infested. Good, sound and clean food and pure water are the preventives.

Tapeworms.—M. D. K., Republic, Mo. At least six different kinds of tapeworms occur in dogs, but as the larvae of these different species occur in different animals, and as you do not say what kind of tapeworm your dog is troubled with, I cannot say anything in regard to prevention. The best remedy against most tapeworms of dogs is the extract of the male fern (extractum filicis maris ethereum), and the dose is from seven and one half to seventy-five grains, or from 0.5 to 5.0 grams. It may be given either in capsules or in the shape of pills.

Sore Ears.—J. F. R., Athens, Pa. I think your veterinarian made a correct diagnosis when he called the affection of your horses' ears an eczema, and he probably saw that it was inveterate, and therefore had good reasons for not telling you what to do, knowing that the treatment, at best, would be a tedious one. If you wish to make an attempt, first soften the scabs with soft soap or with glycerin, wash the diseased skin twice a day with a five-per-cent solution of potash, and then, after all the scabs have been removed, apply a salve composed of white precipitate (hydrargyrum precipitatum album), one part, and lard, ten parts.

Dry and Brittle Hoofs.—A. C. W., North Clarendon, Pa. If the hoofs of your mare are too dry and brittle, they either are composed of morbid horn, or have been ruined by too much poulticing, or too much water or mud, and it will be next to impossible to restore them to a normal condition. Poulticing and so-called stopping only give temporary relief, and make the condition worse afterward. All moisture that is of any benefit must come from within (from the blood). Perhaps the hoofs are also deformed, or may be contracted. You do not say so, but hoofs seldom get very hard and dry, unless contracted or deformed. Improvement may be effected in two different ways: First, by judicious shoeing, if done by a blacksmith who understands the mechanism of the horse's foot; and secondly, by removing the shoes, paring the hoofs so as to give them as good a shape as possible, and sending the horse to pasture. If this method is adopted, the hoofs may require, from time to time, a little paring.

Parturient Paralysis.—J. C., North Vernon, Ind. So-called milk-fever, or parturient paralysis, is an infectious disease, which almost exclusively attacks cows that are excellent milkers and in a very good condition as to flesh, and hardly ever cows that are poor in flesh or not good milkers. It usually makes its appearance within a few (three or four) days after calving, seldom later. If one lives in a locality in which the disease is of frequent occurrence, and has a first-class milk cow which is in very good flesh, and which he desires to protect, it will be advisable to reduce her food during the last three or four weeks before and the first two or three weeks after calving, to see that the cow has always a good, clean and well-ventilated place, but especially while calving and immediately after, and to leave her calf for at least ten days or two weeks. If these precautions are taken, and danger is still apprehended, it will be advisable to irrigate the uterus of the cow, immediately after she has calved, with a weak, blood-warm solution of corrosive sublimate in water. A solution composed of corrosive sublimate, one part, to water, 1,500 to 2,000 parts, is fully strong enough. Any druggist can tell you how to make such an irrigation.



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KENDALL'S SPAVIN CURE

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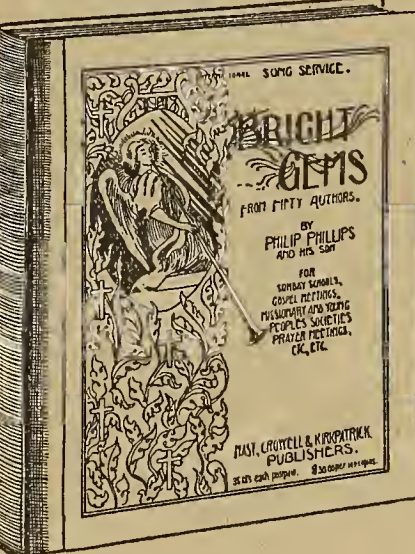
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I have received the book, "Beauties and Wonders of Land and Sea," and am surprised to see such a magnificent volume. Yours truly, LOUIS E. GIESEY, Smithfield, Ohio.

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A FEW OPINIONS OF "BRIGHT GEMS."

I have examined the collection of Sunday-school hymns and tunes, entitled "Bright Gems from Fifty Authors," and cheerfully recommend its use by Sunday-schools irrespective of denomination. Courteously yours, DAVID DAVIS, Cincinnati, Ohio, Choirmaster of St. Paul's P. E. Church. June 4, 1895.

We think your collection one of the best. REV. ELI A. WINNING, Pleasanton, Cal., Pastor M. E. Church.

Your book is a beauty, and I would heartily recommend it. REV. N. L. BURTON, Griggsville, Ill., Pastor Congregational Church.

It is an excellent book. REV. F. E. BRITTON, Albion, Mich., Pastor First Baptist Church.

An admirable collection. REV. A. H. CARVER, Duluth, Minn., Pastor Lakeside Presbyterian Church.

Your book is grand indeed. It is food for the hungry. REV. CHARLES PYLES, Owensboro, Ky., Pastor M. E. Asbury Chapel.

I have found the selections for your new book especially adapted for church and Sabbath-school singing, and would recommend them to any in need of a collection of new and inspiring songs. Respectfully yours, GEO. W. WEBB, Organist, Cincinnati, Ohio. June 5, 1895.

A SPECIAL LOW OFFER.

FOR 20 CENTS We will send this Song-book, and Farm and Fireside six months, on receipt of 20 cents.

Address FARM AND FIRESIDE, Springfield, Ohio.

Our Miscellany.

SUCCESS will never lack for suitors. KEEPS its distance—the north pole. ADVERSITY tries a man's moral muscle. HIPOCRISY is a species of hopeful idiocy. THE center of Judaism now is New York City. BARBADOES cotton was cultivated all over tropical America in 1492. KRUPP has made 20,000 guns of large caliber for the armies of Europe. SOUTH CAROLINA farm products exceed \$50,000,000 in value annually. TO STRUGGLE again and again to renew the conflict—this is life's inheritance. THE eleven cables now in operation across the Atlantic have cost upward of \$70,000,000. HOW to have strong nerves and vigorous health told free by the Excello Co., Pittsburg, Pa. AN Italian scientist says the absence of wisdom-teeth is common among the criminal class. "PILGRIM'S PROGRESS" has been translated into two hundred and three languages and dialects. AN industrious Sedalia, Mo., burglar went through seven houses in a single night, recently. ITALY has the greatest proportion of criminals. They number 5,140 to the million of population. THE roar of Niagara has been phonographed and may be heard in any part of America for a small fee. AT Bombay, twenty-four inches of rain have fallen in a day; at Genoa, thirty; at Gibraltar, thirty-three. MANY a man who now lacks shoe-leather would wear golden spurs if knightbood were the reward of worth. THE man who puts in his time waiting for something to turn up generally finishes by being turned down. LAST year the railroads of this country paid \$232,659,089 in interest on their bonds and \$83,336,811 in dividends. QUEEN VICTORIA has taken four hundred and forty-seven prizes at English cattle shows for products of her stock farm. A MAN who falls out with the preacher so he will pay nothing to his support, can aid the church by helping to pay the sexton. ENGLAND'S great coal strike extended over twelve weeks, kept 250,000 men out of employment and involved a loss of nearly \$50,000,000. TWO THIRDS of all the letters written in the world are written in the English language. It is destined in time to be "the language of the world." MISS CROSS—"What would you do if you were in my shoes?" MISS SHARPE—"Turn my toes 'out."—*Yonkers Statesman.* THE harvester invented by McCormick, in 1831, has been so improved that it is said it will cut and bind an acre of grain in forty-five minutes. THERE are words in the Chinese language that have as many as forty different meanings, each depending on the intonation used in pronouncing it. THE overproduction of cotton and the consequent decline in price will reduce the revenue of Texas planters this year from \$80,000,000 to \$40,000,000. VESSELS which have been used for milk should be rinsed in cold water before being washed in hot. Hot water immediately sets the curd and drives the milk into the whey. MENDICANT—"Please give a poor man a dime to get something to eat with?" MR. HAVERHILL—"My good man, you cannot buy a set of false teeth for ten cents."—*Truth.* THE excise laws in Germany are more vigorous and are better enforced than in New York. All the same, the Germans of the latter city kick harder than anybody else because the saloons are closed on Sunday. ONE of the foremost women physicians of England, Dr. Anderson Brown, has established an industrial farm for inebriate women. The test of the practicability of outdoor life as a cure for drunkenness will be made under the auspices of the Women's Temperance Association. THE ancients slept on the floor or on a divan covered with skins. During the middle ages, beds were made of rushes, heather or straw. It is believed that feather-beds were known to the Romans, since a mention in one of the poets of men so luxurious that they slept on feathers is supposed to refer to this kind of bed. THE attention of our readers is called to the advertisement of the United States Electric Belt in this issue. The Miles Perfected Electric Belt is the result of years of patient experiment in the domain of electrical science, and is now offered to the suffering public as a remedial agent of almost superhuman power and efficiency. If you are a sufferer from any form of physical disease send to the United States Electric Belt Co., Hartford Building, Chicago, for their descriptive testimonial catalogue, and mention FARM AND FIRESIDE when you write.

CATCHING KANSAS CHINCH-BUGS.

To-day I went out with Mr. Kent to witness a method of destroying chinch-bugs in practice on one of his farms, three miles east of Burlington, Kansas, says a correspondent of the Kansas City Journal. His tenant, Leo Applegate, has saved sixty-five acres of splendid corn from the ravages of the chinch-bug by a very simple and inexpensive expedient, which, although not new, is certainly a success when done in the thorough and watchful manner in which he is doing it. On the east of this corn-field, and separated from it by a sixteen-foot laue, was a wheat-field of forty-six acres, cut ten days ago. Two or three days before cutting, he mixed salt and coal-oil in a vessel, putting from one half to one pint of coal-oil to one half bushel of salt. He then made a line with this salt the whole width of the corn-field (ninety rods), through the center of the sixteen-foot lane. This line of salt is about three inches wide at the base. He then bored holes with a post-auger about three rods apart—holes about eight inches to a foot deep. He rimmed the top of each hole with a knife, leaving the mouth of the hole funnel-shaped and smooth. As soon as the wheat was cut, he poured about one quart of water in each hole and a small quantity of coal-oil on it. The holes are on the side next the wheat-field and close to the salt line. The battle has been going on about ten days. We arrived on the field about two o'clock in the afternoon and walked down the line. All was quiet and only a few chinch-bugs to be seen near the line, but he said they would probably move on his works soon. By the side of each hole was a large pile of dead bugs that looked like huge piles of ground coffee. These he had dipped out from time to time with a tin cup. I believe I underestimate the amount when I say there are ten heaping bushels of dead chinch-bugs on that line to-day. In half an hour from our arrival they commenced to come in from the weeds and stubble, and in five minutes the whole line was alive with millions. As soon as they reach the salt line they follow it each way until they come to the holes, when they tumble in by the thousands. They don't crawl in the hole, but as soon as they strike the smooth surface at the top they lose their first hold and roll over, and as there is a constant pressure by the enormous line toward the hole, they look like wheat going into the bopper as they poured over the brink. The run lasted only about twenty minutes, when they disappeared as suddenly as they came, all going back to the weeds and stubble. It is certainly a remarkable sight, and one has only to witness it to become convinced that it is an absolute preventive, if properly attended to. If done in a slipshod manner, as many will do it, it will be a partial if not total failure. After the line is made, a boy or man should be there all the time. Occasionally a little coal-oil should be poured on the line, probably once a day, and the line remade after each rain. The mouth of the hole should be kept smooth. If dry and cracked, sprinkle a handful of dust around the edge occasionally; they can't cling to the dust, but will tumble in as soon as they touch it. The holes should be stirred occasionally with a stick and rubbed around the sides. See that the water and oil in the hole are replenished, if necessary, and dip out the dead bugs before it is too full, and set your trap again. All this requires watchfulness, but very little work, as these runs are not continuous, and there are frequently many hours between runs. A small boy can manage it all after it is started.

AN UP-TO-DATE BISHOP.

Bishop Potter, of New York, is clearly up to date. While staying at a Syracuse hotel, he was called upon by an enterprising reporter, who finally put the crucial question: "Bishop, what do you think of the new woman?" "Why do you ask me that question?" the bishop replied. "They have Bishop Doane stretched upon a gridiron. Do you expect me to ascend the funeral pyre? Every good work has received its impress from woman. The 'new woman,' if she be true to herself, will be as she always has been, the sharer of man's joys and of his sorrows, and his helpmeet."—*Boston Globe.*

A REMARKABLE RECORD.

The large number of our readers who have noticed for many years the familiar advertisement in this and in nearly every other first-class medium, emanating from the firm of Cornish & Co., of Washington, New Jersey, will be interested to note that this old established and reliable firm are making their thirty-first series of Annual special bargains in Pianos and Organs. Their new catalogue is a work of art and fully describes every instrument manufactured by them, and gives much valuable information. A good organ can be bought for only twenty-five dollars and a first-class \$400 upright piano for \$160. A large number of the subscribers of this paper own Cornish Pianos and Organs and are well satisfied. Messrs. Cornish have the good will of thousands who have been enabled by their easy method of purchase to put a really fine musical instrument in their homes at factory cost. Don't fail to write immediately for the new catalogue, to Cornish & Co., Washington, New Jersey.

WOMAN IN 1795.

The following is from an issue of the *Lady's Monthly Magazine* of 1795: Who shall describe a woman of fashion? Her value is only in her jewels. She seeketh powders and paint, and with her hands willingly she maketh cosmetics. She briugeth food and raiment from afar, that it may be more costly; nothing homely or cheaply purchased pleaseth her. She squandereth a piece of china and buyeth it, and squandereth her husband's money in vanity. She girdeth not her body with modest raiment; her apparel is scant and indelicate. She maketh her house the resort of gamblers; her candles burn and give light to evil doings. She layeth her hands on the cards; yea, eagerly her hand divideth the pool. She maketh card purses, and delivereth tickets of invitation for masks and revelry. She openeth her mouth to utter evil words; her tongue retailleth scandal. Her children are nurtured by a stranger and respect her not. Her husband, too, he despiseth her. Fortune, birth and beauty might have raised her above all others; but she is the child of folly. Her conduct should, therefore, have made her a pattern for all women, and her works would have praised her in the gates.

THE HONEYMOON.

(A novel in 100,000 chapters.)

Chapter I.—"Whose little duckie is oo?" "Oo 'ittle duckie." "Who's a soogar plum?" "Oo is." "Who's two soogar plums—three soogar plums—ten million soogar plums?" "Me is." "Do 'e 'ittle soogar plum love its own Willie teety?" "Es, 'e 'ittle soogar plum do." "How much do 'e 'ittle duckie love its own darlingest?" "Oo—oo—oo—oo?" Chapter II.—The same as Chapter I. Chapter III.—Precisely as previously. Chapters IV. to CM.—Ditto. Finis.—*New York Sun.*

25c. with order, balance \$2.70 C.O.D. and express charges, buys a genuine decarbonized steel, K. & W. automatic self-cocking, nickel plated, rubber handled, 5 shot Revolver, #2 or #3 S. & W. model, best grade. The cheap imitation, made of cast iron, nickel plated, only \$1.85. State which wanted, steel or iron revolver. Our prices are lower than any others, quality considered. Kirtland Bros. & Co. 111 Nassau St. New York

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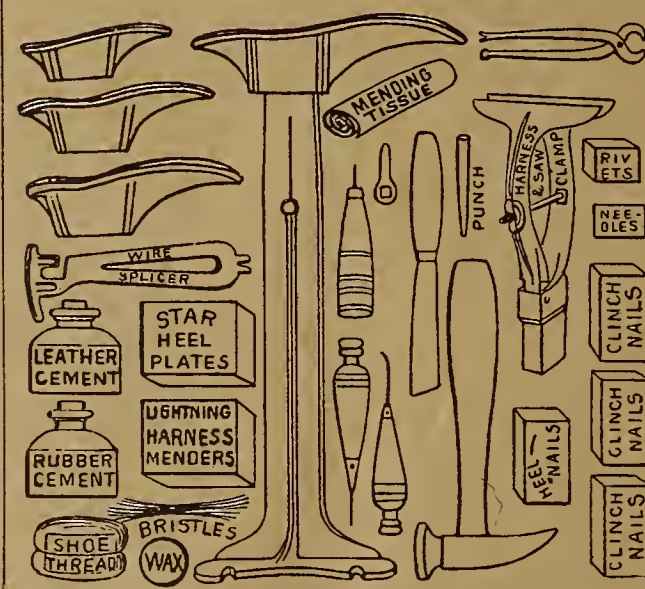
OUR HANDY COBBLER

NOTICE From now on all outfits will contain a Soldering Outfit in addition to articles named below.

Save Your Money and Time

By Mending Your Shoes, Boots, Harness, Rubber Boots and Coats, Wire Fences, and do a Hundred Odd Jobs at Home with Our Cobbling Outfit.

Premium No. 68.



MANY A BOOT OR SHOE would last longer if it had a little patching done to it, and yet it is thrown away because of the inconvenience and expense of taking it to the shoemaker. MANY A RUBBER BOOT has been rendered useless by reason of a nail-hole in the sole, and you never could think to take it to the shop for repair. MANY A RUBBER COAT is made uncomfortable by a leak in the seam and nothing at hand to stop it. MANY AN ACCIDENT has occurred by having a defective strap in the harness because the means were not at hand for repairing it. MANY A DOLLAR is paid out for repairs that could just as well be made at home, and many a dollar is lost by putting off needed repairs, awaiting a convenient time to go to the shoe or harness shop.

MANY DISCOMFORTS, inconveniences and losses such as the above can be avoided by having about a Handy Cobbler, a complete outfit for repairing boots, shoes, rubber boots, rubber coats, harness, wire fences and a hundred of odd jobs around home. NO ONE CAN AFFORD TO WASTE MONEY at any time. Therefore, you should not waste a moment waiting to send for this handy outfit, with which you can save many times its cost every year.

- The following are the articles the outfit contains, with their retail prices:
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| 4 Iron Lasts..... | \$1.50 | 1 Box Lightning Menders..... | .20 | 1 Dozen Bristles..... | .05 |
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| 1 Pegging-awl..... | .25 | 1 Ball Shoemaker's Wax..... | .05 | 1 Package Mending-tissue..... | .25 |
- Every article in the outfit is made from first-class material, and will give excellent service. So far as the tools are concerned, there is practically no wear out to them.
- PREMIUM No. 68.—This is the complete Cobbling Outfit as described above. Price, \$2.75; or with Farm and Fireside one year, \$3.
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- SHIPPING DIRECTIONS Cobbling Outfits must be sent by freight or express, at the purchaser's expense. By a special arrangement with the express companies one outfit can be sent by express about as cheap as by freight, and often cheaper. By this arrangement you will get your outfit in a very short time after the order is received. Give name of express office when different from post-office.
- Address FARM AND FIRESIDE, Springfield, Ohio.

Smiles.

A HOT SPELL.

What's the use of diggin'? The world won't stop If we take to hammoeks And let work drop.

"Folks as won't labor Needn't eat," they say. Like to know who wants to, On such a day.

Too hot to hoe; Too hot for fishin'. Wish you were a pickerel? Pshaw! I'm too hot for wishin'.

-Agnes M. Cole, in Century.

MARY'S MOTTO.

"Why do I ride in bloomers? Well," Said Mary, "they my looks enhance. And should they bring forth jeers and winks, 'Evil to him who evil thinks.'"

-Indianapolis Journal.

A TOUGH SNAKE STORY.

ONE day last week as Richard Roe was crossing the Seven Mountains with his bicycle, he saw an object in the road a few rods ahead, which he correctly reckoned was a good-sized snake. He made up his mind to have some fun by running square over his snakeship, without any thought that it might be a dangerous rattler.

He examined the wheel, and found the marks of the reptile's fangs in the tire, and the green venom about the punctures, and the tube was still swelling. He had no snake medicine about him, so he gently carried his machine to a soft, cool spot under a tree near the road, and hurried to the nearest house, two miles away, for a pint of whisky, and returning as fast as his legs could carry him, he was soon alongside his bike, and found the rubber swollen more than ever.

The whisky was obtained at the house of John Doe. The names of both these gentlemen being familiar to all, there is no further need of vouching for the truthfulness of the story.

A HUSBAND'S SAD STORY.

Cleanliness does not always conduce to godliness. It didn't in the case of the New England sea-captain, who sat upon a wharf relating his woes to some grandchildren. His wife was a chief apostle of the gospel of soap and water, but the husband had never been fully converted.

"Now, I'm a patient man. I'm willing to be told to wash my hauds before I touch the coal-hod, and again afterward. I'm willing everything on the stove should have a bath before a meal and afterward. I never have complained about sitting in the L part of the bouse and shutting up all the rest for company, or wiping my feet on four sets of mats on the way to the table; but there are some things that do rile me a good deal."

The children were somewhat used to these outbreaks, and had learned the value of silent sympathy.

"What do you suppose I'm waiting down here for?"

As no one could imagine, he explained: "I sent for a man to come this morning and take away those shed-room stairs and put up new ones, and I do declare your grandma set out he shouldn't move them till she had scrubbed them down! There's the carpenter—I'm paying him by the hour—sitting out there on the woodpile waiting for those stairs to be washed. I dare say if you looked around you couldn't find so much as an eye-winker dropped on them, anyway."

"Can't the man do something else while he's waiting?" asked the practical listeners.

The old man smiled. "I dare say he could, sonny. Run up and tell him to be scouring bis ualls and putting

chlorid of lime on his hammers and saws, for no doubt he'll be called on to do it." And the old man crossed his limbs dejectedly, like one who had lost all spirit and courage.

BOTH EQUAL TO THE OCCASION.

A well-to-do gentleman of middle age said to me, several days ago: "Do you know that I had rather shell green peas than do almost anything else? My wife says that it demoralizes the servants to have me do it, but I'm not living for the servants.

"The other day I sat down on our back porch with a pan of my favorite vegetables in my lap, and was enjoying myself in great shape, far from the maddening crowd, for my wife had some swell callers.

"All of a sudden I heard a woman's voice say: "Oh, I must see your cute back yard; I've heard so much of it."

"Then the window flew open and out popped two pretty bonneted heads.

"I turned mine away, and my wife was equal to the occasion. "Patrick," she said, 'you must remember to mow that grass before Mr. — comes home.' "Yis, ma'am, I replied in my best brogue, and all was well."—The Louisville Post.

THE WHOLE FAMILY.

"Is your sister at home, Johnny?" "No, sir. She hasn't returned from the academy yet."

"What academy?" "Why, haven't you heard that she's an instructress at the bicycle school—teaches the women to ride and sells them bloomers and things?"

"Well, are your father and mother in?" "No, sir. They're out in the part on their tandem triexle."

"Your brother, Bob, is traveling, isn't he?" "Yep. He's with one of the big racing teams. I tell you, he's a cracker-jack! Wins a hushel of diamonds and gold cups every week."

"And where are the twins?" "They've got Rover, our dog, out in the barn, and are teaching him to ride the new quadricycle, which has just been invented for household pets."

"But how does it happen that you are not riding a wheel, too?" "Sprained my ankle in training for the road race."—Buffalo Express.

A HORSE OF ANOTHER COLOR.

"It is something," mused the poet, "to have an imagination that scorns the houdage of earth and soars untrammelled through the cerulean infinity."

He paused to jot the phrase "cerulean infinity," in his note-book, hoping to make use of it at some future time.

He gazed wistfully into the window of a cheap restaurant where the white-robed cook was industriously turning sinkers, "To have the price of a plate of ham and heans in your pockets is another thing."

He sighed weekly and once more mingled with the hurrying throng.—Truth.

HOW IT WORKED.

The curtain had risen on the third act, and the momentary hush that preceded the resumption of the performance on the stage was broken by a stentorian voice from the rear of the auditorium:

"Is Dr. Higginspiker in the house?" A tall, heavily whiskered man occupying a front seat rose up.

"If Dr. Higginspiker is in the house," resumed the stentorian voice, "he told me I was to come here and call him out at ten o'clock."

Whereupon Dr. Higginspiker, looking very red, picked up his hat and cane and walked down the aisle amid loud and enthusiastic applause.—Chicago Tribune.

TOO LATE.

The house had been aroused by a burglar. Mr. Jones saw a man with a mask going through the pockets of his pantaloons, and as quick as thought he shot at him, the intruder making good his escape.

"Why," asked Mrs. Jones, thoroughly awake, "what did you scare me for?" "I saw a man robbing my pockets and fired at him."

"Well, he didn't get anything," said she, complacently. "How do you know?"

"Oh, I tried 'em myself before I came to bed."—Adams Freeman.

KEEPS RIGHT AT IT.

Gorman Dizer—"What do you do for a living when your summer boarders leave you?" Berkshire farmer—"Waal, about the same as I've been doin'—keep on fattening hogs."—Truth.

FITS CURED

(From U. S. Journal of Medicine.) Prof. W. H. Peeke, who makes a speciality of Epilepsy, has without doubt treated and cured more cases than any living Physician; his success is astonishing. We have heard of cases of 20 years' standing cured by him. He publishes a valuable work on this disease which he sends with a large bottle of his absolute cure, free to any sufferer who may send their P. O. and Express address. We advise anyone wishing a cure to address, Prof. W. H. PEEKE, F. D., 4 Cedar St., New York.

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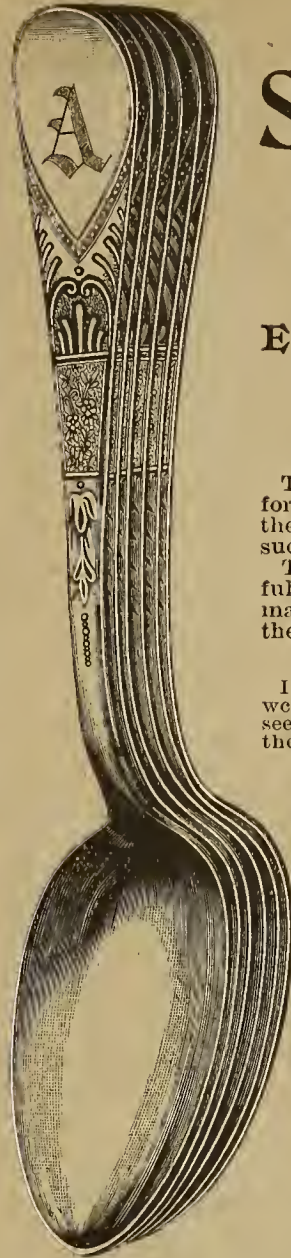
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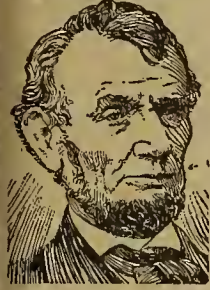
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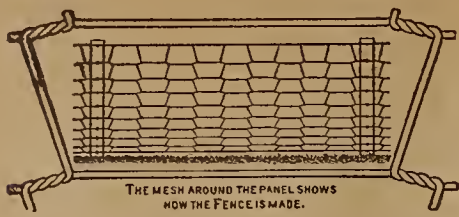
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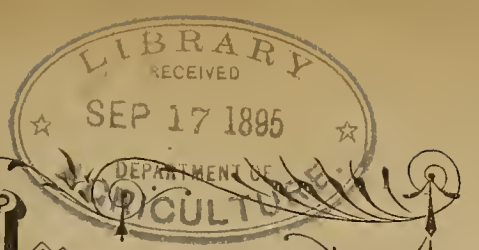
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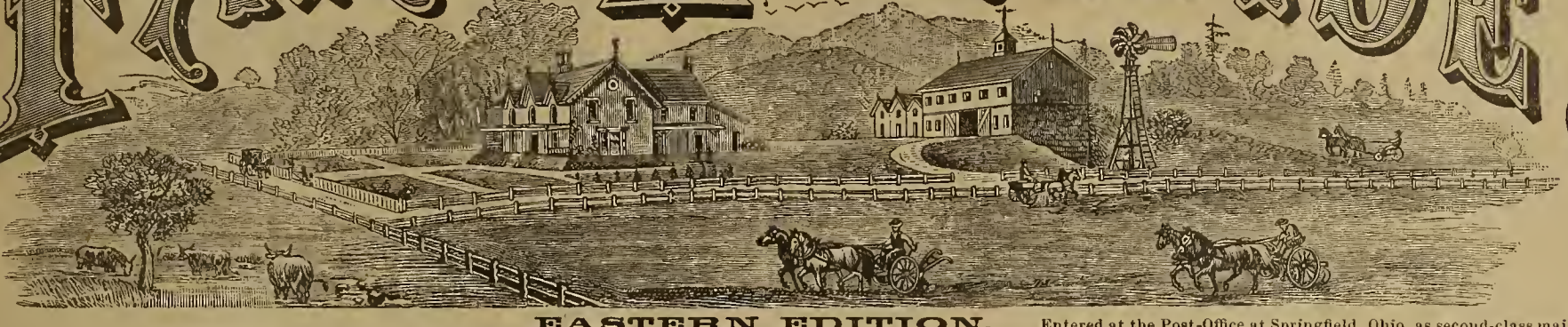
Makeshift Fences Make Shiftless Farmers. Not only that, but they have a demoralizing effect on the live stock of the farm. Here is a sample. Three respectable looking cows, in a good sized pasture, each cow with a yoke on her neck as large as a hen-coop. Comfortable outfit for hot weather!! That farmer has evidently been monkeying with fences "just as good as the Page." PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

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FARM AND FIRESIDE



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VOL. XVIII. NO. 24. SEPTEMBER 15, 1895. TERMS { 50 CENTS A YEAR. 24 NUMBERS.

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In the *North American Review* for September Professor Robert H. Thurston illustrates the "Trend of National Progress" by diagrams. "If we can trace the line of progress during the immediate past, if we are able to follow it during past centuries or bygone ages, we may lay down upon the chart the line of its earlier course, to date, and we can see at once what must inevitably be the direction, the rate, the distance gained, in any stated time in the immediate future, provided new and catastrophic phenomena do not, by their unexpected and unforeseeable action, invalidate all prophecy. Given the curve of human progress, in any field, as representing the immediate past, the immediate future becomes knowable with a degree of accuracy and certainty, which is the greater as the forces and the masses affected by them are the greater."

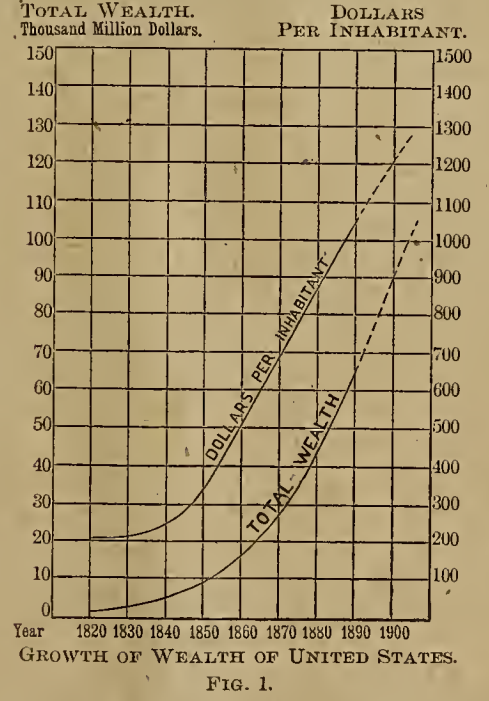
From a number of charts illustrating the trend of national progress in growth, in wealth, in knowledge and in power, we select two illustrating the accumulation and distribution of wealth. "Fig. 1 exhibits the growth of wealth in the United States as the product of the inconceivable physical power applied by our people to its production. The lower curve and the lower left-hand scales illustrate the total wealth of the nation, and its growth from the beginning of the century, while the dotted lines indicate the future probable growth. From 1820 or 1830, wealth has been rapidly increasing with an accelerated ratio. That is to say, from the date of the perfection of Watt's steam-engine and its application to mills and factories, and to steamboats and railroads, wealth has accumulated with a continually increasing rate of accumulation. From \$2,000,000,000 in 1820, it has come to be \$65,000,000,000 in 1890, and it may be expected to become fifty per cent more in 1900, and to double in the next quarter of a century. But the

upper curve, of which the quantities are reduced to dollars per capita, is a better index of our progress and its trend. The right-hand scale applies here.

"The wealth per inhabitant was but \$200 per capita in 1820; it was \$1,000 in 1890; is now \$1,120, and will be \$1,200 in 1900. The smooth and steady curvature of the line indicates that we may expect this gain to continue indefinitely into the coming decades at least, and that with wise administration of the government, with repression of economic heresies and follies, and with continued industry and growing intelligence as the outcome of more and more general and complete education, our people may anticipate a total wealth of \$2,000 for every man, woman and child in the community, within the first quarter of the new century.

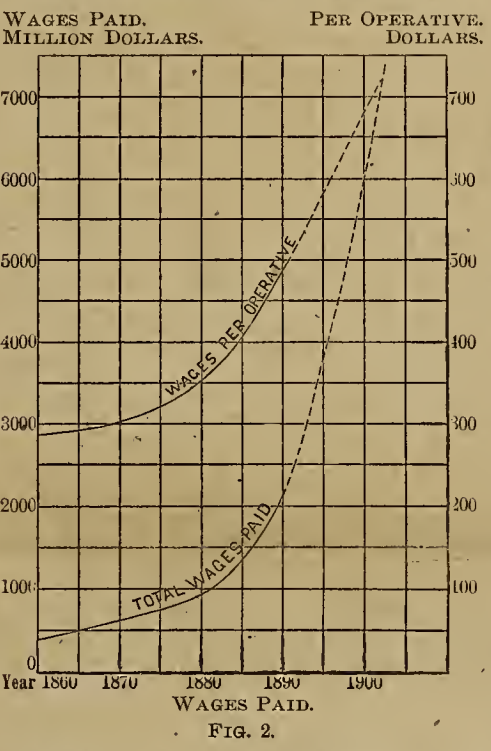
"Fig. 2 shows how wages are and will be distributed out of this wealth production. Before 1860 the wages were what we should to-day think very low, but since the institution of the embargo by the civil war, and the partial embargo of the late war-tariff, all wages have been steadily and rapidly climbing, with that same acceleration of rate of gain which has been everywhere else observed. Almost five times as much is paid out as wages each year as is measured off as the total capital of the country at the time.

"But the striking and encouraging fact is exhibited in the upper of these two curves. The wages paid each operative, less than \$300 in 1860, is nearly \$600 to-day, and will be above \$600 per annum in 1900, if nothing occurs to disturb our present prosperity and the condition of progress. In a few years more the wages paid, on the average, per individual worker, will be as great as to-day supports the average well-to-do family. Of all our curves, this is one



of the most rapid in its rise, and this means that the distribution of wealth is continually coming to be more and more equalized, and that the average day laborer and the workman of every grade will continually profit more and more, and will gain constantly a larger and a larger share of its distribution. Wealth will be more and more equally distributed, just so long as present social and economic conditions are maintained in a wholesome and un-

crippled state. The working people of the United States are rapidly taking possession of its wealth, as they always have held possession of its policy and its legislation. In fact, while we may boast many millionaires, as we boast of an occasional giant



stalk of corn or tall wheat-straw, it is the people as a whole, and the average working citizen, of whom we must think as the makers of the nation and the creators of its wealth. It is the average citizen, no less, who possesses that wealth and who directs the progress of the nation."

PRESIDENT ROOSEVELT, of the board of police commissioners of New York City, in concluding an article on the "Enforcement of Law," in the *Forum* for September, said: "In the end we shall win, in spite of the open opposition of the forces of evil, in spite of the surrender of the weakly good, if only we stand squarely and fairly on the platform of the honest enforcement of the law of the land. But if we were to face defeat instead of victory, that would not alter our convictions, and would not cause us to flinch one hair's breadth from the course we have been pursuing. There are prices too dear to be paid even for victory. We would rather face defeat as a consequence of honestly enforcing the law than win a suicidal triumph by a corrupt connivance at its violation."

They have not had to face defeat. They have already won. The struggle to enforce the excise laws in New York City, which attracted the attention of the whole nation, has been suddenly ended by the surrender of the Liquor Dealers' Association. The association has even gone farther than to stop fighting enforcement of the law. It has adopted a resolution that all its members shall close their places of business on Sunday, and any member who shall hereafter keep his place of business open, in violation of this resolution and in violation of the law, shall forfeit all his rights, privileges and benefits as a member of the association.

"On entering office," said President Roosevelt, "we found what indeed had long been a matter of common notoriety—that various laws, and notably the excise law, were rigidly enforced against people

who had no political pull, or who possessed sufficient means to buy off the high officials who controlled, or who had influence in the police department. All that we did was to enforce these laws, not against some wrong-doers, but honestly and impartially against all wrong-doers."

This triumph in New York for municipal reform and the enforcement of law demonstrates what can be done in every city of the land. Certainly a vast majority of the American people are in favor of the enforcement of all just laws honestly and impartially, and will hold in high honor such men as Theodore Roosevelt, who have the courage of their convictions and fulfil their sworn duties of office.

IN a recent address at Chicago, Keir Hardie, the British socialist, said, "In the year 1890, according to the best returns available, only seventeen per cent of the wealth produced by the level-headed, vigorous, sensible-artisans of America found its way into their pockets, whereas eighty-three per cent of that wealth went to the idle owners of land and capital." Commenting on this specimen of socialist fallacies, the *Chicago Tribune* says: "The total value of manufactured products for the census year 1890 was 9,372 millions of dollars. The cost of the raw material used was 3,162 millions of dollars. Therefore, the wealth produced by the labor of artisans on those raw materials amounted to 4,210 millions of dollars. Of that product the artisans got in the shape of wages 2,283 millions of dollars, or more than fifty per cent, instead of seventeen per cent. Out of the 1,927 millions of dollars, which the artisans did not get, had to be paid the cost of finding markets for goods and taxes, insurance, and other expenses of carrying on business. What remained was the reward not of 'idle capital,' but of the mental ability which could use capital productively. But for the business skill which conducts great enterprises, the earnings of the artisans in 1890 would have been but a trifle of what they were. Hardie is dissatisfied because the working-men did not get all that was produced, though they produced only a portion of it."

Is it not a sign of better things in woman that so many have plead for the release of Barberi, the Italian murderess? If so long ago the Man of Sorrows could pity and release one who sinned, have we not been very long in following his example? And if it has only been the fear of consequences that has kept woman pure, ought there not to be an equal fear to keep our boys pure? With reform at high tide, surely the coming generation of boys should be raised on the equal purity system. But from whom should we expect them to look for the example, their mother or their father?

A CORRECTION.—In the September 1st number we published an extract from a veterinary journal which stated that the veterinary department of the Ohio State University had been closed. President Canfield asks us to correct this report. He says that the veterinary department has not been closed; that the only change for the coming year is that made by the retirement of Dr. Detmers, and that his work will be carried on by his former assistants, Dr. Fischer and Dr. White.

FARM AND FIRESIDE.

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FARM AND FIRESIDE.

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.

Alfalfa, Is the title of Farmers' Bulletin No. 31, published or **Lucerne,** for free distribution by the United States Department of Agriculture, Washington, D. C. The wonderful growth made by alfalfa during the late period of excessive drought in the experiment patches scattered through the middle states attracted much attention. With pastures brown for weeks and weeks, the sight of a green patch of alfalfa growing right along was enough to make any farmer wish for a field of it. This pamphlet tells where and how it can be profitably raised. Let every farmer desirous of the information send for a copy.

Ramie. In the report recently published by the Department of Agriculture on the "Cultivation of Ramie in the United States," it has been the aim to tell the whole story of ramie, the discouraging features of the industry as well as its possibilities, in order that farmers desiring to take up its culture may do so understandingly.

"The fiber of ramie," says the report, "is strong and durable, is of all fibers least affected by moisture, and from these characteristics must take first rank in value as a textile substance. It has three times the strength of Russian hemp, while its filaments can be separated almost to the fineness of silk. In manufacture it has been spun on various forms of textile machinery, also used in connection with cotton, wool and silk, and can be employed as a substitute in certain forms of manufacture for all these textiles, and for flax also, where elasticity is not essential. It likewise produces superior paper, the fineness and close texture of its pulp making it a most valuable bank-note paper. In England, France, Germany, Austria, and in our own country to an experimental extent, the fiber has also been woven into a great variety of fabrics, covering the widest range of uses, such as lace, lace curtains, handkerchiefs, cloth, or white goods resembling fine linen, dress-goods, napkins, table damask, table-covers, bedspreads, drapery for curtains or lambrequins, plush, and even carpets and fabrics suitable for clothing. The fiber can be dyed in all desirable shades or colors, some examples having the luster and brilliancy of silk. In China and Japan the fiber is extracted by hand labor; it is not only manufactured into cordage, fish-lines, nets and similar coarse manufactures, but woven into the finest and most beautiful fabrics."

The home for the ramie industry in the United States is in the Gulf states and California. "While great progress has been made in the past few years," concludes the report, "it can hardly be said that the time has come for ramie to take its place at once with the great staples as a money crop. But the time has come for farmers to experiment seriously with its culture, in order to become familiar with the growth of the plant and to secure roots for future planting on a larger scale."

NOTES ON RURAL AFFAIRS.

Lending and Borrowing. A friend asks me to say something about the borrowing habit, so prevailing in many neighborhoods. Let me state, first, that I value the entente cordiale, that is, good feeling and good will among neighbors, very highly, and possibly to an excess. For this reason, I am always willing to lend to my neighbors and friends anything (or almost anything) they have the heart to ask for. On rare occasions, when I find myself in need of a tool that I do not have, and that I know my nearest neighbor possesses, I will get the loan of it. But I seldom feel easy over it. It seems almost like trespass, and I surely consider my neighbor justified to come to me for a tool or other thing ten times in return for the one instance of my borrowing.

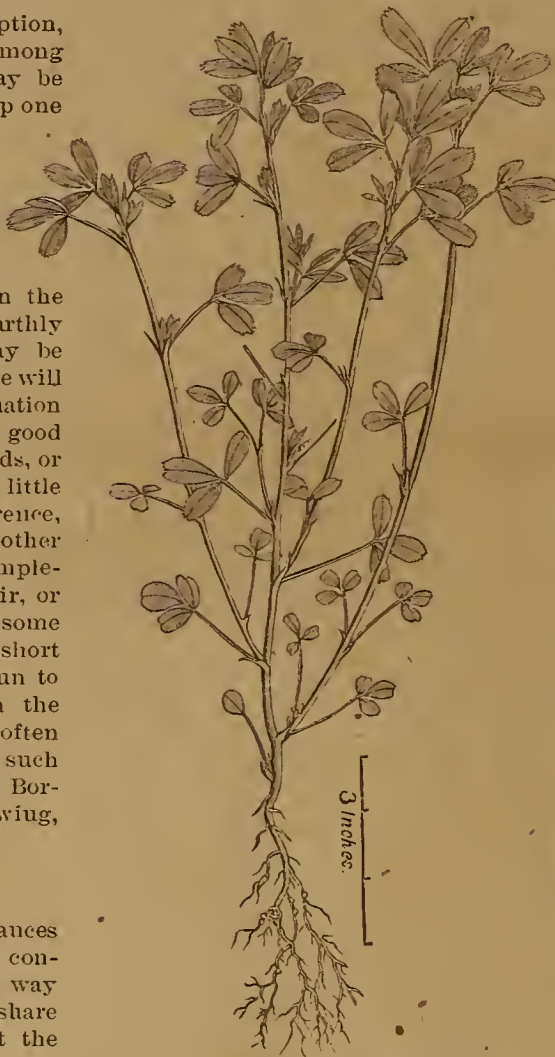
Borrowing, where Justified. As an exception, borrowing among neighbors may be perfectly justifiable. We should help one another to bear the burdens of life. I think this is one of the great privileges of man, to help a brother or sister who is in trouble, or to ask for sympathy and aid when we are in trouble ourselves. This helps to smooth the rough places in the path of life, and makes this earthly existence endurable. A person may be ever so wealthy and influential, yet he will find himself now and then in the situation to accept a neighbor's assistance or good offices, to borrow his time, or his goods, or even his thoughts or brains. A little accident, or some unusual occurrence, may make the use of a tool or other article desirable or necessary. An implement may break or get out of repair, or there may be an unusual demand for some staple article, or the supply run short unexpectedly. We cannot always run to town, perhaps miles, especially in the hurry of the work. Neighbors can often do a great deal to help one another in such cases without inconvenience or loss. Borrowing then is justified, if it is borrowing, and not appropriating.

Borrowing and Stealing. In many instances borrowing is a convenient and safe way of stealing. There is only a small share of exaggeration in the jokes about the borrowed umbrella that never returns. A neighbor comes to borrow a tool, or a ladder, or something of that sort. In rare cases the borrowed article is returned immediately. In most cases the borrower keeps it until some convenient chance to return it, or more usually until the owner asks for its return. In many cases the loan is entirely forgotten. The owner may not want to use it for some time, and if he does, he has no idea where it is. He may have a faint idea that it is borrowed by somebody, but he cannot remember who among the number of chronic borrowers in the vicinity got it. In the meantime the borrower has and uses the article right along like his own, and finally perhaps imagines that it always was his property. It is by no means an uncommon or particularly remarkable thing if a loaned cup of salt or sugar, or a few drawings of tea or coffee, or a little flour, etc., are never returned. The borrower is so much ahead, and the lender is so much out—that is all. I don't see wherein this style of borrowing differs from actual stealing.

Unjustifiable Borrowing. There are people who make a regular business of this style of borrowing, and they do this simply because it is an easy way out of a difficulty, and perhaps because it pays. If a shiftless person is out of sugar, and out of money, too, to enable him to buy it, how easy to go to a neighbor who is known to buy his sugar by the barrel, and borrow a pailful. The difficulty is in paying it back. When

you borrow a neighbor's tool or other article, and keep it, you violate the commandment that says, "Thou shalt not steal;" for it is stealing, and without justification whatever.

Remedy for Borrowing Habit. "Never a borrower nor a lender be." This is a most excellent rule. It does not forbid one to render aid to a neighbor, nor to receive aid from him, in rare instances. But it forbids the borrowing and lending habit. The way I would manage, if I had neighbors that are chronic borrowers, is as follows: Keep a regular book of "loan accounts," with a credit and debit side. When a neighbor comes after the loan of any article, large or small, open a "loan account" with him, and put the article loaned down against him, also giving its value. Let your neighbor see this, too, and tell him that you charge the value of the article to his account. When he returns the article, give him credit for it, and its full value. If the article is damaged, or parts of it lost, keep the amount standing as a charge against him. If he borrows sugar, or tea, or flour, be sure that it is properly weighed out to him, and the proper charge entered in his account. Possibly this formal way of bookkeeping may make him more careful in the future; but if it does not, and he



ALFALFA SEEDLING, SIX WEEKS OLD.

does not feel ashamed of the frequent entries, you may bring him to terms by requiring frequent settlements. Show him the book account, and how much he is in arrears about returning things; and in most cases there will be a gradual cessation of his borrowing visits. On the other hand, put down just as carefully whatever you borrow from your neighbor. It will serve as a reminder. It will make you feel ill at ease when you have to make entries against yourself somewhat frequently, and it may also serve to cure you of the borrowing habit. Better never let it become a habit.

Potash for Crops. "Better crops result from the use of fertilizers rich in potash. Most fertilizers sold do not contain sufficient potash to insure the best results." I quote this from an advertisement which for some time has appeared, above the signature of the German Kali Works, in all leading agricultural papers. It reminds me that I owe them a little puff. Some time ago I mentioned them in these columns in a rather fault-finding manner; this time I can say that I have had some experience, this year and last, which tends to prove that sometimes "better crops" do result from the use of fertilizers rich in potash. Last year, on one side of a two-acre field I applied muriate of potash at the rate of perhaps one hundred and fifty pounds per acre; on the other side I applied sulphate

of potash in the same manner—all broadcast after planting (a mixed crop—corn, potatoes, beans, etc.) Last year already the crops were noticeably the best on the portions which received the applications. This year the effects on the corn and potatoes are still more marked. The center strip, which received no potash, looks this year as if the crops were cut down, or dried up, while they are quite respectable at both ends, where the applications had been made. And this in spite of the fact that I supposed this soil to be well supplied with potash. Evidently the muriate shows as good results as the sulphate. The potatoes last year were of equally good quality at both ends. I will give to these potash fertilizers other extensive trials next year.

T. GREINER.

Virginia Grey Winter Oats. The farmer who does not experiment with untried varieties of grains, vegetables, grasses and other farm products, so as to determine whether they are more profitable than those previously grown by him, loses very much of the pleasure of farm life.

The great agricultural value of the winter oat has been recognized throughout the cotton-growing states for a quarter of a century, but it was only a few years ago that they were found to be hardy in the states of Virginia, Delaware and Maryland. In these states they are rapidly superseding the spring-sown oats, which so often prove a failure, owing to the frequency of a protracted spell of dry weather just previous to or during the time of heading out.

The practical advantages of sowing winter oats instead of spring oats, briefly summarized, are the following:

They are about as certain as any other fall-sown grain crop. The regular yearly yield is nearly or quite double, and the grain weighs eight to ten pounds more to the measured bushel; they are hardy as far north as the fortieth parallel of latitude except on or near the summits of the mountain ranges. They can be sown a little earlier or about the same time and fertilized in the same way as winter wheat. They can be pastured in the fall, winter and spring, and when cut in full bloom, they make excellent hay. They are free from the attacks of the fly and of rust; they measurably prevent surface washing on steep hillsides; they can be harvested a few days earlier than wheat; they possess a stiff straw, and stand up well where the spring varieties would be likely to fall down and lodge.

They are certainly worthy of a trial by hundreds of readers of the FARM AND FIRESIDE. The best seed for trial can be obtained of seedsmen in the leading cities in the states of Delaware, Maryland and Virginia.

Sow from one and one half to two bushels, owing to the time of seeding and the quality of the soil and amount of fertilizer used. West of the Alleghanies, where the mercury falls as low as twenty-five to twenty-eight degrees below zero, a top-dressing of good barn-yard manure scattered over the surface during the winter will be of advantage also in promoting tillering, or stooling, as well as to insure a good stand of spring-sown red clover or grasses for hay or pasture.

The practical results of growing the winter oats are shown by the following reports: A Kent county, Delaware, farmer informs me that the yield in his neighborhood ranges from fifty to seventy-five bushels to the acre, each bushel weighing from thirty-eight to forty-five pounds, making it the most profitable of the grain crops. In Fauquier county, Virginia, B. F. Cockerill raised 1,202 bushels of winter oats on twenty-one acres of land, or at the rate of over fifty-eight bushels to the acre. At the price of winter oats last year, this would have paid \$28.50 an acre for the land.

On account of the rapid increase in foreign countries of the acreage devoted to the production of wheat, there is but little doubt that it will pay American farmers to lessen the acreage devoted to wheat and increase the acreage of winter oats, as well as for the additional reason that the rapidly increasing demand for oats as food for stock and for household use fully warrants the change.

W. M. K.

Our Farm.

FARM THEORY AND PRACTICE.

THE POTATO CROP OF 1895.—Three bushels of potatoes to each inhabitant of this country is all that is consumed at a price that justifies the production of the potato. This amount includes all merchantable tubers used as seed. In the last two years we have grown less than two and one half bushels per inhabitant, and this year's crop is as yet an unknown quantity. The acreage planted would have proven excessive in a seasonable year, and the surplus would have been used as food for stock or thrown away. The extreme heat, however, and the drought combined to limit the yield this year, and while prices will not likely be high, there will not be any excessive production. Heat is more detrimental to potato growing than drought, though the latter is bad enough.

HARVESTING THE CROP.—Satisfactory implements for digging potatoes are costly, but for the small grower there are now a few makes of cheap diggers that do pretty fair work. No digger can do good work in a weedy field, and it is best to dig early and medium varieties as soon as the vines are fully dead and the skin on the tubers becomes tough. When they cannot be marketed from the field, they should be stored in very small ricks and covered with straw. If they are handled carefully, potatoes may be dug in August and kept without any loss other than the rotting of tubers that are cut or badly bruised. The rick should be left open the first night, and covered early the next morning. Potatoes in small ricks or piles in the field or in an orchard are safer than in a cellar in very hot weather. Just as soon as the nights become cool, the main crop of potatoes can be dug and put in bulk in car or cellar with safety, though their keeping qualities are better insured by letting them go through a sweat under straw in small ricks or piles.

POTATO-BOXES.—It pays to have bushel boxes on a farm that produces many vegetables. These boxes may be bought direct from a factory, and are lighter and stronger than home-made ones. They should hold just a bushel when level full, and can be set in tiers on top of each other in the wagon. Their use lessens the labor in handling a crop, and pays in several ways. When sorting, each man knows how much he is doing, and it is a convenience to know when a full load is ready to be drawn from the field. In loading and unloading the labor is reduced to the lowest point. These boxes cost me about twenty-five cents apiece, freight included, when put together ready for use, but they will last twelve or fifteen years if cared for, and repay their cost every two years in handling twenty acres of Irish potatoes and some sweets.

SELECTING SEED.—I have never found it practicable to select hills for seed before digging. It seemed too big a job when 200 bushels were needed for that purpose. The next best thing is to select seed for an acre or two of ground, and from potatoes grown on this plot again select the best for the "pedigree" plot another year, using the remainder for field planting. Very soon one can have first-class stock and maintain it without any fuss or much extra labor. When seed is high-priced, it is profitable to use "seconds," grown from large seed for the main crop, going back to the "pedigree" crop for seed the following year. The potatoes intended for planting should be handled more carefully than many growers seem to think necessary. I prefer keeping them in a cellar until December, when they are taken out and buried. There should be a heavy covering of straw, then six or eight inches of earth, and after the earth is frozen solid, another heavy covering of straw should be added, to keep the frost in the earth. This is a cheap form of cold storage.

SORTING AND MARKETING.—One of the hardest things for some to learn is that it does not pay to send poor stuff to market in the same package with the good. Many believe that the good sells the poor, and that they are gainers by not taking out the inferior stuff. The truth is that a poorly sorted product usually brings no more money than the best of it would have sold for by itself, and the labor and expense of

taking or sending the inferior to market, as well as its feeding or market value at home, is wholly lost. That is not the worst of it, as poorly sorted vegetables or fruits drive buyers away from the producer. In the case of potatoes I find it best to make three grades. The best is sent to market, and brings full market price. The "seconds" can be sold to growers for seed, or be used on the farm when thought best in a year of high prices. The third grade makes good food for stock. Potatoes should be fed raw to horses, cattle and sheep, and are beneficial to health. For hogs and poultry they should be cooked. When corn is worth fifty cents a bushel, I believe that the food value of a limited quantity of potatoes is not less than fifteen cents a bushel.

Four years out of five the grower who sells his potatoes before winter does the best. Shrinkage is heavy, and there is risk of loss in winter shipments. When potatoes are held from fall until spring, the loss by shrinkage in weight and by rot not infrequently exceeds fifteen per cent, much depending upon latitude and variety.

DAVID.

CREAM-SEPARATORS.

Thousands of cream-separators have come into use during the past few years, and the number is certain to be doubled during the next six months. Few can afford to do without a separator, even though only a few cows are kept, and the sooner dairymen ascertain their value, the better. I have longed to secure a machine for two years or more, but already possessing a high-priced creamer of modern construction and a well of very cold water, which enabled me to obtain good results in separating the cream from the skim-milk, I delayed. With care, I left but two tenths of one per cent of butter fat in the milk, as shown by the Babcock test, and had not the unprecedented drought so affected the well as to cut short the necessary water supply, I would probably have continued with the creamer at least another year.

Finding matters growing worse week by week as the drought burned out the pastures, cut short the meadows and soiling fodder-corn, I bought one of the latest machines, and am delighted with the results. The machine is very simple in construction and easily managed. Instead of a multiplicity of parts to wash, wear and get out of order, the bowl has but three parts, and these easily cleaned. The gearing is all incased, thus avoiding danger and being protected from dust and moisture. It has a high stand—an advantage not easily estimated, as it saves room and at the same time secures solidity, and thus gives better results.

I first tried the machine by using skim-milk, as I feared to risk whole milk the first time. The skim-milk had set in the creamer over night; the night being extremely hot and the supply of water not renewed, it of course was expected to have some cream remaining in it. After warming to 75 degrees, it was run through the separator, and I was surprised to obtain as much cream as had been already secured by the creamer. The morning's milk, just drawn from the cows, was then run through, with a large increase in the amount of cream secured. A sample of the skim-milk right from the separator was then run through the Babcock test, and scarcely a trace of butter fat could be found—possibly one hundredth of one per cent, or one part in ten thousand. At the end of one week it was found that the yield of butter was increased forty per cent. Had the well at the dairy-house held out in its full supply of water, this difference would not have been so great, but it led me to wonder how many thousand dollars' worth of butter is lost in this state each year by those who have neither cool dairy-houses nor creamers.

While a good dairy-house will continue to be essential to those who have separators in affording a storage-place for the cream and butter, the crocks, pans, cans, creamers and tanks may be used for other purposes, and the amount of work materially decreased. Where one keeps five or more cows, the increase in the butter output by means of a separator will almost pay for the machine in a year's time; while if only two or three cows are kept, it would still be the part of economy to buy

one of the smaller sizes. Mine has a capacity of three hundred pounds of milk per hour, which is sufficient for any number of cows from five to twenty. Where a greater number of cows are kept, it would be advisable to secure one of six hundred or more capacity, and run it by means of some power. The improved hand sizes now run comparatively easy, and it is not more tiresome to run it even when in full operation and the bowl making 8,500 revolutions per minute than to turn a grindstone or churn, and not so much so if some one were to bear heavily with an ax upon the stone, or it should be a very large churning. There is a double advantage in having the gears inclosed. They cannot collect dust, and with exposed gears there is more or less danger while working about the machine with its swift-flying gearing.

Milk run through a separator is still of good temperature for feeding to young calves or pigs, and thus saves not only the handling of the milk in setting and skimming, but also saves warming it for the calves. There is a disadvantage, however, as with many other things. The members of the family are very fond of milk for table use, but wife says the milk is no longer good to drink; it is too thin to taste well. So it would depend on the question of whether the farmer kept cows to make butter or to supply the table with a cool, healthful and refreshing beverage. If for butter, get a separator; if for the latter, set the milk in a good creamer.

JOHN L. SHAWVER.

Shady Nook Farm.

WAITING TO GO INTO SHEEP RAISING.

The misfortunes that have come to the sheep industry, though crushing, are not to last much longer. It is evident to those who have watched the signs of the times that a reaction has already set in, and there will be no more hesitation or delays in embarking in the business. The great rush of sheep to market has slackened, and that, too, in the face of advanced prices. Texas flockmen have reconsidered their resolve to continue shoving off their sheep and quitting a business that has been subject to such ups and downs.

It now transpires that those who were in a hurry to get out of sheep had no intention of staying out, but quit to begin again as soon as indications warranted. Some only meant to sell the kind of sheep they had, which were generally wool sheep, and if mutton and wool were to be the purpose of the future, as they began to suspect, to embark in the business with such a class of sheep, when they wanted to. There can be no question now that the sheep of the future will be a sheep of more size than the standard Merino of a few years ago, with mutton form of which the Southdown may be named as the true type, with earlier maturity, quicker grown than the sheep used formerly, with the best feeding qualities, hardy and prolific, with the largest fleece of good-wool.

It is said by some that the best mutton qualities and wool qualities cannot be found in one sheep. I do not believe any such thing; it is done already, and if it were not, then it is just like an American to produce it. In this we do not mean a sheep that combines these qualities pretty well, but in the very highest degree. It does not matter what has or has not been done, if such a sheep is really wanted, it will be found in American flocks.

IF THE SHEEP FEVER SHOULD COME:

Thirty and thirty-five years ago when the sheep fever was common in the West, if a man found himself dead stuck on sheep, he would begin to hunt up Merino sheep, and possibly go to Vermont, then the headquarters for sheepmen, and pay large prices for rams to increase and improve the fleeces of his flock. Wool was all a man wanted or expected, and there was a notion that no high-class rams could be found this side of Vermont.

It was rather amusing to men not in the business in those days to see a man go to Vermont with lots of money, buy a few "good ones" and come back home wildly enthusiastic, and talk Vermont and Merino sheep from morning until night. But a change has come.

It is not probable now that everybody will do as they formerly did. The grand Vermont sheep will be wanted farther on when the sheep business becomes adjusted

to the new conditions. No doubt some farmers will continue to raise sheep for wool primarily, and some regions will be found better suited to the purpose of wool growing than for growing the best mutton. In the meantime, shrewd farmers and knowing ranchmen are studying their best interests from

THE STOCK-YARDS.

There is less speculation in the mutton product than in wool. Mutton, like beef and pork, is a staple product at any and all seasons of the year; wool had its season, and the market was manipulated, boomed, managed as mutton, beef or pork never was, at least for any length of time.

For the future the wool buyers and wool manufacturers will not dictate the prosperity of the sheep raisers in this country. The mutton market will be studied; the stock-yard reports will be of keenest interest to the sheep raisers. The first question will be, What is mutton worth?

THE BREED OF SHEEP THAT WILL BE KEPT.

That breed will be the most popular that brings the most money in the shortest time, and on such feeds as the farm produces. One man with rich, level, high-priced land will use one sheep, and another with thin, rolling land will find a smaller sheep most to his purpose, and the markets used will finally decide the question.

WILL IT BE A PURE-BRED, REGISTERED SHEEP?

We would say not, especially for awhile, as cross-breds and grades can be raised cheaper; the first investment costs too much money. There will be a gradual approach to high-bred and pure-bred, and the time will come when such technicalities as "natives," "westerners," etc., will give place to Mutton Merino, Merino Southdown, Merino Cotswold, and so on, as the ease may be, but always referring to a book of record as is done by the terms Shropshire, Lincoln, Hampshire, Oxford and American Merino. As time goes on, these grades will approach the highest standards, and be recognized in the markets of this country as they are now in the central markets of England, France and Germany. We are successfully entering a new era of sheep raising—the mutton era—and there is a wide scope for progressive sheep raisers.

R. M. BELL.

PICKED POINTS.

My counsel is often sought by persons having hogs afflicted with partial paralysis so severely that locomotion of their hind parts is suspended, and the after parts are dragged about by the forward parts. The cause is improper feeding. The food has been too concentrated, too unbalanced, and this upset the nerve centers. Grain, grass, and exercise on the ground, together with dry, clean, sheltered sleeping-quarters guarantee hogs a healthful, prosperous condition.

Butter and cheese are way down; the cold-storage houses of the cities are crowded with the former, and this is likely to keep prices down a long time. When sheep went down, too many went out of the business and changed to dairying. Now the cow has a black eye and the sheep is coming into its innings. It is easier to get out of a line of business than into it. The wise farmer sticks to a business that has served him well, knowing that if it gets depressed it is sure to come up again.

There are several diseases of cattle in the far West and Southwest that do not affect eastern cattle. One is the "deadly deposit" on lands that overflow. Another is bloody urine in certain localities. The third affects the animals something like goiter, but it is not that. The last has appeared as far east as Missouri. By far the most troublesome but least fatal of the new diseases is one in the state of Washington. Sores break out about the feet and legs, and cripple the animals for months, then disappear, only to recur again. As most of these diseases are parasitic, if one sixth part sulphur be added to their salt regularly, some of the difficulty would be avoided.

GALLEN WILSON.

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The thousands of people whom it has raised from disease and despair to happiness and health, are the strongest and best advertisements Hood's Sarsaparilla has. No other preparation in existence has such a record of wonderful cures.

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Prominently in the public eye to-day.

Our Farm.

NOTES FROM GARDEN AND FIELD.

THE POTATO-BLIGHT.—If the same conditions as I find them on my travels through New York and Ohio are met with in other leading potato districts of the country, I think I would be safe in saying that the potato crop is reduced fully one half by the early blight. This disease has indeed become a serious drawback and obstacle in potato culture. The only really healthy potato-patches I have thus far seen (isolated instances elsewhere excepted) was in some portions of the central part of New York state, mostly in elevated locations. Possibly the great decrease in crop may serve to keep prices up. Such a large area is planted in potatoes this year, that there was and is some danger of an oversupply and consequent extremely low prices. What "elevating" influence the interference of the blight will exert remains to be seen.

SPRAYING AND BLIGHT.—I found the large trial patches of potatoes at the Ohio experiment station badly blighted also. The plantations had received three sprayings, and yet most of the varieties had already entirely succumbed to the blight. Among those yet free from the disease, I found Carman No. 1. This at the station appears under three names; namely, its correct and proper one (Carman No. 3), Banner and Peerless Jr. The potato, under whatever name it may be planted, is a strong and luxuriant grower, the stem showing the characteristics of Rural New-Yorker No. 2. The tubers are smooth and beautiful. Evidently we have in this (Carman No. 3) a valuable addition to our list of potato varieties; that is, if the cooking quality is as good as I suppose. I have not yet tried it on the table. My plants at home are more exempt from the blight thus far than anything else I have got, some seedlings perhaps excepted.

Whether spraying potatoes with Bordeaux mixture pays is yet a serious problem. If we let the blight have its way, we will suffer serious loss. There can be no question about that. But it seems, when three thorough sprayings do not check the disease perceptibly, we must begin to doubt that there is so very much in spraying, so far as this particular malady of the potato is concerned. The Ohio station people say that possibly they have not sprayed often enough. The potato foliage should be kept covered with the copper spray from the very start to the finish. But we meet obstacles in our way. The tops get large, and soon make it impracticable to go through them with a machine sprayer, while the use of the knapsack sprayer on large patches involves a rather large amount of hard work. The task itself of carrying and working the knapsack sprayer is so distasteful to some people that I had one of the day hands quit his work for good because he was set at spraying with the knapsack.

A DISCOURAGING INSTANCE.—Two or three years ago the potatoes at the station were sprayed six times, and seemingly with some good effect. But it was found very doubtful whether the increase in crop paid for the extra expense of spraying. Consequently, you will not at present find as great an amount of enthusiasm in favor of spraying potatoes at the Ohio station as seems to prevail at some others of our experiment stations. And to tell the truth, I myself am somewhat discouraged in this respect. I hope, however, that we will be able to renew our courage and obtain a new supply of faith by more favorable reports from elsewhere. Any of our readers who have experimented in this direction this year will confer a favor by communicating to us the results as they have been found by them.

BEWARE OF INFECTION.—The disease often seems to spread from well-defined centers of infection. Sometimes it appears first in a piece of ground on which potatoes are grown for the second season in succession, and then it spreads to adjoining fields. Patches of early varieties that are well advanced toward maturity are especially subject to blight attacks, and if later varieties are planted close by, they are liable to take the infection and suffer severely. For this reason I shall hereafter

plant early and late potatoes quite a distance apart. Indeed, while I shall continue to spray with the Bordeaux mixture—Paris green combination—I shall put my main reliance for escaping serious blight attacks upon the practice of planting early potatoes very early and late ones rather late; keeping both far apart from one another; and next, upon strict rotation; in short, upon keeping the infection out of the fields as far as may be practicable.

LATE PLANTING.—While at the station at Wooster, Ohio, I was shown a few rows of potatoes that were especially thrifty and heavy in foliage. They were grown from seed that had been selected from a patch of very late-planted potatoes. In other words, the seed was such as some potato-seed dealers wrongfully send out as "second-crop" seed. The difference in the appearance and size of the plants as between those grown from this bogus "second-crop" seed and ordinary seed was truly striking. Possibly I might have considered this as an accidental occurrence, and attached little importance to it, had not other instances served to show that there may be really "something in it." A few weeks ago a brother of mine in Ontario county, N. Y., showed me some plants grown from some tubers that had been accidentally left in the cellar until late in spring. These tubers, although somewhat shriveled, had produced a few strong, short sprouts, and were planted whole. They made much larger and thriftier plants than the ordinary seed planted earlier. I have another instance of this kind right in my own field. A row was left unplanted at the regular potato-planting season. Later on I picked out a particular blue potato from among my seedlings, and planted the row with these partly shriveled tubers. They have produced the heaviest foliage among all my many trial lots, and are as yet quite free from blight, although I expect to see them take the infection very soon from the blighted potatoes near by. It may be worth while to experiment a little further in this direction. Possibly by means of keeping the seed properly and planting it rather late in uninfected ground, and away from any chance of infection from other fields near by, we may be able to improve the vigor of the variety and its power of resistance to disease. This plan seems to me to offer greater promises of success than mere spraying alone.

T. GREENER.

NEEDS OF SCIENTIFIC AND BUSINESS METHODS OF FARMING.

That eminent agricultural scientist, Prof. Warrington, of Oxford, England, in a recent inaugural address, stated an exact truth when he said, "That in the full adoption of scientific methods lies the only hope of placing the agricultural interests of the nation on a permanent and sound basis." This remark is equally as applicable to the agricultural condition of this country as to that of Europe. The time has now come when the American farmer must bring to his business more of the principles which form the scientific basis on which profitable agriculture must ever rest.

The future welfare of the farming class lies in the direction of a full and free discussion of all questions pertaining to the most approved and improved methods for increasing the annual average yield of farm products at a relatively diminished cost. Less guesswork and the substitution therefore of more accurate scientific methods is now the order of the day. Not only this, but the time has evidently arrived when the farmer, to be prosperous, must bring to his business the business methods of the manufacturers of the costly implements used in modern agriculture. The farmer is, in fact, a manufacturer, little as he has heretofore seemed to recognize the fact. For this reason his methods must be business ones, or failure will as surely result on the farm as in the factory. The brisk competition common at this time in all lines of business also includes the business of farming. Whether the growing of grain, grass, cotton or fruit, or the manufacture of dairy products is followed, the actual cost of production should be noted down, so that the relative proportion of profit or loss can be definitely determined. The present demand is for more actual business methods of farming.

The accurate methods of agricultural investigation which are now so common in

our present admirable system of experiment stations, form, as they should, the basis structure of improved agriculture. The disciplined mind, the trained hand of the graduate of an agricultural and mechanical college (that is, such in fact as well as in name) tends to elevate the occupation of the farmer to a higher plane than it has heretofore occupied, thus adding "dignity to labor." No man, much less an active, brainy boy, cares to work to accomplish anything, especially in the business of farming, when the mind has little or no share in directing the hand. Enthusiasm is an essential element of progress in all occupations, and in none is it more essential than in that of the agriculturist.

W. M. K.

Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

INQUIRIES ANSWERED

BY SAMUEL B. GREEN.

Pear on Quince Stock.—L. B., Monett county, Missouri. Doyenne Boussock is doing well on quince, but I do not know as to Garber and Pres. Drouard. Would be glad to hear from any of our subscribers in regard to this.

Golden Prolific Gooseberry.—A. S., Morgan county, Indiana. The Golden Prolific gooseberry has done fairly well in my own garden, but I have not had it long enough for a fair trial. It has mildewed somewhat. Would be glad to hear the experience of our readers who have tried it.

Calloused Cuttings.—M. R. F., Missouri. The term callous is used by nurserymen to indicate the first new growth from a root or cutting which precedes the roots. It is simply a healing over of the surface. For instance, it is a common practice in growing grape-vines from cuttings to callous them; that is, allow the butts to heal over before planting them out, which makes them very sure to root. Since raspberries are not grown from cuttings, this matter is of no importance in connection with them.

Grafting and Budding.—E. S. F., Marietta, Miss. Grafting is not done until spring, but budding may be done at this season, or even later in the South. A quite complete article on budding was given in FARM AND FIRESIDE for July 15, 1894, which you may have or can borrow. It would be a good plan for you to get some cheap illustrated book on this subject. Grafting-wax is made very cheaply, and is the most convenient material to use, but stiff, blue clay, mixed with fine cow manure, will do very well. No wax is needed for the operation of budding.

Fire-blight.—A. R. G., Telford, Pa. Fire-blight is abundant in the western central states on both apples and pears, as well as quinces. In the eastern states it has seldom attacked the apple, though in some sections, notably in parts of the Connecticut valley in Massachusetts, it has badly injured the apples this season. There is no known remedy for this blight, and those purporting to be such are humbugs. It is, as you write, quite impossible to keep the young parts of the tree covered with any protecting material sufficiently to prevent the spores entering the plant; and when once they have entered, they cannot be reached by external applications.

Fertilizers for Fruit-trees.—C. H. G., Juniata, Pa. Should try green manuring and the use of commercial fertilizers. It seems to me it would be a good plan to sow rye this autumn, to be plowed in next spring when the land is planted to potatoes. For the potatoes, I should cross-plow the land, or back-set it, covering the grass at least three inches, and would give a light application of some complete potato fertilizer. Kainite is a good fertilizer for fruit-plants. It seems to be all that is needed for some land, while in other soils it is a good plan to use tankage or bone-meal with it. I do not know where you can buy these most cheaply in your vicinity, but if you write to the Pennsylvania experiment station, State College, Center county, Pa., I think you can get this information.

Gooseberry Seedlings.—E. L., Appleton, Wis. Sow gooseberry seed in boxes in the house early in spring, or wait until the ground is settled and sow in a fine border outdoors. I prefer to sow in the house, as the plants do best during the cool spring weather and they are less liable to injury when growing. From the boxes I transplant into a nicely prepared bed outdoors, and shade until they commence to grow. Your seed will be dry when it arrives. I should mix it with moist sand in a box; set in a cool place outdoors until severe weather sets in and it has been frozen; then put it in a cool cellar until spring, when I would sow it in the sand in boxes of earth about four inches deep. Cover the seed about one fourth of an inch deep. Use rich, fine soil. I have raised gooseberry seedlings for several years, with good results. From seed sown last fall and kept in a greenhouse over winter, I have plants about eight inches high.

Wine-making—Plums Not Bearing.—O. G. A., New Orleans. To make a good article of wine requires experience and observation. A friend of mine who has frequently made several barrels of wine in a season proceeds as follows: The grapes are put through a grater to break the skins, and are thrown into a vat until they ferment rapidly (say twenty-four hours). The juice is then pressed out and an equal quantity of water is added, and sugar to the amount of one fourth the weight of the whole compound. This compound should be put into casks or jugs, kept full until all the solid matter has worked over and been removed. After fermenting thirty-six or forty-eight hours, cork tightly in clean bottles or casks, and keep in a cool place. The skins and pulp (lees) which remain after the juice is drawn off will make a fairly good wine, if water is added to them to the amount of the juice drawn off, the whole allowed to ferment, and treated as recommended for the expressed juice.—The blossoms might have been injured by frost, insects or diseases. You do not state the varieties or whether the trees have previously borne plums or not, which is an important matter, necessary for an intelligent answer to your questions.

Peach-rot—Apple-rust.—J. W. C., Hillsboro, N. C. The fungus of the peach-rot winters over in the dried peaches that hang on the trees over winter, from which it spreads very rapidly early in spring, as soon as warm weather starts the plants into growth. In unusually wet springs the blossoms of peach-trees are frequently destroyed by this fungus, and the young twigs are also attacked, as well as the young fruit. This effect is often referred to as peach-blight. The treatment recommended is to pick off and burn in autumn or early in winter all the dried fruit on the trees. Early in spring, before the buds swell, spray the naked trees with a simple solution of sulphate of copper (one pound to twenty-five gallons of water). Later, just as the fruit has set, spray with Bordeaux mixture, made of five pounds of lime, five pounds of sulphate of copper and fifty gallons of water. In about two weeks spray again with this material, and if a third application is deemed advisable, use the ammoniacal solution of carbonate of copper. Where the disease has been abundant it will be well to pay close attention to spraying. This treatment is preventive, and will not effect a cure when the disease has gained a foothold.—The apple-rust is quite peculiar in some ways. Some varieties are much more liable to its ravages than others. It lives upon the red cedar as well as on the apple, and on it forms the reddish, jelly-like masses so common on cedar or juniper early in the summer in some sections. Without the cedar or juniper it would not be troublesome, so that where it is practicable the cedar should be removed from close proximity to the orchard. It is a good plan to spray the foliage of the trees several times with Bordeaux mixture, as recommended for the peach-rot. This same treatment will also prevent the scab of apple leaves and fruit.

GOLDEN MEDICAL DISCOVERY.

The invention of Dr. R. V. Pierce, chief consulting physician to the Invalids' Hotel and Surgical Institute, at Buffalo, N. Y., has, during the past thirty years, made a record in the cure of bronchial, throat and lung diseases that fairly entitles it to outrank all other advertised remedies for these affections. Especially has it manifested its potency in curing consumption of the lungs. Not every case, but we believe

Fully 98 Per Cent.

of all cases of consumption, in all its earlier stages, are cured by Dr. Pierce's Golden Medical Discovery, even after the disease has progressed so far as to induce repeated bleedings from the lungs, severe lingering cough with copious expectoration (including tubercular matter), great loss of flesh and extreme emaciation and weakness.

Do you doubt that hundreds of such cases reported to us as cured by "Golden Medical Discovery" were genuine cases of that dread and fatal disease? You need not take our word for it. They have, in nearly every instance, been so pronounced by the best and most experienced home physicians, who have no interest whatever in misrepresenting them, and who were often strongly prejudiced and advised against a trial of "Golden Medical Discovery," but who have been forced to confess that it surpasses, in curative power over this fatal malady, all other medicines with which they are acquainted. Nasty cod-liver oil and its filthy "emulsions" and mixtures, had been tried in nearly all these cases and had either utterly failed to benefit, or had only seemed to benefit a little for a short time. Extract of malt, whiskey, and various preparations of the hypophosphites had also been faithfully tried in vain.

The photographs of a large number of those cured of consumption, bronchitis, lingering coughs, asthma, chronic nasal catarrh and kindred maladies, have been skillfully reproduced in a book of 160 pages which will be mailed to you, on receipt of address and six cents in stamps. You can then write those cured and learn their experience.

Address for Book, WORLD'S DISPENSARY MEDICAL ASSOCIATION, Buffalo, N. Y.

Our Farm.

NOTES FROM AGRICULTURAL SCIENTISTS.

THE fifteenth annual meeting of the Society for the Promotion of Agricultural Science has recently been held in the city of Springfield, Massachusetts. As its name implies, this society was organized for the purpose of bringing together those who are interested in the application of science to agriculture, discussing the methods and results of investigation, and providing for publications relating to the same.

A. D. Hopkins, of the West Virginia Experiment Station, read a paper entitled "Some Observations on the Varieties of Timothy." He had selected seeds from plants of timothy showing marked differences in character of form and growth, although growing side by side. The seeds from these plants were carefully planted in a series of plots, and observations were made during the growing, blooming and seed-ripening stages.

W. T. Smingle, of Florida, demonstrated by actual experiment that if in the preparation of Bordeaux mixture the dissolved copper sulphate and lime-water are each largely diluted before mixing, there is little or no use of an agitator to keep the ingredients from settling.

"Some Results of Seed-testing" was the subject of a paper by W. R. Lazenby. Among other things, he said that the three essential conditions for testing the vitality of seeds are access of air, an abundance of moisture, and a certain degree of heat. Moisture is the most important factor, and next to this, a proper temperature.

The rapidity with which germination takes place, while depending largely upon the vitality of the seed, is affected very materially by temperature. The higher the temperature within certain limits, the more rapid the germination. Corn will germinate at a temperature of forty-two degrees, but it requires ten days or two weeks for the process.

The remarkable power of re-germination after complete drying is possessed to a marked extent by certain seeds. Wheat has this power to an unusual degree. Experiments made with different samples of wheat proved that it would re-germinate no less than ten times, after intervals of a week or more, during which time the seeds were kept perfectly dry.

P. H. Rolfs, of Florida, read a short paper, giving some "Unexpected Results from Spraying Peach Orchards." In treating an old orchard badly affected with the San Jose scale, the trees were rejuvenated and quite a large crop of fruit secured. In treating peach-trees with the resin wash recommended by the Department of Agriculture, at Washington, it was found that the formula for winter use could not be safely used during the winter in Florida, on account of its liability to destroy the fruit-buds.

An interesting paper on the "Effect of Fungicides in Increasing the Growth and Productiveness of Plants" was read by B. T. Galloway, of the United States Department of Agriculture. Evidence was presented showing that certain fungicides, like the Bordeaux mixture, increased the growth and productiveness of plants in quite a marked degree, where no insects or fungi existed.

C. S. Plumb, of Indiana, treated at length his observations upon the form of the cow's udder in relation to milk production. The deep, square, box-like or symmetrical-shaped udder was found to be the one that gave the best results.

"The Present Status of Wheat Culture" was the subject of a paper by M. A. Carlton. He briefly described the five great wheat-producing districts of the world. There are the great plains of the United States, the black plains of Russia, the pampas of Argentine, the regur of India, and the Australian plains.

At the business meeting of the society the following officers were elected for the ensuing year: President, William R. Lazenby, of the Ohio State University; secretary-treasurer, C. S. Plumb, director of the Indiana experiment station; for third member of the executive committee, Dr. L. O. Howard, chief of the bureau of entomology of the United States Department of Agriculture.

DAIRYING AMONG THE NEGROES OF THE SOUTH.

One of the industries that is now attracting the attention of the entire South is that of dairying. The South, with all of its natural resources, mild climate and luxuriant meadows, is just the place for dairying. "The most serious impediment to the progress of dairying in the South is the lack of intelligent labor to handle, feed and milk the cows," says Howard's Dairyman.

Mr. Booker T. Washington, the able principal and founder of Tuskegee Normal and Industrial Institute of Alabama, was inspired with the idea that the best way to help the masses of his race of the South and make them good citizens and intelligent laborers was to bring the "hands" of the negroes under intelligently developed brains. As a result of the same, he has in progress twenty-two industries, including a department of practical dairying in all of its branches, where students of both sexes are taught in dairying.

Visitors to the dairy will see in operation a first-class separator, a ripening-vat and all of the latest dairy apparatus, and a negro dairyman in charge of the same. The most striking thing is that away down in sunny Alabama, the science of ripening cream with bacteria, using the famous bacillus No. 41, is practically carried on in the dairy. The instructor in dairying studied dairy bacteriology under Dr. Conn, the discoverer of bacillus No. 41.

EXTRACTS FROM CORRESPONDENCE.

FROM OHIO.—The summer of 1895 will be recorded as the driest summer in the history of Montgomery county. The Miami river is very low, and many of its tributaries are almost entirely dried up. In spite of a drought of unusual duration our crops are fair. The early July indications were favorable for an enormous crop of corn—better than had been known for many years.

FROM ARKANSAS.—Fulton county is a timbered country containing some good, rich valley and upland, producing good crops of most all kinds when properly cultivated. The general lay of the country is rather hilly, containing considerable stone in many places. Parties wishing to locate in a smooth country should not come to northern Arkansas, but those who wish to locate in a land of big red apples and fine stock country, with good, mild climate, should come to Mammoth Spring and look at our country.

FROM TEXAS.—The FARM AND FIRESIDE makes its regular semi-monthly visits to our bright and sunny land in the coast region of Texas. The cotton crop here is somewhat a failure, but corn and other staples are fine. The Leconte pear finds its natural elements of soil and climate here, and the trees are now bending under the weight of the luscious fruit.

SEED WHEAT.

Wilson's Fall price-list for 1895 now ready. New and improved varieties of Seed Wheat, White Rye. Small fruits, Strawberry plants, Asparagus roots and other things for fall planting. ADDRESS SAMUEL WILSON, MECHANICSVILLE, PENNSYLVANIA.

and the near future doubtless holds in store great possibilities for it. It is mild in climate, and rich in soil and natural resources.

FROM NEBRASKA.—We are in the sunny valley of the Middle Loup river, in Custer county. The valley is wide and very pretty. The soil is a rich loam; the subsoil almost touches water. Our water is the best on earth, and not hard. Crops are very fine now, and to avoid failures by drought we have an irrigation ditch on either side of the river, so one can irrigate if he wishes.

FROM CALIFORNIA.—In your paper of August 1st is an article on the growth of the city of Los Angeles. It is in error regarding the number of houses built in nine months; namely, nine hundred. You will see by the paper I send you that there were built in the seven months of the present year ending with the thirty-first of July, over thirteen hundred houses.

A RARE CHANCE TO MAKE MONEY.

I am convinced that any one that will hustle can make from \$10 to \$15 a day selling Perfection Dish Washers. They give such good satisfaction that every family wants one. You can wash and dry the dishes in two minutes without danger of breaking dishes or without wetting the hands.

SOUTHDOWNS. C. M. Clay, White Hall, Ky.

FOR SALE REGISTERED SOUTHDOWN Sheep and BERKSHIRE Hogs. ROBINSON & HAGERTY, Hanover, Licking Co., O.

FAYETTE COUNTY, West TENNESSEE. Come here for genial climate and big crops. Northern farmers colonizing the county. A. J. ROOKS, Sec'y, Somerville, Fayette County, Tenn.

FOR SALE Nice 91 acre farm in Buckingham Co., Va., half mile from depot, post-office, church and school. Good buildings; land not worn out and a good stand for selling goods. Storehouse on the place. Price low. Address W. C. HALL, Jr., Gold Hill, Va.

450,000 TREES. 200 varieties. Also Grapes, Small Fruits, etc. Best rooted stock. Genuine, cheap. 2 sample currants mailed for 10c. Desc. price list free. LEWIS ROESCH, Fredonia, N. Y.

The Rocker Washer is warranted to wash 100 PIECES IN ONE HOUR, as clean as can be washed on the washboard. Write for prices and description. ROCKER WASHER CO. Liberal inducements to live agents. Ft. Wayne, Ind.

INCUBATORS. We warrant The Reliable. To Hatch 80 per cent. SELF-REGULATING Durable, Correct in Principle. Leader at World's Fair. Get in stamps for new 112 page Poultry Guide and Catalogue. Large, POULTRY FOR PROFIT made plain. Red-Back Information. Reliable Incubator and Brooder Co., Quincy, Ill.

FOUR HORSE EQUALIZER. Can be used on any SULKY OR GANG PLOW. GUARANTEED TO DISPOSE OF ALL SIDE DRAFT ON PLOWS OF ANY MAKE ON WHICH FOUR HORSES ARE USED ABREAST WITH THREE WALKING ON THE UNPLOWED GROUNDS. ROCK ISLAND PLOW CO., ROCK ISLAND, ILL.

If You Want a PEACH

Plum, Pear, Apple, Cherry or Quince Orchard, or anything in the way of Small Fruits, Ornamental Trees or Shrubs, Japan, Holland or other Bulbs, write us your wants and we will quote you low prices. Everything of the best—for Orchard, Vineyard, Lawn, Park, Street, Garden and Conservatory. Millions of Trees, Shrubs, Roses, Vines, Bulbs, Plants, etc. Price List and Catalogue Free. 42nd Year, 1000 Acres. 29 Greenhouses, THE STORRS & HARRISON CO., PAINESVILLE, OHIO.

GO BUY A "STAY ON" BURLINGTON STABLE BLANKET. Your horse is always clean, it keeps the hair smooth and glossy. No surcingle required. No tight girth. No sore backs. No chafing of mane. No rubbing of tail. No horse can wear it under his feet. No Come Off to Them! Your Harness Dealer Keeps Them. If not, write us for Free Catalogue and prices. The "Stay On" Burlington is patented. We protect our patents. BURLINGTON BLANKET CO. Burlington, Wis.

Our Farm.

THE POULTRY YARD.

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

PREPARING FOR FALL.

THE greatest success in the winter is obtained when the fowls are properly managed in the fall. Farmers know that when cows are suddenly changed from green food to dry provender, there is a liability of their falling off in the yield of milk. When the hens are taken off the range, and can no longer secure a variety, they often cease producing eggs. This is due to several causes, one being that they do not have sufficient exercise, and are more subject to those ills which arise from being overfed.

Before winter begins, the poultryman should aim to store a supply of food that will keep his hens in laying condition. It is not necessary to feed a great many kinds of food, but to allow a varied diet, not only to promote digestion and increase the appetite, but also to supply the hens with the elements necessary to enable them to produce eggs during the season of the year when eggs are scarce. If the conditions of the summer could be created in the winter, the hens would lay as well at all seasons. What are those conditions? Exercise, green food and a variety. The hens not only have grain in summer, but also worms, seeds and grass.

It is impossible to find green food and worms in the winter, but there is something for the hens other than grain all the time. Grain is the best food that can be given in the winter season, but used exclusively it will not make hens lay. During the fall, a few cabbages, turnips and refuse potatoes should be placed where they may conveniently be had for a winter supply, and the use of finely cut clover, scalded, with a mess of chopped meat two or three times a week will afford a variety. The main object should be to afford them exercise. When the trees begin to drop their leaves, rake them up and store them for scratching-litter for the hens in winter; and now is the time to have a large supply of dirt put away.

Take any flock of hens, give them warm quarters, feed something else than grain and keep them constantly at work under shelter, and they will lay. It is idleness in winter that causes the hens to become too fat, which leads them to become addicted to egg-eating and feather-pulling.

LET THE HENS BE SERVICEABLE.

At this season of the year the hens should cost less than at any other period, as there is more or less material that would be wasted but for their aid. If the pickings are good, it will not be necessary to give any food at all except at night, as it should be a rule to always feed the hens well before they go on the roosts. The hen is somewhat of a scavenger, and in hunting up the stray bits here and there, she becomes a medium for converting that which is lost without her aid into a valuable and salable product, while the number of seeds of weeds and undesirable grasses consumed lessen the labor of the farmer the succeeding season. Hence, in the fall she often repays whatever loss may have been sustained by her support during the earlier portion of the year. Although many hens do not lay during the fall, being engaged in shedding the old and donning the new feathers, yet at no season of the year could this be done at less expense. The hens should therefore be given their liberty in the fall to forage at will, in order to save the waste left in the fields from harvesting.

As the days become shorter and the nights longer, the interval between the evening and morning meals increases. During December, the fowls often go on the roost at five o'clock and do not come off until seven o'clock the next morning. This keeps them fourteen hours without food. If not fed, however, until daylight is well on and an hour before roosting, the time is lengthened to sixteen hours, while only eight hours' interval occurs during the day. This difficulty cannot be overcome, but it is best to feed them as early in the morning as possible, and to delay their evening meal until they will have but a very short time before going on the roost.

GIVE READY ATTENTION AND PROMPT TREATMENT to all Affections of the Bowels, Diarrhoea, Cholera Morbus, Dysentery, &c. Dr. Jayne's Carminative Balsam affords immediate relief, and speedily cures these complaints.

BULKY FOOD IN SUMMER.

There are some breeds that when once they become fat easily maintain such condition on very little food, and to reduce them in flesh, withhold all food. Of such breeds may be mentioned the Asiatics and Plymouth Rocks. They really require less corn or other grain than the smaller breeds, because they are not so active in their habits. Fowls give best results when they have plenty of bulky feed, and that is why the hens are more active in summer. They work over the ground for food, and if not allowed grain, will keep in good laying condition. Indigestion, so often mistaken for cholera, is due to feeding too much grain in summer. It not only heats their bodies, but impairs digestion, because it is too concentrated. A hen needs no grain at all in summer, if she can have her liberty. A mixed food, with grass, cooked potatoes and lean meat as the principal substances, will be far better than wheat, corn or oats.

FOWLS OR EGGS.

The question is sometimes asked whether eggs or fowls should be procured when beginning with pure breeds. If eggs are purchased next spring there may be but few hatched, and one must wait a year before securing a flock of any desired number. By taking advantage of low prices now and purchasing a trio, a hundred chicks may be hatched the first half of the year.

In a few months more, prices for pure-bred fowls will begin to go up. Buy now, while the yards are full and the prices are low. Male birds, for improving common flocks, can be had at a very nominal sum. Birds in the fall are cheaper than buying eggs in the spring, as a pair of hens will lay enough eggs next spring from which quite a large number of chicks may be hatched, and as a trio of fowls may be bought for about the price of two sittings of eggs in the spring, it is an advantage to buy them now.

FEEDING GREEN FOOD.

If the grass is of sufficient height, the hens will require no green food other than what they can secure, but where they are confined it must be provided. The hens can pick off the ends of standing grass, but when the grass is fed to them after being cut, it must first be chopped. There are now several cheap cutters designed for the use of poultrymen, and they answer the purpose well. The grass from the lawn, after the lawn-mower has been used, may be given to the hens, and they will also eat the tops of a great many varieties of vegetables. It is always well to have a head of cabbage in the poultry-yard for the hens to pick whenever they so desire.

SURPLUS YOUNG STOCK.

When there are a large number of young cockerels that were hatched late, it may be a difficult matter to obtain good prices for them at this season. The reason is that old cocks sell very low and influence the prices of those that are younger, while the young cockerels, not having reached maturity, do not fatten very readily. They may have large frames and possess size, but they will be lacking in appearance when dressed for market. The better plan is to endeavor to keep them in a separate yard until they are fully matured, fatten them and sell in January, or sell them off now and save expense.

DRY DIRT AND LEAVES.

The best work that can be done for the fowls in the fall is to lay in a supply of leaves and dry dirt under shelter. It is scratching in the winter that keeps the hens in best laying condition, and when the snow is on the ground, a pile of dirt and leaves in the poultry-house will afford an opportunity for exercise, and greatly tend to make the hens more contented in confinement. Too many leaves cannot be put away. They will be found very useful, and will also assist in retaining warmth in the poultry-house by preventing cold drafts of air along the floor.

THE TIME TO PRESERVE EGGS.

After the weather turns cool it is the time to preserve eggs, and not during the summer, as they will keep better and will get into market sooner. Three months is long enough to preserve eggs. There are but a few short rules to follow. First, use only eggs from hens that are not with males; second, keep the eggs on trays (no packing material) in a cool place; third, turn them three times a week; fourth, pack only strictly fresh eggs.

CHICKS FED ON CORN-MEAL.

When chicks are fed on corn-meal, do not make it into a dough, as it is not sufficient, but with each mess of corn-meal mix fresh milk instead of water, and the value of the mess will be increased. Give the chicks a variety of feed, as they will eat any kind of seeds or small grain, especially broken wheat. The chicks are liable to get wet by wading in the milk, although it is excellent. If this is not the case, the milk will become sour and breed disease. Mix the milk with corn-meal and let the mess be eaten up clean; then the chicks will relish it and thrive on the mixture.

HIGH ROOSTS.

I do not understand how it is that nearly all poultrymen and farmers provide roosts so high that injury results to fowls in getting on and off them. In its natural state the bird seeks a high position to avoid danger from enemies, but this precaution is unnecessary in a poultry-house. The roosts need not be more than six inches high from the floor, and the birds will also then escape cold drafts of air.

INQUIRIES ANSWERED.

Walls of Poultry-house.—A. A. C., Bolcknow, Mo., writes: "How can I make a poultry-house warm in winter and cool in summer by filling between walls? That is, whether by using brick-bats or sawdust."

REPLY:—An air-space between the walls and tarred felt on the outside is the better plan. The house will be warm in winter, but the low roofs of poultry-houses make it difficult to have them cool in summer.

Roup in Chicks.—E. R. S., New Lisbon, Ohio, writes: "Last year my hens had the roup. This summer my chicks died from a disease of the bowels, and I am informed that roup attacks chicks in that manner. What is your opinion?"

REPLY:—Roup usually attacks chicks in that manner, all being attacked. There is no remedy but to thoroughly disinfect against the disease, as it is contagious.

Table Fowls and Broilers.—L. R., Bedford City, Va., writes: "Which is the better table fowl, or for market, and which breed produces the choicest broilers, the Indian Games or Plymouth Rocks."

REPLY:—There is no breed that is equal to the Games for the table, or for broilers, but it is more difficult to raise them than Plymouth Rocks. The latter breed is very hardy, and for that reason is a general favorite.

Leghorns as Layers.—T. P., Shelbyville, Ind., writes: "If Leghorns are well protected during the winter, will they give as many eggs as Brahmas or other large breeds during that season?"

REPLY:—Leghorns have given excellent satisfaction in winter under favorable conditions, but they are not as contented in confinement as Brahmas, and unless kept busy, soon begin to learn feather-pulling, egg-eating and other vices due to idleness.

Long-lasting

and good-looking leather comes of using Vacuum Leather Oil. Get a can at a harness- or shoe-store, 25c a half-pint to \$1.25 a gallon; book "How to Take Care of Leather," and swob, both free; use enough to find out; if you don't like it, take the can back and get the whole of your money.

Sold only in cans, to make sure of fair dealing everywhere—handy cans. Best oil for farm machinery also. If you can't find it, write to VACUUM OIL COMPANY, Rochester, N. Y.

J. D. SOUDER, JR., Telford, Montgomery Co., Pa. 28 varieties of high scoring poultry stock for sale. Eggs at \$1.00 per 15. Fine catalogue free.

SUNNYSIDE POULTRY FARM—Leghorns, Wyandottes, B. P. Rocks, \$1.00 per 13; Minorcas and Red Caps, \$2.00 per 13. Circular. H. T. ANDERSON & CO., Natrona, Pa.

TRY US. We sell your Poultry, Veals, Fruits and all produce at highest prices. DAILY RETURNS. For stencils, prices and references, write F. I. SAGE & SONS, 183 Reade St., N. Y.

Make Hens Lay. By feeding green cut bone, the greatest egg producing food in the world. Better than medicine and cheaper than grain. Mann's Bone Cutter. On Trial. Try it before you pay for it. Price, \$5.00 and upward. 161 Highest Awards rec'd. Catalog free if name this paper. F. W. MANN CO., Milford, Mass.

DAIN THE BEST, THE CHEAPEST, THE STRONGEST, THE MOST DURABLE STEEL CORN CUTTER.

A PRONOUNCED SUCCESS--THE VERDICT IS UNANIMOUS. An Entirely New Departure. STRICTLY UP TO DATE.



ADJUSTABLE, PRACTICAL, SAFETY SEAT, EASY TO RIDE, SAFETY SHAFT, SAFETY GUARDS, REASONABLE IN PRICE.



If you have FIVE or more Cows a Cream Separator will save its cost each year of use. Beware of imitating and infringing machines.

Send for new 1895 Catalogue. The DeLaval Separator Co.

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PROFITABLE DAIRY WORK Can only be accomplished with the very best of tools and appliances. With a Davis Cream Separator on the farm you are sure of more butter, while milk is a valuable product. Farmers will take to get a Davis. Neat, illustrated catalogue Agents wanted. DAVIS & RANKIN BLDG. & MFG. CO. Cor. Randolph & Dearborn Sts., Chicago.

For CHEESE MAKING on the FARM, USE Chr. Hansen's RENNET TABLETS Write for pamphlet on Butter and Cheese Making, and for further particulars. CHR. HANSEN'S LABORATORY, Little Falls, N. Y.

THE KEYSTONE DEHORNER Cuts clean on all sides—does not crush. The most humane, rapid and durable knife made, fully warranted. Highest World's Fair Award. Descriptive Circulars Free. A. C. BROSIUS, Cochransville, Pa.

DO YOU WANT AN Organ? We make and sell the Packard Established 1871. At it ever since. Always up to date in Quality, Style and Finish. A Strictly High Grade Organ at an honest price. Catalogue free. Ft. Wayne Organ Co. Ft. Wayne, Ind.

BRASS BAND Instruments, Drums, Uniforms, Equipments for Bands and Drum Corps. Lowest prices ever quoted. Fine Catalog, 400 Illustrations, mailed free; it gives Band Music & Instructions for Amateur Bands. LYON & HEALY, 32 Adams Street, Chicago.

DAIN MANUFACTURING CO., CARROLLTON, MISSOURI. It will cut more corn than any device ever invented and at less expense (machines costing \$100 to \$150 not excepted). For special information, prices, etc., address

Our Fireside.

FRIENDSHIP.

If you have a friend worth loving,
Love him. Yes, and let him know
That you love him, ere life's evening
Tinge his brow with sunset glow.
Why should good words ne'er be said
Of a friend—till he is dead?

If you see the hot tears falling
From a brother's weeping eyes,
Share them: and by kindly sharing
Own your kinship with the skies.
Why should any one be glad
When a brother's heart is sad?

If your work is made more easy
By a friendly, helping hand,
Say so. Speak out brave and truly
Ere the darkness veil the land:
Should a brother workman dear
Falter for a word of cheer?

Scatter thus your seeds of kindness,
All enriching as you go—
Leave them. Trust the Harvest-giver,
He will make each seed to grow,
So, until its happy end,
Your life shall never lack a friend.

—Religious Herald.

HANDLING REGISTERED MAIL.

In the New York post-office, when a letter is presented for registration it is inspected by the receiving-clerk to ascertain whether it is in good condition, firmly sealed, properly addressed and sufficiently prepaid, and that the name and address of the sender have been indorsed on it. These requirements being met, the clerk records the letter in a book composed of alternate thin and thick leaves, a manifold copy of the entry being obtained by means of a sheet of carbon-paper placed between the two.

The thin sheets are perforated in oblong sections for ready separation, and constitute the receipts issued to the public. Each receipt bears a distinct number in a series running from one to 100,000, and every letter registered has the number of the receipt issued for it indorsed on its face, says *Business*.

The condition of the letter envelop is now inspected by another clerk, and if perfect, the imprint of a hand-stamp is impressed across the edge of the flap to betray any tampering. These preliminaries being completed, a card known as the return receipt is prepared and attached to the letter by means of a rubber band. On one side of the card appear the number, date of mailing, name of addressee and destination of the letter; on the other, the name and full address of the sender, to whom the receipted card will be returned when the letter has been delivered.

In its numerical order the letter passes to a separating-clerk, and with ninety-nine others, composing an even hundred, is distributed to one of the six cases, where it will be further treated. The separating-clerk verifies the count of each 100 letters before separating another 100, and as frequently as may be necessary, delivers each subdivision to the clerks in charge of the cases.

A case consists of a long table with a set of pigeon-holes hearing the names of the larger cities in the section of the country assigned to that case, and in these pigeon-holes the clerk in charge boxes the letters and from time to time parcels them out to his assistants. The next step is the preparation of what is known as a registered package envelop. This consists of an ingeniously contrived envelop specially manufactured out of particularly tough paper for the use to which it is put, and also numbered in a series of 100,000.

On the face of each envelop appears its number and spaces for the name of the post-office, county and state to which it will be sent, while the back is arranged for notations of its condition by every postal official through whose hands it subsequently passes. One of these envelops having been addressed, entry of the letter to be inclosed in it is made on a registry bill, which shows the date of mailing, name of the post-office to which it will be sent, number of the registered package envelop, and finally, the registered number of the letter to be placed in it and the name of its addressee.

The bill and the letter are placed in this envelop, which then passes to a clerk, who removes its contents, compares the letter with the entry on the bill and calls the registered letter and registered package envelop numbers, together with their destination, to an assistant, who records these particulars in the mailing-book. The letter and bill are now replaced in the envelop, and it passes to another clerk for final verification of contents and sealing.

The sealing consists in an application of blue mucilage to the three flaps of the envelop, which, when once closed, cannot be reopened without mutilations, the blue mucilage exposing any attempt to open the envelop by any steaming process. The postmark showing the mailing-office and the date is now affixed, and the envelop, with a lot of others from the same case, goes to the pouch-room, where another separation is necessary in order that it may get to the registered pouch that will carry it to the distributing-office nearest its final destination.

The contents of the registered package en-

velop can now only be ascertained by reference to the registered letter numbers charged against the envelop number in the mailing-book, or the fuller description of the letters on the registry bill, which is under seal, and therefore inaccessible.

The registered package envelop is entered by origin, number and destination on the book of the pouch in which it is to be dispatched, a carbon manifold record of the package inclosed in each pouch being preserved, the duplicate sheet of each pouch forming the bill of advice to the office to which the pouch is sent.

When as many packages as the pouch will hold have been entered on the proper book, two clerks verify the entries, sign the last sheet of the bill, place it with the packages in the pouch, adjust the strap that secures it, and finally attach that mechanical wonder called a rotary lock. This lock has a fixed serial number engraved on its side, which serves to identify it, and a rotary number, which unerringly advances one every time the lock is opened.

The pouch is then delivered to a railway postal clerk, who receipts for it by lock and rotary numbers, and it remains under constant guard until its destination is reached. Keys that open the rotary locks are issued only to post-offices exchanging registered pouches, and a careful comparison of the rotary number of the lock with its entry on the pouch bill is the first duty of the clerks opening a registered pouch.

Any discrepancy between the rotary number advised on the bill and that shown by the lock received would indicate an irregularity to be at once investigated. At every transfer from one clerk to another of a registered letter, registered package envelop or registered pouch a receipt is taken, and by these means no difficulty is experienced in tracing a letter from the time it is first mailed until delivered to its addressee.

These rotary locks cost \$15 each, and when the number 999 is turned, they must be returned to the makers for readjustment.

THE AFFABLE WOMAN.

If women could ever learn that it is quite possible to combine affability with dignity in commonplace daily intercourse with their fellow-creatures, this would be a far brighter and more agreeable world.

Nine tenths of the gentlewomen one knows would no more address an uninitiated female than bite off a bit of their own tongue.

Not once in a blue moon do they dare converse with their servants, the clerk behind the counter, the chance companion of a railway journey, or even the lady who has dropped in to call on a mutual friend.

Awkwardness and timidity, with a sense of alleged well-bred reserve, seal their lips to every form of communication.

In their shyness and stupid fear of furnishing an opportunity for undue familiarity, they go through life like oysters, as far as those outside their narrow circle are concerned.

But, thank heaven, there is a woman—and her tribe is increasing—who realizes all the beautiful opportunities and rights the gift of speech gives her.

She can afford to talk to her domestics about and everything, and cement their affectionate respect with every word uttered.

Her kindly recognition of the shop-girl, and fragment of pleasant gossip across the yard-stick, is a wholesome break in the clerk's dull day.

To sit beside a respectable female, for an hour's train travel, and not exchange greeting as two human beings touching in their journey of life, would confound her kindly nature.

She is sure of her dignity, and strong in its integrity, affords to do what possibly a less fine-grained nature shrinks to essay.

Her friendly, well-chosen words are far removed from volubility as her cordial manners are from gush.

Recognizing the power of speech as the most potent of spells for removing dull, unlovely discontent, embarrassment and loneliness, she is free with worthy thoughts graciously expressed.

It is noticeable that such women never leave drawing-room, kitchen, shop or coach, that every other creature of her kind present does not acknowledge to herself the supreme excellence of courtesy above all other feminine charms.

WHAT THE TRAMP EATS AND WEARS.

As a rule, the "poke-out" heggur has but one meal a day, and it is usually breakfast. This is the main meal with all vagabonds, and even the lazy tramp makes frantic efforts to find it. Its quantity as well as its quality depends largely on the kind of house he visits. His usual breakfast, if he is fairly lucky, consists of coffee, a little meat, some potatoes and "punk an' plaster," as he calls bread and butter. Coffee, more than anything else, is what every man of his kind wants early in the morning.

The clothes of the "poke-out" heggur are not much, if any, better than his food. In summer he seldom has more than a shirt, a pair of trousers, a coat, some old shoes and a battered hat. Even in winter he wears little more, especially if he goes South.

While I lived with him I wore these same "togs." I shall never forget my first tramp suit of clothes. The coat was patched in a dozen places, and was nearly three sizes too

large for me; the vest was torn in the back, and had but two buttons; the trousers were out at the knees, and had to be turned up in London fashion at the bottom to keep me from tripping; the hat was an old derby with the crown dented in numerous places; the only decent thing I had was a flannel shirt. I purchased this rig of an old Jew, and thought it would be just the thing for the road; and so it was, but only for the "poke-out" tramp's roads. The hoboes laughed at me and called me "hoodoo," and I never got in with them in any such garb. Nevertheless, I wore it for nearly two months, and so long as I associated with lazy beggars only, it was all right.

It is by no means uncommon to see a "poke-out" vagabond wearing some sort of a garment which belongs to a woman's wardrobe. He is so indifferent that he will wear anything that will shield his nakedness, and I have known him to be so lazy that he did not even do that. One old fellow I remember particularly. He had lost his shirt somehow, and for almost a week went about with only a coat between his body and the world at large. Some of his pals, although they were of his own class, told him that he ought to find another one, and the more he delayed the more they labored with him. One night they were all gathered together at a "hang-out" not far from Lima, Ohio, and the old fellow was told that unless he found a shirt that night they would also take away his coat. He begged and begged, but they were determined, and as he did not show any intention of doing as he was bidden, they relieved him of his jacket. And all that night and the following day he was actually so lazy and stubborn that he would not yield, and would probably be there still, in some form or other, had his pals not relented and returned him the coat. As I said, he went for nearly a week without finding a shirt, and not once did he show the least shame or embarrassment. Just at present I understand that he is in limbo, wearing the famous "zebra"—the penitentiary dress. It is not popular among tramps, and they seldom wear it, but I feel that that old rascal, in spite of the disgrace and inconvenience that his confinement brings upon him, is tickled indeed that he is not bound to find his own clothes.—*Harper's Weekly*.

"DON'TS" OF DRESS.

- Don't clothe yourself in man's apparel and expect the courtesy due to a lady.
- Don't wear feathers in your hat and patches on your boots.
- Don't wear a sailor hat and blouse after your fortieth birthday.
- Don't pinch your waist. Fat, like murder, will out—somewhere.
- Don't put all your allowance outside. A ragged petticoat kills the smartest gown.
- Don't put cost before cut. Corded silk won't cover a clumsy fit.
- Don't let your dressmaker dress you. Dress yourself. She may give you smartness, but individuality—never.
- Don't forget that dress was made for woman, not woman for dress.
- Don't sacrifice fitness to fashion.
- Don't, if you are September, dress as May.
- Don't neglect quality for the sake of quantity.
- Don't imagine that beauty will atone for untidiness.
- Don't spoil the gown for the yard of stuff.
- Don't dress your head at the expense of your hands and feet.
- Don't be dashing—he dainty.
- Don't dress to startle people's eyes, but to satisfy them.
- Don't forget that although veils are becoming to most faces, feet veiled in lace stockings do not look well in the street.
- Don't make hay of your possessions and then credit your limited purse with your shabby appearance.
- Don't emulate the ostrich; the new flower in your hat does not divert attention from the ragged condition of your skirt lining.
- Don't, dear sisters, don't imagine that a house or shirt, coat and sailor hat are suitable for women of every age and figure, on every occasion.
- Don't wear a white petticoat unless it is white.
- Don't wear heels to your hoots unless you can afford to have them always heels, and not half ones on one side only.
- Don't put powder on your cheeks without looking in a glass afterward.
- Don't wear a fur or feather boa with a cotton dress or shirt.
- Don't make your own dresses unless you can do it really well.
- Don't look a frump because you cannot look a swell.
- Don't sacrifice neatness to artistic effect.
- Don't dress more fashionably than becomingly.
- Don't forget that long credit often brings discredit.
- Don't buy cheap imitations if you can afford the genuine article.
- Don't achieve the grotesque while attempting the original.
- Don't gaily cover your head and forget your hands and feet.
- Don't expect great bargains to turn out great saves.
- Don't hold up silks and display rags.
- Don't jump into your clothes and expect to look dressed.
- Don't wear big sleeves and big hats if you are short.

- Don't wear striped material if you are tall.
- Don't wear tan shoes if you have large feet.
- Don't wear a sailor hat with a silk dress.
- Don't use pins where stitches would do.
- Don't let "smart" verge on "loud."
- Don't wear a smart hat and burst shoes.
- Don't wear a bonnet with a costume that requires a hat.
- Don't trim a good material with common trimmings.

HUMIDITY'S EFFECT UPON THE MIND.

It is probable that nothing else which has a place in this world of ours has been so much discussed as the weather. It would seem that its mysteries should all have been brought to light by this time—that the vast ocean of talk should have penetrated every nook and cranny of the subject. Yet new facts about the weather are constantly being discovered. One of the latest is announced by an authority in a scientific journal, who states that moisture in the air has a direct effect upon the mental powers. He says that in his own case he has been amazed at the faulty deductions and misconceptions which were made in damp, foggy weather, or on days in which the air was charged with electricity and thunder-storms were impending. What seemed clear at these times appeared later to be charged with error. An accountant in a large insurance company is obliged to stop work at such times, finding that he makes many mistakes which he does not become conscious of till afterward. In a large factory, from ten to twenty per cent less work is brought out on damp or threatening days. It has been noted by firemen that in states of depressing atmosphere there are more fires than at other times, due, it is believed, to greater carelessness on the part of housekeepers and others. The drivers of locomotives say that there is an increased number of accidents and more trouble in wet weather than in clear. They attribute the phenomena to the effect of moisture on the machinery; but the real cause is the hefogging effects of humidity upon their own minds. The writer goes on to say that the conviction prevails among active brain-workers of his circle that there are atmospheric forces which exert a powerful influence upon mental effort.

WHAT WE NEED.

What the man of to-day needs most is not athletics in a gymnasium, but plenty of fresh air in his lungs. Instead of a quantity of violent exercise that leaves him weak for several hours afterward, he needs to learn to breathe right, stand right and sit right. The young man or young woman who starts on a career of training, and keeps it up year after year, just at the time when the body has a great deal of its own natural work to do and wants to do it, may make up his or her mind that beyond a showy and superficial development of muscle and strength, all this training, in after life, is going to count against them.—*Annals of Hygiene*.

A COLCHESTER paper avers that a hotel at Colchester has a cook so good-looking that she mashes the potatoes by looking at them.



A KNIFE

in the hand of a Surgeon gives you a feeling of horror and dread. There is no longer necessity for its use in many diseases formerly regarded as incurable without cutting.

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is well illustrated by the fact that **RUPTURE** or Breach, is now radically cured without the knife and without pain. Clumsy, chafing trusses can be thrown away! They never cure but often induce inflammation, strangulation and death. **TUMORS**, Ovarian, Fibroid (Uterine) and many others, are now removed without the perils of cutting operations. **PILE TUMORS**, however large, Fissure, tula and other diseases of the lower bowel, are permanently cured without pain or resort to the knife. **STONE** in the Bladder, no matter how large, is crushed, pulverized, washed out and perfectly removed without cutting. **STRICTURE** of Urinary Passage is also removed without cutting in hundreds of cases. For pamphlet, references and all particulars, send 10 cents (in stamps) to World's Dispensary Medical Association, No. 663 Main Street, Buffalo, N. Y.

MOTHERS

and those soon to become mothers, should know that Dr. Pierce's Favorite Prescription robs childbirth of its tortures, terrors and dangers to both mother and child, by aiding nature in preparing the system for parturition. Thereby "labor" and the period of confinement are greatly shortened. It also promotes the secretion of an abundance of nourishment for the child.



Mrs. DORA A. GUTHRIE, of Oakley, Overton Co., Tenn., writes: "When I began taking Dr. Pierce's Favorite Prescription, I was not able to stand on my feet without suffering almost death. Now I do all my housework, washing, cooking, sewing and everything for my family of eight. I am stouter now than I have been in six years. Your 'Favorite Prescription' is the best to take before confinement, or at least it proved so with me. I never suffered so little with any of my children as I did with my last."

SKILFUL ARTISANS.

Hanoi, a city of French Tonquin, has a flourishing industry in the incrustation of precious woods with mother-of-pearl.

The workmen have applied the principle of the division of labor to their art. There are the cabinet-makers who put together the different parts of the material to be incrustated.

When the cabinet-maker has prepared the wood it passes into the hands of the designer, who makes sketches of the ornamentation upon rice-paper.

The bits of pearl chosen, the inlayer strives to give them the form of the design and to dispose them as a veritable mosaic in the wood.

THE ESSENCE OF THE SINGLE-TAX THEORY.

"Progress and Poverty" startled and held the attention of thinking people, because it boldly rested its case on one universally recognized industrial fact and one almost universally accepted economic theory.

LANDS FOR SALE.

AT LOW PRICES AND ON EASY TERMS. The Illinois Central Railroad Company offers for sale on easy terms and at low prices, 150,000 acres of choice fruit, gardening, farm and grazing lands located in SOUTHERN ILLINOIS.

FARMERS IN CUBA.

Between the condition of the planter and that of all other agriculturists whatever in Cuba the widest difference exists. The laborer has nothing, never has had anything, and is happy in the knowledge that he never will have anything.

It is true that there is an intermediate group. Between these people and the planters is a small contingent of thrifty farmers. Here and there through the country may be seen a stone dwelling with red tile roof that marks the home of one who by some rare enterprise has become possessed of enough land to engage in cattle raising or fruit growing.

RED WILLOW COUNTY, NEBRASKA.

I have spent a great part of the time since the first of May driving over southwestern Nebraska and northwestern Kansas.

The finest land I found is in Red Willow county, Nebraska. I never saw land lay nicer. The soil is rich and crops are fine, except small grain, which is light.

In any alfalfa country where farmers make the raising of alfalfa and stock a business, they will soon become wealthy. A crop can safely be counted at \$40 per acre a year.

When there I spent a little time with my old friend, William Coleman, with whom I have been personally and well acquainted for more than forty years and know him as a hard-working farmer.

Valley county, Neb. H. A. McMURPHY.

MANUSCRIPT READERS.

Very few publishers have either the time or inclination for a personal reading of books in manuscript, and for this work they employ skilled readers, upon whose judgment they can rely.

gether with the book in question, to a seventh reader—a sort of court of final appeal—and requests him to write an opinion on the opinions. Even if all the opinions are favorable, the publisher may still refuse to bring out the work in question.

There are a hundred good reasons for declining to publish a book, and the manuscript must run the gauntlet of them all. It may be too long or too short, or too similar to something else already in hand.

Of course, publishers and publishers' readers sometimes make mistakes concerning the value of a book, and decline one that in the hands of another publisher, or brought out at the author's expense, achieves a tremendous success.

There is no virtue in "pearl top" or "pearl glass," unless it fits your lamp. Get the "Index to Chimneys"—free.

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Our Household.

THRESCORE AND TEN.

Who reach their threescore years and ten,
As I have mine, without a sigh,
Are either more or less than men—
Not such am I.

I am not of them; life to me
Has been a strange, bewildered dream,
Wherein I knew not things that be
From things that seem.

I thought, I hoped, I knew one thing,
And had one gift, when I was young—
The impulse and the power to sing,
And so I sung.

To have a place in the high choir
Of poets, and deserve the same—
What more could mortal man desire
Than poet's fame?

I sought it long, but never found,
The choir so full was, and so strong
The jubilant voices there, they drowned
My simple song.

Men would not hear me then, and now
I care not, I accept my fate.
When white hairs thatch the furrowed brow
Crowns come too late!

The best of life went long ago
From me; it was not much at best;
Only the love that young hearts know,
The dear unrest.

Back on my past, through gathering tears,
Once more I cast my eyes, and see
Bright shapes that in my better years
Surrounded me!

They left me here, they left me there,
Went down dark pathways, one by one—
The wise, the great, the young, the fair;
But I went on!

And I go on! And, bad or good,
The old allotted years of men
I have endured, as best I could—
Threescore and ten!

—Richard Henry Stoddard, in *The Independent*.

SNOWBALL LACE.

MAKE a chain of 73 stitches; turn.

First row—2 d c in fifth st, 2 ch, 3 d c in same st, ch 2, a shell of 3 d c, 2 ch, 3 d c in the ninth st of chain, fasten down by 1 s c in the twelfth st, a half ball of 12 trebles in the fifteenth st, fasten down with 1 s c in the eighteenth st of ch; shell of 3 d c, 2 ch, 2 d c in twenty-first st, ch 2, skip 3, 1 d c in next st, * ch 2, skip 1, 1 d c



SNOWBALL LACE.

in next. Repeat eleven times. Ch 2, skip 3, shell in next st, fasten down, skip 3, 12 tr in next, fasten down, skip 3, shell in next st, ch 2, 1 d c in third st from shell, ch 5, turn.

Second row—D c in first d c of shell, ch 2, shell in shell, fasten down with s c in last d c of shell of previous row (the explanation of fasten down will not be repeated again). Finish the ball by working one treble in each of the twelve trebles, keeping the last st of each treble on the hook until all

twelve are made, then throw the thread over the hook and draw through all the stitches at once, draw them together tightly with 1 ch st, ch 4, fasten down, shell in shell, * ch 2, d e in d c; repeat five times. Half ball in next d c, * d c in next d c, ch 2, repeat five times, shell in shell, fasten down, finish ball, ch 4, fasten down, shell in shell, ch 2, shell in shell, ch 2, turn.

Third row—Shell in shell, ch 2, shell in shell, ch 9, shell in shell, * ch 2, d e in d c, repeat five times; finish ball, * ch 2, d e in next d c, repeat five times, ch 2, shell in shell, ch 9, shell in shell, ch 2, d e in last d c of shell of previous row, ch 2, d e in d c, ch 2, d e in third st of 5 ch, ch 5, turn.

Fourth row—D c in d c, ch 2, d c in d c, ch 2; d c in first d e of shell, ch 2, shell in shell, fasten down; half ball in fifth st of 9 ch, fasten down; shell in shell, * ch 2, d c in d c, repeat five times; ch 2, d c in eye of ball (the eye of the ball is the 1st st used in drawing the trebles together), * ch 2, d c in next d c, repeat five times; ch 2, shell in shell, fasten down; half ball in fifth st of 9 ch, fasten down; shell in shell, ch 2, shell in shell, ch 2, turn.

Fifth row—Shell in shell, ch 2, shell in shell, fasten down; finish ball, fasten down; shell in shell, * ch 2, d e in d c, repeat three times; half ball in next d c, * d c in next d c, ch 2, repeat once; d c in next d c, half ball in next, * d c in next d c, ch 2, repeat three times, shell in shell, fasten down; finish ball, fasten down; shell in shell, ch 2, d c in last d c of shell, * ch 2, d c in d c, repeat three times; ch 5, turn.

Sixth row—D c in d c, ch 2, repeat four times; shell in shell, ch 9, shell in shell, * ch 2, d c in d c, repeat three times; finish ball, * ch 2, d c in d c, repeat twice; finish ball, * ch 2, d c in d c, repeat three times; ch 2, shell in shell, ch 9, shell in shell, ch 2, shell in shell, ch 2, turn.

Seventh row—Shell in shell, ch 2, shell in shell, fasten down; half ball in fifth st of 9 ch, fasten down; shell in shell, * ch 2, d c in d c, repeat twelve times; ch 2, shell in shell, fasten down; half ball in fifth st of 9 ch, fasten down; shell in shell, * ch 2, d c in d c, repeat six times; ch 5, turn.

Eighth row—D c in d c, ch 2, repeat six times; shell in shell, fasten down; finish ball, ch 4, fasten down; shell in shell, * ch 2, d c in d c, repeat five times; half ball in next d e, * d c in next d e, ch 2, repeat five times; shell in shell, fasten down; finish ball, ch 4, fasten down; shell in shell, ch 2, shell in shell, ch 2, turn.

Ninth row—Shell in shell, ch 2, shell in shell, ch 9, shell in shell, * ch 2, d e in d c, repeat five times; finish ball, * ch 2, d c in d c, repeat five times; ch 2, shell in shell, ch 9, shell in shell, * ch 2, d c in d c, repeat twice; half ball in next d c, * d c in next d c, ch 2, repeat three times; ch 5, turn.

Tenth row—D c in d c, ch 2, repeat twice; finish ball, * ch 2, d e in d c, repeat three times; ch 2, shell in shell, fasten down; half ball in fifth st of 9 ch, fasten down; shell in shell, * ch 2, d c in d c, repeat twelve times (the eye of the ball always taking the place of one d e); ch 2, shell in shell, fasten down; half ball in fifth st of 9 ch, fasten down; shell in shell, ch 2, shell in shell, ch 2, turn.

Eleventh row—Shell in shell, ch 2, shell in shell, fasten down; finish ball, ch 4, fasten down; shell in shell, * ch 2, d e in d c, repeat twelve times; ch 2, shell in shell, fasten down; finish ball, ch 4, fasten down; shell in shell, * ch 2, d c in d c, repeat ten times; ch 5, turn.

Twelfth row—D c in first d c, ch 2, d e in next d c, half ball in next, * 1 d c in next d c, ch 2, repeat once; d c in next d c, half ball in next, * d e in next d e, ch 2, repeat three times; shell in shell, ch 9, shell in shell, * ch 2, d e in d c, repeat five times; half ball in next d c, * d c in next, ch 2, repeat five times; shell in shell, ch 9, shell in shell, ch 2, shell in shell, ch 2, turn.

Thirteenth row—Shell in shell, ch 2, shell in shell, fasten down; half ball in center of 9 ch, fasten down; shell in shell, * ch 2, d c in d c, repeat five times; finish ball, * ch 2, d c in d c, repeat five times; ch 2, shell in shell, fasten down; half ball in fifth st of 9 ch, fasten down; shell in shell, * ch 2, d c in d c, repeat four times; finish ball, * ch 2, d c in d c, repeat twice; finish ball, * ch 2, d c in d c, repeat twice; ch 5, turn.

Fourteenth row—D c in d c, ch 2, repeat twelve times; shell in shell, fasten down; finish ball, ch 4, fasten down; shell in shell, * ch 2, d e in d c, repeat twelve times; ch 2, shell in shell, fasten down; finish ball, ch 4, fasten down; shell in shell, ch 2, shell in shell, ch 2, turn.

Fifteenth row—Shell in shell, ch 2, shell in shell, ch 9, shell in shell, * ch 2, d e in d c, repeat three times; half ball in next d c, * d e in next d e, ch 2, repeat once; d c in next d c, half ball in next, * d e in next d c, ch 2, repeat three times; shell in shell, ch 9, shell in shell, * ch 2, d e in d c, repeat eight times; half ball in next d c, * d e in next, ch 2, repeat three times; ch 5, turn.

Sixteenth row—D c in d c, ch 2, repeat twice; d c in d c, finish ball, * ch 2, d c in d c, repeat nine times; ch 2, shell in shell, fasten down; half ball in center of 9 ch, fasten down; shell in shell, * ch 2, d e in d c, repeat three times; finish ball, * ch 2, d e in d c, repeat twice, finish ball, * ch 2, d c in d c, repeat three times; ch 2, shell in shell, fasten down; half ball in center of 9 ch, fasten down; shell in shell, ch 2, shell in shell, ch 2, turn.

Seventeenth row—Shell in shell, ch 2, shell in shell, fasten down; finish ball, ch 4, fasten down; shell in shell, * ch 2, d e in d c, repeat twelve times; ch 2, shell in shell, fasten down; finish ball, ch 4, fasten down; shell in shell, * ch 2, d c in d c, repeat sixteen times; ch 5, turn.

Eighteenth row—D e in d c, ch 2, repeat sixteen times; shell in shell, ch 9, shell in shell, * ch 2, d e in d c, repeat five times; half ball in next d c, * 1 d e in next d e, ch 2, repeat five times; shell in shell, ch 9, shell in shell, ch 2, shell in shell, ch 2, turn.

Nineteenth row—Shell in shell, ch 2, shell in shell, fasten down; half ball in center of 9 ch, fasten down; shell in shell, * ch 2, d c in d c, repeat five times; finish ball, * ch 2, d e in d e, repeat five times; ch 2, shell in shell, fasten down; half ball in center of 9 ch, fasten down; shell in shell, * skip one space of 2 ch, one shell of 2 d c, 2 ch, 2 d c in next space; repeat all around the scallop, except at the point; when this space is reached, put two shells in place of one, to give a fullness for turning.

Twentieth row—* 2 d c under 2 ch, ch 5, s c under last d c to make a picot, repeat four times; 2 d c under same space, fasten down with 1 s c between the two shells of previous row. This makes a shell of 10 d c, with 4 picots in the shell of previous row. Repeat all around the scallop.

This makes a very pretty lace for aprons when made of No. 40 thread. It may also be made of No. 16 knitting-cotton and used as table or mantel drapery; in this case, omit the last two rows of each scallop and tie a fringe in each space instead. The balls should then be tightly tufted, when they will appear as so many real snowballs arranged on a fine network.

GRACE McCOWEN.

PAPER CARPET.

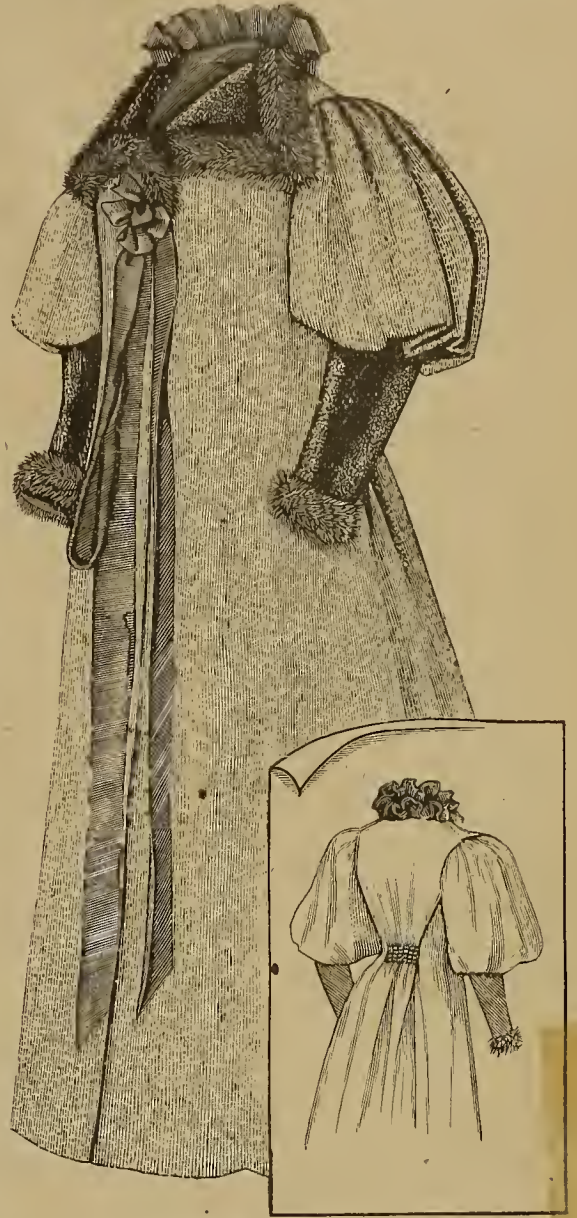
For those to whom linoleum is too expensive for covering a floor, this paper carpet will answer very satisfactorily as a substitute, with care lasting for several years, if properly made.

The floor should be made as smooth as possible, and good, thick, brown paper pasted securely over it, covering completely. Make a good, smooth paste of flour and water, thick enough to work nicely with a brush, free of lumps, and size the paper, which must be securely pressed to the floor. Select an inexpensive wall-paper figured like oil-cloth or linoleum. Cut in strips to fit the room, matching the figures, until the floor is covered. When the first paper has dried thoroughly for several days, paste the figured paper, press smoothly on the floor and let dry. If the weather is clear and warm, it will be ready for the finish in much less time.

Dissolve eight ounces of white glue in nine pints of water. When cold, with a clean brush apply to the paper, passing the brush over the paper lightly until every bit has been covered. The glue must not be allowed to congeal; by keeping it in a pan of hot water, this can be avoided. When perfectly dry, go over it again more freely, crossing the floor in the opposite

direction from the first coat; when this is dry, finish with one part of boiled oil and three parts of good, light-colored varnish, applied with a varnish-brush. Three coats of this, each one dried well, serves a good purpose; more is even better. If this preparation thickens and does not work freely, thin with benzene or turpentine; stir well.

If the paper does not fit nicely around the base-board, use a border to match the paper. Of course, it must be put on before the varnish, so that all can be done at the



BREAKFAST GOWN.

same time. The quantity of paste, protection coat and varnish must be determined by the size of the room.

In order to keep this carpet looking bright, and to wear well, a coat of oil and varnish should be applied once a year, after the floor has been well washed. When soiled, wipe up just like an oil-cloth.

M. E. SMITH.

BREAKFAST GOWN.

This comfortable garment may be made of double-sided flannel or eider-down flannel, trimming it upon the revers and sleeve cuffs with velvet of a suitable color to match the other material. The loose fronts give it a comfortable feeling not found in a tight-fitting gown. If the fronts to the waist are lined with quilted satin, it makes it very desirable for negligee or sickness.

ELSIE.

FOR CEILINGS AND WALLS.

- 3 pounds of Paris white,
- 1 ounce of white glue,
- 1 ounce of common soap,
- 2 ounces of alum.

Mix the Paris white with warm water; add the glue, which has been previously dissolved in hot water. Dissolve the soap in hot water and the alum in cold water; add both to the Paris white. Apply to the walls with a broad paint-brush. This preparation can be tinted.

M. E. SMITH.

CANNED ELDERBERRIES FOR PIES.

- 7 pounds of berries,
- 3 pounds of brown sugar,
- 1 pint of vinegar,
- 1 pint of molasses,
- 1 tablespoonful of cinnamon,
- 1 tablespoonful of nutmeg,
- ½ tablespoonful of cloves.

Boil down till thick. K. L. B.

CHEAP HOME SEEKERS' EXCURSIONS.

On Aug. 29, Sept. 10 and 24, the Burlington Route will sell round trip tickets at very low rates to points in Nebraska, Kansas, Colorado, Utah, the Dakotas, Wyoming, Black Hills and other Western points. For particulars call on your agent, or address D. O. IVES, Gen. Pass. & Tkt. Agt., St. Louis, Mo.

Our Household.

"THE GOOD DIE YOUNG."

There was a man who never told a lie—
But he's dead—
Never said it was wet when the weather was dry—
Never said
He'd caught fish when he hadn't caught one,
Never said he'd done something that he hadn't done.
Never scolded his wife, and never got mad,
And wouldn't believe that the world was so bad.
A respecter of men, a defender of women,
Who believed the divine, and in that which was human.
Meek as Moses—he was never understood,
And the poor man died of being too good.
And he's dead.

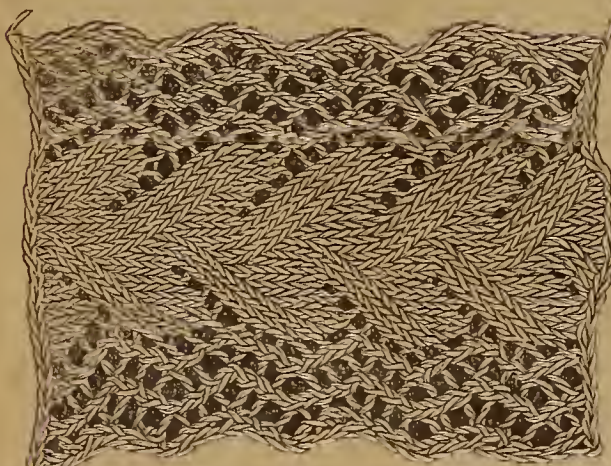
There was a woman who never gossiped a bit—
She's dead, too—
Who hated all scandal, nor listened to it.
She believed in mankind, took care of her cat,
Always turned a deaf ear to this story or that;
Never scolded her husband—she never had one,
No sluggard was she, but rose with the sun.
Never whispered in meeting, didn't care for a bonnet,
Or all the feathers that one could put on it;
Never sat with the choir nor sang the wrong note;
Expressed no desire to lecture or vote.
For the poor soul was deaf as a post—also dumb.
You might have called forever, and she wouldn't have come.
And she's dead.
—Jeannette La Flamboy, in Outlook.

HOME TOPICS.

SCHOOL LIFE.—Vacation is ended again, and all over our land, in city and country, the brown and rosy-cheeked children are trooping back to school. They are strong and healthy now from three months of active, outdoor life, and if they are to stay so, their daily habits must be carefully looked after.

In the first place, see to it that they are in bed by nine o'clock every night, that they may not suffer from lack of sleep. The practice of allowing children to sit up late at night, either to study or for any other purpose, is a bad one. Don't crowd the children. Let them take a year or two more to finish their school life if they cannot do the work without studying late at night. If a child goes to bed early and sleeps in a well-ventilated room, he will waken early and be ready for breakfast. I have always made it a rule in my family, "no breakfast, no school." If a child cannot eat breakfast it is not well, and cannot do its school work.

If the children cannot come home to a midday dinner, they ought to have a good, nourishing lunch, and put up in as inviting a form as possible. Mother should attend to this herself. Do not trust it to a servant, and do not expect a girl to put up her own lunch, or ten chances to one she will half the time go without a lunch or wrap up whatever she finds the most convenient,



FANCY VINE-STRIPE, KNITTED.

and then it will more often be thrown into the waste-basket than be eaten.

A pretty basket or box should be provided to carry the lunch in, and then keep a supply of oiled paper to wrap each sandwich or cake in, and do not forget to put in a napkin. A sandwich or two is nearly always acceptable, but this does not always mean bread and meat. Eggs, cheese, fish, jelly, marmalade, or even occasionally a thin layer of brown sugar, will please the palate and be a pleasant surprise. If meat or fish is used, have it perfectly tender and then chop or pound it very fine.

I never buy potted meats, but prepare them myself, using bits of cold roast beef, steak, chops, fowl and ham, mostly lean. Cook all these together until tender, and with only a little water left, take out the

meat and chop it fine, then put it back in the gravy, season it to taste, break in two or three eggs and stir all together over the fire. If it is not thick enough now, add half a cupful of bread crumbs, made by rolling dry bread very fine on the bread-board. Now pack it into bowls and keep it in a cool place. It will keep well for several days, and when cold may be turned out and sliced very thin.

Some kind of fruit should always be found in the lunch-basket, and little custards, puddings, etc., are also sure to be appreciated. The little porcelain egg-cups with tops that screw on, in which to boil eggs, are just the thing in which to carry stewed fruit, baked apples or jam, and custards or dainty little puddings may be baked in them.

Don't say that all this is too much trouble. Nothing is too much trouble that will help your boys and girls to grow into strong men and women. It is only a few years at best that our children are dependent upon us, and whatever we do for them must be done now. MAIDA McL.

PUTTING OUT PLANTS.

While the "lords of creation" are discussing crops, finance, etc., we sisters may express kindly sympathy to those who lost nearly all their floral pets during the temporary return of winter weather last spring. Nearly everyone in this locality were deceived by that young summer, and when the first rain came, unsuspectingly rushed out their plants as fast as possible. Two ladies told me they worked in the rain nearly all day for the sake of letting their plants get the benefit of needed rain, and it would be such a grand start for them. Alas! fatal mistake. Would that mine had stayed right in their little corners. I saved most of the geraniums by covering each night.

Frozen plants will sometimes start again from the roots, if watered freely after the weather begins to moderate.

For two years in succession my plants were put out Decoration day, and did finely, and after this lesson will try to remember that it is hardly safe to put out tender plants until the first of June, even if all my neighbors think me awfully slow in waiting until that time. Many seeds may be planted early, but look out for house-plants, unless it be the fish geraniums, which are almost half hardy, standing quite a frost, sometimes. GYPSY.

FANCY VINE-STRIPE, KNITTED.

This stripe is pretty knit in wool, cotton or knitting-silk, and may be used as an insertion or as a stripe for spreads, afghans, tidies, etc. Cast on 26 stitches. Purl once across.

First row—Sl 1, k 1, o, n, o, n, o, k 1, o, k 2, n, k 4, n, k 2, (o, slip 1, k 1, pass sl st over) three times, k 1, turn.

Second and every alternate row—Purl.

Third row—Sl 1, k 1, o, n, o, n, o, k 3, o, k 2, n, k 2, n, k 2, (o, sl 1, k 1, pass over) three times, k 1, turn.

Fifth row—Sl 1, k 1, o, n, o, u, o, k 5, o, k 2, n, n, k 2 (o, sl 1, k 1, pass over) three times, k 1, turn.

Seventh row—Sl 1, (sl 1, k 1, pass over, o) three times, k 2, n, k 4, n, k 2, o, k 1, o, n, o, n, o, k 2, turn.

Ninth row—Sl 1, (sl 1, k 1, pass over, o) three times, k 2, n, k 2, n, k 2, o, k 3, o, u, o, n, o, k 2, turn.

Eleventh row—Sl 1, (sl 1, k 1, pass over, o) three times, k 2, n, n, k 2, o, k 5, o, n, o, n, o, k 2, turn.

Twelfth row—Purl, and repeat from first row.

If wanted, a straight edge may be crocheted along either edge of the stripe to convert it into an insertion or a fancy band for a border. ELLA McCOWEN.

GRANGE DAY AT CHAUTAUQUA.

Grange day at Chautauqua opened propitiously, with the sun shining brightly and every promise of a beautiful day. There has been an unusual fall of rain here this summer, so a dry day was appreciated by all. A crowd of people kept pouring in from the boats all morning, and I was strongly reminded of the opening of Noah's ark as I watched the continuous procession wind its way from pier to amphitheater. I watched critically for "hayseeders," but it was difficult to distinguish the grangers from the usual excursionist that daily arrives at Chautauqua, except for their blue and red badges.

Bishop Vincent opened the morning meeting in his usual happy manner, and an hour was pleasantly passed in listening to short addresses from different delegates. Grand Master O. H. Hale, of Lawrence county, presided, and seated with him upon the platform were four sister grangers and five brother grangers, delegates from different counties—pleasant-faced, pleasant-mannered, properly attired, loyal knights of the soil.

Miss Mead pleased all by her gentle, unostentatious carriage, but her voice was not strong enough for a hall seating eight to ten thousand people. Mrs. Lord was more successful, and in gesture and voice showed her familiarity with public speak-



DRESS FOR EARLY FALL WEAR.

ing, and in her plea for equality showed plainly her views on woman's power and influence in elevating and educating the masses. All the delegates were enthusiastic in praising the grange as a means of improvement to farmers, and to the country at large as a reforming element in all political parties.

The afternoon meeting was addressed by Prof. Roberts, of Cornell university, and Mr. Fred Schraub, state commissioner of agriculture. Professor Roberts, on "Soil and How to Sell," gave some scientific talk about soil and its commercial value, stating that in selling apples or produce we sell soil, a better way to sell soil than to wholesale it. That sustenance and development come only by painstaking care, the more intelligent the effort the greater the development and reward. First stands knowledge, and ability to apply it in effective ways. The most profitable way to sell soil is to water it with brains. Thus we lift ourselves from squaw-farming into the realm of creative thought; in fact, have become gods within our sphere of action.

Mr. Schraub opened his address by a profession of love, especially for young lady grangers, and as he was a bachelor, he had a right to love them. Mr. Schraub is a pleasant speaker, and was easily heard all over the hall, except for much talking by those not interested in agriculture. After stating eloquently his faith in granges as educators, and as aids in getting good out of life, no matter how humble, he drew a profitable comparison between the peasant, as depicted in "Ivanhoe," one thousand years ago, with a collar around his neck, and the comfortable farmer of to-day. He objected to England making our markets and our prices. We brag of our superiority and our ability to cope with England in every department, but while we are bragging they are working. He closed with an eloquent eulogium to the farm. Don't let the boys think they are going to a better place by leaving it. The farm is the best place on earth. Be content, and through the grange be a blessing to the country.

The lecture was immediately followed by one of Dr. Palmer's delightful concerts—concerts not often surpassed, when assisted by Sherwood and Listman, and accompanied by Rogers' orchestra. The orchestra played "The Rustic Wedding," a quaint Slavonic tone picture, beginning with the wedding march and ending with the sleigh-bells of the happy pair as they drove away; and a wild Midway Plaisance farce called "War Dance," with tom-tom, war-whoop and all, which were wildly received. The choir sang a waltz, also a chorus of Rossini's "The God of Israel," both grandly done, and a fitting close to the day. It was a rare sight to see Miller park overflowing with the hastening crowd as they poured toward the depot and pier; and then the overloaded boats steamed slowly away to the music of the bands as they played a lusty departure.

ADALINE REED.

AN ALPENA MIRACLE.

MRS. JAMES M. TODD, OF LONG RAPIDS, DISCARDS HER CRUTCHES—IN AN INTERVIEW WITH A REPORTER SHE REVIEWS HER EXPERIENCE AND TELLS THE REAL CAUSE OF THE MIRACLE.

(From the Argus, Alpena, Mich.)

We have long known Mrs. Jas. M. Todd, of Long Rapids, Alpena county, Mich. She has been a sad cripple. Many of her friends know the story of her recovery; for the benefit of those who do not, we publish it to-day.

Eight years ago she was taken with nervous prostration, and in a few months with muscular and inflammatory rheumatism. It affected her heart, then her head. Her feet became so swollen she could wear nothing on them; her hands were drawn all out of shape. Her eyes were swollen shut more than half the time, her knee-joints terribly swollen, and for eighteen months she had to be held up to be dressed. One limb became entirely helpless, and the skin was so dry and cracked that it would bleed. During these eight years she had been treated by a score of physicians, and has also spent much time at Ann Arbor under best medical advice. All said her trouble was brought on by hard work, and that medicine would not cure, and that rest was the only thing which would ease her. After going to live with her daughter she became entirely helpless, and could not even raise her arms to cover herself at night. The interesting part of the story follows in her own words:

"I was urged to try Dr. Williams' Pink Pills for Pale People, and at last did so. In three days after I commenced taking Pink Pills I could sit up and dress myself, and after using them six weeks I went home and commenced working. I continued taking the pills, until now I begin to forget my crutches, and can go up and down steps without aid. I am truly a living wonder, walking out of doors without assistance.

"Now, if I can say anything to induce those who have suffered as I have to try Pink Pills, I shall gladly do so. If other like sufferers will try Pink Pills according to directions, they will have reason to thank God for creating men who are able to conquer that terrible disease, rheumatism. I have in my own neighborhood recommended Pink Pills for the after effects of la grippe, and weak women, with impure blood, and with good results."

Mrs. Todd is very strong in her faith in the curative powers of Pink Pills, and says they have brought a poor, helpless cripple back to do her own milking, churning, washing, sewing, knitting, and in fact, about all of her household duties, thanks to Dr. Williams' Pink Pills.

Dr. Williams' Pink Pills contain all the elements necessary to give new life and richness to the blood and restore shattered nerves. They are for sale by all druggists, or may be had by mail from Dr. Williams' Medicine Company, Schenectady, N. Y., for 50c. per box, or six boxes for \$2.50.

DRESS FOR EARLY FALL WEAR.

This design is very suitable for early fall wear, before it becomes necessary for a wrap. The new goods are rather rough in texture, having a woolly effect of dark color or black over something bright. They are very beautiful, and will make up in good effects. Very heavy lace and satin ribbon bows form the trimming. ELSIE.

WATERMELON-ICE.

When you tire of watermelon, try a watermelon-ice, made as follows: Cut a melon in halves, scoop out the entire center, taking out the seeds, chop, add a cupful of sugar, pack the freezer, turn a few minutes. It will be like soft snow, and is delicious. M. E. SMITH.

PRESERVING CITRON.

Pare and cut into blocks, let them lie in weak salt-water over night, then cook till tender, in clear water. When you can stick a fork well into them, transfer them to well-spiced vinegar, with sugar added in the proportion of a pint of sugar to a quart of vinegar. Let them simmer in this for two hours. Then heat the liquid for six consecutive mornings and pour over them, adding a little more vinegar if it boils away.

CONSUMPTION CURED.

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

A MAN TO LIVE WITH.

As gentlemen cherish ideals of those traits which make women agreeable house-mates, so women like to theorize as to what is essential in the character of a man to live with. I have heard the subject discussed in numberless conversations. The most lively theorists are unmarried women. Wives should, of course, mention their husbands as excellent companions, since they have chosen them (or accepted them). If a husband possess unpleasant traits, or lacks agreeable manners, something may be hoped for as a result of training; something—not much.

I have been thinking over the biographies of celebrated men, wondering how many of them were agreeable husbands. Girls sometimes think brilliant marriages are such as would unite them to men of distinction; but marriage being an intimate, every-day relation, the happiness of

he neither spoke nor heard. He ate with such fierceness that the veins swelled on his temples and the sweat rolled down from his forehead. When walking or seated in a room he kept his mouth continually opening and shutting, as if chewing something, and he was constantly twirling and twisting his hands. His clothes were always soiled, and his wig was so full of dust that a comb could not pass through it; the front, too, was singed where the wearer had thrust it in the candle, as he was near-sighted.

Recently at a ladies' club the members were discussing the married life of Abraham Lincoln. At first his heroic qualities as a lawyer and statesman caused undivided enthusiasm, and Mrs. Lincoln was in danger of being blamed for not understanding her great husband. But one bright little lady spoke up with quick independence, saying, "There are two

IVORY SOAP

IT FLOATS

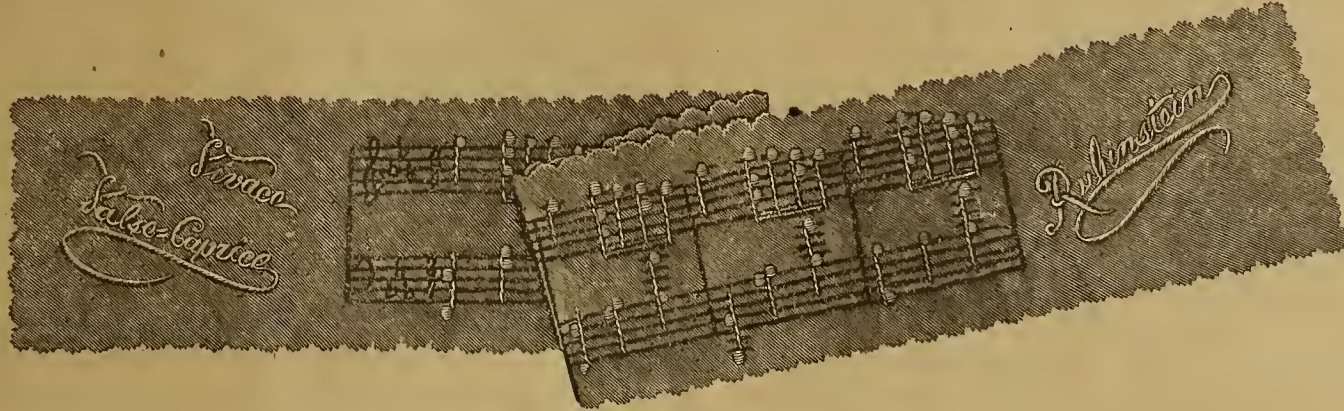
There is only one soap that is kept by all grocers, that is Ivory Soap.

THE PROCTER & GAMBLE CO., CINCINNATI.

happened to say "lack of money." Neither will we say that a pleasant man to live with is one who has money. If he have health and industry—two qualities necessary—he will earn money enough. Besides,

If not dried quickly, corn is apt to sour. Some might not notice what was the trouble, and conclude they did not like dried corn, when if they had that which had been dried quickly enough to keep sweet, they would decide that it was a luxury.

Flies are very apt to get to dried corn if carelessly left open. When sufficiently dry to put away, it is a good plan to put it into a paper or old cloth sack and lay on the grate in the oven until hot enough to kill any insect eggs that may have been left there while drying. Don't forget and let your corn burn up, now, after all your trouble. It does not take very long, and then it should be immediately put up in tight cans or sacks, with entire safety from worms, unless through carelessness in leaving the cover off or sack untied at some future time. GYPSY.



EMBROIDERED COVER FOR KEYBOARD OF PIANO.

the union depends less on fame or celebrity than on merit and amiability. However, let us consider the domestic histories of a few distinguished men, and see if we envy their wives.

Take an artist—Gainsborough. He married at nineteen, and "fortunately, because his wife knew how to quiet his temper." He had one extenuating trait; he repented gracefully. When he had spoken crossly to his wife, he sometimes wrote a little letter of apology. He managed it in a peculiar way. He and she each had a pet dog. His was named Fox, hers Tristram. The note was written ostensibly by Fox, who would carry it in his mouth to Tristram. Mrs. Gainsborough entered into the fun of the thing, answering accordingly:

MY OWN DEAR FOX:—You are always loving and good, and I am a naughty little female ever to worry you as I often do. So we will kiss, and say no more about it.

Your own affectionate TRIS.

Besides his quick temper, he was frightfully extravagant. Music was his hobby. He was delighted one day with a violin solo, and showed his enthusiasm by insisting on buying the violin for fifty pounds (two hundred dollars). Then he exclaimed, "But your violin will do me no good unless I have your music-book." So he bought that, also, for another fifty pounds.

A person might suppose that a great preacher, pious, wise and unselfish, would

sides to that matter. I have read about their domestic life with close attention, and I think that Mr. Lincoln was a man not pleasant for a refined woman to live with. He would use the butter-knife to butter his own bread, and one day when his wife ushered callers into the parlor, they found Mr. Lincoln without his coat, lying asleep on the floor, a chair turned upside down for his pillow."

Absent-mindedness is a fault peculiar to men absorbed in abstruse studies and scientific inventions. A gentleman told me an excellent joke about a conspicuous inventor, who one evening had to be reminded of an engagement. "Have I an appointment?" he asked of a friend who came to remind him. The appointment was merely the inventor's marriage!

In making reference to these distinguished men, I do not mean to say that all artists, authors or statesmen have the same faults, nor can we deny that these faults may be found in men of humble station.

Those of you who know Shakspeare's play, "The Merchant of Venice," remember that Portia had several suitors, and one day, to pass the time, she and Nerissa discussed the merits and demerits of the suing swains. There was "the Neapolitan prince," who could "do nothing but talk about his horse." There was the county Palatine who "did nothing but frown." Portia said, "He hears merry tales, and

he must have common sense, patience, good humor and hopefulness."

AUNT GRISELDA.

EMBROIDERED COVER FOR KEYBOARD OF PIANO.

Exposure to the light will often cause keys to turn yellow, also to accumulate dust, when one does not care to shut the piano every time upon leaving it. This cover is made of good felt or broadcloth, embroidered with the first seven bars of the "Valse Caprice" of Rubinstein, or it can be any favorite melody.

It is done in stem-stitch, flat satin-stitch and chain-stitch with fine silk. Make the letters with light green silk, note streaks beginning ten inches from the edge; treble and bass clef, key and time with dark yellow; heads of notes light blue, tails dark blue, staff lines in dark yellow, using this also for the division of the bars. Line it underneath with pongee silk. This would be a very suitable gift to a musical friend.

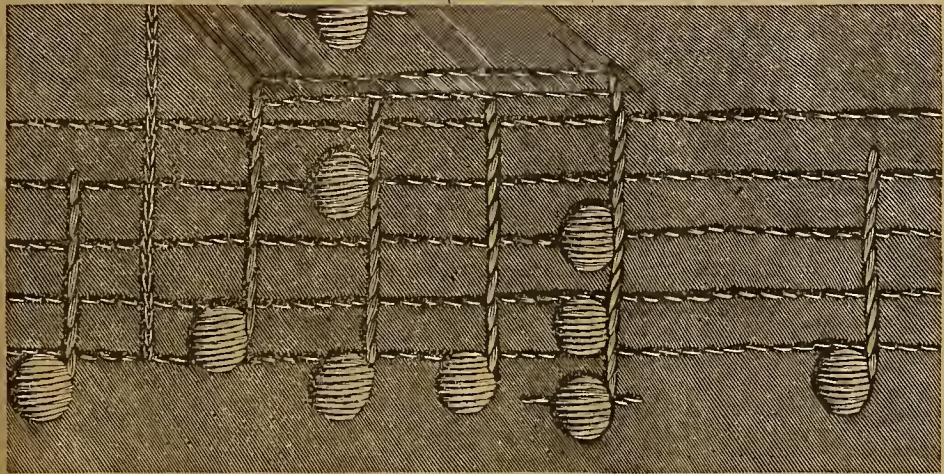
ELSIE.

DRYING CORN.

This is a favorite dish in many homes, even preferred to the canned corn. So many people seem to have trouble with the latter method; and I have seen those who did not succeed very well with the first, simple as it seems.

Corn should not be left to get too hard before gathering to dry, as it will not taste a bit better that way than it would be to eat fresh if allowed to get too old before picking.

It is a good plan to make a business of the job of drying corn, and prepare all you have room for about the stove, and rush it through. Corn that is put to dry in the morning should be nearly dry at night, if properly stirred, and hustled with a good fire. Boil the corn as for eating, then shave and scrape from the cob onto large tins or platters, and place on grates in the oven with a good fire, and stir every few minutes, until the kernels seem to stick together; then remove to a cooler place, frequently stirring as before.



EMBROIDERED COVER FOR KEYBOARD OF PIANO.

be an agreeable husband, but instances have been known to the contrary. The celebrated Mr. Whitefield was very impatient, exacting and sulky toward his wife. Sometimes, having indulged in these unbecoming moods, he burst into tears, saying he knew he was peevish. He was exceedingly fastidious about his dress and the appointments of his table. From these causes arose much of his displeasure. When his wife died, he candidly acknowledged that the event, instead of being a loss, set his "mind at liberty."

As Whitefield may be said to have failed to be pleasing because he was overly nice, a cotemporary was quite as disagreeable on account of slovenly dress and bad manners. I refer to Samuel Johnson. While at table he bent his head over his plate, so absorbed in his occupation that

smiles not;" and then she exclaimed, "I had rather be married to a death's head with a bone in his mouth." There was the young German whom Portia liked very vilely in the morning when he was sober, and most vilely in the afternoon when he was drunk, causing her to say, "I will do anything, Nerissa, ere I will be married to a sponge."

All this sounds much like the prattle of nineteenth-century young women of the fin-de-siecle period, which goes to prove that feminine tastes depend on primal forces not subject to great variety.

An English newspaper published a request that women readers would send in a written statement of man's worse trait. The result was a vast number of opinions. "Bashfulness" seemed to get the most votes; but the joke was, not one woman

Pears'

Pears' soap is as gentle as oil, but effective; has no fat or alkali in it.

But it costs so little, you do not see how it possibly can be the finest soap in the world.

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(For Fall and Winter, '95-'96).

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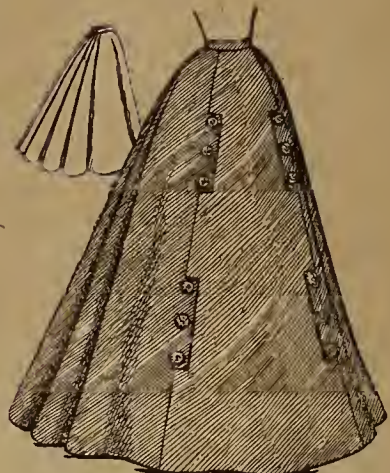
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No. 6467.—LADIES' WAIST. 11 cents. Sizes, 32, 34, 36, 38 and 40 inches bust.



No. 6510.—LADIES' CAPE. 11 cents. Sizes, 32, 34, 36, 38 and 40 inches bust.



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Our Sunday Afternoon.

A PRAYER.

BY MILLER PURVIS.

O Thou who givest gracious gifts,
Listen while one, Thy creatures, lifts
His voice to praise Thy mighty name
And further favors comes to claim.

The hills are Thine, the vales between
All things that move or groweth green;
Thy greatness fills the bounds of space,
Thy power holds the stars in place;
The seas that stretch from land to land
Are held as in Thy hollowed hand;
All things that have been, are, shall be,
Belong to Thee, alone to Thee.

Oh, what am I that I should fall
Upon my face and on Thee call,
Should dare before Thy throne to kneel
And to Thy goodness make appeal?

Naught but the creature of a day,
To live a space and pass away,
I feel my smallness, know Thy might,
I know Thy love is infinite,
And knowing this I come to Thee,
To ask that Thou my strength shall be.

Help me in every time of need,
For this alone is all I plead.
And when, if it be soon or late,
I stand before the utmost gate
And knock, wilt Thou admit me then
To praise Thee evermore? Amen.

SMALL LIBRARIES.

MORE beautiful than any other adornment are the costly books of a princely library; but let not the man of small library stand looking into the garnished alcoves wishing for those unused volumes. The work, man who dines on roast beef and new Irish potatoes will be healthier and stronger than he who begins with "inock-turtle," and goes up through the long lane of a luxuriant table till he comes to almond nuts. We put the man of one hundred books, mastered, against the man of one thousand books, of which he has only a snattering.

We get many letters from clergymen asking advice about reading, and deploring their lack of books. We warrant they all have books enough to shake earth and heaven, if the books were rightly used. A man who owns a Bible has, to begin with, a library as long as from here to heaven. The dullest preachers we know of have splendid libraries. "They own everything that has been written on a miracle, and yet when you hear them preach, if you do not go sound asleep, that would be a miracle. They have all that Calvin and other learned men wrote about election, and while you hear them you feel that you have been elected to be bored. They have been months and years turning over the heavy tomes on the divine attributes, trying to understand God, while some plain Christian, with a New Testament in his hand, goes into the next alley, and sees in the face of an invalid woman peace and light and comfort and joy, which teach him in one hour what God is.—*Tabmage.*

WHERE WAS HE?

"Is your father at home?" I asked a small child on our village doctor's doorstep.

"No," he said, "he's away."

"Where do you think I could find him?"

"Well," he said with a considering air, "you've got to look for some place where people are sick or hurt or something like that. I don't know where it is, but he's helping somewhere."

And I turned away with this little sermon in my heart. If you want to find the Lord Jesus, you've got to set out on a path of helping somewhere, of lifting somewhere, or lifting somebody's burden, and lo! straightway one like unto the Son of Man will be found at your side.

We cannot always find him whom our soul loveth in worship or in ordinances or in sacraments or in still meditation; we can never find him in selfish idleness or in worldliness or in self-indulgence, but on the contrary, like the little one's father, he is sure to be found "helping somewhere."

—*Kind Words.*

A RARE CHANCE TO MAKE MONEY!

I am convinced that anyone that will hustle, can make from \$10 to \$15 a day selling Climax Dish Washers. They give such good satisfaction that every family wants one. You can wash and dry the dishes in two minutes, without danger of breaking dishes or without wetting the hands. In the past six months I have cleared over \$20 a day without canvassing any; people either come or send for Washers, and my trade is increasing all the time. This business is equally good in country, town or city, and any lady or man can make money anywhere if they will only try. After careful examination I find the Climax decidedly the best Dish Washer made. The Climax Mfg. Co., 36 Starr Ave., Columbus, Ohio, will give you full instructions. Go to work at once and let us hear how you succeed. It is certainly our duty to inform each other of these golden opportunities. A READER.

THINGS TO BE DONE TO-MORROW.

Most of us think of procrastination as something for which little excuse can be made, but some philosopher has discovered that there are two sides to this question, as to most others. There are some things, to be sure, which must not be postponed beyond the first possible moment of accomplishment, but others are better left over until to-morrow.

Take quarreling, for example. When the blood goes stinging through our veins, and when hasty words crowd to our lips, it is difficult to consent to any postponement of the unpleasantness. But wait till to-morrow. Wait till your temper is well under control, till the first heat of anger has died away, and then begin your quarrel. And if it no longer seems easy, but results at last in indefinite postponement, that is certainly nothing that should cause regret.

A story has reached your ears which reflects on the reputation of an acquaintance. Put off repeating it till to-morrow. Think of the matter seriously and find out just what good will be accomplished by passing this story on, just what harm will result from its suppression. And if you cannot satisfy yourself in this matter, wait till some future day when you are certain that your act will produce more good than harm.

Put off till to-morrow those thousand things which mar the sweetness and harmony of life—the impatient word, the sarcasm which cuts deep into the quivering heart, the selfish and unkind act. Postpone them all until to-morrow—for to-morrow never comes.—*Young People's Weekly.*

LIVING BY THE DAY.

One secret of sweet and happy Christian life is in learning to live by the day. It is the long stretches that tire us. We think of life as a whole, running on for years, and it seems too great for us. We cannot carry this load until we are threescore and ten. We cannot fight this battle continually for half a century. But really, there are no long stretches. Life does not come to us in lifetimes; it comes only a day at a time. Even to-morrow is never ours till it becomes to-day, and we have nothing whatever to do with it but pass down to it a fair and good inheritance in to-day's work well done and to-day's life well lived.

It is a blessed secret, this of living by the day. Any one can carry his burden, however heavy, till nightfall. Any one can do his work, however hard, for one day. Any one can live sweetly, quietly, patiently, lovingly and purely till the sun goes down. And this is all that life ever means to us—just one little day. "Do to-day's duty, fight to-day's temptation, and do not weaken and distract yourself by looking forward to things you cannot see, and could not understand if you saw them." God gives us nights to shut down the curtain of darkness on our little days. We cannot see beyond, and we ought not to try to see beyond. Short horizons make life easier, and give us one of the blessed secrets of brave, true, holy living.—*J. R. Miller, D.D., in "The Building of Character."*

A WIDE DIFFERENCE.

There is a difference, and a wide one, between practising moral duties and being a Christian. Christianity is a religion of motives. It substitutes an eternal motive for an earthly one; it substitutes the love of God for the love of self. There may be, and are, many persons who practise temperance and other virtues which Christianity inculcates, but who never think of doing so because they are inculcated. It would be as absurd to ascribe a knowledge of mechanics to savages because they employ the lever; or of the principles of astronomy to brutes because, in walking, they preserve the center of gravity, as it is to call such persons Christians. A Christian is one whose motives are Christian faith and Christian hope, and who is, moreover, able to give a reason of the hope that is in him.—*Archbishop Whately.*

REBUKE LOVINGLY.

Broken hearts get all too little sympathy from the busy world. It is so easy, when the "other fellow" is stricken, to make the blow heavier by untimely censure, by studied aloofness, or by evident lack of sympathy. It is so hard for some men to find time to be kindly and really sympathetic. The Jamaica negro, in abject sorrow, cries plaintively, "Put me down softly,—me a cracked plate!" And his cry is echoed by many a broken heart very near us, yet afar off and sorrowing the more because of our heedlessness to its longing cry.—*Sunday-school Times.*

DISSTON'S



Send for Pamphlet, or "Saw Book," mailed free. HENRY DISSTON & SONS, Philadelphia, Pa. Mention this paper when you write.

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By using our (stove pipe) RADIATOR With 120 Cross Tubes, ONE stove or furnace does the work of TWO. Drop postal for proofs from prominent men.



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To THE EDITOR—Please inform your readers that I have a positive remedy for the above named disease. By its timely use thousands of hopeless cases have been permanently cured. I shall be glad to send two bottles of my remedy free to any of your readers who have consumption if they will send me their express and post office address. T.A.Slocum, M.C., 183 Pearl St., New York.

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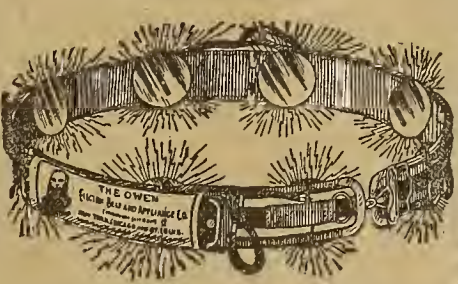
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Queries.

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.

Irrigation Through Tiles.—L. M., Clark, Mo. Irrigation through tiles—subirrigation—is a success. The proper distance between the lines of tile and the fall depends on the character of the soil.

Orchard-grass.—J. W., Agnewville, Va. If the season is favorable, orchard-grass can be sown alone early in September. When sown on wheat or oats, sow it in the spring.

Stiff-strawed Wheats.—C. H. J., Mt. Vernon, Ohio. For well-manured clay soils on which wheat is liable to lodge, select stiff-strawed varieties like the Valley, Velvet Chaff or Nigger.

Alkali Lands.—N. S. H., Phoenix, Ariz., writes: "What is the best treatment for soils holding too much salt and alkali?"

REPLY:—If the land be flooded and the water drained off promptly, the excess of salt or alkali will be removed. You should have a combined system of subirrigation and drainage for your land.

VETERINARY.

Conducted by Dr. H. J. Detmers.

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 include a fee of one dollar.

Periodical Ophthalmia.—S. B. A., Sandy River, Va. What you describe is periodical ophthalmia. The attacks will return again and again until your horse has lost his eyesight in both eyes.

Dead Hogs.—E. H. R., Springfield, Penn. I cannot tell you what caused the death of your hogs. You ought to have made a post-mortem examination, or at any rate have given a good description of the symptoms observed during life.

Umbilical Hernia.—J. C. K., Dysart, Iowa. What you describe is an umbilical hernia, but as your filly is yet very young, you may wait with the operation, if one is necessary, until next April or May.

Shoulder-boil and Six Lumps.—F. C. R., Queen City, Mo. Such a shoulder-boil as you describe requires a surgical operation, and what is meant by lumps I have no means of knowing.

Heaves.—M. W. H., Sprague, Washington. Your horse, it seems, has heaves; that is, a chronic, feverless and incurable difficulty of breathing. You can effect some improvement if you feed no bulky food, no musty or dusty hay, and see that the animal is never constipated, and is always kept in a place with plenty of fresh air to breathe.

Worms.—R. W. L., Yarmouthville, Maine. If your brood-mare is troubled with long, white worms, which are passing off through the rectum, the best you can do is to feed her well with good, sound and nutritious food, do not allow her to drink any stagnant water from pools, ditches, etc., or any water that may possibly be contaminated with worm-brood.

Rachitis.—T. W. H., Shelbyville, Missouri. What you describe appears to be rachitis, a disease which principally affects the bones of the young animals. There must be something wrong in the diet of your sows and pigs. Give them food rich in phosphates of lime, feed them clover, bran, or even bone-meal, allow them more exercise, and avoid sour slop, but especially sour whey.

Garget.—H. P. H., Waddington, Cal. The best remedy against garget, if applied in time, is milking! milking! milking! once every two hours, as has been so often explained in these columns. External applications of liniments, etc., can do no good, but may do much harm.

Epizootic Ophthalmia.—H. D., Francesville, Ind. What you describe is a case of epizootic ophthalmia, a disease quite frequent in cattle, especially in hot and dry summers. Most cases terminate in recovery, but if the cornea ulcerates or breaks, or if interior parts of the eye become seriously affected, loss of eyesight will be the result.

A Capped Knee—A Lump Under the Jaw.—L. Q., Richwood, Minn. You say your horse has a swelling on the knee-joint about the size of an orange, and that you do not know the cause, but you do not give any further description, and do not even say whether it is hard or soft, or fluctuating, which would make a great difference in regard to diagnosis and treatment.

A Worthless Calf.—A. R. T., New Buffalo, Penn., writes: "I have a calf, five months old, that seems to have an obstruction in its throat. When it drinks milk it takes a swallow or two all right, but then it takes a mouthful, and all, or nearly all, runs out of its nose, and by the time it is done drinking it begins to scour. It also has a cough that seems to be loose. It was a small, weak thing from birth, so weak we had to hold it up to the cow for two or three days after birth.

ANSWER:—Your calf, it seems, is worthless. Such a calf should not have been raised. If you wish to incur expenses, have the calf examined by a veterinarian, but I doubt whether the obstruction can be reached and be removed; and besides this, it is not improbable that the calf is tuberculous.

Lameness.—C. J. H., Presho, New York, writes: "I have a four-year-old colt that promises to make a valuable farm-horse. She recently sprained the right hind ankle. A friend gave me some liniment, and advised me to use it. I fear that it was not what was needed, as it blistered the ankle, and only partially relieved the lameness. I turn the horse out to pasture nights and mornings, and keep it in the stable from the flies during midday. Please give directions for treating a sprain."

ANSWER:—You can never expect to cure a lame horse if you do not give the same strict rest. Most people, it seems, expect too much of liniments, and of medicines in general, and forget, or do not seem to comprehend, that an ailing part can be restored to its former healthy condition only by physiological processes. A treatment, therefore, aims to accomplish three things: First, to remove the cause, wherever possible; second, to promote, or even to excite to greater activity, all those physiological processes by which a restoration to a normal condition has to be effected; and third, to remove and to ward off all injurious influences and everything that may interfere with the physiological processes which are necessary to effect a restoration to health.

POWER ON THE FARM.

No doubt many of our readers are considering putting in power this season for doing their grinding, cutting feed, shelling corn, sawing wood, and much other work for which a good power can be used so advantageously on the farm. And as the practice of steaming and cooking feed is also growing rapidly, it is generally preferable to put in an outfit combining the power and steaming qualities in one machine, which is being done best by James Leffel & Co., of Springfield, Ohio, in their line of Steam Engines and Boilers.

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"THE grand, wild music of war"—that of a Chinese military band.

"WE never lose by politeness," hence we bow to the inevitable.

THE average annual rainfall over the whole earth is thirty-six inches.

THE sanguine man can draw a conclusion from an invisible premise.

MUDWUMPERY has a heavy percentage of selfishness in its composition.

A WOMAN looking for a rich husband is wonderfully like a confidence man looking for a farmer.

DAUGHTER (weeping)—"Oh, papa, to-day I enter already on my thirtieth year."

Father—"Caln yourself, child—it won't last long."

THERE is a miniature Indian corn grown in Brazil. The ears are not larger than a little finger and the grains are the size of mustard-seeds.

MANAGER—"Why do you look so gloomy? The house is crowded."

Playwright—"That's just it; suppose they should hiss?"

MAX LEBAUDY, the French politician, has presented each postman in his district with a bicycle. This will encourage them to wheel into line for him.

HERDSON—"Why didn't you defend your wife's suit for divorce?"

Saidso—"I had known for years that what she said was law."

LOUISIANA has the largest farm in the United States. It is 100 miles one way and twenty-five miles the other. The fencing alone costs \$50,000.

MISS BEACON—"Is that Mr. Jowler interesting?"

Miss Lakeside—"No; he sits on the far end of the sofa and talks."

HOUNDS follow a trail better during humid than in dry weather, because the moisture of the atmosphere prevents the dissemination of the odors left by fleeing animals.

MRS. WILLIAM S. JONES, of Waverly, Ohio, has in her possession a gold-lined silk velvet coat worn by Lafayette on his last visit to America. It is profusely decorated.

HOGS carry straws in their mouths on the approach of bad weather because of a hereditary instinct. Wild hogs always make a comfortable bed when rain is coming on.

WOOLEN goods feel warm because wool is a poor conductor of heat, and the goods made of wool contain within their substance large quantities of air, also a poor conductor.

THE twinkling of the stars forebodes bad weather, because it shows that there are aerial currents of different temperatures, this probably indicating atmospheric disturbances.

A BOY'S marble placed in a kettle prevents the incrusting of the vessel, because the marble attracts the particles of lime and so prevents the adhering to the sides of the kettle.

LIVERPOOL has been thoroughly aroused by the effort of Manchester to capture its trade by means of the ship-canal. The former city will build a great landing-stage to debark passengers without the use of tenders, and expects to thus accommodate steamers of the future one thousand feet long, making the voyage from America in three and one half days.

HE was talking in low, earnest tones: "Do you love me?" he asked.

"Yes," she answered.

"Will you—" she checked him.

The number of his check was nineteen.

"I AM very sorry, Karl, you don't admire my new frock. Everybody says it is charming."

"Your friends, my dear, pay you compliments. I pay your bills."—*Lustige Blaetter.*

SEVERAL years ago, Chicago people purchased a tract of swamp land near Gallien, Mich., and in spite of the jeers of the natives, set about draining and preparing it for cultivation. Last year the tract produced 20,000 tons of cabbage, worth \$80,000, and this year there are six hundred acres set to cabbage, while you cannot touch an acre of this lately valueless land short of \$200.

THE phonograph is now used in the office of the *Pall Mall Magazine*. The following information is given: "Articles are spoken into the cylinder, which is then sent to the printer, where it is set in a duplicate machine in which it winds off its message at the pace set by the compositor, who works by ear. The proof-reader uses the phonograph in the same way, and thus does away with the need of a copy-holder."

PEOPLE wink because the eye must be kept clean and moist, and by the action of the eyelids the fluid secreted by the glands of the eyes is spread equally over the surface of the globe.

THE longest bridge in the world is the Lion bridge, near Saugang, China. It extends five and a quarter miles over an arm of the Yellow sea, and is supported by 300 huge stone arches. The roadway is seventy feet above the water and is inclosed in an iron network.

HUSBAND—"We must be more economical in the use of coal."

Wife (Vassar graduate)—"There are untold billions of tons of coal just beneath the earth's surface, and—"

Husband—"And one or two big corporations just above."

FRANCE'S great military port at Bizerta, on the Tunis coast, has been formally declared open. In connecting the great lagoon with the sea by an artificial channel, a harbor has been obtained large enough to hold the whole French fleet, and as safe as if it were an artificial basin in the center of France.

THE Carter Wire Fence Machine Co. have recently moved their works from Derby to Mt. Sterling, Ohio, owing to their large and rapidly growing business. The Carter people have greatly improved their machines and any one desiring a number one Fence Machine should write them at Mt. Sterling for a free catalogue.

THE balloon expedition to the north pole, which will take place under the auspices of the king of Sweden in 1896, is progressing favorably. The balloon will be filled on one of the islands northwest of Spitzbergen, and weighted to float about nine hundred feet high. It will carry three men and a four months' supply of provisions.

CONCORD, a California boom site, is thus described by an impartial writer: "Concord is situated on the Atlantic and Pacific road, about four miles southeast of Mojave, and is utterly worthless for any purpose whatever. It is a sandy desert covered with dwarf cactus, and is even shunned by rabbits and birds. The nearest water that could be used for irrigation is twenty-five or thirty miles away, which would have to be brought that distance by pipe lines up hill. The land is absolutely worthless. A large number of lots have been sold to eastern people, but nothing further has ever been done. The only vegetation is a small cactus, dwarfed to a creeping plant, owing to the conditions that prevent it growing. Concord is miles away from timber. There is no more uninhabited spot on earth."

WORKING THE HISTORIC NILE.

Now that the waters of the Niagara have been made tributary to human enterprise, it may be interesting to note that a similar undertaking is contemplated in Egypt. The general inspector of public works, Mr. Prompt, has just submitted to the Egyptian government the results of his investigations during the last eight months relative to the utilization of the cataracts of the Nile for agricultural and mechanical purposes. His project includes an immense reservoir in Upper Egypt which will permit the culture of cane sugar and cotton in the place of cereals. In the furtherance of the realization of this project he proposes to establish an electric power station near Assuan, where a fall of forty-five feet will be utilized. This station would furnish 40,000 horse-power, besides furnishing 500,000,000 cubic yards of water for irrigation. A fifteen-foot dam is to be built across the Nile just above Cairo, which would furnish both light and motive power at a very low price to the Egyptian capital. The cost of the entire project is estimated at \$8,000,000, which will very likely be raised by private subscription.

LIGHTNING'S POWER.

Professor Hoppe reports in the *Archiv fur Post and Telegraphie*, a new example of the mechanical power of a lightning discharge.

In a storm that raged at Klausthal, in Hartz mountains, a bolt entering a house struck a wooden post on the top of which two metallic nails one sixth of an inch in diameter were melted. No forge could have effected this; to bring it about, an electric current of 200 amperes intensity and 20,000 volts tension must have passed through the nails. Supposing that the action of the lightning lasted a second, the dynamic power thus developed was equal to 5,000 horse-power; but if, as is much more probable, the discharge lasted only one tenth of a second, we get a rate of work that does not fall short of 50,000 horse-power.

THE LONGEST BRIDGE.

It is stated to be the intention of the government of Ceylon to connect that island with the mainland of India by a railway structure sixty-one miles long across Polks strait. Included in this work would be a bridge forty-one miles long. The straits are very shallow, being no more than six feet deep for long distances. The proposed line would connect at one end by a railway 145 miles long with Colombo, the principal harbor of Ceylon, and at the other by a ninety-mile road with Madura, the nearest point on the Indian railway system.



A MAN DOES, BUT A LADY DOESN'T WANT WHISKERS.

NO-HAIR
INSTANTLY REMOVES EVERY VESTIGE OF SUPERFLUOUS HAIR from the face, hands or body. Harmless and pleasant as cream. Does not even reddens the skin. Nearly half a million testimonials received during 1895. Price, \$1.00; Trial size, 50c, with positive guarantee, mailed secure from observation. Correspondence confidential. Address, NOHAIR CHEMICAL CO., Dep't B, St. Louis, Mo.



POOR MAN STOP

wasting your money on the tobacco habit. You can't afford it. It will keep you poor—poor in purse and poor in health. Stop it with the aid of NO-TO-BAC. Lay the foundation for a fortune and health.

BURNING YOUR MONEY!

The poor men of America burned and chewed up \$600,000,000 worth of tobacco-money last year. You helped. Great tobacco trusts absorb millions at the expense of your nerve-force and manhood. Does it pay? Get cured—the money saved will

START A BANK-ACCOUNT.

NO-TO-BAC, original guaranteed tobacco habit cure, will help you. Sold by all druggists under absolute guarantee to cure. We will give you the guarantee in writing. If you haven't got the ready money, write to us and we will find a way to help you to a quick and easy cure.

DON'T TOBAGGO SPIT AND SMOKE YOUR LIFE AWAY.

That's the title of our little booklet sent for the asking with a free sample of NO-TO-BAC and written guarantee of cure. Write a line today.

THE STERLING REMEDY CO., Chicago, Montreal, Can., New York. 86



WOMAN'S UNREASONABLENESS.

She—"I'm afraid you do not love me as fervently as you did."

He—"I swear by yon star that I love you more fiercely than ever. There is no sacrifice I would not make to convince you of the strength of my passion."

She—"Well, anyway, when you called tonight you did not embrace me half so closely as usual."

He—"But you see, darling, I had a five-cent cigar in my vest pocket I was afraid I would crush, and I couldn't do that and be prudent, you know."

SUFFICIENT UNTO THE NIGHT.

"I'm not troublin' meself about the new woman," hiccupped O'Murthen, making his way deviously homeward at 3 A. M. "It's th' ould woman that's worryin' me!"—*Chicago Daily Tribune.*

CORRECT ARITHMETIC.

Teacher—"Now, Jimmy, if you ate three apples at two cents apiece, then four apples at one cent apiece, what would the cost be?"

Jimmy—"Oh, about twelve dollars, I believe. Our doctor is a steep one."—*Truth.*



WALL PAPER.

Samples free from largest Wall Paper concern in U.S. KAYSER & ALLMAN 932-934 Market St. Philada. 418 Arch St.

What Shall I Do? Because of wide and varied experience in life I can give advice of practical value to those who are young or unemployed. Fee \$2.00. Particulars sent free to persons who do not know what to do to be successful. CHAS. SETH BROWN, Oberlin, O.

FREE TO BALD HEADS. We will mail on application, free information how to grow hair upon a bald head, stop falling hair and remove scalp diseases. Address, **Altenheim Medical Dispensary**, 127 East Third Street, Cincinnati, O.

DEAFNESS and Head Noises relieved by using **Wilson's Common Sense Ear Drums.** New scientific invention; different from all other devices. The only safe, simple, comfortable and invisible Ear Drum in the world. Helps where medical skill fails. No wires or string attachment. Write for pamphlet. **WILSON EAR DRUM CO.**, Offices: 138 Trust Bldg., Louisville, Ky. 1122 Broadway, New York.

MAMMOTH PUMPKINS

I have grown them for 5 years. Quality unexcelled. Ordinary ones weigh 60 to 100 lbs.—very often they reach 200 lbs.

Best for cooking. Best for feeding. Best for all purposes. This year's crop surpasses all others for size and quality. Price 10c. per pkt., 3 for 25c., 7 for 50c. Ready for delivery Dec. 1. Send silver or postage stamps. Neighbors can save money by ordering together.

Farm Grown Seeds are the Most Reliable.

C. C. ASFAHL, Doran, Iowa.

NEW FACES. ALL about Changing the Features, Removing Blemishes and Skin Diseases in 150 page book for a stamp. **JOHN H. WOODBURY**, 127 W. 42d St., N. Y. Inventor Facial Soap. Branch Offices: Boston, Phila., Chicago, St. Louis.

WHAT CAN YOU PAY For a Sewing Machine? All we ask is for you to drop us a card listing us know you want a sewing machine, and we will mail you the most liberal inducement ever offered—**NO MONEY IN ADVANCE—30 DAYS TRIAL IN YOUR OWN HOME.** We manufacture the **BEST** and our highest priced machine is only \$25.00. Our inducements in new localities are most liberal. We have shipped hundreds of our Best High Grade Sewing Machines to introduce at \$2.18, \$2.22, \$2.36, \$2.44, \$2.66 & \$3.50 each. **LET US MAKE YOU OUR BEST OFFER.** Do not hurry. Cut out this advertisement and mail it to us. **ELY MFG. CO., B 4 307 & 309 Wabash Ave., Chicago, Ill.**

5000 NEW TELEGRAPH OPERATORS Needed each year. Pleasant, profitable and permanent employment. Telegraphy taught in a thorough and practical manner. Modern equipment. Main line practice. School established in 1862. Graduates assisted to positions. Catalogue free. **Arthur H. Johnson, Sec., 10 S. Main St., Oberlin, O.** Mention this paper when you write.

3.95 SPRINGFIELD A \$10 WATCH FOR \$3.95. Warranted 5 Years. The **GREATEST BARGAIN** ever OFFERED. 11 Jeweled Springfield stem wind and stem set, movement encased in a genuine Ducler silver case, gents full size, made strong and heavy with two back caps to protect the works. Will keep its color and wear a lifetime. No retailer will sell this watch for less than \$10. No other wholesale house will duplicate it for less than \$6.00. Our price for a short time \$3.95. Send us your name and full address and we will ship the watch by express for you to examine, and if you do not find it a bargain and equal to any \$10.00 watch you ever saw, don't pay a cent, but if satisfied it is well worth the money, pay agent our price \$3.95 and express charges and it is yours. A 5-year guarantee is sent with every watch. Order at once, this offer may be withdrawn. **B. H. KIRK & CO., Wholesale Jewelers, 172 Washington St., Chicago.**



Smiles.

A FADING FLOWER.

Just she and I all, all alone beneath the stars so calm and bright; I told her that to me her cheeks were like twin lilies pure and white; But in the morning as I brushed my powdered vest for half an hour, I realized the lilies must have been some other kind of flour.

A SERIOUS LOVE SPELL.

A young lady sings in our choir Whose hair is the color of phoir, But her charm is unique, She has such a fair chique It is really a joy to be noir. Whenever she looks down the aisle She gives me a beautiful smile, And of all of her beaux I am certain she sheaux She likes me the best all the whaisle. Last Sunday she wore a new sacque, Low cut at the front and the back, And a lovely bouquet, Worn in such a cute wuet As only few girls have the knaque. Some day, ere she grows too antique, In marriage her hand I shall sique; If she's not a coquette, Which I'd greatly regrette, She shall share my six dollars a wique.

DID NOT KNOW HIM.

BISHOP POTTER is credited with telling the story which, more aptly than the thousands of other stories on the same subject, illustrates the abject misery and utter irresponsibility of seasickness. We hardly know why it is, but it cannot be denied that any yaru involving the horrors of mal de mer is seized upon with avidity by the public generally, and with particular gusto by those individuals who have themselves suffered the indescribable wretchedness of that grievous malady.

"I was coming from Liverpool upon one of the famous liners," says Bishop Potter, "and although the sky was clear and the weather warm, a somewhat tempestuous sea had occasioned more than the usual amount of seasickness among the passengers. As I paced the deck one afternoon I noticed a lady reclining upon one of the benches, and the unearthly pallor of her face and the hopeless languidity of her manner indicated that she had reached that state of collapse which marks the limit of seasickness.

"Touched by this piteous spectacle, I approached the poor creature and in my most compassionate tone I asked, 'Madam, can I be of any service to you?'"

"She did not open her eyes, but I heard her murmur faintly: 'Thank you, sir, but there is nothing you can do—nothing at all.'"

"At least, madam," said I, tenderly, 'permit me to bring you a glass of water.'"

"She moved her head feebly and answered: 'No, I thank you—nothing at all.'"

"But your husband, madam," said I, 'the gentleman lying there with his head in your lap—shall I not bring something to revive him?'"

"The lady again moved her head feebly, and again she murmured faintly and between gasps: 'Thank you, sir, but—he—is—not—my—husband. I—don't—know who he is!'"

THE RIGHT TIME.

At a picnic given the waifs of Chicago, a plate of tarts was passed to two little urchins, evidently chums. One, whose mouth was too full for utterance and plate too full for even an extra tart, shook his head. Not so his neighbor, who added the tart to his pile of goodies. In a few minutes number one had so reduced his plate that he asked for the refused dainty, when he was told they were gone. Whereupon his little friend was heard giving him this philosophical advice: "The time to take tarts, Bob, is when they're a-passin'."

MORE ACCURATE.

"Do you miss him much?" She, to the surprise of the questioner, smiled.

"Not so much as I used to. Even a woman can learn to throw straight, when the distance is measured merely by the width of the breakfast-table."—Cincinnati Tribune.

CHEAP EXCURSIONS TO THE WEST.

Bountiful harvests are reported from all sections of the West and Northwest, and an exceptionally favorable opportunity for home-seekers and those desiring a change of location is offered by the series of low-rate excursions which have been arranged by the North-Western Line. Tickets for these excursions, with favorable time limits, will be sold on August 29, September 10, and 24 to points in Northern Wisconsin, Michigan, Northwestern Iowa, Western Minnesota, South Dakota, Nebraska, Colorado, Wyoming, Utah and a large number of other points. For full information apply to agents of connecting lines, or address C. Traver, T. P. A., Marine National Bank Building, Pittsburg, Pa.; F. M. Snively, T. P. A., 127 The Arcade, Cleveland, Ohio.

HE KNEW IT.

Dr. A claims to be an adept in the art of diagnosis. On being called in to see a lady, he remarked with a knowing smile:

"I see what your complaint is. You are suffering from a disordered stomach and nervous spasms."

"Sir!" "Let me finish. Your temperament is somewhat exacting—"

Here the lady interrupted: "Why, it is not myself who is ill, it is my uncle."

The doctor, quite unabashed, said: "I suspected as much."

A SHARP DOCTOR.

Some jokes are rather severe, says the Epworth Herald, but because of the wit in them we generally receive them with good grace. We presume this was so with the man who questioned the doctor.

"Doctor, I have an important physiological question to ask you. When I stand on my head the blood rushes into my head. Now, when I stand on my feet, why does it not rush into my feet?"

"Because your feet are not hollow."

A SUMMER DELICACY.

The white cow (gleefully)—"Did you see that young city fellow out with the city girl, gathering wild flowers?"

The muley cow—"Yes; they go through the pasture here every day."

The white cow—"Well, he had them in his straw hat, and when they sat on the stile to rest she put her straw hat over his to keep the sun from them, and I—ha! ha!—I ate the whole business as a sandwich."

OUTCLASSED.

Patrick Regan had a face on him that, as he had once remarked himself, was an "office to the landscape." Next to his homeliness, his poverty was the most conspicuous part of him. The other morning a neighbor met him, when the following colloquy ensued:

"An' how are ye, Pat?" "Moighty bad, intoirly. It's shtarvation that's shtarvin' me in the face."

"Is that so? Sure, an' it can't be very pleasant for ayther of yez."—London Sporting Times.

HOW HE TELLS TIME.

"My father," said the small boy to the woman who was calling on his mother, "is a great man. He knows what time it is without even looking at his watch."

"What do you mean, Tommy?" asked the visitor.

"Oh, when I holler out and ask him what time it is in the morning, he always says it's time to get up. And when I ask him what time it is in the evening, he always says, 'Time to go to bed, Tommy.'"—The Waterbury.

IT MADE NO DIFFERENCE.

The young lady at the piano was playing a difficult selection from Wagner. In the midst of it she suddenly stopped in confusion.

"What's the matter?" inquired one of the company.

"I struck a false note," she replied.

"Well, what of it?" asked another. "Nobody but Wagner would ever know it, and he's dead. Go ahead with the music." And she went ahead.—Chicago Tribune.

NARROW ESCAPE.

"Father," said Johnny Ironside, "how big a fish did you ever catch?"

"I caught a catfish once, Johnny," replied Deacon Ironside, "that weighed—"

The good man stopped short, looked fixedly at his youngest son, and resumed in an altered tone:

"John, this is Sunday."—Youngstown (Ohio) Indicator.

WE WANT AGENTS Everywhere, for the sale of the "Bruner" Cedar Washing Machine, the Electric Clothes Wringer and the Smith & Bruner Post-hole Digger. They are all the very best in the market. Address THE BRUNER CO., Springfield, Ohio.

\$3 A DAY SURE. Send us your address and we will show you how to make \$3 a day; absolutely sure; we furnish the work and teach you free; you work in the locality where you live. Send us your address and we will explain the business fully; remember we guarantee a clear profit of \$3 for every day's work; absolutely sure; write at once. ROYAL MANUFACTURING CO., BOX 14, DETROIT, MICH.

MAKE MONEY! selling BEVERIDGE'S Automatic Cooker. Best cooking utensil. Food can't burn. No odor. Saves labor and fuel. Fits any stove. Agents wanted, either sex. Good pay. One lady sold 2385 in one town. Write (P. O. 728), BEVERIDGE MFG. CO. Baltimore, Md.

CANCER CURED Without the use of the knife and with little or no pain, by Dr. M. G. PINGREE, 126 State Street, Chicago. BOOK FREE.

AGENTS \$75 A WEEK AT HOME, using or selling PRACTICAL PLATING DYNAMO. The modern method, used in all factories to plate new goods. Plates gold, silver, nickel, etc. on watches, jewelry, table-ware, bicycles and all metal goods; fine outfits for agents; different sizes; always ready; no battery; no toy; no experience; no limit to playing needed; a great money maker. W. P. HARRISON & CO., Clerk No. 15, Columbus, Ohio.

Advertisement for Derma-Royale skin cream. Text includes: 'If you desire A Pure, Soft, White Skin, FREE FROM EVERY SPOT and BLEMISH, You must use Derma-Royale'. Features an illustration of a woman's face and detailed text about skin treatments and a \$500 reward offer.

MUSIC AGENTS advertisement for Howley, Haviland & Co., Publishers. Text includes: 'Who want to make money send for Sample Copy of EVERY MONTH, contains \$2.00 worth of Latest and Most Popular Music... Will \$500 Help You Out?'

PARKER'S HAIR BALSAM advertisement. Text includes: 'FREE. SUPERB FORM. LOVELY COMPLEXION. PERFECT HEALTH.' Features illustrations of a woman's face and a bottle of the product.

IF YOU HAVE RHEUMATISM advertisement. Text includes: 'Gout, Sciatica, etc., when doctors fail to cure you, you write to me and I will send you free a package of the most wonderful remedy which cured me and hundreds of others, even cases of 30 years standing.'

AGENTS advertisement. Text includes: 'We have the biggest bargains in Premiums ever offered subscribers. You can earn good wages by engaging with us.'

PARALYSIS CURED advertisement. Text includes: 'CURED without medicine. Rheumatism, Spinal Diseases and Dropsy easily cured.'

FAT FOLKS advertisement. Text includes: 'reduced 15 lbs. in a month, any one can make remedy at home. Miss M. Ainley, Supply, Ark.'

KIDNEYS AND BLADDER advertisement. Text includes: 'Why suffer the misery and perhaps fatal result caused by diseases of the above organs when I will send you full particulars of a cheap, sure and permanent Home Cure FREE of charge.'

FAT FOLKS REDUCED advertisement. Text includes: '15 to 25 lbs. per month. Reduced permanently. Endorsed by the press and leading societies.'

TAPE-WORM advertisement. Text includes: 'Expelled ALIVE in 60 minutes with be-d, or no charge. Send 2c. stamp for Pamphlet.'

RUPTURE advertisement. Text includes: 'A positive, radical cure at home (sealed.) Book giving full particulars sent free. Address DR. W. S. RICE, Box F, Smithville, Jeff. Co., N.Y.'

PILES advertisement. Text includes: 'Instant relief, final cure in a few days, and never returns; no surgery; no pain; no suppository. Remedy mailed free. Address, C. J. MASON, Box 519, New York City, N. Y.'

OPIUM HABIT CURED advertisement. Text includes: 'Established in 1871. Thousands cured. Cheapest and best cure. FREE TRIAL State case. Dr. MARSH, Quincy, Michigan.'

OPIUM Morphine Habit Cured advertisement. Text includes: 'in 10 to 20 days. No pay till cured. DR. J. STEPHENS, Lebanon, Ohio.'

FITS advertisement. Text includes: 'A Great Remedy Discovered. Send for a trial package and let it speak for itself. Postage 5 cents. DR. S. PERKEY, Chicago, Ills.'

Dr. ISAAC THOMPSON'S EYE WATER advertisement. Text includes: 'If afflicted with SORE EYES USE DR. ISAAC THOMPSON'S EYE WATER'

\$15 to \$40 Per Week advertisement. Text includes: 'Can be made representing us Big pay guaranteed from the start. The work is easy and lasts the year round.'

\$865 Given Away In Six Grand Prizes advertisement. Text includes: 'NEW DESIGNS. Return this Advt. with order and we will send by express prepaid, this beautiful hunting case, Gold Filled, full jeweled, Elgin style, stem wind and set watch which you can sell for \$25.00.'

FAT MADE LEAN advertisement. Text includes: 'ABSOLUTELY HARMLESS. Simply stopping the fat producing effects of food. The supply being stopped, the natural working of the system draws out the fat and reduces weight at once.' Features illustrations of a man and a woman.

PLAYS advertisement. Text includes: 'Dialogues, Speakers, for School, Club and Parlor. Catalogue free. T. S. DENISON, Publisher, Chicago Ill.'

RUBBER STAMPS advertisement. Text includes: 'Best made. Immense Catalogue Free to agents. The G. A. HARPER MFG. CO., Cleveland, O.'

SPEX advertisement. Text includes: 'BIG MONEY IN SPECTACLES. Send for our Optical Catalogue—just out. New goods. Cut prices. F. E. BAILEY, Chicago, Ill.'

AGENTS advertisement. Text includes: 'to sell Household Specialties everybody needs. Quick sales. Big profits. Sherman & Butler, 16 N. Canal St., Chicago.'

LADY AGENTS advertisement. Text includes: 'New Goods. Reliable, quick sales. Large profits. Lasting customers. Catalog free. LADIES SUPPLY CO., 3115 Forest Ave., Chicago'

MEN AND LADIES advertisement. Text includes: 'in small towns wishing to earn \$25 a week easily, write us. We will explain. MATTOON & CO., Oswego, New York.'

WATCH 98c advertisement. Text includes: 'SEND FOR CATALOGUE OF WATCHES, JEWELRY AND NOTIONS. CHEAPEST PRICES IN AMERICA. WILLIAMS WATCH CO., CHICAGO, ILLS.'

\$80 PER MONTH advertisement. Text includes: 'Lady or Gent. New Specialties. Instructions and sample free. Work in your own locality. Enclose stamp. PEOPLES MFG. CO., 41 VALLEY BLDG., DETROIT, MICH'

\$75 A MONTH advertisement. Text includes: 'and expenses. Lady or Gent. Samples free. A permanent situation guaranteed. Write today. Address P. O. Box 5508, Boston, Mass.'

A BONANZA advertisement. Text includes: 'Now is the very time of the year to take subscriptions. We have the finest premiums and pay a big commission. Write at once for full particulars. They are free to you. Address FARM AND FIRESIDE, Springfield, Ohio.'

YOU advertisement. Text includes: 'You can now grasp a fortune. A new guide to rapid wealth, with 240 fine engravings, sent free to any person. This is a chance of a lifetime. Write at once. Lynn & Co. 48 Bond St. New York'

\$1000 & UPWARDS advertisement. Text includes: 'easily made with small capital by safe method of systematic speculation in grain. Book and full particulars free. Nat'l Bank References. Pattison & Co., 612 Omaha Bldg., Chicago, Ill.'

HILL:—He Pays the Express. 24 18k. GOLD PLATE WATCH advertisement. Text includes: 'Ladies' or Gents' Size. CUT THIS OUT and send it to us with your name and address and we will send you this watch by express for examination A Guarantee for 5 years and a handsome chain and charm goes with it free. You examine it and if you think it a bargain pay \$2.50. It is beautifully engraved and warranted the best time-keeper in the world for the money and equal in appearance to a genuine solid gold watch.'

CORPUS LEAN advertisement. Text includes: 'Will reduce fat at rate of 10 to 15 lbs. per month without injury to health. Send 6c. in stamps for sealed circulars covering testimonials. L. E. MARSH CO. 2815 Madison Sq., Philada., Pa.'

The five toilet and medicinal articles shown below sell in drug-stores for 55 cents, but in order to advertise the goods and introduce them, the manufacturers have agreed to send, for the next 30 days, this Vaseline Toilet and Medicinal Outfit

absolutely free to any one

Prem. No. 69.

Who subscribes to Farm and Fireside one year at the regular price, 50 cents. (Notice—Any one sending 50 cents for Farm and Fireside one year and the Vaseline Toilet and Medicinal Outfit, will not be entitled to any other premium.)

VASELINE Is one of the most wonderful additions made to medicines in recent years, and is now used daily in every hospital in the world. It is a pure and highly concentrated essence of petroleum, refined without the use of chemicals, and prepared expressly for toilet and medicinal purposes. It has neither odor nor taste, and will never become rancid. It is the most perfect and valuable base for ointments that the medical world has ever known.

For External Use as a Liniment.

It is applicable to Burns, Cuts, Wounds, Bruises, Sprains, Rheumatism, Catarrh, Ulcers, Bites of Insects and Serpents, Eczema, Barber's Itch, Tetter and all diseases of the skin, also for Piles, Hemorrhoids, Chilblains, Bunions, Swellings, Tumors, Nasal and Bronchial Catarrh, and to every purpose where a liniment is needed.

For Internal Use.

It may be used to great advantage for Coughs, Colds, Hoarseness, Sore Throat, Diphtheria, Croup, Asthma, Consumption, and all the affections of the Lungs, Bronchial Tubes, Throat and Chest. Also for Dysentery in adults and children. It is tasteless, odorless and harmless.



The articles in the outfit are four times as large as shown in the illustration.

Besides the tube of pure Vaseline, the other four articles are:

CAPSICUM-VASELINE Is a substitute for and superior to a mustard or any other plaster. This new extract consists solely of the essential principle of Capsicum, or Red Pepper, absorbed directly from the plant in vaseline. It has wonderful pain-allaying and curative properties. It is considered the best and safest external counter-irritant, as a remedy for colds in the chest, throat and lungs, pains in the stomach, chilblains and all rheumatic, neuralgic and gouty complaints, also as a speedy cure for headache and toothache. *Guaranteed not to blister the skin.*

VASELINE COLD CREAM Will allay all irritation of the skin and keep the complexion smooth, soft and clear. Superior to all cosmetics. For use after shaving, and chafing of infants it is unequalled.

VASELINE CAMPHOR ICE For the lips, pimples, blotches, chapped hands and skin and local irritation. In tubes.

VASELINE SOAP *Superfine Quality and Exquisitely Perfumed.* The admirable properties of vaseline render this soap not only an elegant toilet article, but indispensable in the family and for infants and invalids.

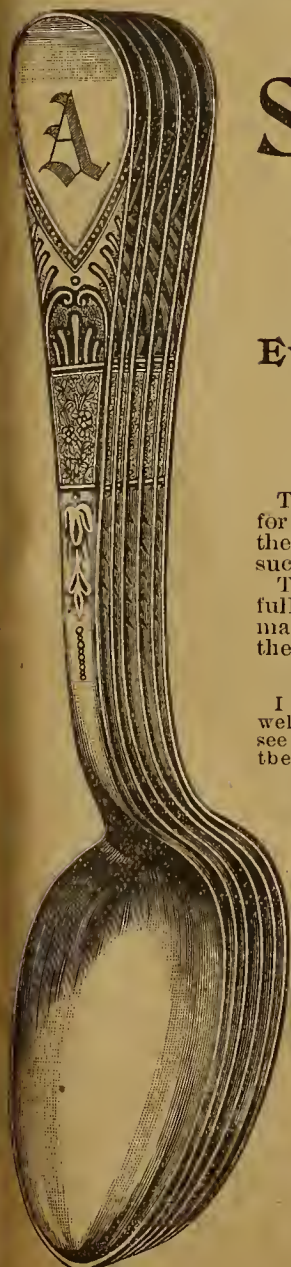
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These articles are made by the Chesebrough Manufacturing Co., which is a guarantee for purity and excellence, and they only make this remarkable offer to introduce their goods. We recommend that everyone accept it who can, and any one not perfectly satisfied can have their money back.

OFFER—GOOD FOR 30 DAYS We will send Farm and Fireside one year and this Vaseline Toilet and Medicinal Outfit for 50 cents. Postage paid by us.

Persons now on our list and receiving this paper may take advantage of this offer, and their subscriptions will be advanced six months from the date on the yellow label.

Address all orders to **FARM AND FIRESIDE, Springfield, Ohio.**



SET OF SIX

Silver-plated Teaspoons.

PREMIUM NO. 12.

Every Spoon Guaranteed to be Equal to Solid Silver in Beauty and Finish.

These silver-plated teaspoons are especially manufactured for us. We do not make any profit on them, but simply offer them to get subscribers. This is why we are able to furnish such handsome initial teaspoons as premiums.

They are of the latest style in shape and carving, and are full size; in fact, they are perfect beauties. We have received many letters from ladies praising them, and almost every time they say they are much finer than they expected.

I received the spoons and am well pleased with them. Do not see how you can afford to give them away.
MRS. J. M. ASHTON, Montgomery, N. Y.

I have just received the teaspoons. They surpass anything I anticipated, both in beauty and quality.
ALICE WEATHERFORD, Olex, Oregon.

We engrave each spoon with any initial letter desired by the subscriber, which makes them far more valuable than ever.

Regular Price, with this paper one year, 75 cents.

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FOR 50 CENTS We will send this Set of Six Silver-plated Teaspoons, and Farm and Fireside One Year, on receipt of 50 cents.

When this offer is accepted, no other premium or commission will be allowed, and cannot be counted in a club.

NOTE.—Only ONE initial, in Old English, will be engraved on each spoon. Say what letter you want engraved.

Address **FARM AND FIRESIDE, Springfield, Ohio.**

BECAUSE WORDS CANNOT SHOW COLOR

We Are Cheated

By any description of this family of seven dolls, which we give Free with six months' subscription to Farm and Fireside at 20 cents. These dolls must be seen with your own eyes to be appreciated, for it is impossible to show you here the rich and beautiful colors in which they are dressed. They are

The Tallest in Height, The Most Modern in Style, The Richest in Color, The Largest in Number, and

FINER THAN DOLLS SELLING IN STORES FOR 50 CENTS A SET.

These dolls are cut from heavy cardboard, lithographed in many pretty colors, and each one fixed to stand alone. They exactly represent the style and color of the clothing, hats, gloves, laces, neckties, etc., worn by fashionably dressed people. Children go into raptures over them. Take our word for it, they are beauties, and a bargain. Order a set, then if you want to, return them and you can have your money back.

Premium No. 35.

Seven Dolls Count As ONE Premium.



This little illustration (and it is smaller than the baby doll alone) is a picture of the dolls in a family group, but it gives no idea of their beauty.

First Permit Us to Introduce You to

GRANDPA He still dresses in the old colonial style, with his long, blue coat trimmed in golden braid, his white waistcoat, brown knickerbockers, and silver huckles on his shoes.

MAMA You would surely admire Mama, if you could see her out calling, fashionably dressed in a brown street costume, trimmed with embroidery and velvet, and a bonnet to match.

GRANDMA You are sure to love Grandma, with her quaint ways and wonderful stories. She looks for all the world like Martha Washington, with her silver locks all tucked under her dainty lace cap and with her beautiful heliotrope gown.

BROTHER. Dressed in his little Lord Fauntleroy suit of purple velvet and golden braid, with tam-o'-shanter hat to match, and white sailor collar, he is a Brother that any little girl might be proud to claim.

PAPA Stylishly dressed in a three-button cutaway, light trousers, patent leather shoes, silk hat, tan gloves and walking-stick.

SISTER is just as pretty a little girl as an Empire dress of blue silk and big sleeves can make her. You are sure to like her when you once become acquainted.

This the first and only set of dolls in which there is a grandpa and grandma. They were made especially for us.

BABY Everybody will want to know the dear little Baby, with her pretty white dress, golden curls and dainty cap.

Oceans of Fun for the Little Ones.

Think of the make-believe weddings, parties, visits, and all the delightful combinations that can be arranged. For, remember, this set contains a WHOLE FAMILY OF DOLLS. They cannot fail to please the little people, and at the same time develop in the child at an early age a taste for what is termed "style in dressing." The costumes of all except those of grandparents are of the most modern styles, fashionable and up-to-date.

Most of the dolls on the market are no taller than our baby doll, and made from paper, while four of our dolls are ten inches high, and are all made from a fine quality of cardboard, fixed to stand alone and lithographed in rich colors.

SPECIAL TRIAL SUBSCRIPTION OFFER.

FOR 20 CENTS We will send this Family of Seven Dolls, and Farm and Fireside six months, on receipt of 20 cents.

Persons now on our list and receiving this paper may take advantage of this offer, and their subscriptions will be advanced six months from the date on the yellow label.

Postage paid by us in each case.

Address **FARM AND FIRESIDE, Springfield, Ohio.**

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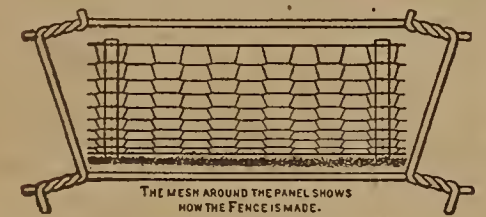
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