

FARM *and* FIRESIDE

EVERY OTHER WEEK. THE NATIONAL FARM PAPER
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New Ways For Marketing Our Products—Told on Page 3

THERE have been a number of very important political campaigns this year. Every Congressional district has had an election, and in many States United States Senators have been running under the new popular-election amendment to the United States Constitution.

What sort of men have been running? This is an important question, but there is another still more important.

What kind of men can run for these and the state offices in your State? Could you afford to be a candidate? Supposing that your neighbors wanted you to run, could you pay the bills? If you could not, could any man of small means?

If no man of small means could run, and pay his own campaign bills, how would they be paid? Who would pay them? If paid by someone else, why would they be paid? Is it likely that anyone would pay them unless he had some sort of promise from the candidate as to his action after election?

Men do not usually put up money for the campaign expenses of others unless they have some sort of an ax to grind. They usually take a mortgage on the official acts of the candidate as security for the loan. If the expenses amount to much the salary attached to the office will not enable the man elected to pay the expenses with his own money. So he must pay it in some manner out of the public's money. That is, he makes you and me pay, and generally pay over and over again, the expenses of letting us elect him to office.

Sometimes men with money will pay large sums to aid a candidate for public reasons, but those cases are rare. Generally such money is advanced for the most sordid of reasons. And so long as public officers have their official acts mortgaged to the men who have helped elect them we cannot have good government.

The Macou (Georgia) "Telegraph" tells us of the conditions in Georgia, where candidates for governor and United States Senator are elected this year. "The time is coming," it says, "when a man will have to be a multimillionaire to offer as a candidate for governor or United States Senator. He will have to have a 'barrel' to thread the intricacies that lie between him and the legislative or county office nomination."

This thoughtful paper seems to prove its case. I hate to think of the Georgia local papers, but a pretty wide acquaintance with local papers elsewhere prepares me to accept the statement of the "Telegraph" that the three hundred weekly papers in Georgia will collect an average of \$20 each from the candidate for printing his announcement and platform. How the local editors justify this on any basis except polite blackmail is for them to say, but in any case it costs the candidate \$6,000 for this alone.

WITH THE EDITOR



Then, says the "Telegraph," in the 150 counties there are 1,500 precincts in each of which the candidate must hire a worker for twenty days before election, paying him \$5 a day. This costs \$75,000. No such practice should be permitted.

Matter printed in the daily papers will cost \$4,000 more if the campaign be a lively one—and Georgia campaigns are usually lively. There will be a speech-making campaign in which the candidate is expected to pay the expenses, at least, of his speakers at the rate of about \$15 a day each. Ten speakers for two weeks will cost over \$2,000. Here we have about \$90,000, and when such things as window signs, correspondence, clerk hire, telephone and telegraph bills, rent, and the like is added, the sum of a hundred thousand dollars is very, very badly shot to pieces.

Are you eligible for the Senate or governorship? If a law were slipped into the statute books making it illegal for any man to run for one of these offices until he could show an available war chest of \$100,000 we should take the field in rebellion if we could find no legal mode of changing the law.

Well, what's the difference in effect between such a law and the conditions described by the "Telegraph"—and they exist in so many States other than Georgia that it is fair to say that they are general. What's the difference?

Do not these conditions disqualify most of us from taking office, just as completely as if it were done by law? They certainly disqualify me, and I suppose they disqualify almost every man who reads this.

I think that all these expenses should be made illegal. I think the law should annul the election of any candidate who spends a cent in getting nomination or election except those items expressly

allowed by law and listed in the law. And these expenses should be such that any poor man may be able to raise the money without mortgaging his official acts or humiliating himself by accepting what amounts to charity.

Of course the voters of the State should be able to read the man's platform, and this the State should see to. Oregon does it this way.

When such laws are passed the advantage which wealth gives to a candidate will largely disappear; but there will still be many ways in which the rich man or the rich committee will be able to use money to obtain improper advantages, unless there is in every State a good corrupt practices law. Such laws exist in many States—some good and some not meant to be good. They limit the amount of money a candidate may spend, and they call for publicity as to the amount spent, what it is spent for, and who furnished it.

We have a national law for publicity of campaign expenses which needs amendment. Representative Rucker is making the fight in the House for this law, and Senator Kern in the Senate. The number of the House Bill is H. R. 8428. It limits the amount which can be legally spent in a single Congressional district to \$5,000, as a general rule, and forbids the overwhelming of the local candidate in any district with money sent from elsewhere. It calls for a filing of the expense account before election with a public officer in Washington.

It does not provide for the circulation of literature at public expense, but it is a step toward that.

Whenever a law is introduced for the adoption of the Oregon system or anything like it, the weekly newspapers kill it. They kill it in the interest of that \$20 which, on the average, in Georgia—and it is about the same over a great portion of the nation—the paper gets from the candidate.

I think that granges, farmers' unions, and equity associations, farmers' clubs, and farmers as individuals should concern themselves in this matter. As things now stand the working farmer is disqualified for any but the most insignificant offices by reason of his lack of wealth. He may be able to afford a motor car, but Congress is put out of his reach, not to mention the governorship or the Senate. This is not true in all States, but I think it is fair to say it is in most of them. In some of them it is true because the local and daily papers want to make money out of millionaire candidates or slush-fund committees. I suggest that the farmers get after the record of their local papers on this, and in every way, organized and unorganized, take such action, day by day, year by year, as will reopen the door to public service to rich and poor on equal terms.

Herbert Quirk

LOOK FOR FARM AND FIRESIDE'S NEXT ISSUE

What is the farmer? Our October 24th cover will show some different viewpoints. It is drawn by Horace Taylor, FARM AND FIRESIDE'S cartoonist.

Postmaster-General Burleson gives us his story of the efficiency of parcel post. This is something our readers have been looking forward to. Have you been making use of parcel post? Postmaster-General Burleson points to many who have.

But one man thinks that for the transportation of eggs parcel post does not give him what he needs. Several other men in this man's community think the same. He will discuss the question of the shipping of sterile eggs.

And the departments will all be brimful of good things for the fall season.

Edwin Baird's "His Own Daughter," the first chapter of which is in this issue, will be completed in the next. "All the world loves a lover." Who,

having read the story in this issue, is not in haste to know the fate of this aeronaut and his vivacious sweetheart?

What would Hallowe'en be without candy? We have some excellent home-made recipes to offer. There is one for a new kind of fudge, and some nut candy recipes three generations old—hoopskirt nut candies, we might call them.

The opportunities in our homes! Home is not only the place where we are the happiest because the fondest sentiments cluster there, but it is also the place where we may become most prosperous, most successful in the use and marketing of our abilities. At least that is the opinion of an experienced woman who tells her ideas convincingly to FARM AND FIRESIDE.

Have you ever realized what you can do to reduce the burden of washing day without sacrificing personal cleanliness, just by choosing wisely the sizes and materials of your towels? Read the next issue.

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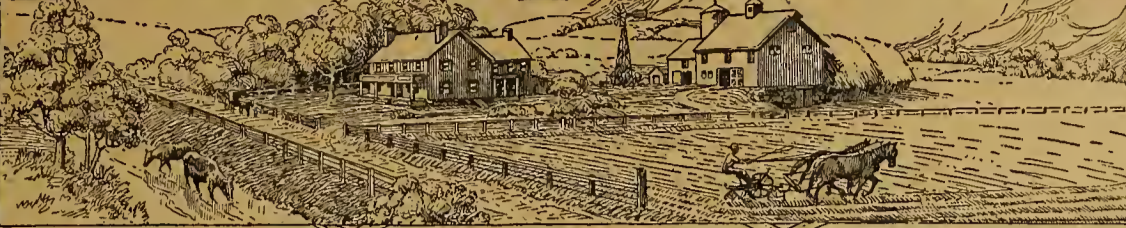
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FARM and FIRESIDE



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New Markets on Every Hand

Ways That Express Companies Are Co-operating With Farmers in Their Sales

By D. G. Mellor

UP IN the small town of Cattaraugus, New York, lives a man by the name of W. R. Chase. Ten months ago he produced a few eggs and sold them as a side line. When he learned what Wells Fargo was doing he became actively interested and came down to New York to get full details from headquarters about our new marketing methods. He said he would supply good eggs in any quantity, and after an investigation we bulletined his goods on our weekly quotation sheets.

That was in January last. Before the month had passed he had far exceeded his own capacity for filling orders and was gathering eggs from his neighbors and others, paying a good price for them. During January he shipped 138 cases of eggs. In March the orders filled by him totaled \$3,400 in value. His April business ran over \$5,000. And Wells Fargo had found almost the entire of his widely spread market.

Now, how did Mr. Chase accomplish this? The answer is by progressive and upright business methods. He candled every egg that he received, both his own and those that he purchased from others. He took pains to fill orders promptly; and if, for any reason, such as the great blizzard last winter, he was unable to fill one immediately, he sent a letter by return mail explaining the cause of delay. In other words, he gave his customers an interested, personal service. He put himself in their position and acted accordingly. And the results have been, and still are, most gratifying. In fact, Mr. Chase has asked us to discontinue mentioning him in our quotation bulletins because he has already secured enough steady customers to buy all the eggs he can supply.

Greenings, \$1 a Bushel

Where did these orders come from? From consumers' buying clubs, hotels, restaurants, and individual families with whom our express agents in the larger cities are in close touch. Within the past year thousands of cases of eggs have been sold direct from producer to consumer or to small dealers through the medium of the express. Many of the big insurance offices and department stores in New York and dozens of other cities have buying clubs among their employees which purchase great quantities of eggs, butter, ham, country bacon, honey, cheese, and vegetables each week. This produce, bought in quantity at prices well below the current city retail price, is divided up among the members of the club, and a great saving to the consumer is thus effected.

One day while waiting for a train on a little railroad platform not two hundred miles from New York City I fell into conversation with a farmer standing near-by.

"How are you going to market your produce this season?" I inquired.

"About the worst way possible," he replied frankly. "I am going to haul a hundred barrels of greenings into town in a few days and sell them at 25 cents a bushel to keep them from rotting on my hands."

"Don't do that," I replied, and then went on to tell him how our Food Products Department could help him to sell for a much better price.

After explaining that the express company was willing to help him sell the apples simply for the sake of the express traffic which would thereby be created I succeeded in getting him interested. I gave him the addresses of some cardboard box manufacturers and advised him to lay in a stock of containers (1 bushel capacity) large enough to accommodate his crop.

IT IS a matter of importance that we take advantage of present-day means for marketing our products. Mr. Mellor is manager of the Food Products Department of Wells Fargo & Company Express. In this article he tells what the express companies are doing to bring the producer and the consumer together. In the next issue Postmaster-General Burleson will show how parcel post is working toward the same end.

He did so, and promised that all apples shipped upon order would be carefully graded. I then proceeded to quote these apples upon the weekly quotation sheets that are sent out from our department to Wells Fargo agents in New York City and vicinity, and to many city consumers as well. Within a few weeks that New York State farmer received enough orders through our

method of procedure in aiding the farmer to market his produce to the best advantage:

Let us suppose that Mr. Jones, a farmer at Dingman, Kansas, has a steady supply of high quality eggs. He has considerable trouble, however, in finding a good paying market for them. He would like to sell his eggs for a higher price, and accordingly enlists the services of his local express agent, Mr. Smith.

Now, the latter has several ways of helping Mr. Jones find a market for his eggs. He can either send the quotations to our Food Products Department in the nearest large city—Chicago, St. Louis, Cleveland, Pittsburgh, Buffalo, New York, Philadelphia, or Baltimore—and have the Jones eggs bulletined on the weekly quotation sheets put out from those cities; or he can sit down and fill out a blank, furnished by the company, known as a "Food Products Quotation Advice," describing these eggs, their quality, price, weekly supply, etc., and send that "Advice" to the agents of his company in near-by towns and cities, asking them to solicit orders from dealers or consumers. In many cases this latter plan is tried successfully.

Perhaps one of the city agents whom Agent Smith has written needs eggs for several of the consumers' buying clubs that he has just organized, or perhaps some of the dealers, hotels, or restaurants in another city are anxious to buy direct from the producer. In any case, Agent Smith begins to receive orders from other agents, and is soon able (owing to the widespread advertising given Mr. Jones's eggs) to turn over a number of orders each week to Mr. Jones. By the prompt filling of orders and business-like treatment of customers, Mr. Jones gets an excellent opportunity to build up a good egg business direct with customers in a distant city. And he can usually command, moreover, top wholesale city prices, f. o. b. his station.

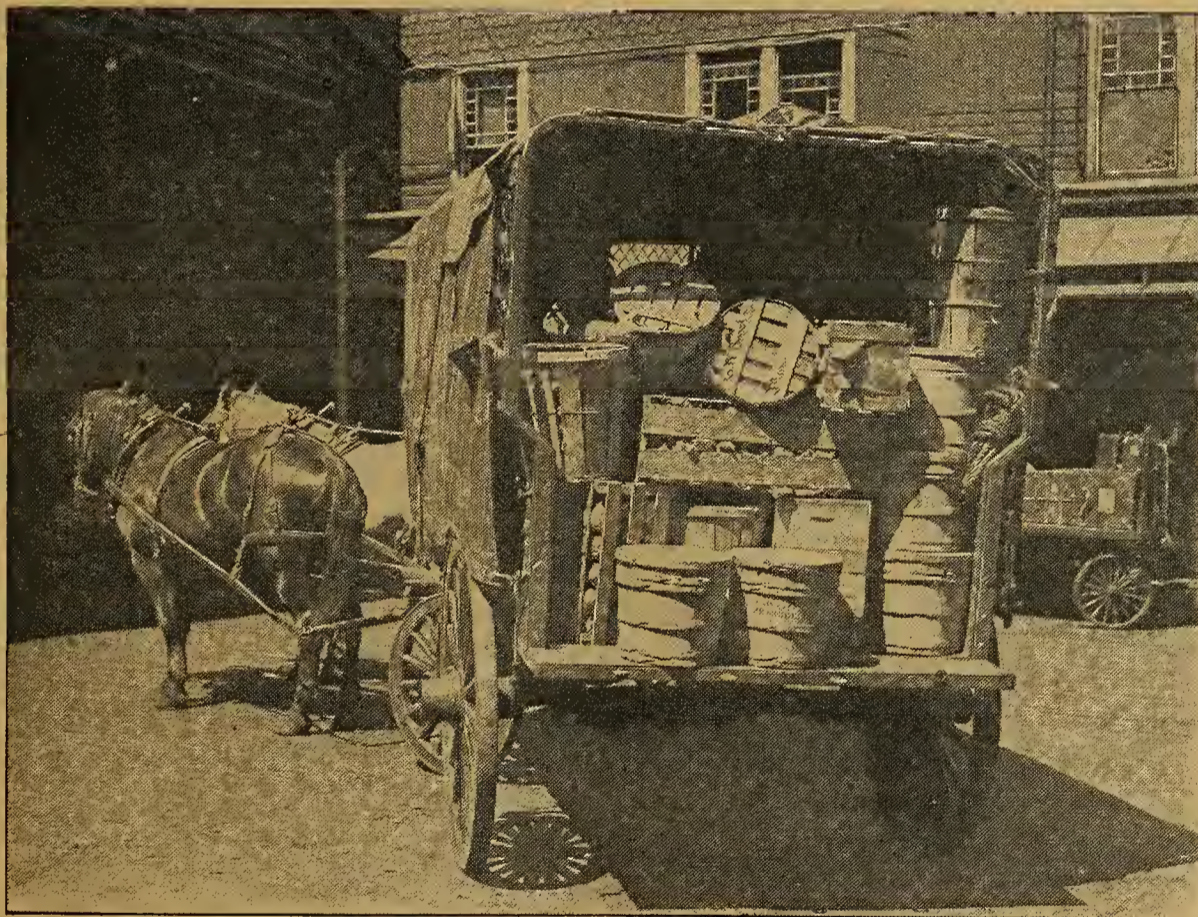
Direct Sales Encouraged

It is highly important, of course, for a farmer dealing with a distant customer through the express company to be especially particular about the high quality and freshness of the produce that he sends. If he keeps his original promise to the express agent to ship only first-class produce he will inspire confidence in the purchaser. But let him send inferior stock and he will find no repeat order forthcoming.

Frequently, after the city consumer, hotel, or dealer comes to know a producer, he will prefer to do business direct, and not place his orders through the express company. This is something that the express is very willing to encourage, for it has no interest whatever in the sale of the produce, but only in its transportation. The express charges nothing for this selling service: it is trying merely to create new markets for the farmer and in that way to increase its traffic.

Another egg producer who has found the express a great aid in selling his product is Earl W. Benjamin of the Whitney Farm, Almond, New York. Mr. Benjamin's success is largely due to his very laudable policy of shipping only new-laid, infertile eggs. Besides marketing many cases of his own product through the express each week he has done much to encourage his neighbors to similar high standards. He tests each egg, and stands back of every shipment from his farm with a guarantee. As Mr. Benjamin has said, infertile eggs are the only kind safe to market at a distance.

Frequently a farmer can get a higher price for his eggs if he separates the browns from the whites and



The city consumers' clubs receive large consignments of fresh produce

department to sell up his entire crop. And the most interesting thing about it is that he received not 25 cents a bushel for his greenings, but \$1 a bushel f. o. b. his station, for that was the price quoted to the consumer on the Wells Fargo quotation bulletin. You can see that the consumer in the city who bought those apples also was benefited when you compare \$1 a bushel, plus 35 cents express charges, with 10 and 15 cents a quart (\$3.20 and \$4.80 per bushel), which was the prevailing retail city price at that time. Afterward his winter apples were disposed of for \$1.25 per bushel f. o. b. his station, and also the apples of several other farmers.

This is the Way the Plan Works

By finding a market for that farmer's apples the express company aided both producer and consumer, and built up its own traffic as well.

This little incident illustrates the part that the express can play in helping farmers and producers to wider markets and better prices. Briefly, here is our

sells them in lots of all one color. Certain localities like whites, and will pay better prices for them than for browns, while hotels and restaurants in other parts of the country may prefer all browns. In any event, mixed whites and browns are less likely to bring as high a price as cases of one solid color.

One of the most interesting cases of marketing via express is that of A. J. Benjamin of South Lima, New York. Mr. Benjamin knows how to grow fine head lettuce and had always heretofore put up his lettuce crop in hampers and shipped them to commission people to be sold. At our suggestion last fall he packed in new wooden open crates 24 heads of select stock to the crate, and allowed us to quote his produce through our service. When some of the hotel men of Cleveland, Pittsburgh, and Louisville heard of this offer they ordered a few cases through their local express agent, who transmitted the orders to our agent at South Lima, New York, to be filled by Mr. Benjamin. The upshot of the matter was that we sold the entire output of Mr. Benjamin within a very short time. One purchaser in Louisville, Kentucky, placed an order for 80 crates per day; Cleveland turned in orders averaging 25 crates per day, and Pittsburgh more than this. The producer realized fully 20 per cent better returns through this direct marketing service and was greatly pleased with our co-operation.

Successes with Lettuce and Honey

The important fact to be noted in connection with this incident is that Mr. Benjamin was what might be called a business farmer—he gave his patrons what he promised and dealt with them in a strictly honest and businesslike way. Quality was maintained without exception. No lettuce heads went out from his fields that were not accurately graded according to size, quality, and weight. It is probable that we will again co-operate with him during the coming season in the sale of his stock, and with his neighbors as well, for many of them have agreed to hold to the same high standards of fair dealing.

Let us consider an example of marketing by express in another section of the country. Mr. Huff of Clayton, Michigan, is a producer of honey. In previous years he has traveled from town to town selling his product both to stores and to householders as he went. Last year he became interested in the express method of

finding a market, and after a little calculation decided to try it out. The agent of Wells Fargo at Adrian, Michigan, a near-by town, advised him in his arrangements and succeeded in getting him a few orders from surrounding cities. Progress was rapid. Within a few weeks orders were coming in from all parts of the country, and Mr. Huff was shipping out 10-pound pails of honey in large quantities each week. We exhausted his supply of 60,000 pounds before the season was over.

The Net Price is What Counts

In fact, we got so many orders for honey that new producers in the same section were secured and given orders for filling that amounted to over 7,000 pounds. And in spite of all that, our Adrian agent, E. J. Saiter, declared that he was forced to turn down orders for over 5,000 pounds for lack of supply. Mr. Huff has expressed himself as very much pleased with our marketing assistance, and is planning to sell through Wells Fargo next year. He did not get such a high price for the honey as he had gotten in previous years by peddling it from house to house, but through the express he secured a steady, reliable market for all the honey he could possibly produce. And he saved so much money in traveling expenses, and so much of his own time, that he has declared the new marketing method far more profitable than the old.

Our experience in marketing farm specialties has also been successful. For instance, through our Cleveland office during the past spring came orders for over 4,500 pounds of maple sugar and syrup which were distributed to various producers whose maple products had been quoted through our service. Charles Walradt and Walter S. Terry of Niobe, New York, and C. E. Lloyd of Ashville, New York, filled a number of orders for syrup, receiving \$1 per gallon net, while the dealers of the vicinity were paying only 90 cents. Farmers at Cambridge Springs, Pennsylvania, had similar satisfactory experiences with direct marketing. Z. L. Rhodes and Ralph Perry of that town reported great satisfaction at the orders sent them. In all cases they received good prices, got their money promptly (in most cases before the produce was shipped), and were pleased at our efforts to help them market their goods. It might be noted in passing that an enterprising man by the name of H. W. Canfield, of that same little city, Cambridge Springs, marketed over 3,000 dozen eggs

within two months recently through our general agent at Pittsburgh. These were consumed by hotels, buying clubs, and small retail dealers of the Smoky City. Mr. Canfield says he has had satisfactory prices, prompt remittances of money, and that he is well suited with the marketing aid rendered him through the medium of the express company's Food Products Department.

C. W. Starrett of Plymouth, Wisconsin, a producer of fine cheese, received orders for over 500 pounds of cheese within ten days of last November. He reports satisfaction in dealing direct with consumers through the express. Rolling Prairie, Wisconsin, is another cheese-producing point. The express agent there has been the means of finding many new customers for local producers. In the sale of specialties like this, direct to the consumer, it has been found that high quality means repeat orders, and that the only way to build up a business with distant customers is to impress them at the very outset with a high standard and to maintain that standard persistently.

Even a side line, like chestnuts, may be marketed to good profit by express. Our agent at Jamestown, New York, discovered long ago that city people liked good chestnuts, and accordingly encouraged some of the farmers in the vicinity to quote prices (to small dealers and others) that would make these nuts available at a lower price than that asked by the pushcart vendors in the big cities. Chautauque County chestnuts are of excellent size and flavor and have become very popular. Last year shipments were made to points all the way from Boston to Portland, Oregon—a considerable quantity going to fill orders from towns west of the Mississippi River. During the coming season-increased efforts are to be made to widen the marketing fields for the chestnut producer.

Butter is Always in Demand

Pecans, too, have been sold by Louisiana and Oklahoma growers with great success. Consumers' buying clubs in Lincoln, Nebraska, ordered through the express within two months over 800 pounds of pecan nuts from Oklahoma points alone.

Or take the case of butter, and consider what the experience of the express has been in finding markets for this important article of food. During the month of April last over 32,000 pounds were shipped from creameries in the region of [CONTINUED ON PAGE 18]

Let's Look Into the Paint Can

And Also Thoroughly Examine the Outside of Our Buildings

By D. S. Burch, Associate Editor

TWO years ago a neighbor of mine built a house and specified yellow paint for the body color and white for the trimming. The job looked well and he paid for it. To-day the house looks shabby and must be repainted. The job cost him \$120. Divide this by three and you have \$40 a year. Good painting is not as expensive as that. His painters practically robbed him in such a way as not to violate the law. They charged him 40 cents an hour, putting on "paint" that wasn't paint. A good job will last fifteen years or more. Theirs didn't last three.

They were pretty safe too, for their dishonest work couldn't be easily found out until after they got their money. We are just beginning to learn how much worthless stuff is sold as paint, and concocted and applied by men who call themselves painters. All poor painters are not dishonest; many of them have simply "picked up the trade" and its methods without thinking much about the ethics of it.

Dr. E. F. Ladd, Food Commissioner of North Dakota, is the man who put the "aint" in paint. For ten years he has been showing conclusively that very often paint is not what the label says it is. He gets his samples in the open market, just as you would buy paint. When he began his work he found that some paints were nearly half water. Short measure and misbranding were common. The liquid portion of one barn paint he analyzed contained over 39 per cent of water and 40 per cent of benzine, and the oil was not linseed. The name and address of the manufacturer did not appear on the label. No wonder!

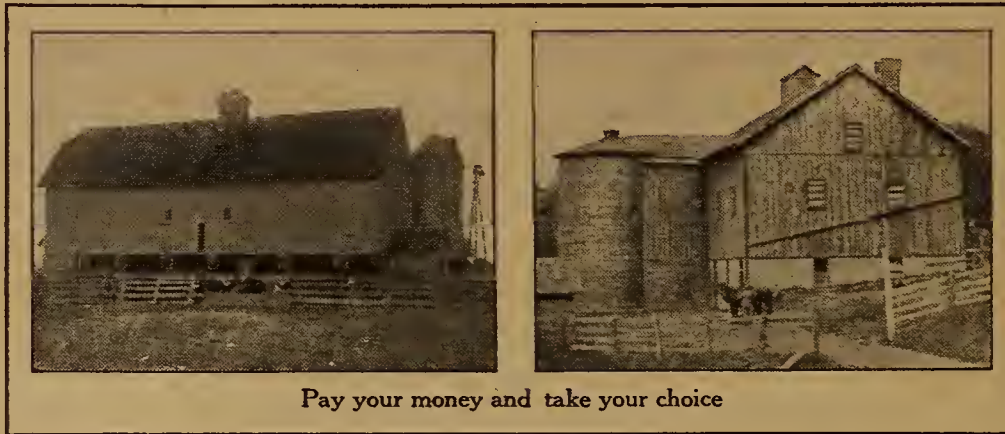
A ready-mixed house paint was represented on the label as containing no water, benzine, or whitening, and the oil was "pure old-fashioned linseed oil." But it contained no white lead. It was over 49 per cent silica—pulverized sand!

One brand of "white lead" paint contained 50 per cent of lime and barytes, both adulterants. Barytes has chemical properties similar to lime. Another "white lead" paint contained only 13 per cent of white lead. The ingredients were principally zinc oxide, barytes, and silica.

Some Labels that Lied

Another sample labeled "standard strictly pure white lead and oil" contained only 11 per cent white lead and over 55 per cent of barytes. Another "white lead" paint contained less than 4 per cent white lead. It was 77 per cent barytes and lime and 11 per cent clay. Commissioner Ladd's name among paint men was a few years ago like a red rag to a bull. But with the people behind him he has kept right on showing up what is really inside the paint can.

The better class of paint manufacturers now realize the value of his work, and are even helping him. To-day most of the paint sold in North Dakota is accurately labeled and of good quality. Paint laws in North Dakota and other States have helped to bring up the standard of prepared paint in about the same way that the pure-food laws have bettered food



Pay your money and take your choice

products. But always beware of the paint that fails to give the name and address of the maker. "If the manufacturer's name does not appear on the label," says the Department of Agriculture, and in this Commissioner Ladd concurs, "it is very presumptive evidence that he is not particularly proud of his product."

Don't Put Any Faith in "Secret Formulas"

The paint men, however, do not deserve all the blame for the bad paint. Most bad paints are cheap; and cheap paints are made because the public demands them. When the public is ready to spend money for an article someone is usually ready to make the article and take the money for it. Still, you can get any kind of paint you want, and the more skillful you are in selecting paint the more profitable your paint investment will be.

A coat of paint must often cover a multitude of sins in material and workmanship. It must protect the thing painted and add to its beauty. A coat of paint is about one three-hundredths of an inch thick, thinner than ordinary writing paper. This thin coat of paint must contain ingredients that have good covering and weathering properties.

All paints are made from well-known standard substances. Any good chemist can analyze any paint and tell just what is in it. So you may be suspicious of so-called "secret formulas."

White paints and light-colored paints are usually most expensive because they require expensive ingredients. Of these, white lead and zinc oxide are most used.

White lead is best for most outdoor work, as it excels all other solid ingredients in durability and has the greatest covering properties. Zinc oxide is whiter than white lead but not so durable, and is therefore used largely indoors. In prepared paints both of these ingredients are used together in varied percentages according to the quality of the paint and the purpose for which it is sold.

Light-tinted colors, such as cream, buff, and light yellow, are simply white paint with a small amount of coloring matter. For example, light blue is secured by the addition of Prussian blue, while buff is secured by ochre and umber. White paint is used as the basis.

A good dark brown or red paint, on the other hand,

can be made with iron oxide as a pigment. Iron oxide is cheap, and good paint made from it need not be expensive. Red lead is also fairly durable and is used in red and brown paints. It is much cheaper than white lead. Pigments used to give color to paint are of earthy, animal, and mineral origin.

The principal cheapeners, adulterants, and substitutes used in white paint are lime, barytes, and silica. The lime used costs about one seventh as much as white lead. Barytes is slightly cheaper, and silica even more so. When white lead has been quoted at \$6.38 per hundred pounds, silica has been quoted at 60 cents.

The liquid portion of paint (called the "vehicle") serves to dissolve the other ingredients and make them spread evenly. The best vehicle is linseed oil. Turpentine is a poor vehicle, and 10 per cent of it in any paint is the limit.

The chief adulterants and substitutes for linseed oil are cottonseed oil, fish oil, and corn oil. Besides these, benzene, water, and turpentine are used. One sample analyzed by Commissioner Ladd contained only 64 per cent linseed oil, about 20 per cent drier, of which two thirds was benzene and the remaining 16 per cent water. A so-called "Golden Rule Paint" contained over 16 per cent benzene drier and over 20 per cent water. The liquid portion of good paint ought to be over 90 per cent pure linseed oil.

Most of us have had experience in small jobs of painting and know the common rules for doing good work. The greatest mistake of the beginner is forgetting to keep his paint stirred. When he gets to the bottom of the can he finds the paint as thick as mortar. I have noticed that unskilled people seldom have linseed oil on hand, but are likely to have plenty of turpentine. So in goes the turpentine and on goes the paint. Of course the job is a poor one because the paint from the top two thirds of the can is mostly oil and the bottom one third mostly pigment and turpentine. Where the rules of good workmanship are ignored you have no right to blame the paint.

Painting Galvanized Metal

"If a good grade of paint does not stick well," says a local painter of long experience, "the fault lies either with the surface or the workmanship. Paint only on dry days when the thermometer stands at 50° F. or over. On cold days the paint will chill and be too thick to spread well. If you have just had a rain let several days of bright weather elapse. Trying to rush a paint job in bad weather is folly. Unless you are an expert, use boiled linseed oil, not raw oil. The former needs no drier. Raw linseed oil does, and too much drier will make the paint peel. If you use too little the paint will not dry. Above all, have a firm surface. Don't try to cover old, peeling paint or splintery wood or rusty metal.

"Galvanized metal is a mean thing to paint. It gets a thin film of grease in the factory, but weathering will take off this grease in time and roughen the metal so the paint will stick." [CONTINUED ON PAGE 22]

His Own Daughter

Her Flight in an Aëroplane and Her Descent With Cupid

By Edwin Baird



LD Bradbury Cole was in a temper. "It ain't aviation," he sputtered, scowling across the breakfast table at his coolly winsome, motherless daughter "I got nothin' against that. It's all right, I guess, as a circus stunt. What makes me mad is the copper-riveted nerve—"

"But, Papa—"

"The brass impudence of the fellow!" he cried "Never heard o' such a thing! Preposterous! Can't support himself, much less a wife. Can't even—"

"Papa, you're hopeless."

"Humph! All you know about it." Old Cole flung down his napkin and stood up. As he lighted his cigar: "He's not the succeedin' kind. Never will be. Ain't got it in him."

"I think you're very much mistaken," said Miss Evelyn Cole, her maiden dignity stiffening. "I never knew a harder-working boy than Harry Winfield, nor one more tenacious; and those qualities, as I understand it, indicate the successful man—or nothing."

"Humph! It's nothin' in his case, sure as you're livin'. He's kickin' his heels against a stone wall; that's all."

She retorted spiritedly:

"I don't agree with you. Aërial navigation is the thing of the hour, the biggest thing of the future. It's going to revolutionize transportation. Some day we'll travel from San Francisco to New York in eighteen hours, and around the world in seven days—and all the way in the air. Of course there are backward, unimaginative persons who will try to retard its growth with derision and skepticism—"

"Humph! Slammin' me, I suppose?"

"Well, I must say I am surprised that a man of your intelligence—"

"Well, I won't have him!"

"Well, I will!"

"That settles it."

"All right."

Evelyn moved her slender shoulders, lifted her black eyebrows and, with delicious serenity, resumed her breakfast. Old Cole glared at her and started hotly from the room, his neck swelling, his face purpling.

She checked him at the door.

"I suppose," she said tranquilly, buttering a bit of toast, "you'll cut me off like the heroine in a British novel—with a penny?"

He wheeled upon her sternly.

"I'll do worse than that," he warned, shaking a terrible finger. "I'll cut you off *without* a penny. Mark my words."

And he turned and left her.

She sat at the table, consuming toast, eggs, and chocolate until, through the leaded casements facing the street, she saw him spring heavily into his automobile and go chuffing to his office. Then she rose, "fluffed" her dark hair before the mirror above the sideboard and, having already ordered her electric coupé, left the house and motored up Astor Street and through Lincoln Park.

She stopped before a neat cottage in Wilson Avenue, alighted, and walked to a shed in the rear. As she paused on the threshold a young man in overalls, who had been engrossed in an odd-looking contrivance not unlike a mammoth box kite, rose eagerly, tossing a pair of pliers upon a workbench, and came toward her, beaming a radiant welcome.

"Almost finished!" he exulted enthusiastically. "I'll be flying to-morrow. D'you hear, Evelyn?" He seized her hands and gazed joyously down into her upturned face. He was a rather good-looking young fellow, not more than twenty-five, with healthily bronzed skin, straw-colored hair, and wholesome blue eyes that were unusually earnest for one of his years.

"That will be fine," she agreed; but her tone did not imply as much.

He was quick to perceive this, and loosed her hands.

"Hello! What's up?"

"Oh—nothing," she sighed, and gestured with shoulders and hands, helplessly, hopelessly.

"Not losing interest in the game, I hope?"

"Hardly!"

"Anything wrong at home?"

"Y-yes," she hesitated.

"I thought so. Same old story, eh?"

"Same old story. Papa and I've been at it again."

"What about?"

She looked into his eyes, then at the floor. Her mouth twitched.

"About—you."

The young aviator stepped back and absently rested one leg across a corner of the workbench, his yellow brows drawn together thoughtfully.

After a moment's silence he said slowly, picking up a rat-tail file and tapping it fitfully against a vise:

"After all, Evelyn, maybe your father's right. Financially, you know, I'm a frost-bitten lemon. Sometimes I think I ought to bounce aviation and take up something else."

"Now who's losing interest in the game?" she mocked.

"Not I," he avowed stoutly. "I was only—"

"Then show me it," she commanded.

He did so. "It" was a hydro-aëroplane, and young Winfield, who was to compete in the International Aviation Meet commencing in Chicago the following week, had been working double shifts on the air-and-water ship to have it ready in time.

Taking her departure an hour or so later, Evelyn, with one foot on the step of her coupé, turned to Harry, beside her, and with a studied carelessness that quite deceived him said:

"Oh, I almost forgot to tell you something. I'm writing to Detroit to-day for—what do you think?"

"I can't imagine. Something unusual, since it's you."

"A monoplane!"

"Evelyn!"

She stepped lightly into the coupé, saying over her shoulder:

"Won't it be perfectly killing?"

"You—you're not going—to fly in it!" he gasped.

"Certainly!" she replied.

His astonishment held him dumb, and as she settled her slim young person against the cushions his earnest blue eyes grew scintillant with fear and admiration.

"Ev," he said finally, looking up at her from the door, "you're the pluckiest girl alive. But don't you—aren't you afraid you're going a little too far this time?"

She smiled down at him, dark eyes dancing.

"I shouldn't wonder," she said, purposely misunderstanding him. "It'll exhaust my bank account, or very nearly, and Papa's cut me off—or at least he's threatened to if—"

"If you marry me?"

She nodded, all at once very quiet. He lowered his gaze and began fidgeting with the polished handle of the coupé door.

After a minute of silence:

"It's no more than I expected," he said in a hard voice. "I'm sorry, Evelyn."

She glanced at him quickly, eyes widening.

"Sorry? Why? Do you mean—that you would—"

"I'd love you," he broke in passionately, "if you were a beggar in the street!"

Exhaling a long breath she settled back in the upholstered seat and laid hold of the steering lever. She was again smiling—very, very happily.

"Well, I must be off. By-by—Sweetest Boy!"

She sent for the monoplane that night, enclosing a check with the order that reduced her personal bank account to zero.

The machine arrived on the day the meet opened; and, unhappily for its purchaser, it was delivered at an hour when she was one of a box party at Aviation Field. Her father was home, however,—for it was a Saturday afternoon,—and he intercepted the men as they unloaded the large crates from the motor truck.

"Whatcher got there?"

"Monoplane for Miss Evelyn Cole."

Old Cole was not slow of perception. Neither was he slow of tongue. There was a little Frenchman present, sent by the Detroit firm as instructor, who afterward declared that it was the finest swearing exhibition he had ever enjoyed, and that he had immediately formed an unwonted respect for the possibilities of the English language.

When the old gentleman had cooled down to a point where he could talk coherently he said to the man in charge:

"I'll take care of this. Everything paid for, you say? All right. Follow me."

He led the way to the garage, had the crates locked in with his automobile, and threatened his chauffeur with instant dismissal if he dared open the door for anyone save himself. Then he waved the men away with a peremptory gesture and returned to the house.

He sat awaiting his daughter in the library when she came in, about seven, flushed, excited, happy, overflowing with news of the first day's exhibition, which had been a flawless wonder.

He listened with a calmness so unusual that she should have been warned all was not well. Presently she did divine something amiss, and came to a slow stop in the midst of a glowing description of a biplane race and eyed her father speculatively.

"What's the matter?" she inquired after a little silence. "Anything happened?"

"A parcel came for you to-day," he said with the comfortable satisfaction of one who holds the upper hand. "In fact, several parcels. Large ones. It required three men and an overseer to handle 'em."

She bubbled delightedly, feigning a joy she did not feel, in order to cover her irritating nervousness.

"Oh, it's my 'plane! Where'd you put it, Papa? I'm crazy to see it."

He clipped the end from a cigar, smiling grimly.

"It's in a safe place," was the ominous answer.

The light died from her face. She looked at him coldly, steadily, with round, proud eyes.

"I—think—I understand," she said, still eyeing him. "You've locked it up—hidden it from me."

"Yep, that's exactly what I've done."

She stood up. Her face was very white, her eyes very black.

"Do you realize you've seized my property—property I bought with my own money?"

He also stood up, his face darkly red, and rested his fat, white hands on the book-strewn table that separated them. Thus they faced each other. It was their battle cry, the infallible sign of open hostilities.

"Before I'll allow you to endanger your life—" he began.

"What right have you to seize my property?" she demanded.

"Every right," he asserted.

"You're my daughter, and if you can't take care of yourself I'll do it for you. I don't know what you paid for that thing, but whatever it is I'll refund the amount when you've chucked that infernal Winfield. He's to blame for this nonsense, confound him—"

"He's not!" she denied hotly. "You've no right to talk that way."

"Well, what I've said goes flat."

"Then I think you're a horrid, s-spitiful . . ."

The rest was lost. Her under lip trembled piteously, her eyes suddenly brimmed with angry tears. A moment later she had fled from the room.

Alone in her bedchamber, she flung herself in a deep armchair, her five feet four inches of slender loveliness quivering with rage and wrathful sobs. Later, when she had quieted somewhat, she rang for her maid, and half an hour afterward, clad for the street, she left the house by a rear door and made her way to the garage. Stealthily she examined the doors and windows. All were locked. It was the chauffeur's "night off" and the place was dark. She let herself out a side gate, hastened down the street to Dearborn Avenue, and thence to Division Street. At a white-bearded locksmith's shop, housed in a murky basement, she stopped and, having assured herself there were no patrons within, entered. There ensued a brief colloquy, and the venerable locksmith adorned his gray head with a cap as aged as himself, filled a tattered valise, and returned with her to the garage.

Kneeling at the door he fell to with the tools of his craft, and after an appreciable length of time he rose and placed in the hand of the girl a key. She inserted it in the lock—and the garage door swung open.

When she gained her room Evelyn sat down at her maple desk, turned on the electric light, and wrote the following:

M. LE BLANC: At ten o'clock Monday morning you will kindly call at my father's garage and tell Gus Hoefield, our chauffeur, that his brother, Herman (a street-conductor in Milwaukee), has met with a serious accident, and that he must hasten to his bedside immediately. You might pretend you are a claim agent, or a lawyer, or something of that kind.

Report to me here at eleven o'clock, and bring with you the necessary implements for putting the monoplane together.

I trust you will comprehend the purport of this letter.
Sincerely,
EVELYN COLE.

The epistle, being directed to the French instructor from Detroit, was dispatched forthwith.

Evelyn had added a third interest to the two which had dominated her for some time—Winfield, her lover, and the science of flying. This third interest was that of winning the game which her father was playing against her. Since babyhood Evelyn had dealt drastically with the obstacles between her and the goal she chose. She swept them away just as she always saw him do. She was his own daughter.

[TO BE CONCLUDED]



The locksmith fell to with the tools of his craft

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Cheer Up!

Experts Assure Us That We Can Get Along Without German Potash

By Harry B. Potter

THE potash situation has reached about the same stage as the snake situation in Ireland. You remember the man who started to write a book on "Snakes in Ireland." He wrote, "There are no snakes in Ireland. The End."

At the beginning of the present war this question was published and talked all over the country: "What will we do without potash from Germany?" Now men who know tell us that we need not be frightened, we may be able to do well without it.

Quit Wasting It and You'll be All Right

Director Thorne of the Ohio Station says: "I would say that the farmers of Ohio are probably losing annually, from the leachings from their barnyards, an immensely greater quantity of potash than they have ever purchased from Germany."

"A ton of average fresh farm manure contains approximately 10 pounds of potash. The annual winter production of manure in Ohio, under conditions permitting of its being saved, amounts to

gerous. Briefly, I think the decreased supply of potash will teach our American farmers a wholesome lesson."

Probably we need the lesson. At least we can learn more about mixed fertilizers and the mixing of fertilizers. That holds true whether we get our supply abroad or here.

There's Lots of It in Stable Manure

Fear of Pennsylvania calls attention to our lack of potash supply and our inability to readily make good from our own resources the deficiency in the foreign supply.

He does not state whether we may expect to secure potash from local sources in future years. At this time, however, we have no potash supply developed.

"There need, however, be no fear," he says, "of the paralysis of the agricultural industry from this cause. While potash has proven particularly desirable for our trucking crops, tobacco, and some of our fruit-fertilizing operations, it is of the three elements phosphorus, nitrogen, and potash the least deficient in our field crops. It is, moreover, the most abun-

It's True in Ohio: Is It Elsewhere?

"OUR annual expenditure for fertilizers is about \$4,000,000, of which much less than one fourth is spent for potash. If, therefore, the European war should cause our farmers to look to their stables for potash instead of to Germany it would mean a tremendous financial gain to the State as a whole."—Thorne

somewhere in the neighborhood of ten million tons, containing one hundred million pounds of potash.

"I believe it is a conservative estimate to say that one fourth of this, or twenty-five million pounds of potash, is annually wasted, either by soaking into the soil from which it is never recovered, or by washing into the streams which carry it to the ocean.

"Our annual expenditure for fertilizers is about \$4,000,000, of which much less than one fourth is spent for potash. If, therefore, the European war should cause our farmers to look to their stables for potash instead of to Germany it would mean a tremendous financial gain to the State as a whole."

The war, then, in this respect at least, is to be a gain to Ohio. But what about the South and the tobacco section?

It's Needed for Tobacco

Ellett of Virginia states that quite a lot of potash is used by the farmers of his State on their tobacco crops.

"In my opinion," he continues, "the loss of these potash salts will materially affect the industry unless some other form of potash can be used to take its place. With other crops, however, I do not think the State will materially suffer for the next year or two, as phosphoric acid seems to be the controlling factor in crop production in Virginia."

With most crops in Virginia, then, phosphorus has been the needed fertilizer. Hopkins of Illinois has pointed this out for his State too. He says in his book "Soil Fertility and Permanent Agriculture" that while potassium is required by plants in very considerable amounts, yet, when measured by the average composition of the earth's crust and by average crop requirements, the supply is very great. He would have us see that the loss of our potash supply is not nearly so serious as would be the loss of our source of phosphorus.

We've Been Wasting Money on Potash

Others seem to agree with Doctor Hopkins in this. Jordan of New York says: "It has been my opinion for a long time, and I have freely expressed it, that farmers have been overbuying potash. While I would not claim that potash is unprofitable in all sections and under all conditions, I am quite sure that many brands of fertilizers have contained a much larger percentage than was desirable from a business point of view, and that in certain sections of New York, at least, potash could pretty nearly be left out of our fertilizers without harm and with profit to the farmer. Of course you recognize that each farm is a problem by itself and much depends upon what the farmer purchases and what use he makes of his home-grown crops. Rules are dan-

dant and soluble of the mineral elements in our stable manures. The fertilizer trade will undoubtedly be embarrassed and will be obliged to extend its stock of potash through the fertilizers it prepares, and doubtless to diminish the guaranty percentages of this ingredient, but most of the American agricultural operations have been carried on without potash fertilizers, and can doubtless get along reasonably well for a year or two without this supply."

With plenty of potash in manure and soil Pennsylvania ought to fare well. Texas seems to be in the same boat.

Better Buy Nitrates and Phosphates Anyhow

Fraps of that State says: "Our analyses and fertilizer experiments have shown that phosphoric acid and nitrogen are needed to a greater extent by Texas soils than is potash. Commercial fertilizers are applied, as a rule, in only small quantities to staple crops, such as corn or cotton. We doubt very much if the two per cent of potash or less contained are of any advantage whatever to the crop. We are, on the contrary, very much inclined to believe that it would be better to leave the potash out entirely and to apply only phosphoric acid and nitrogen. Under the conditions with which these fertilizers are used with our average soil, I doubt very seriously if potash is of advantage on the staple crops. There are of course soils which need potash, and there are some crops on which it is of advantage to apply potash. I do not believe that this State will suffer at all from the lack of potash. In fact, I am inclined to believe that the lack of potash this season will have the effect to induce more discrimination in its application and a greater tendency to use it where it will give satisfactory results."

Experimentation is a good thing, and the experiment stations are doing splendid work in ferreting out such facts as these. When we come to a crisis like this we can turn to them and they can turn to their fields for the answer.

Not a Matter of Much Consequence

Dodson of Louisiana is very optimistic. He says: "Our experiments indicate that we get no material good from the use of potash salts for corn, cotton, and cane. We have incomplete evidence that a small quantity of potash fertilizer hardens the grain of rice, but I believe that cottonseed meal would contain all the potash we would need for this crop, so that between the sources of fertilizer available in this country we could go for an indefinite length of time and suffer no harm to the staple crops from a lack of 'European potash salts.' "There are some of the truck crops

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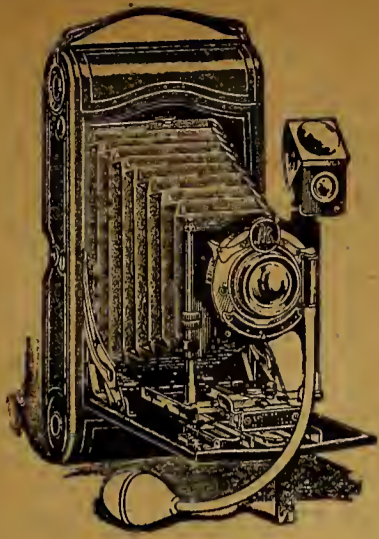
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that are benefited by the use of potash salts in some soils, but I don't consider that a matter of very great consequence. We are, therefore, not worried at all in Louisiana over the inability to secure potash salts from Germany. We rather rejoice that the exportation of cottonseed meal and phosphorus is interrupted, and I sincerely hope that we will learn to use these products more wisely at home, and that the export trade may not again be developed to the extent that has existed up to the outbreak of the European war."

We shouldn't become so cheerful, however, as to think soils do not need potash. Some soils do need it in order to produce certain crops. Take potatoes in Maine and Michigan, for example. But for those crops and States there ought to be sufficient potash from the new sources being opened up by our Government.

Certainly Needed on Peaty Soils

Davenport of Illinois gives his viewpoint in saying that if the European war were going to destroy the German potash mines he would consider the question seriously.

"But," he says, "the mines will be there when the war is over, and without a doubt the Germans will be as anxious to sell potassium as we are to buy it. There is no question but that the temporary loss of German potassium salts will interfere with American farming, particularly with the development of peaty lands, which, we have learned, rests upon an abundant supply of potassium. But, looked at in the large, the matter is relatively unimportant because we can conduct American agriculture without potassium a good deal longer than the European nations can conduct a war. The whole thing at longest is a matter of two or three years. In our opinion, therefore, it is to be regarded more as a temporary inconvenience than as an agricultural disaster."

Lipman of New Jersey is positive that no permanent inconvenience need arise, since "A number of chemical processes are available, by means of which soluble potash fertilizers may be manufactured out of feldspar rock or out of the practically inexhaustible deposits of greensand found in New Jersey and elsewhere."

We Might Produce Our Own Potash

"It has been suggested," he continues, "that the greensand marls of our State be used for cement-making, and that the potash compounds which would become available as a by-product would largely meet the needs of the United States for potash fertilizers. But for the cheap supplies of concentrated and of readily available potash salts from Germany, American chemists and manufacturers would have developed processes for supplying our needs. Until now, however, the incentive did not exist, since it was difficult to meet the competition of the German Kali Syndicate."

"If the present war should cripple the potash industry for some years, our own processes will be developed and plants will be established for manufacturing potash fertilizers at reasonable cost."

"Meanwhile we could surely manage to get along without German potash supplies for at least one year."

"The more generous use of lime and green manures would enable us to utilize more effectively the large supplies of potash already present in most of our soils, and no depression in crop yields should arise next year, because of the smaller applications of potash from outside sources."

"In our experience, potash fertilizers do not cause any increase when used under average conditions in the growing of small grains, forage crops, hay, and corn. Where the yields on medium or heavy land do not exceed 15 to 18 bushels of wheat, 1 to 1 1/2 tons of hay, 35 to 40 bushels of oats, and 30 to 40 bushels of corn per acre, the use of potash salts seldom shows an increase. On light sandy soils this is not always the case."

"On the other hand, under more intensive methods of production the application of potassic fertilizers may be found profitable, even in general farming. In that case, however, the yields would have to be much higher than those obtained under average conditions. In the case of potatoes and truck crops, as well as of fruit grown under intensive conditions, potash fertilizers could not be left

out with as much safety. Nevertheless, even in the case of these crops the temporary leaving out of potassic fertilizers need not seriously depress crop yields except on the very light soils. It should be remembered, of course, that lime and organic matter should be present in abundance to provide for the utilization of the soil stores of potash."

California is still more optimistic, for two reasons. First, they do not need potash in their soils; and, second, they have a supply right at hand. Burd of that State points this out in saying:

"I do not regard potash as being of the first importance to agriculture in this State, and think that we might be able to get along without foreign potash salts almost indefinitely."

"If, however, potash should come into great demand it may be readily obtained from some of the varieties of kelp growing on this coast, which contain in the neighborhood of 13 1/2 per cent potash in the dried and ground material. If attempts to utilize kelp are confined to drying and grinding I believe it can be done successfully, particularly if the war has the effect of stiffening prices, as it doubtless will."

We are now in a position of finding out our own resources. Perhaps California can supply potash to the needing States, and do it economically to both giver and receiver. We should look about us for new ways of doing old things and for new supplies to crop our soils in ways we know to be correct.

In the meantime the war need not frighten us away from our regular farming operations.

As to Seed Crops

By J. S. Michael

ON SUCH varieties of garden seed that come from Germany and France—which are more or less of the following kinds: table beets, radish, carrot, common varieties of cabbage, and some of the miscellaneous minor kinds not used much—there doubtless will be some shortages due to the war.

Turnip and rutabaga we get mostly from England, and also have contracts with English growers for more or less stuff of the above-mentioned kinds that they doubtless have in turn grown in the countries before mentioned; but fancy varieties of high-bred kinds of cauliflower and the more particular late improved varieties of cabbage which come mostly from Denmark and Holland, which countries are at this writing neutral, will be shipped as usual.

Holland bulbs, such as tulip, hyacinth, crocus, and various other kinds have been shipped out of Holland and will arrive here in due time.

Regarding flower seed, all that is not produced in America comes from Germany. This country produces more flower seed than any other. Flower seed is grown around Erfurt and one or two other points in that neighboring part of the country. There will doubtless be a shortage on all such seed.

Such varieties of flower seed as aster, phlox, verbena, sweet peas, and several other well-known sorts are produced in abundance in America, on the Pacific coast in the Santa Clara Valley of California largely. Our California people have met with severe losses with their sweet-pea crops. America has been looking forward to southern France for sweet peas, but doubtless will not be able to get them out of that country.

Sugar-beet seed has come from Germany in past years. There may be short acreage another year on account of the war. What is true with sugar beet is true of mangel-wurtzel beet, which is not so important to the American trade.

The American seed crop of alfalfa seed is a very light one this year from all information I can gather up to this time. I look for much higher price on alfalfa seed in the spring, especially if the war continues.

A friend of mine was telling me, too, that the English Government had advised the people of England to discontinue the cultivation of ornamental plants, and plant nothing but vegetable-producing plants. They gave the list of vegetables to plant, which he said would be complied with practically to the letter. This is another war feature that suggests itself, and a very wise measure at such an awful time.



"Buying mixed paint? Why don't you get lead and oil and mix it yourself?"

"Because lead and oil alone do not make good enough paint for me. Besides, I prefer to leave the mixing to those who make paint their business."

"What's in that can you have there besides lead and oil and coloring matter?"

"Zinc—Oxide of Zinc. Zinc gives longer life to paint and it's as necessary as white lead. A paint to last and hold its color must have both."

"Just lead and oil have been doing pretty well for a good many years."

"Pretty well, yes. So did your old wind-mill, but now I notice you have a gasoline engine."

"What do you call that paint?"

"It's Sherwin-Williams House Paint, S W P for short, and two coats of it are good for five years or more. I know, I've proved it."

"I always thought those mixed paints were made of pretty poor stuff."

"Some of them are, I guess, but S W P is not merely a mixture in a can, but a manufactured product, worked out according to an exact formula and proved up for forty years. It is ground and mixed by powerful machinery—not by hand with a paddle. It has great covering power and I never saw the like of it for standing off the weather and holding its clean, bright look."

"Guess I'll try it. Did you get it here at Jones'?"

"Sure, he has all the Sherwin-Williams Paints, including a bully paint for your buggies or your automobile."

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Parcel Post—Next Issue

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EDITORIAL COMMENT

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HERBERT QUICK, - - - - - Editor

October 10, 1914

The Illinois Quarantine

WE NOTED some months ago the fact that the Governor of Illinois had declared a tuberculosis quarantine against almost every State in the Union. Very few people understood this action. Illinois had never been so very strict in such matters, and her tuberculosis law was criticised in some quarters as rather lax. The startling facts behind the quarantine appear in Mr. Welliver's article in this issue. It reads like a Doyle detective story, and it doesn't tell half the facts.

How Are Your Shoes?

THERE is a crisis in the leather business on account of the war. Nothing like it has ever been known. The supplies of hides and tanning materials from Europe have been cut off.

We all expected that Russia leather would be scarce with Russia at war, but not many of us were prepared for the statement of Mr. John E. Wilder, president of the National Association of Tanners, that "almost eighty per cent of the upper leathers used in this country is made from French hides and calfskins," or that "the Germans are the tanners of the world, and from them we get the necessary aniline colors." Mr. Wilder states, however, that the supply of upper leather on hand will probably last six months. The bearing of these statements on the prices of cattle is obvious.

There is many an old cow and new calf whose hide will in six months be worth more than the whole animal would bring at this moment, unless the war is a short one.

The Harvester Decision

THE United States District Court sitting at St. Paul rendered a decree ordering the International Harvester Company to dissolve into not less than three independent concerns.

The case will be appealed to the United States Supreme Court.

Farmers everywhere will be interested in the fact that while the Court decided that the I. H. C. is an illegal combination in restraint of trade it has done nothing wrong, in recent years at least, in either charging excessive prices for its machinery or badly treating its competitors.

So far as its business methods are concerned the International was given a rather unique letter of recommendation by the judges. The decision holds, however, that when the McCormick, Deering, Osborne, Plano, and Warder, Bushnell and Glessner concerns united a dozen years ago, and afterwards absorbed the Minneapolis, the Keystone, the Aultman-Miller, and other plants, it obtained so large a proportion of the business that it became an illegal combi-

nation, regardless of whether it was fair or unfair to its customers or its competitors. Originally the concern was chiefly engaged in the manufacture of harvesting machinery.

The decision will hardly affect the business of the I. H. C. or of the farmers with it for a year or so if the appeal is perfected.

Just what effect the cutting up of the business into three or more portions will have on the price of machinery is a thing which every farmer would like to know. The only answer is that there is no way of telling.

After hearing the evidence the Court decided that the I. H. C. prices are not excessive. If this be true, it is difficult to see how three companies can sell any cheaper than can one.

The Public Market Boom

OFFICIALS of the city of New York have been campaigning among the farmers of Long Island and New Jersey in the interests of public markets for farm produce.

Several free markets have been established in the city, and the farmers are urged to sell their goods in them. Similar movements have been carried on with some success in many cities.

These markets are a good thing, though the problems which must be solved if a great town like New York is to be served by them have not yet been solved. In the smaller city the matter is not so difficult. And yet, so long as people prefer to pay high prices rather than carry their food home the grocer who runs a delivery wagon will continue to do the business.

The advantage of the public market lies in the fact that people who will do their own delivering can save money by patronizing them. The benefits to truckers are very great, if the market is really free and really public. Persons studying the question find that in many cities the so-called public markets are close corporations of commission and other merchants, run for private profit rather than for public interests. In these cities there is work to do in liberating the produce trade from the clutches of the market monopolists, quite as important as that of establishing markets where there are none.

Meat and the War

AN AMERICAN war correspondent, Harry P. Burton, unconsciously tells the most important fact we have seen regarding the effect of the war on the meat and live-stock situation.

"In the most exclusive restaurant in Paris," he writes, "you can buy neither butter, cream, nor milk. Every cow in the country has been commandeered for the army."

What does this mean to us?

It means that in France, at least, the farm herds are swept out of existence. It means that the same thing exists in all probability in each of the warring nations. It means that the dairy products will be scarce in Europe for years after the war is over, that the local supply of beef will be obliged to await the building up of the herds, that the breeding animals will be imported from other countries.

All this ruin to the farmers of Europe must be remedied by the efforts of years. In the meantime we must do our part in the matter of supplying the breeding animals and the meats.

Supporting Cotton and Apples

THE people of the South are urged as a matter of patriotism to buy cotton as a means of supporting the glutted market. "Buy a bale," is the slogan. An excellent means of distributing the burden of carrying cotton, if it could be carried into effect.

Why not start the slogan, "Buy a barrel of apples?" The apple market needs support no less than that for cotton, and those who buy will find the cost of living lessened. If every man, woman, and child would eat an apple a day for a week it would save the situation.

Wisdom From an Ex-President

HE IS a former president of the Chicago Retail Grocers' Association, keeps a shop on West Madison Street, and rejoices in the name of Sol Westerveld. He has a great scheme. He suggests that the price of wheat might be kept down and the government revenue increased by making the farmer pay a tax of a cent on every bushel of wheat which he sells for a dollar, and an increase on this tax of a cent a bushel for every advance of ten cents in price.

This tax would of course be added to the expense of getting the wheat from the farm to the loaf. Probably the reader doesn't see how adding to the expense of creating the loaf would make bread cheaper, but Mr. Westerveld thinks he sees clearly.

This is a fair sample of the wisdom freely aired in the newspapers by people who have epoch-making inventions for making somebody else pay for cheaper living for the people.

In the same issue of the Chicago "Tribune" in which this interview appears the statement is made that the activities of the Federal Government in indicting and threatening to indict people who by monopolization of food and conspiracy to raise prices were partly responsible for the cost-of-living trouble have resulted in a drop in prices of a third in many items, and a failure to advance in most of them.

Perhaps that's what is eating the former president of the Chicago Retail Grocers' and Butchers' Association.

Virginia's New Dog Law

AT THE recent session of its legislature, the State of Virginia passed a dog law which makes it a misdemeanor punishable by a fine up to fifty dollars for the owner to allow his dogs to run at large in the country. The indirect effect of this law is to allow any farmer to shoot a lone dog on his property. Before the owner can bring a suit for damages if the dog is killed, he must establish that the dog was at large. By so doing he makes himself liable to the fine.

This law does not apply to dogs accompanied by their owner or other responsible person who has them in charge. The law grew out of sentiment among the farmers against sheep-killing dogs, and is expected to result in the stocking of large amounts of waste land with sheep.

Two Ways of Doing It

IN PHILADELPHIA all mention of the war by the teachers in the public schools and all discussion of the war on the school premises are forbidden. In Chicago a special course in geography and history is given in the higher grades, and the movements of the armies from day to day will be studied.

The one course suppresses; the other uses the great events now taking place.

The one applies a hoodwink; the other uses the field glass and microscope.

The one hushes up the greatest thing in the world's thought; the other links it up with the school studies.

Suppression is autocratic, discussion democratic. The Philadelphia way dodges certain ticklish points in a school population in which the warring nations are represented; the Chicago way meets the difficulty in a democratic way and, if successful, solves it.

The passions of the war will not survive calm discussion anywhere. It is so unutterably sad that the sane minds must soon come to the point of looking on all the men engaged in it as poor victims whose sufferings and struggles command our pity.

To Americans, both native and naturalized, the war should furnish no occasion for anger or pride. It may be confidently predicted that in the Chicago schools in which its progress is studied under competent teaching there will be no outbursts of either.

The Farmers' Lobby

The Elgin District—Now Famous for Tuberculosis

By Judson C. Welliver



Mr. Farmer, keep your eye on the political herd as well

tributed all over Illinois, or, from its Wisconsin end, shipped as Wisconsin cattle to other States.

It requires no diagram to show how effectually this little scheme worked to defeat the laws. It was perfectly regular to ship tuberculous cattle into Illinois; Illinois had in effect extended an invitation to the country to send 'em along; she had opened her arms in welcome to 'em. They couldn't be shipped into Wisconsin because Wisconsin wouldn't allow it. On the other hand, they couldn't be shipped out of Illinois—not to the States that had quarantined against Illinois. So Illinois law was used at one end of the conveniently located farm to get 'em in, and Wisconsin law at the other end to get 'em out!

Can you beat that?

Uncle Sam thinks he can.

Having had the whole system laid before him by state and federal investigators, Secretary of Agriculture Houston began by issuing a general quarantine order against cattle from the five north-eastern Illinois counties in which this business has been centered. They are Lake, Henry, Kane, Cook, and Du Page. As Cook County includes Chicago, the great stock yards district of that city is included in the order.

Uncle Sam Takes Things in Charge

Under this order no cattle can be shipped from these counties unless accompanied by a certificate showing that they have been subjected to and have passed the government tuberculin test. This test can be administered only by the authorized agents of the federal Bureau of Animal Industry, who must personally make the test. No state officer's or private veterinarian's certificate looks good to your Uncle Samuel.

The Illinois authorities have agreed to prohibit private inspection entirely, and to turn over to the representatives of the Department of Agriculture the complete control of the business, so far as concerns interstate shipments. At the same time the Illinois State Board of Live Stock Commissioners has undertaken to control shipments of stock from these quarantined counties into other parts of Illinois.

Utmost rigor is being employed in enforcing the regulations because of the extremely bad conditions discovered. In some cases cattle so obviously reeking with disease that it could have been recognized by any man with eyes have been shipped into the finest dairy herds.

The Department officials have been working two or three years, laying their wires to land the whole conspiracy and get testimony on which convictions of the guilty may be based. They believe they have it. Names and details of numerous transactions are in their hands; but these are not being given publicity.

At first the investigators were unable to find any handle by which to take hold of the vicious system. Illinois laws seemed to have been carefully fixed to give protection and immunity. But finally Governor Dunne of Illinois, who took the keenest interest in efforts to put an end to the conspiracy, discovered a statute under which he assumed power to declare a state quarantine. The federal quarantine came next. It was at one time proposed to quarantine against all Illinois, but this would have compelled wide-spread suffering among innocent people. The state officials undertook to keep a very strict watch on conditions throughout the other counties, and so only the five that have been named, and which were considered the headquarters of the most vicious practices, were included.

Mexico Got Lots of Them

What this exchange for diseased stock has been doing by way of disseminating tuberculous cattle may be guessed from some of the reports.

The Colorado officials report that in a single shipment of dairy stock from Illinois there were 700 head. They were sent from Gilberts, a little suburban town out of Elgin. Of these 700 no less than 80 per cent were found on examination to be "rotten with the disease," and they were killed and used for fertilizer manufacture.

Missouri reported that its authorities were holding two shipments, one of them a full carload, which came out of the Elgin district on forged or otherwise faked certificates of their healthfulness.

Dr. D. F. Luckey, state veterinarian of Missouri, was a leader in digging into this mess. "Nobody knows how widely this business has spread disease throughout the country," said Doctor Luckey. "Cattle manifestly in the worst stages have been coming to this center for years, and are still coming. We know just where they come from, and we know who the man is who is at the bottom responsible."

Prior to the revolution in Mexico that country was a favorite market for the "tuberculosis trust." It filled northern Mexico with disease-bearing animals, and made the poor Mexicans believe they were the finest that the States afforded.

And still some people wonder why the Mexicans are at times dubious about the disinterested friendship of the United States!

What they really did was to take away from the people in Illinois towns all power to protect themselves against diseased cattle and milk, and to make Illinois the dumping ground for tubercular cattle. Dairymen needed only to be informed that Illinois had no "fool laws" about inspecting and testing stock. The agents of the "trust" merely explained to the farmer that cattle in danger of being condemned in one State would be perfectly safe in Illinois.

"Don't let your stock be condemned and destroyed because you have crank laws," they argued; "send 'em to us in Illinois, and we can use them. You'll only lose a few dollars on a head."

A Handy Farm on the Border Line

So the "trust agents" were able to pay within \$5 or \$10 of the market value of perfectly healthy animals. They simply swept the diseased cattle of the country into the dairy country of Illinois, there to receive their certificates, and thence to be distributed, with the germs of disease and death, to all parts of the country.

It is about ten years since the "trust" seems to have begun operations on a considerable scale. The investigators believe that one man is the head and brains and direction of the whole business. They say that his very large political pull in Illinois made it possible to get the vicious inspection law passed, and has since been potent to prevent interference of state officials, in Illinois and other States as well, with his system. It is promised, in fact, that a scandal of wide ramifications, reaching to many States and dragging officials into the meshes of the "trust," will be uncovered.

A long time ago Western States began to discover that they were getting diseased cattle from Illinois. In Colorado, Georgia, Kansas, Kentucky, Minnesota, Montana, Nebraska, North Dakota, South Dakota, Oregon, Washington, and Wyoming state regulations have been made absolutely prohibiting cattle from Illinois to be brought into the State unless accompanied by a certificate of federal inspection.

But note now the devilish ingenuity with which the conspirators managed to render these regulations worthless. They picked out a farm north of Elgin as a base for operations. Part of this farm lies in Illinois, part of it across the state line, in Wisconsin. Diseased cattle could be shipped in and unloaded on the Illinois side of the line; the anti-inspection law of the State made this perfectly safe. Then they would be driven over to the Wisconsin end of the farm. They could thus be shipped as Wisconsin cattle, right into any of the States that had strictly quarantined against Illinois stock!

And that is just what has been going on.

Only a few days prior to this writing Dr. O. H. Eliason, state veterinarian of Wisconsin, issued a circular letter to veterinarians throughout the Middle West, describing this method of getting around the quarantine. He warned all veterinarians and buyers against cattle coming from this farm, and flatly charged that diseased cattle from a notorious "trust plant" south of Elgin were being constantly smuggled or even openly driven to this place, and from it dis-

THE existence of a great clearing house for tuberculous cattle, through which diseased animals are taken from infected herds and unloaded on innocent buyers all over the country, has been discovered by the federal authorities, and as a result prosecutions are promised.

Officials of the Department of Agriculture allege that many thousands of diseased cattle have been dumped on unsuspecting purchasers, with the result that tuberculosis has been carried to all parts of the country.

It is an amazing story of political intrigue, not all the details of which have yet been made public.

You will recollect the name of Lorimer; William Lorimer, sometime a Senator from Illinois? Well, the same corrupt legislature that elected Lorimer a Senator, and thereby started the scandal that resulted in two trials of Lorimer by the United States Senate, also passed the vicious law which seems to have been the cornerstone of the wicked system of traffic in animals described as "rotten" with tuberculosis.

Lorimer, it will be recalled, was expelled from the Senate on the second trial. Public opinion compelled the Senate to take that action. A good many Senators who voted to leave him in his seat have since been called to account by indignant constituencies and retired to private life.

How the "Clearing House" Worked

But the unholy law that that legislature passed, opening the way to establishing in Illinois a national exchange for tuberculous cattle, nullifying federal and state acts for the protection of the public health and the herds of honest farmers, has gone on doing its damage long after Lorimer disappeared from public life.

This case is one of the finest illustrations we have ever had of the impossibility of having national and state laws everlastingly in conflict, the one canceling and nullifying the other, while the public interest falls between the two stools.

Elgin, center of the most famous dairy district in the country, was also the capital of this vicious industry. Briefly, the scheme was to receive here diseased cattle from wherever they might come, and resell them as choice dairy animals from the great dairy section. The very name of Elgin gave color and respectability to the horrible traffic. Dairymen everywhere have been imposed upon the more easily because highly recommended cattle from its world-famed dairy farms were accepted as fully guaranteed in advance. In fact, the dissemination of thousands of the most dangerously affected cattle through this center of contamination became so serious a matter, even before the conspiracy was exposed, that no less than a dozen States had established quarantines against Illinois cattle.

It must be explained, further, that dairymen in many parts of the country have been partners in this business. The investigators declare that it was widely known among owners of dairy stock that if tuberculosis appeared in a herd, or if, its existence being known, there was threat of inspection and condemnation, it was only necessary to communicate with the management of this "clearing house," and presently a buyer would appear who would take the diseased cattle at a price only a little less than that for sound and healthy animals.

Next, these notoriously diseased cattle would be shipped to the Elgin district, there being a number of consignees in that immediate section who represented the "trust."

Lawmakers Were Corrupt or Ignorant or Both

Then came in the fine work.

The privilege of private inspection and certification of cattle by veterinarians is allowed in Illinois. These diseased cattle would be given a first bill of health by private inspectors, and then would be ready for sale. They would be offered, of course, as high-class stock. The "trust" could afford to pay good prices for them, because as soon as they got certificates of character they could be disposed of as the choice selections from the best herds of dairy cattle in the country. People were found everywhere perfectly willing to assume that "Elgin dairy stock" must be particularly choice; buyers were not only given diseased animals but victimized into paying scandalous prices for them.

The performance was made easier and the scale on which it was conducted was vastly expanded by reason of the corrupt inspection law passed by the Lorimer legislature to which I have referred. This was a most remarkable statute.

It provided, in effect, that no Illinois city should have the power to pass any ordinance requiring the tuberculin test of cattle from which the city was supplied with milk.

It was passed, of course, on the pretense that the tuberculin test was a piece of foolishness; that it didn't in fact detect the presence of tuberculosis, but merely provided an excuse for destroying the farmer's stock. Some of the men who helped pass this outrageous measure actually went home and took vast credit to themselves for it, on the ground that they had performed a noble service for their constituents.

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Crops and Soils

Investments in Washington

By Harry B. Potter

MUCH of the West has been noted for its production of grain.

Spillman of the U. S. D. A. points out that there are certain sections of the Northwest where continuous grain production will be followed for a number of years. The reason is that there it is the most profitable line of farming.

He maintains vigorously that the farmer will raise what it pays him to raise; and he is not far wrong, is he?

If we can invest \$500 in the soil and get in return \$1,000, we will invest.

It is to this point that Schafer of the Washington State Station addresses himself when he talks about the new work that his station is planning with forage crops. He shows how grain-farming in his section of the country as in many another part of the United States has used the fertility that was once there.

We are in the habit of thinking of the

"fertility" as "stolen," when as a matter of fact there may be much valuable plant food still present. Perhaps only one particular part of the plant's diet has been taken from the soil. But that will mean the plants will not thrive there.

The work, then, is to get back into the soil what is needed, and Schafer thinks that forage crops will do it for Washington.

Forage crops would mean more live stock, and live stock would mean more manure than the Western farms have had. The particular effort now is to increase the amount of alfalfa, clover, and field peas grown in the State. The farmers of the State are following the advice of the station and are trying out these crops on their fields.

In the meantime the station will find out on its own fields what varieties and strains will be best for the State, and then when the demand becomes greater the station will have improved seed ready for distribution.

Washington is but one State that needs to know more about forage crops and the part they play in profitable farming. In fact, we all need to learn.

Why a Potash Scare?

By Herbert Quick

GERMANY furnishes most of our potash.

Potash is one of the ingredients in every "complete" fertilizer sold.

With Germany cut off from the world the fertilizer companies cannot make "complete" fertilizers. Probably half the fertilizers bought by the farmers of the United States bear the formula 2-8-2. That is, they purport to carry 2 per cent of nitrogen, 8 per cent of phosphorus, and 2 per cent of potash.

Will it ruin us if the war causes the manufacturers to leave off the potash and make the formula 2-8-0?

The soils of the State of New York are surely not on the average richer than those of other agricultural States. They have been tilled for a long time, and most of them were not originally of surpassing fertility.

Every good farmer restores to the soil the straw and other haulm in manure or some other form. Let us assume that to be the rule. Leaving out the peaty soils, of which there is a very small acreage, and the average of six types of New York soils show that in the upper six and two-thirds inches there is enough potash to grow more than four thousand crops of wheat at twenty-five bushels to the acre, nearly four thousand fifty-bushel crops of corn, about five thousand crops of oats at fifty bushels to the acre, and other crops for similar periods.

Doctor Hopkins assures us that where the soil contains enough potassium to meet the drafts upon it for say 2,000 years we may assume that the supply will be absolutely permanent, as new and unexhausted soil will be brought to the surface by erosion as fast as it is exhausted.

We need not worry about the lack of potash in the fertilizer formula, whether we buy it or mix it ourselves, while the European war lasts.

A peaty soil is a different matter. It may need potash every year, but the average farmer who buys fertilizers will not be harmed by swearing off on potash for a year or so. And in the meantime, why not swear off altogether if Doctor Hopkins is correct? Perhaps some of our fertilizer friends will tell us.

We can use the information we have, however, while we are waiting for some of a more definite sort.

What crops are large users of potash? Those analyzing over 1 per cent potash are: Soy beans, red clover, horse beans, oats, huckwheat, barley, hops, tobacco.

Grow these sparingly if in past seasons you have noticed that the crops lacked color and had brittle leaves and stems and seeds were not fully matured, all of which suggest that potash supply is low.

The safest crops to grow on land deficient in potash are: Millet, rice, sweet corn, wheat, alfalfa, potatoes, sugar beets, all fruits and berries, all garden truck except peas and beans.

More Lost People

ADDIE CAWTHON and children, Mason, A. Jim, Charlie, and Gussie May, are lost to J. W. Cawthon of Florida. Any information concerning them will be gladly received.

Andrew L. Harris, or any of his family, whose post-office address until three years ago was Batesville, Arkansas, are lost friends to R. E. Hayes of Connecticut, who would like information concerning them. Address correspondence in care of FARM AND FIRESIDE.

Jacob Willard, a long-lost brother of F. C. Willard, was known at Akron, Ohio, and had friends and acquaintances there. He has been lost since 1881.

EDITORIAL NOTE—Four of the sixteen people whose names have been published under the title of "Lost People" have already been located to the great satisfaction of their friends and relatives. All readers are urged to help in this matter and send some word even though it is only a clue.

\$930,000 Per Week Paid for Hudson Cars

Motorists are paying—on the average—\$930,000 weekly for this new HUDSON Six-40. And they have for weeks. We are building and selling 100 cars per day.

They would buy more if we could build them. On one day in September—when car arrivals were heavy—152 HUDSONS were delivered to users.

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We are selling five times as many HUDSONS as we sold at this season last year. Think what that means on an old, famous car like the HUDSON—long a leader of the line. Think what a car this must be—this new model Six-40—to multiply HUDSON popularity by five-fold in one year.

Last year's model was 3,000 cars oversold. In July—when this 1915 model appeared—we trebled the factory output. But on August 1 we were 4,000 cars oversold.

Men waited weeks for this HUDSON Six-40 when other cars were plenty. No other car could please them when they once saw this.

The HUDSON Six-40 now outsells any car in the world with a price above \$1,200.

See What Did It

See the car which has made a record unmatched in the annals of this line. You will see a quality car sold at a price which is winning men by the thousands from lower-grade cars. You will see a class car—in many respects the

finest car of the day—sold at one-third what class cars used to cost.

You will see how clever designing and costly materials have saved about 1,000 pounds in weight. Yet never was a car more sturdy. You will see a new-type motor which has reduced fuel cost about 30 per cent.

You will see new beauties, new ideas in equipment, new comforts and conveniences. You will see scores of attractions you never saw before.

They are all in this masterpiece of Howard E. Coffin, the great HUDSON designer. This is his finished ideal of a car, and he is counted the final authority. Mr. Coffin has worked for four years on this model, with 47 other HUDSON engineers. Part by part, every detail of the car has been refined to the limit.

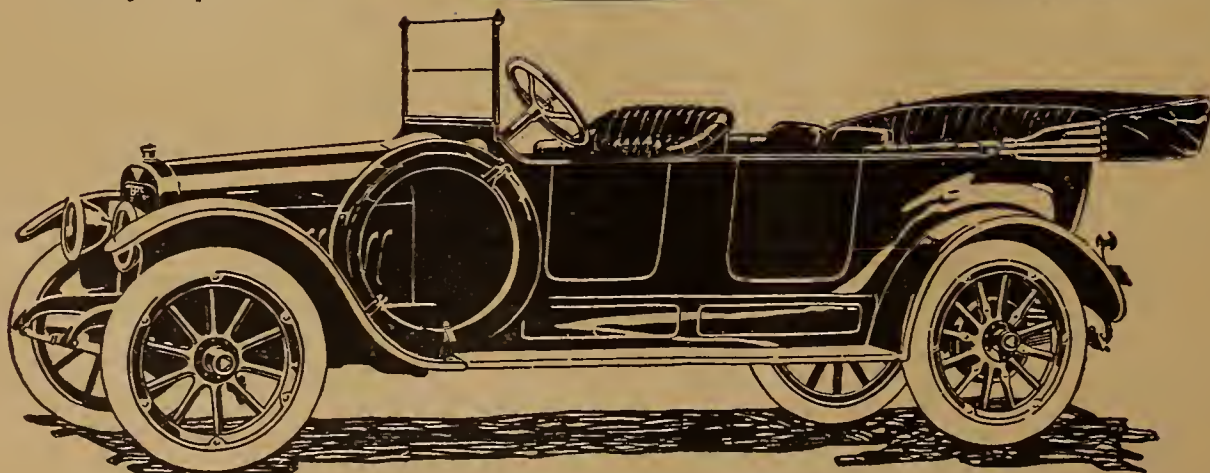
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Growing Old Restfully at Home

By Hilda Richmond

AFTER seeing many of her elderly friends the victims of "retiring,"—which means going to town to be rid of the burden of farm duties,—a wise country woman evolved a plan for continuing to enjoy life where she was born, instead of seeking the lonely repose of town life that usually saddens elderly people reared in the freedom of the fields. She recognized her inability to perform the heavy tasks of her young womanhood, so she evolved a plan for simplifying life in the dear old farmhouse.

The many young people of the family had gone one by one to homes of their own, or to careers in town, so there were many unused rooms. These the mistress of the house closed. The customary furniture remained, but the beds were not made up, no curtains draped the windows, and the floors were not swept and garnished as in other days. It was as if the rooms had never been, as far as washable furnishings were concerned.

Her extra bedding, and she had once collected stores of extra things for the bedrooms like all notable housekeepers, were divided among her children, and she retained only enough for emergencies. The burden of carrying bedding up and down stairs to air twice or three times each year was thus abolished.

The extra dishes and other household stores were also given away. She had the pleasure of dividing her own things to suit herself in her lifetime, and to know they were used and appreciated.

When the reconstruction was complete she and her husband enjoyed the family sitting-room, dining-room, and kitchen for living-rooms, and they had their own big, comfortable bedroom in addition to

these apartments, all on the first floor. It was a joy to keep them in order, and there was not a useless thing to bother with in the whole domain.

When the children or grandchildren came home to visit, young and strong hands quickly swept a bedroom, aired it, and laid down a few emergency rugs to make the room habitable. What would have been a burden for a woman verging on sixty-five was a light task for them. The young relatives rejoiced in the sane housekeeping methods that prevailed in their old home. Many young folks would visit the old homestead oftener if they felt sure their home-going was not a burden to the aging mistress of the house.

And there was a change in the house-keeping along all lines, for when the younger people went home for a long or short visit simple cooking was the order, and almost always they took supplies with them. No longer were the burdens of butchering, canning, preserving, and pickling felt in the new-old homestead. The young folks went to visit, not to disturb the ways of the household, so it was no uncommon thing to find one young matron furnishing the meat, one the cake, and so on through the list of eatables for the family gatherings. It was an ideal plan and saved all the worry and work incident to big dinners.

If, instead of running away from the farms, more old people would simplify their manner of living and stay on in their beloved homesteads, if more big farm homes were reconstructed to meet new conditions, life would be sweeter all around. Fewer farmers and their wives would close their days sadly in uncongenial surroundings.

A Kitchen Window Garden

By Maud E. Hymers

A WORTH-WHILE window garden is one which serves the double purpose of brightening the kitchen, while offering dainty relishes for the table at a time when green things are most appreciated.

The garden may be simply a deep wooden box the width of the window, which should preferably have a southern exposure. Provide it with legs to bring it to the height desired, and paint it to match the woodwork so as to make it as inconspicuous as possible. It is the garden, not the box, from which we expect to derive our winter pleasure. If you fill it with good rich soil, well mulched, and provide proper drainage, the box should be a source of profit as well as pleasure this winter.

For a border all around the box there is nothing better than a row of bright-colored nasturtiums, which take kindly to indoor life. The foliage falling over the box will, together with its wealth of blossoms, provide a bit of brightness that will rest the eyes to look upon. Again, the petals of the flowers, as well as the tender leaves, may add a zest to many a dainty salad or sandwich.

The remainder of the space may be

divided into compartments and sowed with any preferred seed, parsley being generally favored. The curly-leaved variety is decidedly decorative, looking almost fern-like among its plainer companions. Few housewives need to be reminded of the many ways in which parsley is useful, but recently I saw it served in a way new to me at least. It was passed after we had all partaken of onions and eaten with salt like celery, for the parsley is said to kill the odor of onion on the breath.

At one end may be garden cress, which is almost as crisp and delightful as the water variety, with even more bite to it. This is almost a salad in itself, requiring only a plain dressing to make it ready for the table. It serves equally well as a garnish for meat dishes, and may be eaten from the fingers.

Between the two may be lettuce, its paler green contrasting well with the deeper tints of the other plants. Other savories may be added as desired, provided the box is large enough to accommodate them; but those mentioned will be sufficient to give you both color and variety in the routine of winter.

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Live Stock and Dairy

When and Where is the Big Steer Best?

By W. S. A. Smith

THIS time of year, when Western range cattle are marketed and we see steers off grass bringing over \$100 per head, the big three-year-old steer looks like good property, and he is good property where he is produced.

Owing to the high prices of stock cattle and the decided shortage, the range countries are sadly depleted of cattle, and at present there are large sections of idle pastures or pastures which can be had very cheap. In consequence of which ranchmen are able to carry a young steer through the winter at a trifling cost, often in one of our mild winters at no cost except looking after him.

These pastures are what is known as the short-grass country, and the grasses are very nutritious, curing right on the ground. The large majority of ranchmen, however, generally feed a little hay through the severe part of the winter, and it without doubt pays to do so, as every pound weight lost in winter has to be replaced before gain can be made. Cattle from the short-grass country come to market in wonderful shape, and are bought for beef by packers in preference to half-finished corn-fed steers.

I have bought these steers in September and put them on second growth clover up to the knees, and they invariably lose weight unless given corn. The change from the dry-cured buffalo grass to washy clover will not make beef.

Push the Calf to Maturity

In the corn belt the big steer has no place. That is to say, we cannot afford to keep a steer at a profit that length of time, and ought to realize that the calf in the corn belt should be pushed from birth to maturity in sixteen to twenty months. If judiciously managed by the help of silage, cows can now be kept twelve months, so that calves can be and will be for quite a few years produced at a profit.

The ideal plan, the plan we must eventually come to, is to keep practically dual-purpose cows such as they now have in certain parts of Great Britain. A few cows can be kept on every farm on what is now practically waste, at a good profit.

When it comes down simply to a feeding proposition there are no finer cattle to be had than the big Western steer if the market goes the right way. My experience has been, however, that, taking one year with another, there is less risk in feeding baby beef, as a much smaller advance is necessary to pay out.

As time goes on the chances are that the big three-year-old steer will be a thing of the past.

Even now many ranchmen are satisfied to sell their six-months-old calves for \$35 to \$40 a head in preference to keeping them over. This plan enables them to keep more cows if more attention is given to the better breeding of these calves. Ranchmen, with prevailing prices, ought to do well as long as cheap and good pastures can be had.

Stop at the First Cross

DISCUSSIONS of dual-purpose cattle have often been condemned as useless and a waste of time. Talk is a mighty poor substitute for actual work, but sometimes it hits a mark at which it isn't aimed. Mr. L. A. McCumber, a Michigan dairyman, contributes the following letter to the discussion:

I have read what Mr. DeGraw and others have had to say in answer to your query, "Which Is the Best Cow?" I am not a crank on either side, but believe in common sense and good judgment in all branches of business and farming. I believe in a highly developed dairy cow, in a highly developed beef cow, and also a strain of cows adapted especially for the general farmer's use.

I believe in cows that can consume great quantities of green forage and roughage (that would otherwise go to waste), and that can convert such feed into milk, cream, and butter, also beef. There would be enough for the family and some to sell, to say nothing of raising at least two calves on the skim milk received from using such cows, her own offspring, and another one bought. When autumn comes you have two fine calves.

I have in mind just such an instance. Some years ago I bought a cow at public auction. The man who was selling out was

a local butcher. He had bought the cow cheap because she was thin, but instead of killing her he saw her possibilities and put her on pasture. She gained rapidly in flesh and in quantity of milk, and filled a 16-quart pail brimming full of milk twice a day. She was a cross between a Guernsey and Durham, her sire being a Guernsey and her dam a large red and white Durham, more red than white. To make a long story short, I bought the cow which otherwise would not have been for sale except for her owner leaving the State. After keeping her two years I was obliged to sell her for a very curious reason. I had to send her to pasture about two miles away, and her udder was so large that it was hard for her to travel that distance—two in the morning and two in the afternoon. Besides, her legs were short and her body was very large. These characteristics were probably inherited from her Durham mother.

The cow was so fat that her flesh shook as she walked. She was so heavy that when turned into a moist pasture late in the autumn with other cows she sank in up to her body while the other cows fed all over the pasture. After that lesson she kept to the higher ground.

Now I want to emphasize that this kind of a cow is the right kind of a cow for the general farmer. She is a cow that is not too particular about what she gets on her bill of fare so long as it is healthful and wholesome. Why shouldn't we farm folks work for just such a cow?

Mr. McCumber's letter is an interesting one. The cow he mentions is known in breeding terms as a "sport." A sport is an animal which is endowed with the desirable characteristics of both parents to the seeming exclusion of the undesirable characteristics. Such cows would be excellent if we could get them in large quantities. But remember that they are accidental. Another heifer calf from the same parents would probably be a much inferior animal. But worst of all, these sports are very poor breeding animals. They do not transmit their characteristics with any certainty, and if you breed such a cow as Mr. McCumber describes you will end up with a bunch of scrubs. To get real dual-purpose cows you must go about it in quite a different way.

First select a breed which is nearest to the desired goal. The Red Poll, Dairy Shorthorn, and Brown Swiss seem the most promising dual-purpose breeds. You can occasionally get a good animal by crossing dairy and beef breeds, but it gets you nowhere. You stand only a fair chance of getting a desirable cow in the first cross, and after that your chances are so poor that it won't pay you to experiment. Actual experience supports the laws of breeding on this point.



The lion and the lamb lay down together

Red Poll Facts and Figures

By W. A. Jones

I HAVE been following with interest the discussions in FARM AND FIRESIDE on dual-purpose cattle. In my experience the Red Poll cattle come nearer fitting both requirements than any other breed. They are good milkers the year through, quiet to handle, and easy to keep. Their milk tests are good, and being blocky they make excellent beef. I have been handling them for some time, and have sold 65 head in my own locality and cannot supply the demand.

I started breeding with ordinary cows and a Red Poll bull. I have kept it up until now I have some high grades as fine-looking as you will find among pedigreed stock. I use nothing but good pedigreed stock for breeding in all farm animals. I sell no heifer calves, and so have built my herd up in good shape. I find that the farmers in this section want good grades and do not care very much for pedigrees.

I usually get from \$75 to \$90 for milch cows. These are all young cows, as I have no old ones on account of demand. Parties buying my stock are always requested to milk them before taking them. This has been a satisfactory method.

FARM AND FIRESIDE readers wishing to get yearly tests of Red Polls can get a pamphlet, "Facts and Figures," from H. A. Martin, secretary of the Red Poll Club, Gotham, Wisconsin.

THE Dairy Division of the U. S. D. A. has found that concrete silos cost on an average \$2.58 per ton capacity. Stave silos cost \$1.63 per ton capacity. The greater durability of the concrete silo and the smaller cost of upkeep just about counterbalance the smaller first cost of the stave silo.

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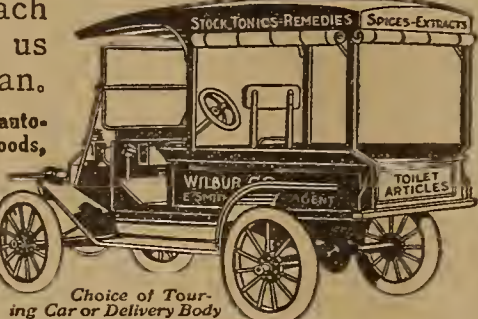
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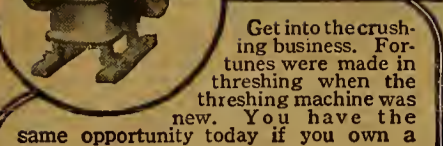
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He Thinks He's a Goat

TRAINING a dog to stay with goats may seem difficult, for goats and dogs are seldom on friendly terms. C. R. Short of Mariposa County, California, however, has trained a collie to take care of his goats, and this is how he did it:

I got a Scotch collie pup about a month old [says Mr. Short] and put him in a pen with some young kids that were too small to go with the flock. I kept the pup with them all the time. Whenever he would try to leave them I took him back at once.

As the dog got older I was obliged to whip him back to the goat pen, and finally broke him to stay with them all the time.

I have never allowed strangers to pet the dog, as I didn't want him to be friendly with anybody except our own family. Part of the time I fed him on goats' milk, giving it to him out of a pan.

At first the goats resented his presence and butted him around. So I made a kennel for him in the pen, and he soon learned



"With patience I succeeded"

to go to it for protection when he saw a goat coming. As he grew older I put bread in his milk, and finally fed him on table scraps. When ten weeks old he would follow the goats a little way when I turned them out. With patience I succeeded in making him go farther with the goats each morning, until finally, when three months old, he would stay out with them all day.

Now he is a year old and an excellent goat dog. He has a band of forty-five to take care of, and does his work well. If a stranger approaches the goats he lets him know in no uncertain way that he is boss.

Here is a dog that is useful, for he saves part of a man's time. Who else has had experience in training a dog to take care of goats or sheep efficiently?

It's All a Horse Wants

By Wm. G. Bracebridge

AFTER seeing the team of Harrison Speer I thought I would send in the picture of my "twin colts," Jim and Betsy, who look so much alike that most people have to take a second look before they can tell which is which.

Like Mr. Speer's team, they too emigrated to Grand Traverse County, Michigan, from Nebraska. This was in 1887 and they were one year old at the time. They were purchased by my father, and have been in the family ever since.

They too have done their share in making the necessary improvements on the homesteads, and have also done many days' work for neighbors in clearing new ground, etc., and they are still able to perform different kinds of farm work that is not too hard. We favor them all we can, after twenty-five years of faithful service.

They have been enjoyed by the family and the whole neighborhood alike on pleasure trips and work. Their weight has been about 1,100 pounds, and they are still in fair flesh, but their age tells on them. They are physically sound,



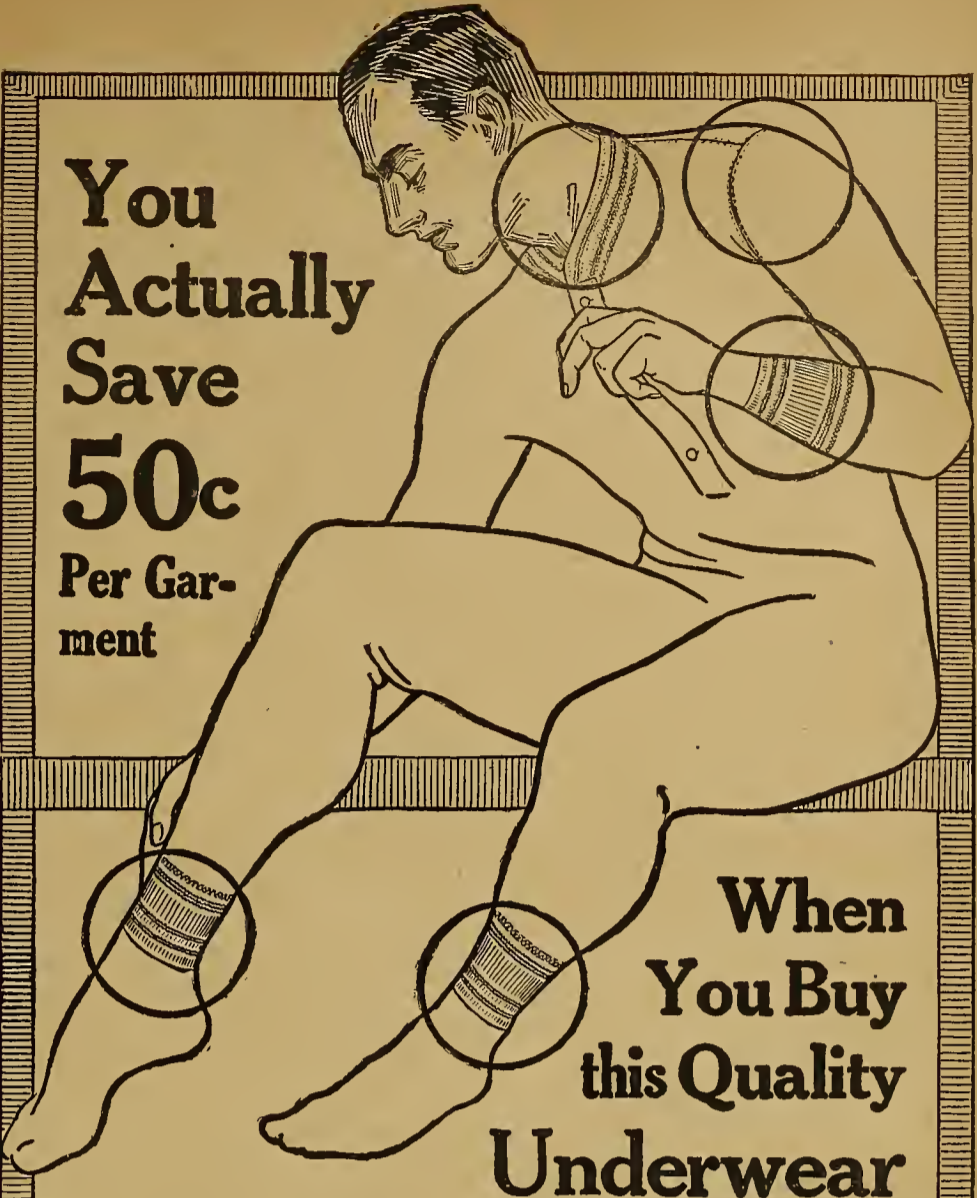
Jim and Betsy, another pioneer team

and have always been noted for their steady strength in pulling heavy loads and hauling logs.

I have often thought, What would a team like this be worth to-day if the same physical soundness and length of service could be guaranteed the purchaser?

For so many years of faithful service it seems to me a small reward to give them good care, enough to eat, a comfortable place to sleep, and an easy time.

AN ACRE of corn hogged off will feed 20 spring pigs for 20 days if it is a 50-bushel crop. If properly hogged off there is no more waste than if the same amount is fed in a dry lot, and the pigs make better gains. Saves all the labor of gathering too.



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When You Buy this Quality Underwear

YOU wouldn't pay \$200 for a horse if you could buy one just as good for \$100. Then why pay \$1.00 per garment for winter underwear when "Hanes" costs only 50c per garment? It's just as good as—often superior to—winter underwear sold at twice the price.

Next time you're in town, take your wife along with you to size up "Hanes" Underwear—nobody like the women when it comes to judging quality in underwear.

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ELASTIC KNIT UNDERWEAR

Notice the elastic collarette—can't gape at the neck. The improved, firmly-knit cuffs that hug the wrist snugly and cannot flare out. Notice **The Unbreakable Seams.**

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If our mills were not located in cotton land—if we did not buy our raw material in large quantities direct from the grower—if we didn't specialize on one grade of underwear only, "Hanes" would cost you \$1.00 a garment instead of 50c. Buy two or three suits of this warm, durable, elastic knit underwear—let "Hanes" see you through this winter hale, hearty and strong. Don't forget the low price—50c per garment, \$1.00 per union suit.

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For One Whole Year

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The Crosby Frisian Fur Company,
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Peace and Good-will are at a low price now, but 10 cents buys a tin of VELVET, The Smoothest Smoking Tobacco, that makes men friendly and homes happy.

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The name "Ball-Band" on rubber footwear has the same real, relative value to you as the pedigree of a cow, or the strain in the sire of your colt.

"BALLOBAND"

The Red Ball, the "Ball-Band" trade mark, stands for a record of quality running back through years. Every year, "Ball-Band" Rubber Footwear stands the test of fit and long wear on the feet of eight and one-half million wearers. These men buy "Ball-Band" again the next year, because under any working conditions it gives more days wear at a lower cost per day's wear than any other kind of rubber footwear.

Over 50,000 stores sell "Ball-Band" Rubber Footwear. Most stores keep a "Ball-Band" sign in their windows.

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It tells how rubber footwear deserves to be treated.

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"Ball-Band" Arctics are made with one, two and four buckles. The Red Ball is on the sole. Look for it. The tops are best cashmerette and the linings we make ourselves from the same kind of wool that goes into the Coon Tail Knit Boot.

"The House That Pays Millions for Quality"



Kill Next Year's Pests Now

The Secret is to Keep Them From Going Into Winter Quarters

By D. S. Burch

Codling Moth—The moths lay eggs on the foliage of the apple trees early in the spring, and the worms which hatch from the eggs finally make their way into the young fruit through the blossom end. When the worms have reached full size they eat their way out of the apple and then hibernate for the year.



Worm of codling moth (1/2 life size)

To control this pest, remove all loose bark and litter from around trees. Encourage birds to come to the orchard. Screen all places where apples are kept to prevent the escape of moths which otherwise would reinfest the orchard. Spray the orchard in the spring with arsenic poisons just after the blossoms have fallen.

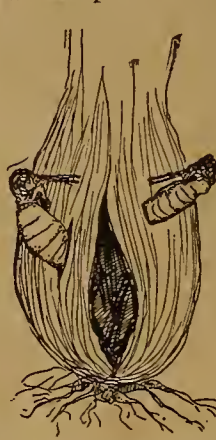
Grasshoppers—All of the half-dozen species of grasshoppers are troublesome. When numerous they eat the leaves of field crops and even of trees. Grasshoppers come from eggs laid in the ground in the fall by the previous generation of "hoppers." Pastures, grassy roadsides, sandy knolls, and hayfields are favorite places for egg-laying.



Grasshopper attacking corn (1/2 life size)

Plow such places deep in the fall in order to break up the egg clusters. A large flock of poultry will help to keep the numbers down. When very abundant, grasshoppers can be killed in the summertime by poisoned bran mash or trapped with a hopper-dozer, a horse-drawn machine which catches the grasshoppers in a shallow pan filled with kerosene.

Hessian Fly—This is one of the worst wheat pests and very hard to control. The fly is about half as large as a mosquito and looks something like one. It lays eggs on winter wheat in the fall. The damage is done by little maggots which hatch from the eggs and feed on the young wheat plants, making them yellow and weak. The attack of the maggots is renewed in the spring. Usually the Hessian fly is worse during years of plentiful rainfall.



How the damage is done (six times life size)

Late planting of winter wheat is a good way to keep the new crop from being attacked. A rotation of crops also helps, especially if the new fields are at a distance from the old ones. Predictions are that the fly will be "bad" next year.

Grain Weevils—A great variety of beetles attack grain, seed, and flour in storage. If unchecked these insects, which are commonly called grain weevils, work great damage.



Grain weevils (four times life size)

Clean out all places so infested, and fumigate with carbon bisulphide. Let bags and other containers be in the building to get the benefit of the fumigation. Another way is to heat the room or building containing the grain to a temperature of 140 degrees Fahrenheit for four hours or more. The last method can best be done with stoves in warm weather, being careful to take precautions against fire.

Wire Worm—"Wire worm" is a common name for several varieties of slender, shining brown worms from half an inch to an inch long. They breed mostly in grass roots, and do little apparent damage until the ground is plowed up and used for garden or grain. Then the worms, which live for two years or more, attack the new crop. They bore into corn and small



Wire worm in potato (1/2 life size)

grains, also into the roots and tubers of vegetables.

The best way to fight this pest is fall plowing, and thorough cultivation for at least a month. Do not allow any field infested with them to be used for pasture. Clover, however, seems to be immune, and clover hay may be raised on such fields.

Cutworm—"Cutworm" is simply a convenient term applied to many different worms all of which have the habit of cutting off the stems of young plants. Some work at the surface, others slightly underground. They attack young garden plants especially, but field crops suffer also. The worms come from eggs that were laid the previous fall. Weedy fields suffer most.



Cutworm attacking plant (1/2 life size)

Deep plowing in the fall and early cultivation in the spring will control this pest fairly well.

Another effective way of control is to spread poisoned bran mash over the ground in the spring a few days before the plants are expected to come up. The worms will eat the poisoned mash and die.

Cotton-Boll Weevil—This scourge of the cotton field is in its active adult form a brownish snout-nosed beetle a quarter of an inch long. In the spring the weevils that live through the winter lay eggs in the young bolls, and sometimes after the bolls have opened. In either case the larvæ from the eggs do great damage.



Cotton-boll weevil (life size)

Thoroughly clean up the cotton fields in the fall and burn all stalks and trash. Winter plowing, early planting, frequent cultivation, and anything else to promote the vigor and hasten the maturity of cotton will reduce the damage.

San José Scale—This pest attacks fruit trees in particular, but is also found on some shade trees and shrubbery. Twigs and branches, fruit and leaves, affected by San José scale have a crusted ashy look. The insects themselves are under the scaly shell, each one smaller than a pinhead. They multiply rapidly and soon spread over a tree from which they suck the sap.



Scale on small branch (life size)

As soon as the leaves are shed in the fall, rake them up and burn them, also cut out dead or dying trees and prune affected trees. Scrape off loose bark and the scales found underneath it. Burn all cuttings and scrapings. In the early winter, spray with lime-sulphur solution. Spray again in the spring before the buds appear. Examine all nursery stock purchased, to be sure it is free from the scale.

Chinch Bugs—After chinch bugs have done their usual damage to corn and wheat crops they hide for the winter in corn shocks, fence rows, bunch grass, or under anything that will furnish protection. The full-grown chinch bug is about as large as a grain of wheat, is black or nearly black, and has thin white wings. He does his damage by sucking the juices out of the plant he attacks.



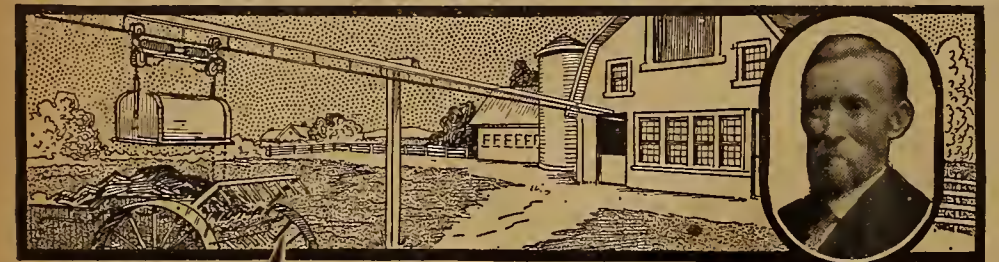
Chinch bugs on young cornstalk (twice life size)

In the fall, clean up and burn all wood, weeds, tufts of grass, rubbish, or anything that could harbor the bugs. Remove corn shocks from the field.

Rotation of crops assists in the control of this pest as it does in fighting most insects. Deep plowing helps if done so that the furrow slice is inverted and the bugs buried. Mow and burn over meadows that are attacked.

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Cleaning the barn every day is a hard job, if you do it the old way—especially on winter mornings when cows have been kept in the stable over night. But it is no job at all if you have Louden Litter Carriers, because you substitute quick-acting, easy-moving machinery for muscle. The boy who found barn cleaning a drudgery find it a pleasure, and you can save one hired man's wages.

Louden Feed & Litter Carriers prevent waste—waste of feed, waste of manure value, waste of time and labor. These carriers are honestly built; have no weak points; will stand the moving of heavy loads every day for years. They are free from trouble-making attachments—hit-or-miss ratchets, no brake or clutches, no dangerous cranks.

Louden Barn Equipments

Louden Stalls and Stanchions do away with wood partitions and with the rope halter. They cost less and are easier to install, are fire-proof and rust-proof—last much longer. They give you a light and airy barn that is perfectly sanitary and easy to keep clean. They make the cow comfortable, so that she can do her best as a milk producer. Our spring-balanced mangers and manger partitions insure each cow her portion of feed.

Louden barn equipments will fit any barn, no matter how large or how small—can be installed a little at a time. They mean progress and profit.

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MORE COMFORT MEANS MORE MILK

Tent Caterpillar—When full grown this caterpillar is about two inches long.



Young caterpillars and web (1/2 life size)

Its general color is black with a white stripe down its back and blue dots along the side. In the spring it strips the leaves of various plants and trees, especially apple and wild cherry trees. The tent caterpillar gets its name from the tent-like nest that it forms in the forks of twigs and branches. Destroy the caterpillars in their nests in the evening or early morning by burning with a torch or spraying with kerosene. In the winter when the twigs are brittle break off the nests and burn them. The caterpillars may be found at home in cloudy or stormy weather or very early in the morning. Destroy old apple trees and wild cherry trees which harbor this pest.

turely and which contains worms. Spray with arsenate of lead just after the blossoms fall in the spring. Also use a curculio catcher, a device shaped like an inverted umbrella and made to catch the beetles when they are jarred off the tree. Cultivate the orchard frequently in the summer. Keep persistently at the remedies suggested, for without persistence no success need be expected.

Corn-Ear Worm—This worm, which attacks corn especially, is brownish or dark green in color and about an inch and a half long. It enters the tip end of the ear of young corn and works its way downward, eating the silk and young kernels as it goes. The same worm also attacks tomatoes. It winters in the soil in burrows which it makes near the surface of the ground.

Fall plowing and harrowing are the best ways to destroy it. Early planting is also of benefit, as is anything else which will make the corn mature before the worms are large enough to become troublesome.

General Treatment for All Pests—When several pests are obnoxious but you cannot identify them, give the following treatment: Remove all loose rubbish, boards, tin cans, useless bushes and clumps of grass that would furnish a harbor for them. Clean up fence corners and, better still, burn over the fence rows. In the fall plow the affected land deeply and harrow or disk thoroughly. Put next year's crops in different fields and as far from the previous crop as possible. Encourage woodpeckers, robins, in fact all small birds, to come to the farm. Manure or fertilize the fields well to promote the strong and rapid growth of crops. For specific and detailed treatment for any pest, consult current agricultural literature or the "Ask FARM AND FRESIDE" Department. Please sign name and address very plainly.

Corn-Root Aphid—This pest is a common cause of fields of corn becoming dwarfed, seared, and yellow. The aphid is a fat greenish louse about half as big as the common small brown ants which constantly attend them. The eggs of the aphid are a shiny black, and if these eggs are found in ant burrows in the winter you can expect to have trouble with the aphid, for the ants will place them on the corn roots early in the spring to feed.

Plow and harrow late in the fall. This breaks up the ants' nests. Keep the weeds down and practice crop rotation. Anything that adds to the vigor of the corn is of benefit.

Army Worm—This dark, naked worm, somewhat over an inch long when full grown, attacks grain fields, gardens, and meadows. In years when they are plentiful they travel in armies. Stop them by plowing at least four furrows around the field to protect it. About every ten feet dig post holes in the open furrow and crush all worms that will accumulate in them as they try to find a way up the vertical side of the furrow.

Also drag the plowed strip as the worms try to cross it. In the late fall, plow, disk, and harrow all fields where army worms have been troublesome. This brings most of the larvae to the surface where they are killed by the cold.

Squash Bug—The common squash bug, dark brown or black, and about half an inch long, is a garden nuisance. It injures cucumbers and melons as well as squashes. The adults live over winter. Early in the spring they attack the young plants, sucking their juices. The bugs lay eggs, and the young, which quickly hatch, add to the damage.

In the fall, burn the old vines and other garden litter. This will kill the bugs that are hibernating in them and will also destroy the reddish egg clusters underneath the leaves. Look under boards and stones and destroy the bugs found.

Plum Curculio—The little brown-headed white worm found in plums, cherries, and peaches is the larva of the plum curculio. The curculio beetle spends the winter in trash, grass, or any protective place about the orchard, and begins to feed on the young fruit as soon as it forms in the spring. At this time each female lays eggs under the skin of the young fruit as it forms. The eggs develop into the worms in the fruit. Gather up and burn all trash in the orchard, especially fruit that fell prema-



Corn-ear worm at work (1/4 life size)



Ant attending aphid (ten times life size)



Army worm attacking corn (natural size)



Squash bug on leaf (life size)



Larva in cherry (twice life size)

Dynamiting Tree Holes

By C. M. Weed

MUCH has been said recently about using dynamite to make the holes for planting trees, but you need to try it to realize fully the advantages of the method. I had been convinced of its value in a general way for some time, but I thought the soil on my New England farm was so deep and loose that the ordinary way of digging the holes with a spade was sufficient.

I know better now. I have just had a hundred holes blown with dynamite, and that will be my method hereafter. I hired a neighbor who is experienced in the use of dynamite to do the work, and when I examined the holes he blew I was convinced that no other method compares with it.

Dry Weather is the Best Time to Blow Holes

I had a large field in which several rows of trees were to be planted. This is how the holes were made. We first cut stakes and drove them in where the trees were to go, lining them up to get straight rows. Then we made holes about 2 inches in diameter and 2 feet deep by driving down a short crowbar with a sledgehammer. This was quickly and easily done. Stakes were put back in their holes to guide the dynamiter.

The dynamiter cut each stick of ordinary sixty-per-cent dynamite into three pieces, fastened a cap and fuse to each piece, lowered it to the bottom of the hole, and packed soil tightly around the fuse, which was then lighted. The explosion did a very effective piece of work, pulverizing the soil to a depth and diameter of about 4 feet.

These holes were made during the drought of August, when the soil was so dry that the explosive was more effective than when the soil was wet.

The cost of this method is not great. A man can easily blow fifty or more holes in a day. The dynamite, fuse, and caps cost about 5 cents a hole. Of course dynamite is dangerous and should be handled only by a careful experienced man, but you can usually find such a man.

Breakfasts of "Other Days"

ran something like this:

Ham, bacon or sausage; fried potatoes; doughnuts and coffee—prepared by over-worked mothers.

Today's and Tomorrow's Breakfasts

run about like this:

Post Toasties

—with cream or fruits; a poached egg or two; crisp toast; and a cup of Postum—a royal starter for any day.

Quick, easy to serve, appetizing, and—

"Mother" has it easier!

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We also carry a Spring weight Clothcraft Blue Serge Special at \$15, known as No. 5130.

The Clothcraft Store
(in your town)

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They do not warp, twist, harden, crack, leak or waterlog like all-leather shoes. They do not sweat or "parboil" the feet like rubber boots, overshoes or "arctics." Steels are always light—always comfortable—always shapely. No more tired, swollen, blistered, calloused, chafed, aching feet. No more corns or bunions. "Steels" are foot-form-fitting. No "breaking in"—easy from first to last. In all regular sizes and all heights. For Men—sizes 5 to 12; 6, 9, 12 and 16 inches high. For Boys—sizes 1 to 4; 6 and 9 inches high.

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New Markets on Every Hand

[CONTINUED FROM PAGE 3]

Lima, Ohio, a very large percentage of which was sold through our Food Products Department. At Camp Point, Illinois, our agent turned over orders to a creamery for 10,000 pounds in a single month. Gibson City, Illinois, Markle and Decatur, Indiana, and Algoma, Wisconsin, all contain creameries receiving orders through Wells Fargo & Company to the extent of thousands of pounds per month.

The demand for good butter in the cities is enormous. Only 8 per cent of the butter used in New York City is produced within the State of New York. Some buying clubs among the employees of department stores and large offices there order as much as 600 pounds of butter per week. Through the creamery the farmer profits by this widened mar-

forced to ask us to discontinue our quotations of his Pippins last year because by orders that we had already sent him he was entirely sold up. Another man in Russellville, Missouri, sold his eggs through his local express agent for \$7.75 per case when the local price was at \$6. And the consumers in a well-known Chicago suburb who bought them at \$7.75 got an excellent bargain at that.

But express has done more spectacular marketing feats than these: it has moved huge crops from whole areas of different rich producing lands and marketed them for the producer to excellent advantage. From the famous peach section of West Virginia just recently it helped find markets for over 3,500 carloads of peaches. In Texas and Arkansas each year it works to make an efficient distribution of berries and tender vegetables to the city markets of the North and East—not in hundreds of crates, not in thousands, but in carload lots. And for the melon growers of California, Colorado, and Illinois the express has done much in a really wholesale way to help them sell their wares.

Six thousand boxes of cantaloupes per day marketed through the express from Illinois alone—that is a record of achievement.

Good Results with "Pony" Ice Chests

This work of bringing the market to the farmer is going steadily on. Our field representatives, or industrial agents, are journeying among the rural districts rendering practical assistance to producers of all kinds of foodstuffs. Their wide experience in agricultural and marketing lines makes it possible for them to give advice of real value. Whether it be about harvestings, plantings, or selling methods, the express industrial agent aims to give the producer an intensely practical and personal service—and free of all charge.

Especially helpful to producers has been the assistance frequently rendered in devising suitable carriers and containers for food products to travel in. Our representative on the Pacific coast designed a new kind of small ice chest—express men call them "pony" refrigerators—in order that the delicate cherry crops of certain California sections might travel overland several thousand miles by express and still be delivered to the consumer with the bloom still on them. Reports on the "pony" refrigerator business handed out of Sacramento during two months of last spring show that Eastern cities bought these rare cherries eagerly, and that hundreds of sales were made which would not have been made but for the persistent experimentation of this interested industrial agent.



After the club receives its produce one of its members may act as distributing agent

ket, for it is the farmer that supplies the raw material for the butter. In this connection I will repeat what an express industrial agent said the other day. It was his advice to the farmers of dairying sections to "get together," make their own butter, keep it up to a high standard, and market it in this way. The express selling service of course costs nothing, and it has again and again proved its worth in aiding the producer in the sale of his goods.

California Products for Boston

Then there is the case of the California fruit and nut growers. That is an especially notable instance of co-operation with the express and resultant success. Within the last few years a number of producers in that far Western State have so standardized their produce—their figs, raisins, walnuts, almonds, ripe olives, prunes, oranges—that our Food Products Department has been able to go direct to consumers in Eastern cities and offer them tempting assortments of these California products. In fact, a special commodity rate of 4 cents per pound, with a 35-cent minimum, was established to make possible the movement of small food shipments to points even thousands of miles from the Pacific coast. If a housewife in Boston wants an 8-pound assortment of choice layer figs and cluster raisins, fresh from the grower in a California valley, she need only send her order with her check for \$1.63 to the local office of Wells Fargo & Company. That order is promptly transmitted to the grower to be filled, and the shipment goes back East as fast as express trains can carry it.

California producers found a market for over 80,000 packages of this sort direct to consumers between November of last year and the first day of last May. Our Food Products Department issued a 20-page catalogue last winter, quoting a number of combinations by various growers, which did much to acquaint Easterners with the excellence and great variety of California fruits, vegetables, and nuts. During 1913 Fresno producers alone shipped 10,000 small packages. And within the last few months certain growers in the vicinity of San Francisco who co-operated to ship raisins in fancy packets have been receiving over a hundred orders per day. There is no doubt but that the far Western producers are quick to take advantage of an opportunity to extend their sales and increase profits.

These are a few of the ways in which the express is helping the farmers and producers of the country to obtain wider markets and better prices. There are many more examples of notable success. One apple grower in Idlewild, New York.—H. R. Gordon, by name.—was

We are striving to tell the farmers of the land that in this campaign for better prices and wider markets a wonderful future lies before them. We want to show them that if they will co-operate among themselves, and with us; if they will standardize their goods, hold to the very highest interpretation of upright dealing, and furnish a reasonably steady supply of produce, we may be depended upon to do our part.

Marketing through the express holds untold possibilities for the American farmer and truck grower. While it does not mean that every farmer can sell all his produce through the express, it does mean that progressive farmers may sell some of their produce through new channels.



AS AN example of tomatoes made to serve decorative purposes, a California friend sends us this picture. Here the Commonplace has been recognized for its beauty

International Harvester Manure Spreaders



WHY are International Harvester manure spreaders so popular? Because:

An I H C spreader is low enough for easy loading, yet it has plenty of clearance underneath. The rear axle is well under the load. Rear wheels have wide rims and Z-shaped lugs, insuring good traction under all conditions. Frame, wheels, and all driving parts are of steel. Apron tension is adjusted by a simple device. Winding of the beater is prevented by large diameter, and beater teeth are strong, square and chisel-pointed.

International manure spreaders are built in several styles and sizes, low or high, endless or return apron, for small farms and large. Repairs, when needed, may always be had promptly of the local dealer.

Examine International spreaders at the dealer's. Write us and we will tell you who sells them, and we will send you interesting catalogues.

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- TILLAGE
- Peg, Spring-Tooth, and Disk Harrows
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- GENERAL LINE
- Oil and Gas Engines
- Oil Tractors
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- Cream Separators
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- Grain Drills
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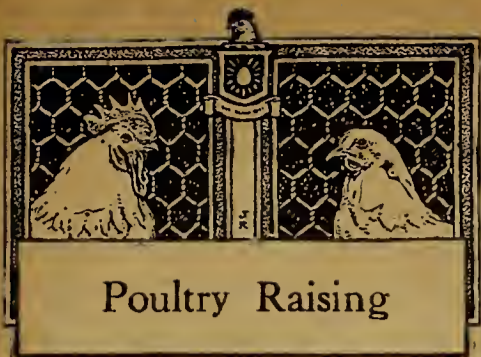
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Poultry Raising

Food for the Larger Breeds

A Letter to Mr. Thorpe From M. Russell James

I AM watching your pen of Barred Rocks in the Missouri contest with much interest. It certainly made a fine summer lay considering the rations at these contests, which are hardly suited to the larger breeds. Alfred Robinson, our California Barred Rock fancier, who probably has the largest yards devoted exclusively to Standard Barred Rocks in the entire country, wrote me last season: "I do not believe that the heavier breeds—notably my own preference, the Barred Plymouth Rock—are getting half a show as egg layers in these contests. I suggest that a strictly utilitarian contest be inaugurated in which the fowls are to be fed a straight diet of green stuff and grain—principally wheat—no mash, no balanced rations. For my own stock I would make it half a handful of grain to the bird in the morning, all the green stuff they will eat during the day, and one handful to the bird at night. That is a diet any man can understand and follow, and under it I have found Barred Rocks notable layers; while by feeding the menu of the egg-laying contests I can reduce the egg production of my hens 25 per cent. The full right diet soon makes the Rocks too fat for anything but the pot."

As a commercial proposition on this California coast, the White Leghorn is "it." White eggs bring a premium of 2 to 10 cents a dozen over brown ones.

Picking Out the Champions

By B. F. W. Thorpe

A HORSE RACE is interesting when run on the square. There is something like a horse race in the Connecticut egg-laying contest between a pen of White Leghorns owned by Mr. Francis F. Lincoln of Connecticut, and the sensational White Wyandottes of Mr. Tom Barron of England.

The Lincoln hens led in this race for several weeks, when they were overtaken and passed by the British birds. On June 26th the Leghorns had laid 1,365, and the Wyandottes 1,418. As this is written (September 23d) the Connecticut hens are 53 eggs ahead. The race is exciting.

How would you go about it to select a pen of ten contest layers? Mr. Lincoln in the "Rural New Yorker" tells how he picked out his promising contenders for the championship, as follows:

My birds are American Leghorns, bred for egg-laying for many years, though I haven't handled them long. My first males came from Merritt M. Clark, Connecticut, and I think are White and Rice blood; the females came from a farm in New York, where the strain had been trap-nested for several years. Crossing this unrelated blood I think I have a strain of exceptional vigor and laying ability.

When I had entered a pen for the present egg-laying contest my problem was to pick the best 10 from about 200 pullets, all of which would be in laying condition at least by November. I thought the pullet that used its food efficiently in growing would continue that efficiency when laying, so when in early September we did our first selecting, we picked the 16 pullets that seemed nearer maturity than the rest, and it was a job. I like a layer to be pretty small, long-backed, deep in the back, with legs well apart and a short, sometimes almost stubby beak; and while the main point I looked for was the quickness with which a pullet approached maturity—the comb is a good signpost for this—I kept the type in mind, and would do it again. The 16 were gradually culled, and one was added later, until we had the number required.

These pullets would ordinarily have started laying late in September, but I knew the probability of their molting if they had laid much at home before being shipped, so for a month and a half we moved them often enough so that they would never feel at home enough to lay. All beef scrap was taken from their mash, but I couldn't stop them entirely, and the 10 birds did lay perhaps 30 eggs before they left home. When they reached the contest they spent a week getting settled, then started in hard, were the leading pen for November, second for December, have kept persistently at it ever since.

This interests me not a little, because I have some Barred Rock hens in the laying competition at Mountain Grove, Missouri. But instead of 200 pullets to select from, I had only 15. My entire hatch of pullets in 1913 numbered only

23. Seven of my 23 pullets began to lay too early to enter the contest. Twelve out of the 15 were shipped to the experiment station, and 10 were entered as Pen No. 59. Two of the 12 were stolen en route, so there were no substitutes in case of death or accident.

There's a Lesson Here

But my Barred Rocks selected from 15 pullets, as compared to Mr. Lincoln's White Leghorns selected from 200, have done pretty well, I think.

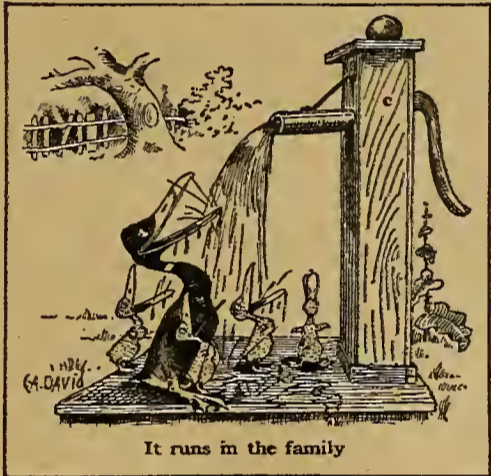
From December to August 1st my pen No. 59 laid 1,342 eggs, and Mr. Lincoln's pen No. 53 laid 1,365 eggs in a period of equal length, from November 1st to the end of June.

Ten pullets of the same stock, which I kept at home, laid 1,223 eggs during the eight months' period, from November 1, 1913, to July 1, 1914. One had to be killed December 19th as a result of injury. Three others hatched broods and reared the chicks. One of these hens, after resuming laying in June, suffered a sunstroke and had to be killed. Still another lost over a month's time laying as a result of eating poisonous garbage. These losses of time in laying equal thirteen months of laying for one hen.

The lesson I believe there is to be found here is this: The mother of the majority of these pullets was a four-year-old hen that as a three-year-old laid 217 eggs, and in her fourth year she laid 187 eggs. The father was a pedigreed cockerel whose breeding inheritance extends back over a half-dozen years of systematic breeding for egg production.

I am convinced that the egg-production inheritance these pullets derived from their ancestry is responsible for their uniformity of laying. While they have not made a sensational record, they have done well, and have laid heavily when eggs were at a premium.

What has been done with these Barred Rocks can be accomplished by any poultry keeper who will give attention to the requirements.



It runs in the family

Eggs Sell for 3c to 10c Above Market Price

BETTER plans of marketing eggs and poultry are getting some needed attention these days. One of the encouraging movements for this purpose is being worked out through the country-agent "route" in Missouri. It is quite appropriate that Missouri, standing third in poultry population and having earned the title of the "Show Me" State, should take an advanced position in increasing the income from her twenty million head of poultry.

Mr. D. H. Doane, state leader of the Missouri county-agent work, has kindly furnished FARM AND FIRESIDE this account of what is being done in one particular Missouri county under the direction of Mr. Long, county agent:

Mr. Long has interested a number of women in the marketing of eggs. His plans, when worked out by twenty-five women during the month of June, made them enough profit over and above the old scheme to pay his salary for the month. The marketing was not done exclusively by parcel post. Some of the eggs were marketed in this way, but he found that this outlet was too slow, and he has made arrangements with commission firms to handle the product now in unlimited quantities. In short, he is just completing a campaign of the county. Every egg producer in the county that desired to join the organization has had the opportunity. He has an assured market that will pay from 3c to 10c a dozen above local price for eggs; that is, the net margin will be from 3c to 10c a dozen. The basis of the whole scheme is the production of a standard product and individual responsibility. The producers follow instructions he gives out, which call for infertile eggs, standard weight, gathered daily, marketed twice a week, in sealed cartons. These eggs are taken to the local merchant who has been receiving them, and he merely reships them to the commission firm in the city. The producer stands responsible for the eggs reaching the consumer in satisfactory shape.

We have now in this State arrangements whereby it will be possible for us to organize every county where we have a farm adviser into a club for the marketing of eggs. Up to date our plans have not extended beyond one county, but we expect to go much further this fall.

Buy Roofing as You Buy Seed

YOU wouldn't think of buying seed from a company you knew little about or because of low price—

You have too much at stake to take a chance—you must be sure of results!

Roofing—like seed—is only safe to buy when offered by a company in which you can place absolute confidence.

J-M ASBESTOS ROOFING "The Roll of Honor"

is manufactured by a concern that has been in existence for over half a century—that has a reputation for honest dealing that is country-wide and has never been known to willingly permit a single customer to be dissatisfied.

J-M Asbestos Roofing is made of the best materials that money can buy—fire-resisting and practically imperishable pure Asbestos fibre and Trinidad Lake Asphalt—the world-famous water-proofing. It never needs coating.

J-M Regal Roofing has proved its merit through years of dependable service.

J-M Transite Asbestos Shingles give you a fireproof stone roof that is artistic and permanent.

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Fine for Dairy Farms

We sell a great many Pilot Lighting Plants to dairy farmers. Because dairy farmers can get even more out of an Acetylene installation than anybody else.

Our Dairy farmer patrons make these Acetylene plants do double work. They run an extra line of pipe to each barn—and sometimes to other outbuildings. In these buildings they fasten the great balls of Acetylene light to timbers or rafters.

They also equip these lights with ignition devices—to make them light with the pull of a chain without matches.

Two of these Acetylene barn lights will make a big dairy barn as light as day. They will give more light than a dozen lanterns—and unlike lanterns, they cannot be tipped over.

The same is true of Acetylene house lights. They burn in handsome stationary bronze or brass fixtures securely fastened to ceilings or walls.

Acetylene is, too, a double boon to the women folks. In addition to the beauty of the light, it brings even a greater convenience in the gas cooking stove.

For Acetylene is used in gas cooking ranges in thousands of country homes, just as city gas is used in millions of city homes.

In all of these homes the gas range has shortened cooking hours and has done away with the drudgery of handling coal, wood and ashes.

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POULTRY PAPER 44-124 PAGE periodical, up-to-date; tells all you want to know about care and management of poultry for pleasure or profit. Four months for 10 cents.
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Hurry Your Pullets Along Get Them Started Laying

The quicker your pullets "spread out" and reach maturity the better layers they will make. What they need right now is scientific tonics to improve the appetite and digestion and tone up the blood. So sure am I that

Dr. Hess Poultry Pan-a-ce-a

will make your poultry healthy, tone up the dormant egg organs and make your hens lay regularly that I have authorized my dealer in your town to supply you with enough for your flock and if my Pan-a-ce-a doesn't do as I claim, return the empty packages and get your money back. Buy on that guarantee—you can't possibly lose.



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1 1/2 lbs. 25c; 5 lbs. 60c; 25-lb. pail, \$2.50 (except in Canada and the far West). My Pan-a-ce-a is never peddled—it is sold only by reputable dealers, whom you know. Write for my free poultry book.

Dr. HESS & CLARK
 Ashland, Ohio

NOT DRUGS
Food Did It.

After using laxative and cathartic medicines from childhood a case of chronic constipation yielded to the scientific food, Grape-Nuts, in a few days.

"From early childhood I suffered with such terrible constipation that I had to use laxatives continuously, going from one drug to another and suffering more or less all the time.

"A prominent physician whom I consulted told me the muscles of the digestive organs were weakened and could not perform their work without help of some kind, so I have tried at different times about every laxative and cathartic known, but found no help that was at all permanent. I had finally become discouraged and had given my case up as hopeless when I began to use the pre-digested food, Grape-Nuts.

"Although I had not expected this food to help my trouble, to my great surprise Grape-Nuts digested easily from the first and in a few days I was convinced that this was just what my system needed.

"The bowels performed their functions regularly and I am now completely and permanently cured of this awful trouble.

"Truly the power of scientific food must be unlimited." Name given by Postum Co., Battle Creek, Mich.

Trial 10 days of Grape-Nuts, when regular food does not seem to sustain the body, works wonders. "There's a Reason."

Look in pkgs. for the famous little book, "The Road to Wellville."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.

Only \$2 Down
One Year to Pay!
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Buy the New Butter-fly Jr. No. 1. Light running, easy cleaning, close skimming, durable. Guaranteed a lifetime. Skims 95 qts. per hour. Made also in four larger sizes up to 51-2 shown here.

30 Days' Free Trial! Earns its own cost and more by what it saves in cream. Postal brings Free catalog folder and "direct-from-factory" offer. Buy from the manufacturer and save half.

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from a Bone Spavin, Ring Bone, Splint, Curb, Side Bone, or similar trouble and gets horse going sound. Does not blister or remove the hair and horse can be worked. Page 17 in pamphlet with each bottle tells how. \$2.00 a bottle delivered.

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"For Want of a Nail"

a shoe was lost. For want of a shoe a horse was lost." Be on the safe side and shoe your horses with "Capewell" nails. The best nail in the world at a fair price—not the cheapest regardless of quality. Holds under the severest strains. Does not crimp or split in driving. Insist upon the use of this brand by your shoer.

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FREE TRIAL FULLY GUARANTEED. Easy running. Easily cleaned. Whether dairy is large or small, obtain our handsome free catalog. Address **BOX 1058 AMERICAN SEPARATOR CO. BAINBRIDGE, N. Y.**

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You face no lingering, discouraging case of lameness today that we have not met and CURED.

REMEMBER—No blistering or loss of hair. Horse works as usual,—any season. This remedy is not experimental.

WE ORIGINATED the plan of treating horses under Signed Contract-Bond to Return Money if Remedy fails on Ringbone—Thoropin—SPAVIN—or ANY—Shoulder, Knee, Ankle, Hoof or Tendon disease.

Our Charges for Treatment ARE MODERATE, BUT WRITE and we will send our "SAVE-THE-HORSE BOOK"—it is the Quint-Essence and last word of UP-TO-DATE knowledge and practice on ALL LAMENESS. We also send Sample Contract and ADVICE—ALL FREE (to Horse Owners and Managers—Only). Address

TROY CHEMICAL CO., 59 Commerce Ave., Binghamton, N. Y. Druggists Everywhere sell Save-The-Horse with CONTRACT, or we send by Parcel Post or Express paid.



Good Markets for Better Butter

By Elizabeth D. Abernathy, Thomas Lauxman, and Herbert Quick

"WHEN I found your paper in my mail box with 'Betty Botter's Bitter Butter' in it I had to say something." That's the way one of the letters we received in answer to that article begins. A good many flare-ups came in, some censuring the article, but most of them were the other way, which is evidence that a great deal more is left to say about the interesting subject of farm butter.

"I, too," writes Elizabeth D. Abernathy of Tennessee, "have been thinking of the acres and acres of wretched butter that go into the packing-stock dump. I have also thought of the hundreds and hundreds of pounds of good butter that are dumped every year into the packing-stock conglomeration. I wish somebody would tell us all about the packing-stock butter after it goes into filthy barrels, no filthier than the stuff they hold. Where does this go and what use is made of it finally?"

Renovated Butter May be Good

Let's stop for a minute and answer that question. Packing-stock butter goes to the renovating factory where it is first melted in large tanks. Some of the impurities rise to the top and are skimmed off; other impurities settle and are drained off; and still others, especially the gases, are driven off by blowing air through the melted packing-stock. When it has been purified it has a beautiful amber color. Then it is mixed with milk, and while still hot is allowed to run into a tank of cold water, where it granulates. After draining it is salted, worked, and finally packed for market.

All renovated butter (also called process butter) is made under government inspection. Every package must be conspicuously stamped either "process" or "renovated" butter, and the wrapper must be officially approved by the government authorities. In addition, this butter must be sold in the original package so that the consumer will know exactly what he is getting.

In reality, renovated butter is often purer than some creamery butter, but a prejudice exists against it because of the poor material from which it is made. The reason that buyers of packing stock do not object to insanitary handling of it is due to the fact that most of it is poor anyway, and as it all has to be melted and purified, a little more bad flavor will not do it much harm. Besides, the poorer it is the lower price they can get it for, and the greater will be the margin of profit between the cost of packing stock and the price of renovated butter.

But listen to Miss Abernathy's account of packing-stock collections in her neighborhood:

"A man comes around in an uncovered wagon buying eggs, chickens, butter, and hides. The eggs go into boxes, the butter into lard stands, the chickens into coops, the hides into the back of the wagon. He 'handles' them, literally.

Hides and Butter Don't Mix

"First he catches the hens by their legs in a filthy coop and weighs them. Then he counts a basket of eggs; next he weighs a hocket of butter and empties it into the lard stand, using his hands as a ladle.

"Now he wipes his hands on his horse's tail and weighs the green hides, and drives on to the next place for more butter, chickens, eggs, and hides!

"Don't wrap your butter in butter paper," he tells the women along the way. He does not want parchment mixed with the melted butter in the lard stand. But to change the subject, the women of our community decided to study together Bulletin No. 541, 'Butter-Making on the Farm.' We met every two weeks.

"Some of the women knew how to make good butter, and they helped the rest of us to understand the whys and wherefores of the rules laid down in the bulletin. The bulletin spoke of refrigera-

tor boxes for shipping butter in hot weather.

"We wrote to the Agricultural Department at Washington and found out more about these boxes.

One Way to Rescue Country Butter

"When we finally received catalogues from dealers in creamery supplies we learned about butter cartons. Every farm woman needs to know about butter cartons, the little collapsible cardboard cases which fit the rectangular pound print as nicely as a lady's glove fits her hand. These cartons are paraffined so that they do not absorb moisture.

"And think of this! Only last week I read in a Nashville paper, 'The quality of packing-stock butter is now excellent in most instances, and is almost up to the standard of creamery and dairy butter.'

"What a pity it has to be handled by the produce men! Shall we not try to rescue some of Betty Botter's Bitter Butter for the city people who want good country butter? Here is a story that is too good to be true. Mr. Quick, do you want the story?" [I certainly do. And here it is.—H. Q.]

"I am going to tell you of a method for marketing butter and eggs that has been in successful operation here in Tennessee for more than a year. It is a plan worked out by the Pleasant Valley Ladies' Aid

"The eggs are so fresh that it is a joy to break them. I wish you could send us some good country sausage."

"The butter and eggs are collected and packed in several homes in the vicinity. The president of the society does the selling and bookkeeping, and communicates by telephone with those who pack the butter and eggs. The packers are responsible for the delivery of the packages at the near-by express office. However, in most cases one member of the society packs the crate and another takes it to the express office. We do not candle the eggs, but guarantee both butter and eggs to be fresh. Doubtful-looking eggs are dropped into brine made by putting a teaspoonful of salt into a pint of water. If fresh, the egg sinks to the bottom and lies on its side; otherwise it stands on its point or bohs up and down.

We Don't Advertise, We Can't

"If we needed to advertise we would have 'Pleasant Valley Butter' printed on the cartons, but we cannot supply the demand for our butter, so use the cheaper kind. Our cartons cost us \$3.30 per thousand in lots of five thousand. Every pound of butter, however, bears on its carton the maker's symbol—some letter or figure.

"Our representatives in the city who retail the butter and eggs receive a commission. We pay the express charges. Empty containers are returned to the society. The same cases are used again and again.

"One of our ways of shipping butter is original. Nearly every crate of eggs carries butter in the top layer. The butter carton makes such packing possible. An egg crate of 30-dozen capacity will hold 25 dozen eggs and 16 pounds of butter, 21 dozen eggs and 24 pounds of butter, or 18 dozen eggs and 32 pounds of butter. The express charges on such a package are reasonable, and two crates can be taken to the express office in the same buggy.

"Here are the returns from one such package shipped to Nashville, a distance of 71 miles, last winter:

25 dozen eggs @ 40c.....	\$10.00	
16 pounds butter @ 35c.....	5.60	\$15.60
Commission	1.56	
Express on package.....	.35	
Express on empty crate .....	.10	
		2.01
Net proceeds		\$13.59

"Why should not every rural community in the United States organize a butter and egg club? These small co-operative associations will finally lead to larger ones. This plan of direct marketing developed among our church women when we were seeking ways and means of building up the community and helping to pay a debt on the church.

"Through this association one tenant woman who belongs to the organization sold over \$200 worth of butter and eggs last year. My official relation to it is that of chief packer, but at present I seem to be the Bureau of Publicity, at your service."

Yes, Direct Marketing Worked

Despite the vein of humor in the letter just quoted, the plan is worth thinking about seriously. Those women have proved that direct marketing can be made successful just by doing it.

Here is another marketing letter from a man in the Rio Grande Valley of Texas. His name is Thomas Lauxman, and this is what he says:

"In this beautiful valley, where we have spring and summer all the year round, where we do not have to depend on rain because we irrigate, and where vegetables grow in abundance, we nevertheless realize little or nothing from our crops, all on account of a poor marketing system.

"What I want to know is, how can a farmer with 20 acres, or a tenant farmer who is farming 20 acres, hold his own?"



The large building is the Pleasant Valley Church where the butter-marketing organization described by Miss Abernathy was founded. Beside the church is the schoolhouse. From these two buildings have gone out young men and women trained to think their way out of their problems

Society. By studying together and experimenting we learned how to standardize our butter and eggs and how to pack these commodities for shipment. Through the help of our city friends who had once lived among us we easily made engagements for butter and eggs at city retail prices.

"We shipped our first crate of eggs the middle of January, 1913, when eggs were 18 cents a dozen on the home market. We got 30 cents a dozen for them in Nashville, Tennessee.

We Were Prosperous

"Two months later we had engagements for butter and eggs in St. Louis, Nashville, Memphis, and Montgomery (Alabama), and were soon shipping all the good butter we could command, also from three to eight cases of eggs a week. Wasn't that fine?"

"The following June, when local dealers were paying from 10 to 15 cents per pound for butter and 12 to 14 cents per dozen for eggs, we were getting 30 cents per pound for butter and 20 to 25 cents per dozen for eggs. At the same time some other women of our county were getting 10 to 15 cents per dozen for eggs and 20 cents per pound for butter, while some other women of our county were making their butter into soap.

"Despite the intensely hot summer of 1913 we made regular shipments of butter in pound prints. In September the price advanced to 30 cents a pound, and even at this price for butter and 40 cents per dozen for eggs we could not supply the market demand. Our customers would write:

"Eggs and butter received in perfect condition."

"Not an egg broken or even cracked. Butter firm and so good."

"I don't mind housekeeping, now that I can get good butter and eggs."

If he wants money he will have to go to the bank and borrow, paying 9 and 10 per cent interest on his money.

"With the returns we get, he can't hold out very long; it's too much of a pressure."

"If the railroads and large corporations had to pay the interest we farmers do, they would have been out of commission a long time ago."

"Some people might say, why don't you get out of that country?"

"My answer is that we like the country and don't care to leave. Living is cheap, and we have enough vegetables for our own use, and all that seems to be wrong is the marketing system."

"I have written several letters to find out what the consumer had to pay for our green goods in midwinter. They paid 5 to 7 cents a pound retail for cabbage. We got from nothing to next to nothing. Who gets the money for our truck? That is what I would like to know."

Mr. Lauxman sends me two sales accounts showing the proceeds from two cars of cabbage shipped in bulk. The first car was shipped the end of March and contained the cabbage of seven different farmers. The cabbage weighed 26,305 pounds.

It sold here in Springfield, Ohio, for \$87.75, and the freight and commission charges were \$34.19, leaving a balance of \$53.56 to be distributed among the seven shippers. That is, the growers got about one fifth of a cent a pound for their cabbage, and what Mr. Lauxman says about the retail price here in Springfield is correct.

In other words, the value of that car of cabbage increased twenty-five times somewhere in the commission house and grocery stores.

The other car was shipped to Milwaukee, Wisconsin. The weight was almost exactly the same, but there it brought only \$21.75, and the charges were \$34.24.

So you see the loss to the shippers was \$12.39.

The consumers would gladly have bought more cabbage if they had not been obliged to pay 5 cents per pound or more for it.

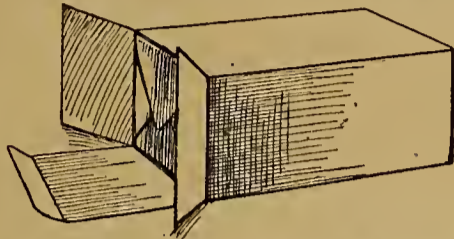
But from the shippers' side it looked as though the cabbage market was glutted, which was not the case.

I didn't see the cabbage and do not know its quality and so cannot tell just what seemed to be wrong.

Perhaps Mr. Lauxman and his cabbage-shipping friends made one mistake in not putting their cabbage in standard packages, as did Miss Abernathy and her friends with their butter and eggs. By putting their cabbage in smaller, well-graded packages they could have hunted up some of the smaller and less well-supplied markets, and while the volume of business would be much less their profits might have been larger. Marketing isn't simply shipping out large amounts of products.

Somebody has to do all the grading and packing, and looking at the figures that Mr. Lauxman sends we can't escape the conclusion that he and his friends could have spent their time to better advantage than simply raising cabbage and shipping it in bulk.

There is no reason why the grower can't grade his vegetables as well as anyone else, if he only studies the matter; and besides paying the expense of having someone else do the grading he



The modern way of selling butter is in these handy, sanitary paraffined cartons

pays the freight on the vegetables which are unmarketable and which ought never to have left the farm.

Standard packages and more direct shipment seem to be the best solution, and if this solution works in Tennessee why not in Texas?

Of course every grower and shipper has his own problems, and no one at a distance can help him much, any more than an outsider could tell him how to move in a checker game without seeing the board. But the rules of the marketing game are about the same everywhere, and he who observes and reads widely may learn.

And all the while let us try to work live stock into the general scheme of profitable marketing. Bulky crops such as hay, grain, and some vegetables are often most profitable when converted into meat, hides, wool, butter, eggs, and other products of concentrated value.

Canning-Club Profits

What One Georgia Girl Did in a Contest

MR. CHARLES A. WHITTLE of the Georgia Agricultural College has been kind enough to send us a statement of the yield of the tenth-acre tomato patch of Miss Clyde Sullivan of Lowndes County, Georgia, who won the championship of the United States in the Girls' Canning Club work.

It certainly gives the girls and boys of the nation a high mark at which to aim. But there is no good reason why any one of them should not equal or even surpass it. Here is Mr. Whittle's statement:

The best record of the Girls' Canning Club work of the United States for the year 1913 was made by Miss Sullivan, whose net profit from a tenth-acre patch was \$132.99. At this rate she would have netted \$1,329.90 from a whole acre. She grew the tomatoes, canned them, and sold them in pursuance of the rules of the Girls' Canning Club, as laid down by the Bureau of Plant Industry of the United States Department of Agriculture.

From the tenth-acre Miss Sullivan gathered 5,354 pounds of tomatoes. These were put into 2,466 cans and in the making of 60 pounds of catsup. An accurate account of the items of expense, the yield, and receipts have been kept and verified by county agents. The table of costs and sales is as follows:

COST	
Rent	\$1.00
Plowing .....	.50
Seed .....	.05
Fertilizer	4.50
Cultivation	10.00
Harvesting	8.00
Cans, jars, etc.	61.72
Cost of canning	10.50
Total	\$96.27
SALES	
968 cans at 10c	\$96.80
115½ dozen cans at 85c	98.17
212 cans at 12c	25.44
Sold as fresh vegetables	8.85
Total sales	\$229.26
Total cost	96.27
Net profit	\$132.99

Miss Elizabeth Holt, the state agent in charge of canning-club work in Georgia, giving expression to her aims and hopes, says of the Girls' Canning Club work:

"It is the first step in an education feature of the State leading to ideal farm home conditions."

"The following are the fundamental needs of the farm home:

1. Greater variety of foods.
2. Better preparation of foods.
3. Better facilities for preparing foods.
4. Better facilities in the entire work of home-making.
5. More resources for recreation and pleasure.

"The tenth-acre gardens and poultry clubs supply the first need. The canning demonstrations are introductory to the second. The money profits of the gardening and canning render the third and fourth possible. The social gatherings and club meetings held in connection with the work afford the opportunity for the development of the fifth."

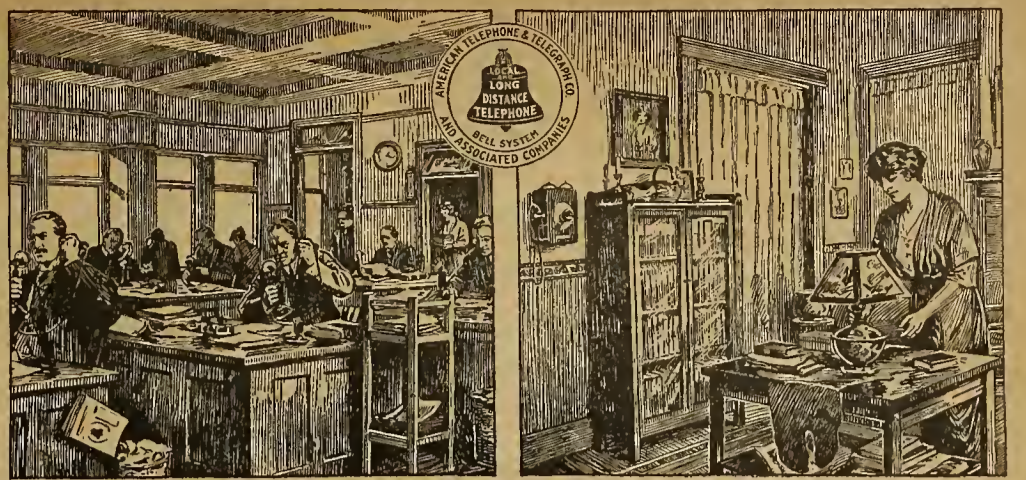
It Works for Better Home-Making

"It is our plan to develop the gardening and the cooking work year by year until finally each girl shall be able to produce all the vegetables in their proper season and according to the best methods, and to plan and prepare the dietary in an economic, wholesome, and attractive fashion throughout the entire year; to so train her in all the duties of home-making that she shall be able to perform them with consideration for sanitation and economy of time and effort; to furnish her with a list and prices of desirable household conveniences that she may know how best to use the money profit of her work year by year; to train her to use her leisure moments so as to increase the happiness and mental and moral wholesomeness of herself and associates."

With the foregoing as the preamble, Miss Holt sets forth the needs of the State and appeals to the Legislature to enact a law that will authorize each county to tax itself to raise funds for carrying on the work.

Miss Sullivan sold her canned goods to the consumer or the retailer, and therefore kept all or most of the consumer's dollar. The Editor of FARM AND FIRE-SIDE happened to be in the tomato-canning business at the same time, and would have been very well satisfied if he could have been able to get considerably less than 10 cents for his three-pound cans.

As a matter of fact, the best price he got was 80 cents a dozen cans for one carload sold on the Missouri River. Most canned tomatoes sold for about 75 cents a dozen. And as a matter of fact, when people in the cities were buying them, as they were, three cans for a quarter, there was no excessive profit in them for anyone—least of all for the grower and canner.



Fair Play in Telephone Rates

IT is human nature to resent paying more than any one else and to demand cheap telephone service regardless of the cost of providing it.

But service at a uniform rate wouldn't be cheap.

It would simply mean that those making a few calls a day were paying for the service of the merchant or corporation handling hundreds of calls.

That wouldn't be fair, would it? No more so than that you should pay the same charge for a quart of milk as another pays for a gallon.

To be of the greatest usefulness, the telephone should reach every home, office and business place. To put it there, rates must be so graded that every person may have the kind of service he requires, at a rate he can easily afford.

Abroad, uniform rates have

been tried by the government-owned systems and have so restricted the use of the telephone that it is of small value.

The great majority of Bell subscribers actually pay less than the average rate. There are a few who use the telephone in their business for their profit who pay according to their use, establishing an average rate higher than that paid by the majority of the subscribers.

To make a uniform rate would be increasing the price to the many for the benefit of the few.

All may have the service they require, at a price which is fair and reasonable for the use each makes of the telephone.

These are reasons why the United States has the cheapest and most efficient service and the largest number of telephones in the world.

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126 State Street, - MARION, IND. Base Burner

Let's Look Into the Paint Can

[CONTINUED FROM PAGE 4]

or scrubbing with strong soap and water or benzine will help get rid of it."

On this subject Mr. J. S. Warner gives his experience as follows:

"A row of houses built here in southern Pennsylvania in 1896 had the galvanized iron spouting well painted, and the spouting is in good condition to-day. Another row built in 1898 did not have the spouting painted, and it had to be renewed last fall at a heavy expense.

"Painters tell us that paint does not hold on galvanized iron. Ordinary mixed paint will not, but red lead with good boiled linseed oil will. If you wish to apply other paint over this you may do so. I have seen cases where thousands of dollars could have been saved if people had known how important it is to paint galvanized iron."

"The usual method of painting over knots," continues the painter whom we interrupted, "is to coat them with shellac. This is the best way if painting must be done at once. But in six months the knots dry out enough to paint without shellac.

"When three coats are given the outside of a building, make the second one rough so the finishing coat will stick. To get this rough surface use half a pint of turpentine to each gallon. Some painters use more turpentine, as it makes their work easier, but it spoils the durability of the job.

"High-grade paints are the best investment on permanent buildings because they last much longer, cover more surface per gallon, look best, and take less time to apply than cheap paint. However, for temporary purposes high-grade paints are too expensive. The grade to use is something everyone must decide for himself, but a safe rule is to use a paint for the purpose it is made for. Don't put a barn paint on a house, or a wagon paint on a chicken coop.

What Good Paints Should Cost

"High-grade paint costs \$1.50 a gallon, or more. Barn and fence paint can be had for about half that amount. Good floor paints come at from \$1.25 per gallon upward."

The ideal formula for any kind of paint and the cost for an ideal paint are subjects which have been hotly argued, and experts still differ. Mr. P. H. Walker, one of Uncle Sam's paint experts, says: "There is no reason why any mixed paint should cost per gallon more than a paint made entirely of white lead, linseed oil, and the necessary drier. By ascertaining the market price of white lead and linseed oil the buyer should be able to calculate the maximum price for a mixed paint."

The total cost of materials in the highest grade white paint is about \$1.85. White paints of excellent quality, however, can be made without having the cost of materials exceed \$1.41. The cost of the materials in the best dark-colored paints runs from 91 cents to \$1.37 a gallon. Black paints are the cheapest of all, and blue the most expensive. The figures given, of course, are subject to change, depending on market values of pigments and oils. Neither do they include the cost of manufacture and distribution.

Rules for Selecting Brushes

Most painters have their own ideas concerning brushes. For those who have not yet learned what each kind is best for, the following remarks may help. Round brushes are best for surfaces where the paint has to be well worked in. Flat brushes cover more surface at a stroke but do not work the paint in as well. This may mean going over a surface several times to do a good job. But if the surface is smooth and takes paint well a flat brush will do the work quicker than a round one. An oval brush is a general-purpose brush. A safe rule to follow is to use a round brush for rough surfaces and a flat brush for smooth ones.

For cleaning brushes kerosene is nearly as good as turpentine, and much cheaper. When the paint is out, wash the brush well with soap and water, shake it, and hang it with bristles down until dry. Then put it away. More brushes are ruined from hardening with the paint on them than from wearing out.

Sometimes a person wants to paint an old building where the lumber is so weathered that it would soak up oil paint at an alarming rate and make the job very expensive. In such cases, and for many rough outside jobs, water-mixed paints give excellent service. They are similar in preparation and use to white-

wash. Calcimine (or kalsomine) is the most familiar water-mixed paint.

Here are some government formulas for good weather-proof whitewash:

Whitewash for Buildings and Fences

(1) 62 pounds (1 bushel) quicklime, slake with 12 gallons of hot water.

(2) 2 pounds common table salt, 1 pound sulphate of zinc, dissolved in 2 gallons of boiling water.

(3) 2 gallons skimmed milk. Pour (2) into (1), then add the milk (3) and mix thoroughly.

Lighthouse Whitewash

(1) 62 pounds (1 bushel) quicklime, slake with 12 gallons of hot water.

(2) 12 pounds rock salt dissolved in 6 gallons of boiling water.

(3) 6 pounds of Portland cement. Pour (2) into (1) and then add (3).

To get color effects with whitewash, use such pigments as Spanish brown, yellow ochre, or common clay. To secure a smooth coating, strain the whitewash before using. This is most important when it is put on with a sprayer. To give whitewash a gloss like oil paint, dissolve a pound of cheap bar soap in a gallon of boiling water and add to five gallons of thick whitewash. One part of silicate of soda solution (water glass) to ten parts of whitewash gives a covering that resists fire.

Paint and the War

Thus far paint prices have not been noticeably affected by the clash of arms in Europe. But judging from our foreign trade in paint materials for the past five years we may expect paint prices to go up. This country has been importing from Russia large amounts of linseed (flaxseed) for making linseed oil. Russia's crop of linseed is about 20,000,000 bushels, and up to the time of the war we had imported this year from Russia over 30,000 tons of linseed. The United States is also a large user of ochre, umber, and sienna. These products are brought over in both the dry form and ground in oil, and are used for paint pigments. Our average yearly imports of ochre have been about 10,000,000 pounds; umber, 3,000,000 pounds; and sienna, 2,000,000 pounds. France, Great Britain, Belgium, and the German Empire supply us with most of these products.

We import zinc oxide (mostly from Germany) to the amount of 5,000,000 pounds a year. Other paint ingredients secured from Europe annually are: White lead, 540,000 pounds; red lead, 650,000 pounds; litharge, 96,000 pounds; orange mineral, 485,000 pounds; Venetian red, 3,000,000 pounds.

While the balance of trade in paint materials is in favor of the foreign countries, still we are not dependent on them. We have in this country large deposits of minerals from which paint pigments are made.

Pennsylvania and New York are the two leading States in this line. These States produce enormous quantities of mineral paints used largely for painting freight cars, structural steel, barns, fences, and other rough work.

All in all, paint prices are likely to rise if the war is of long duration, but the low-grade paints will not advance as much as the better grades which depend on imported oils and pigments. Fortunately very little mixed paint is imported and we have the factories on this side of the ocean.

New Books

BARREL MAKING SIMPLIFIED, by Leon Miller, is a paper-covered pamphlet of some 40 pages, dealing with the various forms of barrels. It is not worth the price to those not interested in securing knock-down barrels and setting them up in the orchard. To those who are so interested it may be valuable. Illustrated. Published by the author, Philadelphia, Pennsylvania. Price \$1 per copy, postpaid.

THE GOVERNMENT BOOK STORE is the title of a twelve-page pamphlet issued free by the Superintendent of Documents of the Government Printing Office. It gives brief directions for obtaining government literature of all kinds. It may not be generally known that the Government publishes in addition to the agriculture bulletins many circulars and reports dealing with manufacturing, commerce, the army and navy, education, the liquor question, woman's suffrage, immigration, museum publications, and scores of others. Altogether about forty million documents are handled every year by the Government Printing Office.

Work puts man in a condition to enjoy a rest, which puts him in a condition to enjoy more work.

Don't Let This One Bounce Off

Counting seven white horses with your fingers crossed is never going to lose that smoke jinx that's been making you wince in the windpipe. But if you slip around to the nearest shop, slide the man a dime and say "P.A.," careless like, he will hand you some pipe food that is bona-fide smokings.



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PRINCE ALBERT

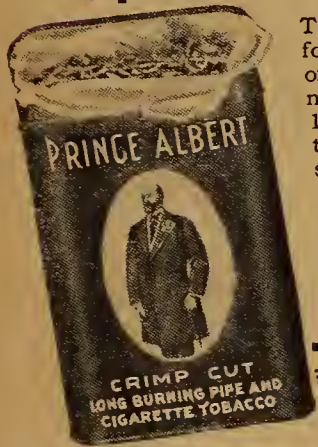
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Trapping the Sunshine

How to Make the Family Gathering Place a Joy-of-Living Room

By Alice Preston Mills

THE living-room of the farm home should be the joy-of-living room. Isn't that really what you want yours to be? In it centers the home life of the entire family, and it should be the largest and cheeriest place in the house. It must be a room which is carefully planned, in-order that the remarkable influence it exerts over your children will be the sort of influence you wish them to have; it must be such a room that it will offer peace and restfulness—with no jarring sense of extravagance or too-nice-ness to the tired father after his long day's work has ended; and you must be sure also, Housemother, that it is not such a room as will demand too much of your precious energy and strength in caring for it each day.

Above all, see that it is *honest*. Now please do not start back in annoyance and assert that of course it is honest. Dishonesty in this connection means pretense or sham, and there are few homes, simple or magnificent, where these attributes are not found. If you have been forcing your family into the kitchen in the evenings for the enjoyment of games and conversation, go into that sacred room designated parlor and look carefully about you. Is not the whole room more or less of a pretense?—a pretense of a social life which has no existence in rural communities, a pretense of circumstances? Note the unused furniture of plush and mahogany which the remainder of the house belies.

Throw Open the Windows and Build a Bonfire

If you have such a room, throw up the blind and open the window, and make of this room what it should be. Throw out the bric-a-brac case of hideous design, even though it was a wedding gift. Take down the wax or feather wreath of flowers, though it was made in commemoration of some loved one. Don't you think living flowers are the only ones worthy the beloved memory? They may be had, in all their exquisite beauty, at any time of the year, for the tending. Remove the spotty paper and the heavy Nottingham lace curtains, and with them send the crocheted tidies and the glass roling pins and the turkey-foot ornament. Now remove the cherry stain from the woodwork and restain it in a pleasing shade of brown, or paint it cream-white or the new French gray. If there are not enough windows to flood the room with light, can't you have two more cut? Place them wherever they are needed for the interior, and be sure that the irregular effect on the exterior will not be displeasing at all, while you will be amazed at the improvement within. Cover the walls with a plain paper; a cartridge paper is always nice, or an oatmeal paper gives a soft, velvety look to a wall. If the room is on the sunny side of the house, use a soft gray or dull blue or green; but if you wish a warm color, choose a rich brown, not too dark, or a sunny tan. The ceiling should always be white or cream, in a plain or moiré paper.

Simplicity and Comfort

Stain the floor, if the wood is good; but if not, paint it a rather dark brown or green. If your carpet was good in color or design, try making a sort of rug of it, leaving a border of twelve or eighteen inches of bare floor. If the design was a large, spotted one, send the carpet to one of the firms which will make it over into small rugs at a reasonable price. The design which would have ruined the restful sense of the room will have disappeared, and the small rugs may be used here or placed in another room, and a large rug of simple design used instead. If you have used brown or tan on the walls you will find a rug in plain green or one in yellows, browns, and dull red the prettiest, while the rug in a blue room should be either plain blue or brown. If you have green walls do not repeat it on the floor, as it is apt to give the room a dreary look; but instead find the correct shade of plain brown, or use the same mixture of colors as was suggested for the brown room. If you cannot purchase a new rug and have none at hand to make over, why not get out all the rags on hand, dye them the desired color, and have them sewed some night at an old-fashioned sewing bee? They may be woven at twenty-five cents a yard, and it does not take many rags for small rugs for an average room. Don't use the old hit-and-miss weaving, but instead have the rug proper a solid color, with contrasting bands at each end. These are lovely and have the advantage of being washable.

If you have chairs that are comfortable and well constructed, you will naturally feel, even though they are poor in design, that you cannot cast them aside for new ones. If they are upholstered in brilliant red and green plush, cover the plush with linen or jute in colors which harmonize with the other tones of the room. If the wood of the chairs needs a new finish do not revarnish it, but remove the old finish, restain, and wax. If new chairs are to be bought and economy is an issue, choose one or two of wicker or willow, in dark brown or green, and have the cushions of cheerful chintz or cretonne. Mission rockers, if not too heavy, are good also, and a morris chair is comfortable. The

FROM time to time we shall have more to say about making the rooms of our farm homes sunshine traps. The boy's room, the girl's room, the kitchen, the dining-room, why not open the flood gates of comfort into them all? Mrs. Mills will go on telling us just how to let in the light and draw together in family life. She will also answer any personal inquiries that are addressed to her in the care of Farm and Fireside

old-fashioned slat-back chairs of the colonial period are always charming and distinguished looking.

There must be a large seat or couch in the living-room, and if you do not care for a manufactured couch get a large box, pad the top thickly, and cover the whole with a ruffled cover of unbleached muslin or of cretonne or burlap. Another good substitute for the couch is a long low seat which any carpenter will build for you beneath a group of windows or against a wall on the opposite side of the room from the fireplace. It might be made in box form, with storage space beneath the lid, but it is much nicer to have it on the order of a regulation seat, leaving the space beneath open. For the top pad you may either use a single bed mattress or have an upholsterer make a pad about three inches thick. A couch should have three or four comfortable pillows with plain washable covers. Gingham or chambray is inexpensive. Flowered cretonne or chintz to match your hangings are exceed-



An honest living-room which the family can enjoy



A room full of shams, where nobody can be comfortable

ingly pretty. Keep the colors harmonious and your couch will be most satisfying artistically, as well as highly comfortable, no matter how simple its construction.

Reading, Writing and Music Make a Home

Well-filled bookcases undeniably add greatly to the homelike feeling of a room; and if you have not many books, why not make it a point to get one or two new ones occasionally? If you have an old-time secretary, with desk below and bookshelves above, detach the upper part and set it on the floor. This affords more desk room and better light for writing. Nowadays, built-in cases are deemed the best, since they give a sense of permanency, and if you build some of these have them on either side of a fireplace or window seat. Don't have them too high nor crowd the top with ornaments. The less bric-a-brac you put in your house the better looking it will be. You may not have enough books to fill the cases at the beginning, but the empty shelves will remind you to buy more, and will offer a convenient resting place for magazines, work basket, the children's toys, or a bowl of flowers.

If you have no desk, a table should be provided for letter-writing. It is the better plan to have two tables

in the room, in order that one may be used exclusively for this purpose. Have it twenty-eight or thirty inches high—never more—and cover the top with a large blotting pad. Keep this desk well supplied with stationery, ink, and pens. Some brass desk fittings, which need not be expensive, will add much to its attractiveness. The other table should be used as a library table, and should hold a good reading lamp, the latest magazines and books, and a vase of flowers. If well stained it looks best without a cover.

Have you a piano, or have you relegated the organ to the woodshed while you await the advent of the piano? If so, it would be wise to have it tuned truly and brought back into the living-room, for daughter may not be here to coax the old tunes out when the piano is possible. If you have neither piano nor organ, a phonograph with some really good records will add greatly to your pleasure.

Hints for Lighting and Heating

Since so much of the leisure of the family comes during the long winter evenings, see that good lights are provided for reading and writing. If you have no electricity, oil lamps will give satisfaction if you obtain the right sort of burners. Have several lamps in the room, and when choosing these select them with a view to their beauty. You know a brass or pottery bowl will make a lovely lamp bowl when fitted with a tin oil tank, but many of the glass and china lamps of to-day are simply hideous. Avoid painted designs and seek the bowls of solid color. Brown pottery bowls are beautiful. Keep the room at a comfortable temperature, remembering that nothing so detracts from pleasant social intercourse as an overheated or a frigid room. Have a thermometer, and do not let it rise above 70° F. If a woodbox is provided beneath the seat of a window box, it will facilitate matters when the small boy is asked to replenish the fire.

If you are so fortunate as to be the possessor of a home in which an old fireplace has been boarded up, by all means bring it to light once more. If it is near a side wall, build a long high-backed settle along this wall, for this gives a quaint, old-fashioned look to the corner. Be careful not to crowd the mantelpiece with too many ornaments. The same restraint should be exercised here as in the decoration of the bookcase tops. If you can have brass fittings for the fireplace they will add color to a dark corner, and have a corn popper and tiny teakettle handy so you may watch the joy of the children on a cold, stormy night.

Don't crowd with poor pictures the walls you have beautified, when so many good prints and photographs of really fine ones are easily procurable, and have the ones you do choose properly hung with two vertical wires. These are preferable to the single wire because they hold the picture flat against the wall instead of permitting it to tip forward, which is unrestful to the eye. Remember that a bare wall space is to be preferred to a crowded one, or one crowded with pictures poor in execution and sentiment.

Order and Cleanliness

Have two or three low stands with ferns or decorative plants, and have thin, sheer curtains of muslin or scrim or some similar material that will admit floods of sunlight and fresh air. The cretonne and chintz draperies which have come in again after long years of disuse have little to recommend them. They darken the rooms and collect dust.

You will find that your living-room really invites comfort and sociability, and that it is as easily cleaned as any other in the house. Take all the chairs, cushions, portières, and rugs out of doors on a windy day for a brisk shaking and beating. Sweep the floor carefully, and wipe it up with a warm suds if it is

painted, or go over it carefully with a flannel cloth wrung as dry as possible from crude oil and turpentine in equal parts if it has been waxed or shellacked. Wipe the walls down with a wall mop made by covering a broom with a cloth, and dust the woodwork carefully. Dust all the furniture while it is out of doors, replace it, and the room will be thoroughly clean, with an added fragrance of fresh air which no amount of inside cleaning can lend.

Then keep it orderly. I have known good rooms spoiled by hairbrushes left on the tables, children's shoes on the window seat, and baby's nursing bottle sprawling in a chair. Such informality is disgusting. Far from adding to anybody's comfort, it makes for inefficiency and loss of time, strength, and temper. Each room should be kept for its own uses. A living-room is not a dressing-room.

No efficient office is disorderly; likewise no home which tolerates disorder can carry on the necessary activities of domestic labor without an extravagant loss of energy and money, such as would produce failure in any business. Housekeepers should put their work on a business basis.

A living-room should possess a lovable coziness which will gather together the members of the family in its comfortable corners and make them lovers of home.

Recipes from "The Land of Cookies"

By Marie Westenberg



HOLLAND might, as well as Scotland, be called "The Land of Cakes," or, better still, of cookies. In all my wanderings abroad I have seen no country where is to be found such a variety of delicious cakes and pastry. Indeed, even the most modest village baker, especially in the north, takes a pride in producing his own special "cookje" (Dutch: koekje). One of the most popular cakes is known as "sand cake." I am giving here some excellent well-tried recipes for making this kind of pastry.

1. RICH SAND CAKE—Three-fourths pound of sifted flour, three-fourths pound of butter, one-fourth pound of fine sugar. Work the butter well with a wooden spoon, add gradually sugar and flour, kneading the paste vigorously all the time; work the whole for half an hour, and bake in a buttered tin in hot oven. This cake should be a light brown outside, while the inside should be a paler color and crumbling or sandy. It is best baked in a plain round tin, about three inches high, if possible in a tin of which the ring-shaped border can be removed when the cake is done. The paste may be baked just as well in small plain or fluted tins, or divided into two or three parts and baked separately, and while hot put one on top of the other with jam between.

2. A plain and equally good cake is made by mixing three fourths of a pound of flour, one-fourth pound of butter, one-fourth pound of fine sugar, and baking in two round sheets, with jam put between the layers while hot.

3. Vienna Sand Cake is a special favorite and is made with three fourths of a pound of flour, three fourths of a pound of light brown sugar and one-fourth pound of finely cut up almonds. For this cake the butter is melted and the ingredients should be thoroughly mixed. The paste is then divided into two parts and lightly rolled into two round sheets, which are baked a rich brown; while hot the cakes are put together with a thick layer of apricot jam. It may afterward be covered with white icing.

Both this and the plainer sand cakes require a slower oven and less kneading of the paste than the first recipe given. The quantities given are for a good-sized cake.

DUTCH COOKIES (in our language called "quick and nice")—Three small cupfuls of flour, one and one-half cupfuls of melted butter, three and one-half cupfuls of boiling water, three or four eggs, one-half cupful of brown sugar, and some baking-powder to make them light. Mix flour, butter, sugar, and water to a paste, then add the well-beaten yolks of eggs and, lastly, the stiffly beaten whites. Put mixture into buttered tins, only half filled, and bake quickly (one-half hour) in a hot oven. These good old-fashioned cookies are baked in Holland in a special quaint brass pan, in all sorts of odd, fanciful shapes. They are eaten hot with sugar.

COOKIES (also old-fashioned, but always popular)—One-fourth pound of butter, one-fourth pound of flour, two spoonfuls of sugar, some currants, and finely cut almonds. Cream the butter, and dredge in the other ingredients, stirring well. Put the paste in small balls on buttered sheets, and bake in moderately hot oven.

OLD-FASHIONED DUTCH APPLE FRITTERS—Ten ounces of flour, about one-half bottle of light ale, a little salt, ten sour apples (sufficient for eight or ten persons).

Make a thick batter by mixing flour, ale, and salt. Peel, core, and slice the apples; dip each slice into the batter, and fry a light brown in plenty of smoking-hot lard or drippings (lard is best). Place them on a sheet of paper to get rid of superfluous grease; serve very hot, thickly sprinkled with sugar and (if

liked) some cinnamon. Sliced pineapple or peaches make excellent Dutch Fritters too.

RIZ GLACÉ, OR LEMON RICE—One-fourth pound of good rice, one-fourth pound of white sugar, the juice of three or four lemons (the juice of three lemons and four oranges is very good). Boil rice, with some finely cut lemon peel, in three times as much water as rice, taking care to keep the rice moist and the grains whole. Then add the juice of the lemons and the sugar, and pour all, hot, into a stone mold well rinsed with cold water. Serve very cold, either plain or with some marmalade around. The rice should be glossy and shining.

A more elaborate variety of this simple but very good pudding is made as follows: Put half of the hot boiled rice into the mold, then a layer of stiff jam of any kind (taking care that the jam does not touch the sides of the mold), and fill up

mixture six ounces of melted butter, and put in the oven till a rich brown crust is formed. When cold, cover all with sweetened whipped cream. Instead of apples stewed rhubarb may be used.

MOOR'S HEAD (thus called because of chocolate on top) is another delicious trifle and a great favorite with the Dutch children as well as with the grown-ups.

For a dessert for six or eight people one-half pound of soft biscuits (lady fingers) are needed. Put a layer of lady fingers at bottom of a round dish, cover with thick, vanilla-flavored custard (while hot), then put another layer of biscuits, and cover with custard again. Beat up the whites of the three eggs which were used for the custard; when very stiff stir in two tablespoonfuls of powdered chocolate mixed with three teaspoonfuls of fine sugar, and spread on the top of trifle. Place in slow oven to dry the chocolate mixture. Serve cold.

The custard is made in the following manner: Boil one-half pint of milk or cream with one fourth of a pod of vanilla. Split the vanilla, and boil slowly so as to flavor it well; sweeten to taste. Mix one-half spoonful of corn-starch with some cold milk into a smooth cream, beat up the three egg yolks, and add to mixture. Pour this egg mixture slowly and carefully into the hot milk, and cook until the custard is thick and smooth, stirring it well.

HAM AND EGG SHAPES—Butter round, even-sided tins which have about the same width at top and bottom. If no suitable tins are at hand use little cups instead. Line the sides with finely minced ham or smoked tongue. Slide an unbeaten egg in the center of each cup, then place all the shapes in a wide saucepan with boiling water, taking care that the water keeps well below the rims of the cups. Put the pan on the fire, and keep boiling for about ten minutes, until the eggs are hard, then turn each little pudding out onto a slice of fried bread. The bread may be fried while the eggs are boiling. Serve very hot. Instead of ham, grated cheese may be used to line the cups. About one-fourth pound of ham is needed for five eggs.

OLIVES OF VEAL AND BACON IN JELLY—For this potted meat use oblong pieces of rind of bacon, cut very thin, and steak of veal or lean pork, cut in neat, thin pieces. I prefer veal, but both veal and pork make good olives. Wash the bacon rind, soak for some hours in tepid water to make it tender, and cut it into oblong pieces, a little larger than the slices of meat. Sprinkle each layer of bacon with pepper and salt, put a piece of meat on the top, roll them up and tie with cotton string into oblong shape. Place the olives

in a large kettle or pan, covering them entirely with two-thirds water and one-third vinegar, and boil for three hours, adding to the liquid some bay leaves, cloves, and thyme. The spices are usually tied in a muslin bag, so they may be removed easily. When done, place the rolls of meat in a wide earthenware jar, or bottle them, covering them with the liquid, which forms a savory jelly when cold.

POOR MAN'S DELIGHT—This is a dish much like French toast. It makes an attractive course for lunch or for the Sunday night supper. Take slices of stale bread fully an inch thick and soak them in milk in which two or three eggs have been well beaten. When the bread is well soaked and swelled through and through, fry it in butter. The butter should be quite deep in the pan and the bread nicely browned on each side, and to secure the beautiful golden tone the butter should not be allowed to become too hot. When it is done, place on a plate and sprinkle with granulated sugar and cinnamon. Serve at once, while it is still hot. This toast is a great favorite with the children, especially when eaten with home-made jam or preserves, and makes a good dessert that can be quickly prepared for unexpected company from materials almost sure to be at hand.

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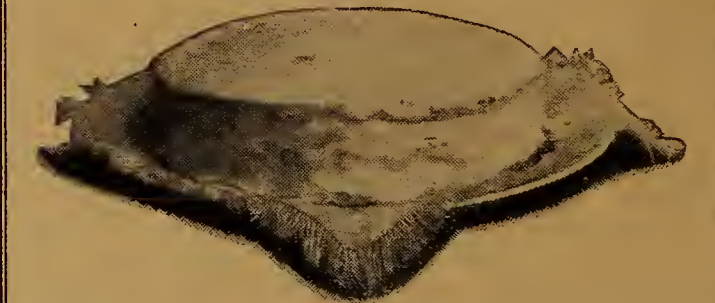


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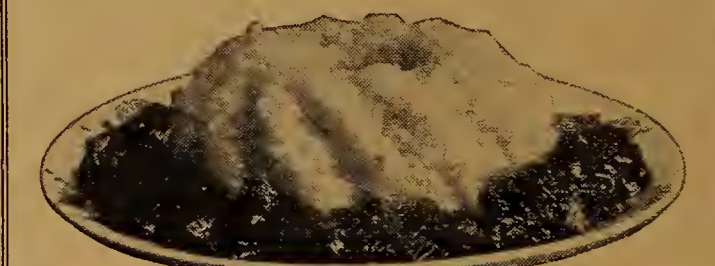
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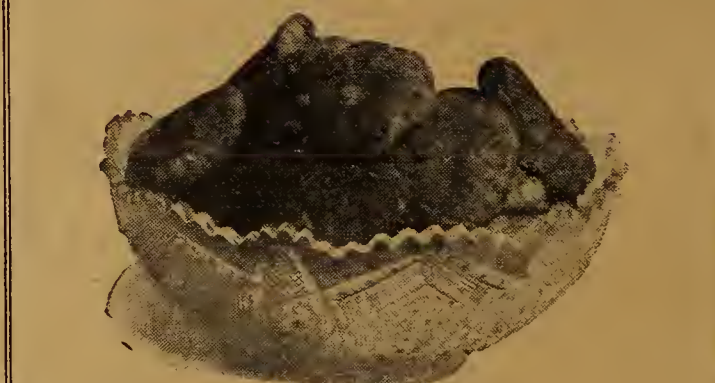
Old-fashioned apple fritters



Rich sand cake



Riz glacé, or lemon rice



Dutch cookies

with rice. Serve with a creamy custard, flavored with vanilla, poured around the pudding. Almost any kind of fruit jam may be used for this dish.

A BUTTERMILK PUDDING may be something of a novelty, and is well worth making. Like the rice pudding above, it is very refreshing and is a nice hot-weather dish. It is then better if made the day before it is to be used. Serve either plain or with biscuits and cream. Use one and one-half cupfuls of fresh buttermilk, three lemons, three fourths of a pound of white sugar, ten sheets of gelatin, seven white and three red to make the pudding a pink color. Dissolve the sugar in the juice of the lemons, stir into the cold buttermilk, and finally add the gelatin dissolved in some hot water. Pour into well-rinsed stone mold, and stir now and then until the pudding begins to thicken. When quite set, turn out.

APPLE TRIFLE—Peel sour apples of good quality, cut into quarters, remove cores, and boil in little water, shaking them occasionally. When soft, pass through coarse sieve, and sweeten to taste. Put the apples on the bottom of a fireproof dish, and cover them with a mixture made by pounding nine large rusks and adding to the crumbs six ounces of white sugar. Then pour evenly over crumb

The Child at Home

My Naughty Children Find a Use for Themselves and Are Good

By Helen Johnson Keyes

THE School of Play, which has adopted the Montessori theory of sense training for little children, is closing its first session. Billy Bailey has shown himself the naughty child of the class, and has refused to enter into the games and studies. Rosaltha, who has been adopted for six months by the Teacher of the class because her mother was worn out by her stupidity, is gradually developing a spirit of helpfulness and good sense in her more sympathetic surroundings.

I WAS still standing on the back porch watching my youngsters make use of the many devices which I had strewed about the yard for their amusement and education, when Ann came strolling around a corner of the house—Ann whose baby I used to bathe, you will remember, Ann of the big eyes and the teachable heart.

"Hello, Nella," she cried, "I am over visiting with Alice to-day and I thought I'd run in and see your school. Having a good time, aren't they? Will you look at Rosaltha playing nurse to Billy!"

"Rosaltha is getting to be my right-hand helper," I affirmed proudly. "How is my infant class?"

"Your infant class? Oh, I see what you mean. Why, Baby William is doing just what it is in order for him to do at this hour—sleeping. You taught me to train him so well that Alice says he isn't a baby, he's a machine."

"Ann," I said, putting my arm across her shoulders, "do you notice how many of these children look sickly? You know my belief in the health of country youngsters is getting severe shocks. I have read some statistics lately which show that they are not so healthy as city ones."

"What nonsense!" Ann remonstrated. "Why, with all the fresh air they get they must be healthier than cooped-up city people."

"We don't feed them right, Ann, and even fresh air won't make up for poor food. We give babies starch before they can digest it; we fill up our older children with veal and pork which are fried or boiled, instead of roasting or broiling beef and lamb for them. So far as meat is concerned they would do well enough without any if they had lots of milk and eggs and cooked fruit. I am going to be very fussy about food in the School of Play. To-day I have a rib roast of beef, baked potatoes, milk, apple sauce, and sponge cake, which is perhaps rather a hearty meal—"

"Pretty high in proteins," criticized Ann, who had studied domestic science. "Nevertheless, for growing children on a cool day like this," I defended, "I think it is just about the right thing."

"You'll have to give me a lot of figures before I'll admit country children are not all they should be."

"I'll give you a table of them before you go, my dear, and you'll get a shock. Shocks are good for us."

"Well, anyway," argued Ann, "I was reading something by Montessori the other day, and listen to what she said. When she started her first House of Childhood it was in a very poor Roman tenement. The children returned to their homes to eat and had no food in the school, yet soon they began to get fat and grow active and mischievous. Montessori explains it by saying that if you're happy you'll probably be healthy. If that is so it seems as if country children ought to be well anyway. The country is so very interesting."

"Yes," I said, "but there are a lot of people who never discover that it is interesting, and so of course they cannot teach their children to find it out. The country is horribly dull if you don't care about how things grow or what the animals and birds do."

"I suppose," admitted Ann, "that most of us have to be shown what is interesting and why it is interesting, and then almost hypnotized into admitting that it really is interesting."

"Exactly," I said, "it seems to us almost too good to be true that what is

within our reach is worth caring about. Well, as you see, I have a teeter-totter and a swing and a fence whose top rail the children love to walk, and a long board on the ground which Mary, aged three and a half, has been trying for ten minutes to walk the length of without tumbling off; and these exercises are amusing and educate the children through their muscles,—which, as you know, are great and important highways to the brain,—yet I intend as soon as I understand my work a little better to apply



MISS DIMPLES

By Everett McNeil

BBETTER a smile and a dimple
Than a frown or a tear;
Better the music of laughter
Than the discords of gloom or fear;
For all, like the plant, need sunshine,
And laughter and smiles are the sun
That chases the gloom from the shadows
That fall on every one.
Then rejoice, little maid, in your dimples,
Rejoice in the smile of your eyes—
'Tis the sun shining out through the windows
Of your soul's splendid paradise.

the same principles to the real life things, as we might call them, so that the youngsters will find their interests supplied not by their teachers but by the world itself. But I'm forgetting dinner, just after talking about the importance of feeding—and it is important, Ann, more important than any other one thing, I think."

I found it no easy matter to get fourteen children to stop their play instantly, even for the sake of eating, so I told Rosaltha to form them into a procession and march them in.

"Billy Bailey," said Rosaltha, "you get the boys and stand them as is the same size together. I'll get the girls and form the *colyums*."

Thus did my School of Play march into the dining-room, Rosaltha marshaling the somewhat ragged "*colyums*" and Billy

"And Billy Bailey," Ann completed as she tied on a bib—there was a gleam of merriment in her usually solemn eyes—"well, occasionally I have wished some executive genius would execute him!"

"Here's an executioner's ax for the beheading of some of your own theories!" I retaliated some minutes later, handing her a sheet of paper.

I had arranged two low tables with little chairs at which the children could eat so comfortably that it would be fair to insist on very good table manners. These tables were to be served by the children themselves, in turn.

Children four and even three years old in Doctor Montessori's House of Childhood carry securely soup tureens full of hot soup; they set tables neatly, fold the cloths, and brush up the crumbs.

All this ease in doing things is the result of the constant exercise in controlling their muscles, which they get while they are delightfully at play with the enchanting toys Doctor Montessori has invented for them.

How often we blame children for some awkward act, such as dropping a plate or upsetting the milk, when really the fault is no more theirs than it is the fault of the near-sighted man that he cannot see what is far off! We simply have omitted to train the children's muscles to work together harmoniously.

Just as communities must learn to co-operate, so each little human body must learn to co-operate with its own forces. It must learn to use muscles, eyesight, touch, hearing, the power of motion, all together in harmony, in order to perform the work of life.

A Live Country Pastor

By Anna B. Taft

"THAT man's a cracker-jack," said a brother minister of a country pastor in southern Minnesota. "He is the livest country pastor I have found in all my travels." As this statement was made by a man of national knowledge of country churches, it indicated a church worth studying. These are some of the things that I found. A small country town of about one hundred and fifty people in the center of a prosperous farming locality, with only one church in which services were held with any regularity. Five years ago Mr. Morse accepted a call to this church. There was then a good building, very incomplete as to furnishing, and a decided ebb in enthusiasm and interest among the people.

Through the efficiency of the pastor a real revival came about. Possibly the most impressive feature of this work is the remarkably fine Sunday school and Christian Endeavor societies. It is a natural transition from these organizations of young people into the church, and last year twenty-five were received into membership of the church, every one of them out of the Sunday school.

For the past two years Mr. Morse has taken the older boys of the Junior Endeavor Society on a camping expedition, keeping them at a lake about fifty miles distant for a week. Later in the season, attended by his wife, ten of the girls from the same society had their week of camping at the lake.

The young people are so well trained in music that at least ten can play the piano or organ at any of the services. When Mr. Morse came to this little community there were not four pianos in that whole locality. There was not even one in the church.

Another of the social organizations of the church is a Farmers' Club which meets monthly. One month's vacation this busy pastor spent in the harvest field and went with the threshing crew for a week. Three weeks of hard labor side by side with his farming people brought him into close touch with them, and they realized that the parson could use his hands as well as his head. He was up at four in the morning and worked until ten at night. Incidentally, it was a capital way to spend a vacation.

LIGHT BOOZE

Do You Drink It?

A minister's wife had quite a tussle with coffee and her experience is interesting. She says:

"During the two years of my training as a nurse, while on night duty, I became addicted to coffee drinking. Between midnight and four in the morning, when the patients were asleep, there was little to do except make the rounds, and it was quite natural that I should want a hot cup of coffee about that time. I could keep awake better.

"After three or four years of coffee drinking I became a nervous wreck and thought that I simply could not live without my coffee. All this time I was subject to frequent bilious attacks, sometimes so severe as to keep me in bed for several days.

"After being married, Husband begged me to leave off coffee, for he feared that it had already hurt me almost beyond repair, so I resolved to make an effort to release myself from the hurtful habit.

"I began taking Postum and for a few days felt the languid, tired feeling from the lack of the coffee drug, but I liked the taste of Postum, and that answered for the breakfast beverage all right.

"Finally I began to feel clearer-headed and had steadier nerves. After a year's use of Postum I now feel like a new woman—have not had any bilious attacks since I left off coffee."

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Let us advise you regarding any crippled, paralyzed or deformed child or person in whom you may be interested. It will cost you nothing, and in view of over 30 years' experience in this work, our advice should be valuable. Our Pamphlets and Book of References will be sent postpaid and free of all charge, on request.

The McLain Orthopedic Sanitarium
905-Y Aubert Avenue, St. Louis, Mo.

Percentages of Sickly Children

	Country	City
Needing medical or surgical care,	75%	72%
Suffering from lung trouble,	3.7	Fraction of 1%
Suffering from poor nourishment,	31.2	23.3
Curvature of spine,	3.5	.13
Adenoids,	21.5	8.5
Enlarged tonsils,	30.	8.8

Eye, ear and heart troubles occur from twice to five times as often in country children as in city children.

Bailey beating a vehement stick upon a mute stone in semblance of a drum. In other words, my well-behaved children were captained and marshaled by my two "bad" children!

"I wish the people who were at your valentine party could see Rosaltha now!" cried Ann who was always loyal to me. "Rosaltha," I stated solemnly, as I lifted one of the babies into a chair, "is an executive genius. She has a future."

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an inner vest of steel that insures him for life. His big, bold figures and hands are easy to read in the dim morning light. His keys almost wind themselves. He rings for five minutes straight, or every other half minute for ten minutes, as you prefer.

The next time you're in town, just drop in at your jeweler's and ask to see Big Ben. If your jeweler hasn't him, send a money order for \$2.50 to Westclox, La Salle, Illinois, and he'll come to you, transportation charges prepaid, all ready for work. Hire Big Ben for your farm and he'll prove the promptest hired man on the place.

This Wisconsin Boy Wanted to Increase the Profits of His Farm

His name is Christopher E. Hertel. He works with his father on a 120-acre farm in central Wisconsin.

One year ago he took the course in Agriculture offered by the Scholarship Bureau. Through the aid of that course he has helped his father greatly to increase the profits of his farm. He is an enthusiast for the farm, has increased its fertility, reduced the cost of operating, and sees a rosy future in scientific agriculture.

Do you want to help your father increase the profits of his farm?

Write for the little booklet
"An Agricultural Course Without Cost"

THE SCHOLARSHIP BUREAU
FARM AND FIRESIDE - - - SPRINGFIELD, OHIO

Heating Plans Free

Don't decide on your heating system for home, church, school or other buildings before getting free plans and factory prices from the Kalamazoo expert engineers. Real scientific service. Easily installed in old or new buildings. Plans furnished free also for future homes.

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Kalamazoo Stove Company, Manufacturers, Kalamazoo, Mich.
We make full line of Ranges, Stoves, Furnaces, Metal Kitchen Cabinets and Gas Stoves. Mention catalog wanted.



The Housewife's Interests



OFTEEN we desire to remove wall paper so that we can paint the walls instead. To do so, make a pasty solution with flour and a few spoonfuls of salt and boiling water, then add a few ounces of acetic acid bought at any drug store. Apply this to the wall paper with a brush in quantities. After a minute it can be torn off very easily in long strips, and with little dirt or dust.
A. B. R., Illinois.



IHAVE a bottle with a quart of linseed oil and three tablespoonfuls of cider vinegar mixed, and when I am through wiping up the oilcloth or linoleum I go over it with a cloth saturated with this mixture. This will make it look like new. I use the mixture to brighten up the furniture also.
J. E. R., Pennsylvania.

IF THE yolks or whites of eggs which you are not able to use at the time of breaking are covered at once with sweet milk and set where the milk will not sour they will keep fresh. When needed, pour off the milk and beat up as usual.
J. E. S., Colorado.

TO PREVENT juicy pies from running over in the oven, insert a paper funnel upright in the center of the pie.
W. M. K., Iowa.

WHO has not been annoyed when hanging clothes, by having to stoop for the pins, especially on windy days? Keep your clothespins in a basket or, better yet, in a wide-mouthed pail that you can cover to keep dirt out. Have a wire hook fastened to handle or bail, hang on the line, and push along in front of you. You'll find this handier than clothespin aprons.
M. N. D., Kansas.

SILVERWARE may be easily cleaned by placing it in a pan of sour buttermilk and allowing it to stand overnight.
C. P., North Carolina.

THOSE who pour kerosene on the fire to make it burn surely do not read the papers, or they would see the casualties therein recorded and take warning. It is a practice far too common to replace the wick burning after filling the lamp. This risk should be avoided by filling the lamp in the morning when the burning wick is not needed to give light. This should be regularly done, and nothing allowed to cause its postponement. Glass lamps should be carried about carefully, if at all, for the reason, as one has said, that they are glass. In carrying the lamp there is a chance that one may slip, or that some accident may occur, causing it to be dropped. The lamp should never be filled quite full, for when taken into a warm room the oil will expand and overflow, leading to the suspicion that the lamp leaks. The oil should be wiped from the outside of the lamp, and careful notice taken that the burner is in order and that the wick fills the passage.
F. M. B., Virginia.

WHEN a carpet sweeper gets full, remove all waste collected, take out the brush, and carefully pick out all lint, etc. Then apply kerosene on a woolen cloth and rub the ends of the bristles thoroughly with the cloth. It absolutely prevents dust rising when the sweeper is used, and brightens the carpet. A drop of machine oil in the holes where the ends of the brush revolve will do as much as any one thing to preserve your sweeper.
C. L. C., Michigan.

ON BAKING DAY, when you take the bread from the oven, rub the crust or top over with a piece of pork rind and see how flaky it will make it.
W. F. P., Connecticut.

TO MAKE the toughest steak tender put three tablespoonfuls of olive oil and one tablespoonful of vinegar in a flat dish, lay the steak in this for half an hour, turn and leave for another half hour, wipe dry, and cook in a hot pan.
L. M. T., New York.

THE girl whose nails are long will find that her gloves will wear better if after they have been put on once she carefully turns them and places a bit of court plaster at the end of each glove finger inside. This prevents the sharp nails from cutting the finger tips of the gloves.
L. M. T., New York.

A BAKER gave me this hint: If you do not line your cake tins with paper, flour sifted ever so lightly over the greased bottom of the tin will prevent the cake from sticking.
A. C. C., Connecticut.

WHEN you scorch your beans, set them immediately in a pan of cold water; they will not taste scorched. If badly scorched put them in another pot as soon as possible after first setting the scorched pot in water.
A. L. J., Tennessee.

BEFORE blacking stoves wipe with a woolen cloth dipped in vinegar. This insures a smooth, glossy polish and outwears any other.
G. P. E., New York.

ONIONS peeled under water will not hurt the eyes.
L. E. W., West Virginia.

EASY WAY TO WASH OVERALLS—Spread them on a board, set in the tub like a washboard. Soap, and scrub lightly with a scrubbing brush. If very dirty a few rubs on the washboard will easily remove the loosed dirt. Lift by

What My Eleven-Year-Old Girl Can Make

FUDGE—Two cupfuls of sugar, one-half cupful of milk, two tablespoonfuls of chocolate or cocoa, one tablespoonful of butter. Boil until it hardens in water, stirring often. When done add one teaspoonful of vanilla, and beat until quite thick; pour into square buttered tin, and when partly cold cut into inch squares.



SEA FOAM—Two cupfuls of sugar (light brown), three-fourths cupful of water. Boil until it forms a soft ball in cold water, then pour slowly, beating constantly, into a stiffly beaten white of an egg. Continue beating until quite stiff, then drop in teaspoonfuls onto paraffin paper or a buttered platter. It may be flavored with vanilla or one-half cupful of nut meats just before it is put out on paper.

OATMEAL COOKIES—One egg, one-half cupful of shortening, one cupful of brown sugar, one cupful of thick sour

milk, one teaspoonful of soda, two cupfuls of oatmeal, two cupfuls of white flour, one cupful of raisins. Mix into a thick dough, drop pieces size of walnuts onto a buttered pan, and bake in a quick oven.

FILLING FOR BUTTERSCOTCH PIE—One cupful of brown sugar, one-half cupful of water, one tablespoonful of butter. Boil until thick. To the beaten yolks of two eggs add two tablespoonfuls of flour and mix smooth with one cupful of milk. Pour slowly into boiling syrup, cook until smooth, stirring constantly. Pour into a crust which Mother has baked, spread with meringue made with beaten whites of eggs and two tablespoonfuls of sugar, and brown lightly in oven.
E. S. J., Indiana.

Since my little daughter has learned these recipes she has had a different attitude toward her home—she regards herself as a producer.

Overland \$1075

MODEL 80
f. o. b. Toledo, Ohio

IN spite of the fact that this latest Overland has a much more expensive, and entirely new and much larger full stream-line body, the finest electrical equipment, left-hand drive, demountable rims, and larger tires; *in spite of the fact* that it is made throughout of all first grade materials and first grade workmanship; *in spite of the fact* that it rides—due to its longer, improved and underslung rear springs—with the smoothness and ease of the highest priced cars—the price has not been advanced.

Such is the perfectly natural and economical result of manufacturing the greater volume of automobiles.

Our greatly increased 1915 production has permitted us to *again* add materially to the size, comfort, value, merit, quality and completeness of the Overland *without adding one dollar to the price.*

This is an achievement which no other automobile manufacturer is in a position to accomplish.

The newest Overland is, without question or doubt, the world's most extraordinary motor car value.

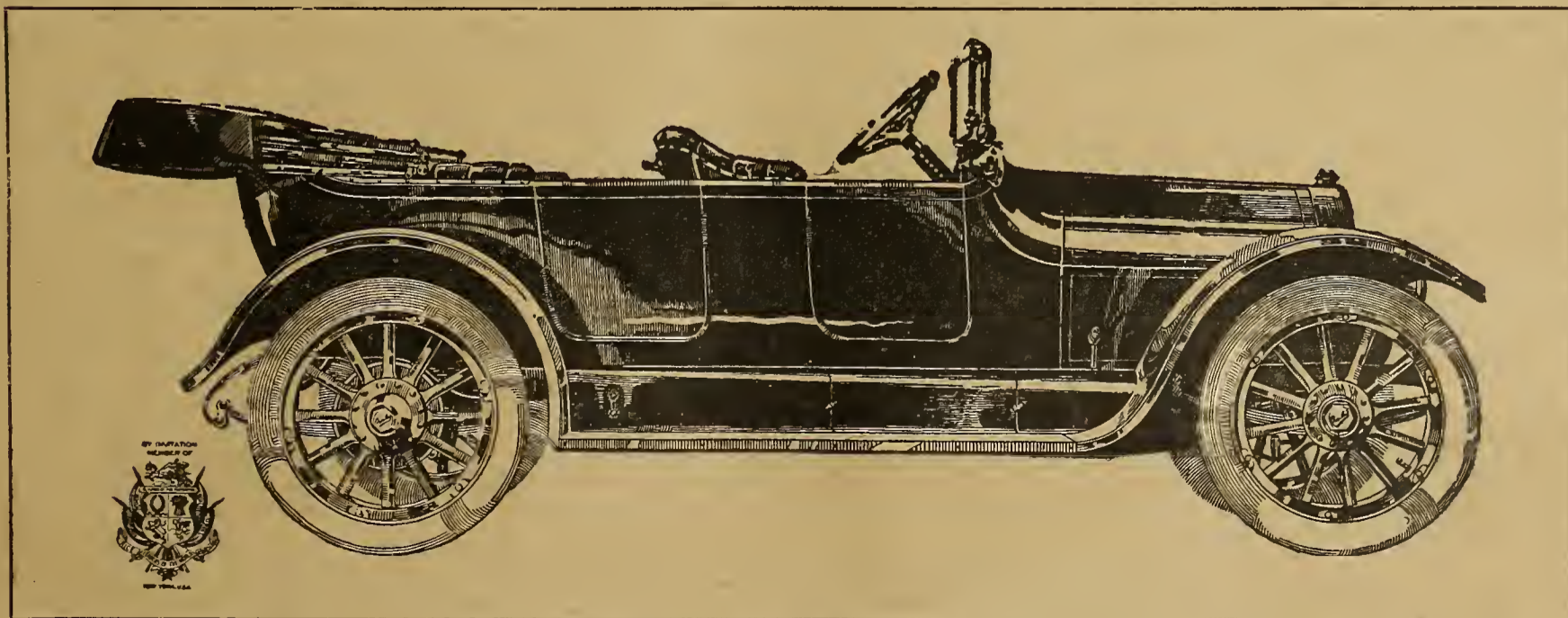
Buy an Overland and save money.
Dealers are now taking orders for immediate delivery.

Here are listed a few of the many additions, enlargements and new 1915 features

- Motor; 35 h. p.
- More economical
- New full stream-line body
- Tonneau; longer and wider
- Greater comfort
- Instrument board in cowl dash
- Individual front seats, high backs
- Upholstery; deeper and softer
- Windshield; rain-vision, ventilating type, built-in
- Crowned fenders
- Electric starter—Electric lights
- Electric horn
- All electric switches on steering column
- High-tension magneto—no dry cells necessary
- Thermo-syphon cooling—no pump needed
- Five-bearing crankshaft
- Rear-axle; floating type
- Rear springs; extra long, and underslung, 3-4 elliptic
- Easier riding
- Wheel base; 114 inches
- Larger tires; 34 inch x 4 inch
- Demountable rims—one extra
- Left-hand drive—center control
- Body:—beautiful new Brewster green finish
- Mohair top and boot
- High-grade magnetic speedometer
- Robe rail, foot rest and curtain box

Handsome 1915 catalog on request. Please address Dept. 62.

The Willys-Overland Company, Toledo, Ohio



Model 81 Prices:
5 Passenger Touring Car - \$850
2 Passenger Roadster - \$795

Two Passenger Roadster—\$1050
Four Passenger Coupe—\$1600
All prices f. o. b. Toledo, Ohio

Model 81 Prices:
Delivery Wagon with closed body - \$895
Delivery Wagon with open body - \$850

THIS PONY GIVEN AWAY

"BUTTERCUP"

"BUTTERCUP" is a beautiful black and white spotted Shetland Pony with long silky mane and tail. She is about 6 years old, stands 42 inches high and weighs around 350 pounds. We have already given away 233 ponies to boys and girls who joined our Pony Club and "Buttercup" is just as fine as any of these other 233 beautiful ponies. This is saying a great deal when you consider that we go around to all the big pony farms and pick out the very best ponies we can get for children. "Buttercup" is as gentle and lovable as any pet could be and is thoroughly broken to ride and drive. Hitched up to her nobby little pony cart, with her nickel trimmed harness flashing in the sunlight, she makes the prettiest picture you ever saw. Not only is she pretty, but she can carry along a whole buggy load of happy children at a fast clip—faster than many big horses can. Can you imagine anything you would like to own better than "Buttercup" and her complete outfit? Read this page through carefully and then send us your name and address so we can tell you just how you can get her for your own.

WE WILL GIVE YOU OR SOME OTHER BOY OR GIRL THIS PONY WITH COMPLETE OUTFIT, JUST AS IT LOOKS IN THIS PICTURE.

THE OUTFIT

ALONG with "Buttercup" we send the finest and most complete Pony Outfit that you ever saw: A stylish four wheeled pony buggy—strong and easy riding (just like the one in the picture) a handsome black nickel trimmed harness and a hand made saddle and Indian horsehair bridle. No matter how rich a child's parents may be they could hardly buy him a better or more complete outfit than the one we send with "Buttercup" to you or some other boy or girl. The horsehair bridle is made especially for us by an old cowboy at Deer Lodge, Montana, and is hand woven out of many colored horsehair—red, black, blue, yellow, green and white. It is woven into remarkable Indian designs, mounted with fluffy tassels, and the reins end in a real cowboy quirt. You will be the first in your neighborhood to have one of these bridle if you send us your name and get "Buttercup" and the outfit. We had just as soon send this wonderful Pony Outfit to you as to any other boy or girl, but you must send your name and address right away so we can tell you all about our easy plan. Use the coupon below and mail it now.



Here is "Buttercup"

Send Us Your Name Today If You Want To Own "Buttercup"

As soon as we hear from you we will tell you how to go ahead and get "BUTTERCUP" for your own. Our wonderful Pony Club is known all over the country because it gives real Shetland Ponies to boys and girls and you can have one of our ponies as well as any other child. Don't let anyone persuade you that you can't get beautiful little "BUTTERCUP" and her outfit because our plan of giving away ponies is different from others. The fact that we have already given away 233 ponies to boys and girls all over the United States, from the state of Vermont to the state of California, several going over 1800 miles from St. Paul, is proof that we give ponies away. The postmaster or hanker in your town knows that the Webb Publishing Company of St. Paul, Minnesota, established more than 30 years ago, is one of the largest publishing houses in the United States and can afford to give away ponies to advertise its papers. We never heard of one of the 233 children to whom we have already given ponies until they wrote us they wanted a pony and that is why you must send us your name and address at once if you want us to send you "BUTTERCUP" and her dandy outfit.



We Have Given Away 233 Ponies

Here are the Names of 30 of our 223 Lucky Pony Winners

- | | | |
|--|--|--|
| "Bob," John B. Corn, Jr., Pulaski Co., Arkansas. | "Peter," Charley Mahoney, Chippewa Co., Michigan. | "Peaches," Alicia M. Davenport, Klamath Co., Oregon. |
| "Sweetheart," Lillias E. T. Howe, Nevada Co., California. | "Star," Clarence Grover, Trail Co., Minnesota. | "Dapple," Ernest L. Heckert, York Co., Pennsylvania. |
| "Pipplin," Doris Navarette, Fairfield Co., Connecticut. | "Mac," Ruth Mead, Saline Co., Missouri. | "Irene," Colgate M. Searle, Kent Co., Rhode Island. |
| "Pal," Julia Federer, Champaign Co., Illinois. | "Reggie," Clifford Smith, Yellowstone Co., Montana. | "Cupid," Edna Evans, Moody Co., So. Dakota. |
| "Heinie," Clarence Niemoeller, Bartholomew Co., Indiana. | "Bumps," Barton Lewis, Dawes Co., Nebraska. | "Lady," Marion Jones, Franklin Co., Tennessee. |
| "Justin," Norma Thorsen, Palo Alto Co., Iowa. | "Busy," John H. Albrecht, Jr., Camden Co., New Jersey. | "Zip," Ella L. Fullam, Randolph Co., Vermont. |
| "Jerry," Cleta Johnson, Douglas Co., Kansas. | "Sultan," Donald M. Robinson, Saratoga Co., New York. | "Lulu," Louise Damron, Benford Co., Virginia. |
| "Keno," Vanessa Lykins, Bourbon Co., Kentucky. | "Silver-Tips," Georgia Lee Barringer, Stanley Co., N. Car. | "Scotty," Catherine Rohrbeck, Pacific Co., Washington. |
| "Merry," Isabelle Whitecraft, Baltimore Co., Maryland. | "Paddy," Grace McGogy, McIntosh Co., N. Dakota. | "Princess," Geneva Holt, Nicholas Co., W. Virginia. |
| "Clipper," Adelaide J. Stever, Bristol Co., Massachusetts. | "Flo," Loyd Thomas, Allen Co., Ohio. | "Polly," Alfred Hokenstad, Dane Co., Wisconsin. |



Notice we print the names of 30 of our 233 Lucky Pony Winners. We would gladly print the whole 233 names if we had room for them here, but we will send them to you just as soon as we hear from you. Possibly some of these happy children live in your county or a county near you and, if so, you probably know them because our Lucky Pony Winners are the best known children in their neighborhoods. However, it doesn't make any difference where you live; if you send us your name and are the lucky child to get "Buttercup" she and her whole outfit will be shipped without one cent of cost to you. If you send us your name the day you read this, we will send you 1000 votes for "Buttercup" and a big surprise that will double your chances of getting a Shetland Pony.

Every Club Member Gets a Prize

Every single child who sends us his name and joins our Pony Club will receive a handsome prize of his own choosing. Besides the Pony Outfit (and the Big Surprise we have for you) we will give Bicycles, Diamond Rings, Sewing Machines, Rifles, Cameras, Gold Watches, Flashlights and many other wonderful rewards that you never could get until now. Of course, "Buttercup" and her dandy Outfit is the best prize of all and you have the same opportunity to get her as any other boy or girl if you send us your name now.

CUT OUT THIS PONY COUPON AND MAIL TODAY



The Farmer's Wife Pony Club:-
591 Webb Bldg., St. Paul, Minn.
Please send me pictures of "Buttercup" and names of the 233 ponies you have given away, and also tell me how to take care of Shetland Ponies. I have no pony and want to join the Pony Club and get "Buttercup" for my own.

NAME.....
P. O.....
IN THE SADDLE R. F. D.....STATE.....

THIS COUPON IS GOOD FOR 1000 VOTES FOR "BUTTERCUP"

Send Your Name Today.

Our ponies are given away so quickly that you will be more sure of getting this one if you sit right down now and send us this coupon with your name and address or send it in a letter (either way will be all right). The work we require you to do to be a full fledged Pony Club Member, eligible to get "Buttercup" is so easy that any child who could drive a pony can do it. We shall write you promptly just as soon as we hear from you.

Address all Letters To
THE FARMER'S WIFE PONY CLUB
591 WEBB BLDG., ST. PAUL, MINN.

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FARM *and* FIRESIDE

EVERY OTHER WEEK ~ ~ THE NATIONAL FARM PAPER

SATURDAY, OCTOBER 24, 1914

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ESTABLISHED 1877



As the cartoonist sees him



As the city man sees him



As the politician sees him



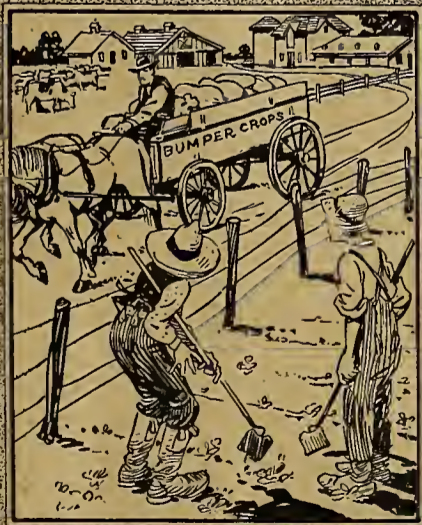
As his live stock see him



AS HE REALLY IS



As the professor sees him



As his neighbors see him



As he sees himself



As the commission man sees him

DRAWN BY HORACE TAYLOR

I HAVE a good deal of faith in the tendency of evils to cure themselves. Time is the great healer and rectifier. If a thing looks like an oncoming calamity I take counsel with myself as to whether the general Frame of Things be not wiser than I, and wait for it to develop.

Once in Judea there was a great hubbub because Peter, a fisherman, and a group of men amounting to about a dozen went about performing great and mysterious works and preaching a new religion. Certain influential men in the community proposed that these men be caught and slain. Probably an attempt to do this would have been made had it not been for Doctor Gamaliel, a Pharisee, who told them that they had better take heed what they did to the Apostles. They need not worry themselves, said Doctor Gamaliel, about the preaching of this new religion of Jesus. If there was nothing in it, it would burn itself out. Had it not been so in the past? Did not Theudas, "boasting himself to be somebody," join to himself about four hundred—and all were finally scattered and Theudas slain? And a fellow named Judas of Galilee, in the days of the taxing, drew away much people after him. He also perished, and those who followed him were dispersed. And as for these Apostles, said Gamaliel:

"Refrain from these men and let them alone; for if this counsel or this work be of men it will come to naught, but if it be of God ye cannot overthrow it: lest haply ye be found even to fight against God."

I know as well as does Mr. John Pickering Ross that this doctrine of let alone can be carried to a dangerous extreme when it is applied to things as distinguished from thoughts. Thoughts are sacred and should be allowed to take free wing. If they are of men they will do nothing irretrievably evil; and if they be from God they cannot be destroyed, and should not be opposed.

Things, as distinguished from thoughts, are a different matter. Things we may subjugate and put under ourselves. We may enslave things, while thoughts we have the right to oppose with thoughts only.

For all that, even in the domain of things, Time works wonders. I cannot become in any great degree anxious at the prospect of a meat famine. Evidently I am not as much concerned as Mr. Ross thinks I should be. Here is a letter from him which blows the bugle for what a punster would call meat-axion:

I look upon the continued decrease of our flocks and herds as threatening a real meat famine, which, if this war continues for any length of time, will not be relieved by importations. Further than this, fertility can only be obtained through the consumption of a large part of the crop product of the land on the land. We are the most backward people on earth in recognizing this; I think because we are tempted to export so much of our cereals, and as arable farmers are tempted to sell so much of our product to feeders whose feed lots absorb the manure that to a great extent belongs to the land.

Then, another thing: our smaller farmers, especially, must be besought to cease the slaughter of female

WITH THE EDITOR



calves and lambs. They can no longer look to the West, the South, or to Texas for ewe lambs or young female cattle, for the men of those regions are finding out that it pays to keep and fatten them at home, or to use them as breeders.

FARM AND FIRESIDE devotes considerable space to well-written articles on the Dairy, the Poultry Yard, Farm Notes, Farm Machinery, Motors, etc., but I fail to find as much as I would like to see just now on this most pressing need of a determined effort to increase our live stock, and to grow forage crops on which to feed them.

Our agricultural colleges publish the results of elaborate experiments on carefully weighed-out rations, but the ordinary run of farmer has not the time to avail himself of what we may almost call laboratory fads. What he wants to be shown is how to rear and feed his stock in a rougher sort of way; how, when, and on which of the varying soils of his farm he can best raise the forage crops which, in passing through the laboratory of the beast's stomach, will feed both it and the soil.

I can't get pessimistic about the meat situation because I feel sure that Time will cure it in one way or another. Meat will get more plentiful in one of two ways—through an increase in the supply, or a decrease in the demand. Perhaps we shall have to come to a vegetarian diet some day—oh, say five hundred or five thousand years hence. It's cheaper than meat, much cheaper. One acre in crops which are to be eaten in vegetable form will feed as many mouths as five acres in crops which must be turned into meat.

Population to-day is getting sparser in Europe. Men who call upon God to bless their efforts are in the field by millions murdering each other at the behest of certain boss butchers called monarchs, but the tendency of population under peaceful and just rule seems to be to increase; and in view of the fact that the world is pretty small and fairly well settled, the time is approaching, I suspect, when the people of the Caucasian lands will have to come to the dietary standards of the Mongolians—vegetable food in the main. Let's not be

troubled about that—our descendants may be just as happy without meat as we are with it. And this scarcity of meat may be a part of the Great Plan for teaching us the lesson of vegetarianism.

If we become vegetarians, meat will not be scarce any longer.

On the other hand, other farmers understand this meat situation quite as well as I do—or Mr. Ross. They know how hard it is to get feeders. They know, too, the risks of sheep-raising. They will grow more meat just as fast as they find that it pays. We are trying to show some of them in some ways that it will pay. The experiment stations are doing the same things by feeding live stock on certain rations and telling the world which gives the cheapest gains.

Of course the average man must grow his cattle and sheep in a "rougher sort of way" than the methods adopted at the experiment-station farms, in some ways. The average farmer cannot have quite as good buildings, for instance. But I notice that the herds fed at the stations are usually given just good farm conditions. The good farmer anywhere can apply the principles of the feeding tests right on his own farm so far as that is concerned.

If we are to cure the meat shortage we must do it by feeding rations which will make meat cheaply, and by growing breeds of cattle which will be beef instead of canned goods after they are slaughtered. Haphazard and rule-of-thumb methods will not do. They are the methods which are now engaged in failing.

I am with Mr. Ross on the proposition of advising the farmers to cease the slaughter of female lambs and calves. (I only wish all my ewes—almost—hadn't presented me with cute little rams this year.) But I can conscientiously carry this advice only as far as the profit extends. When a dairy farmer has all the cows he needs and can keep, and the local market for heifer calves is such that he can get more money out of the calf as veal than as calf, I for one don't see why he should sacrifice money for the principle of adding to the number of heifers in the land.

This is assuming that the man who sacrifices the calf has studied the matter out and acts along lines of real profit.

Sometimes we do the thing which really loses us money, because we haven't studied the matter.

We have printed articles in this paper showing methods by which heifers may be reared at a cost which seems to make it a very foolish thing for most dairy farmers to kill or veal them. But after all, nobody should expect any man to keep or destroy any animal on any idealistic basis.

Unfortunately we are obliged to farm with profits constantly in mind, regardless of national considerations. Profitable farming is the only kind we can advocate, even as a public matter, for it is the only sort which can endure.

Herbert Quick

THE BROWN MOUSE—A SERIAL BY HERBERT QUICK

This is a Brown Mouse which even women will like.

To be sure, he stole into unexpected places, collected corn for strange uses, and at one time even caused petticoats to withdraw cautiously into elevated places of terror-stricken observation, while men fought him with broomsticks. But at last a murmur went forth that this was no ordinary mouse, but a Mendelian Segregation.

And yet he was ordinary, for he was just a plain hired man.

Watch how expressions changed on the faces in Woodruff district as the Brown Mouse went forward with his work. Jennie Woodruff, for instance, had rather a perky stick-in-the-air nose to begin with, and she used it to point

out to the Brown Mouse—otherwise Jim Irwin—the errors of his ways. Jim cared a great deal about Jennie's nose, but being a Mendelian Segregation he had to carry out his own ideas, not hers. It was a marvelous moment, however, when he saw that nose begin to go down and the mouth tremble, and—

But only Herbert Quick can tell us the story of the Brown Mouse. It is a story of love between a man and a woman, of love between a teacher and his pupils, of love between a leader and his community. It is a great story because it is human and uplifting—and true.

Mr. Quick has been a country-school teacher in Iowa himself, he is a farmer and a friend of humanity. In "The Brown Mouse" he gives the fruit of his experience and a prophecy as to what the experiences of the future will be.

BEGINNING NOVEMBER 7TH

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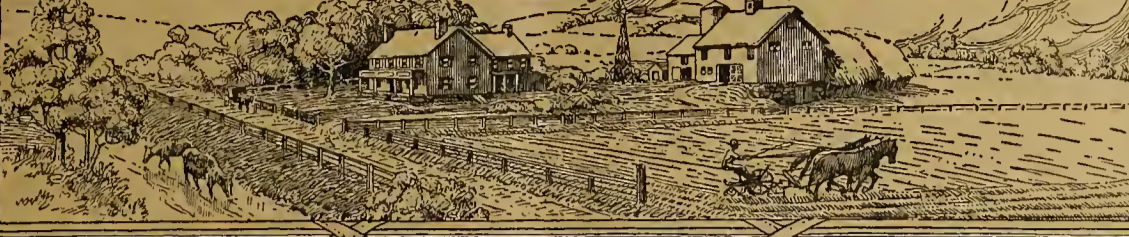
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FARM and FIRESIDE



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Parcel Post Did It

The Farmer and the City Dweller Are Now Close Business Neighbors

By Albert S. Burleson
 Postmaster-General

NO LONGER need we speculate about the possibilities of the parcel post. It is already a demonstrated and working success. Its possibilities are just as big as the people may choose to make them. If the people will prove by patronizing them that they appreciate these facilities the Department will have its case strengthened when it asks Congress for yet more liberal terms for the employment of this new public service.

The best way to make the parcel post still more serviceable, to get its facilities extended, will be to make the best use of the privileges it already gives to us.

When I was a member of Congress I used to hear some of my colleagues express the fear that a parcel post would disjoint a good many established business relations. Among some there was genuine fear, for instance, that it would injure the country town, and, because the country town is to a very large extent the primary market for the farmer, it would in the end disorganize marketing instrumentalities and thus injure the farmer. There were many very well-meaning men who insisted that nobody except the "big mail-order houses" would derive any benefits.

To-day it is safe to venture that you could not find a member of Congress opposed to the parcel post, or opposed to expanding and cheapening its facilities as fast as practicable.

Since the establishment of free rural delivery it may be doubted if another so popular legislative service has been done by Congress for the people as in creating the parcel post.

The expected protests from the country town have not been heard. The parcel post has proven a utility to the country town as well as to everybody else. The country merchant finds himself doing a good deal of business that formerly he could not handle, because he can order for his customers a vast variety of things that it is impracticable to keep in stock, and have them sent direct by parcel post to the customer.

The parcel post is a universal service, reaching twenty million people who have not had the advantage of express facilities.

The failure of the private companies to reach this great rural population was a chief reason for the Government's creating the parcel post.

Necessarily trade between the cities and the farms has been stimulated, and any increase in the weight limit that may be found on experience to be feasible will further increase the benefits to both buyers and sellers, on the farms and in the cities.

It is possible to discuss with confidence farm-to-consumer use of the parcel post because the Department in the last few months has made a careful trial. Ten cities were selected in which special efforts were made by the postmasters to inaugurate and encourage direct dealing between the producer and the consumer. It was a "farm to table" campaign. Farmers were asked to send their names, with lists of articles they would send by parcel post to town customers.

At the outset, circulars were distributed in large numbers among the farmers, explaining the methods of packing, costs of postage, etc., and asking them to send in their names. Then the postmaster at each of

for their produce. They ask full retail city prices, sometimes more; and some of them seem to have an exaggerated idea of what city people pay.

There must be advantage at both ends if the system shall succeed. The farmer must remember that his buyer doesn't see the goods; he can't personally go and pick them out as he could in the city market. There must be a price inducement to get him to take this chance. Between the usual selling price that the farmer gets and that which the consumer pays, there is a wide margin. The farmer must expect to divide this with his customer. By doing so he will get more than he formerly got, and the consumer will pay less than he formerly paid.

To illustrate this point, here is the actual experience of a Washington man who buys his eggs by parcel post from a farmer at Harper's Ferry, West Virginia. The farmer was paid at home 22 cents for his eggs. In Washington they sold at 38 cents. Therefore the problem was to distribute the difference, at 16 cents, in such wise that it would pay the expenses and postage and still give the farmer a little better price and save the city man something. Here is how they figured it out:

Each week the farmer sends five dozen eggs to his customer. The postage on that shipment is 12 cents; postage to return the empty container, 7 cents. The Washington man pays 25 cents per dozen. It figures out thus:

Five dozen eggs	at 25c per dozen	\$1.25
Postage on eggs and container		.19
Total for five dozen eggs		\$1.44

That makes the eggs average 28 4/5 cents per dozen cost to the consumer.

Once a month he remits. The farmer has got 25 cents instead of 22 for his eggs; and, what is even more important in a large proportion of cases, he has got the 25 cents in cash instead of in trade at the country store. Each party to the transaction has made a comfortable saving. Assuming that four shipments are made in a month, the consumer gets 20 dozen eggs for \$5.76 which in the regular way would have cost him \$7.60. There is a saving of \$1.84. If they had made their arrangement so as to divide that saving equally it would have been almost a dollar for each.

I have not taken into account the cost of the container, which is very small, for the same container has

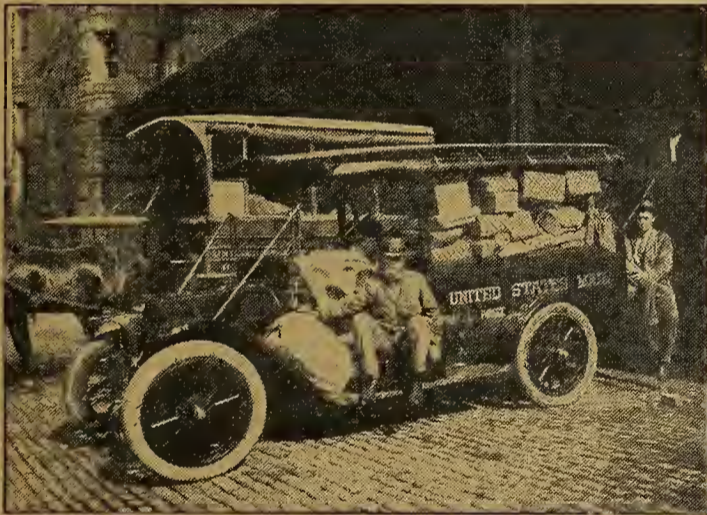


PHOTO BUCK, FROM UNDERWOOD AND UNDERWOOD, N. Y.

Butter, eggs, vegetables, fruit, go to consumer quickly

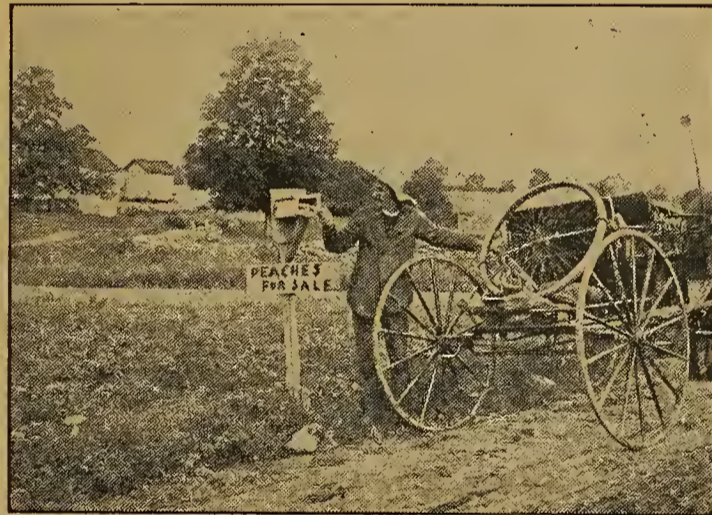


PHOTO BROWN BROS., N. Y.

Parcels of all kinds can be sent—and they are

the ten cities printed and distributed a circular, giving to the townspeople directions about how to buy by post, and giving the list of farmers willing to deal in this way.

As a result we now have reports from all these ten cities, telling actual experiences. Nothing theoretical about these! They tell us just wherein the service has been successful and satisfactory; wherein it has been weak; what modifications of methods must be adopted by both buyer and seller in order to better the service.

Right at the outset let me say that the most general complaint has been that many farmers want too much



PHOTO BROWN BROS., N. Y.

Large city office—packages must be carefully sorted



PHOTO BROWN BROS., N. Y.

The bags are filled direct from sorting department

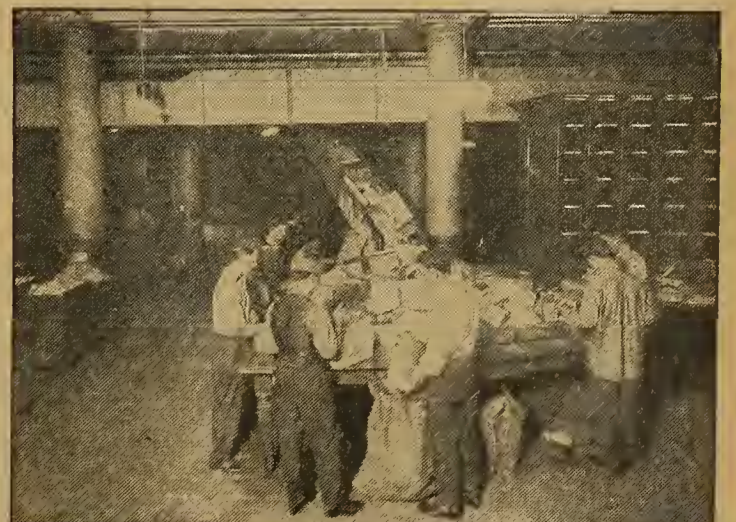


PHOTO BROWN BROS., N. Y.

Chutes carry window-mailed parcels to sorting table

in this case been used for several months and will serve for many years more; nor the cost of postage in making remittances. These items are so small as not materially to alter the general statement.

The ten cities in which we have made special efforts to test out this business are St. Louis, Boston, Baltimore, Atlanta, Birmingham, San Francisco, Rock Island, Illinois, Lynn, Massachusetts, La Crosse, Wisconsin, and Washington, D. C. Following the announcement by the postmaster in each city that he would like the names of farmers prepared to furnish particular articles by mail, large lists were made up from the responses received and distributed to the city people.

Our advice to buyers was to look over the list and write to two or three who offered the articles desired; then, judging by the replies, give orders to one or more as a test. If the first didn't give satisfactory service, then to try another until a satisfactory arrangement should be made; then, so far as possible, have a standing order for certain supplies to be sent at certain intervals.

Containers specially made for the purpose have been used for vegetables and fruit, but the ordinary market basket is an excellent container for these articles. The corrugated pasteboard egg container has reduced breakage almost to nothing, and is very light. We find that despite all efforts there are still great numbers of people who don't know about containers, where to get them, etc. Go to your post-office: the postmaster will tell you about these details.

Some excellent containers on the thermos-bottle principle are now being turned out that will keep butter from melting, and solve the problem of shipping it even in hot weather. Experience has been that butter and poultry fell off sharply in extremely hot weather because people did not know of these containers. In the larger post-offices we are having ice boxes installed to keep perishables that cannot be delivered immediately. We are also adjusting delivery service to the special purpose of getting the best possible results with this particular line of business.

In a great number of cases groups of families have formed buying clubs to take, regularly, certain articles. This makes it possible to reduce expenses and also to expand the variety of articles provided. To compute the expense for postage within the first 150 miles it is merely necessary to add 4 to the number of pounds in your package to get the postage in cents. If the package weighs 3 pounds, postage will be 7 cents; if it weighs 50 pounds, postage will be 54 cents. The group of a few families that buys 30 pounds of butter weekly thus pays practically a cent a pound postage.

One of the most successful plans for getting farmer and consumer together has been that of farmers who advertise for a fixed amount to "send you a choice collection of seasonable vegetables by mail weekly." The price must be high enough to make it profitable for the farmer; low enough to give an inducement to the consumer.

In the cities where the test was made hundreds have established regular dealings profitable to both sides,

highly satisfactory, and rapidly increasing in volume.

Standardization of goods, and the maintenance of uniform quality all the time, is one thing very important for the farmer always to keep in mind. Some of our reports insist that maintenance of the very highest quality is not so important as uniformity in quality. It will not inspire confidence or lead to ultimate success if the farmer sends excellent produce one week and a decidedly poorer quality the next.

The novelty of this system has made it possible to enlist a vast amount of publicity in its favor. In Washington, for instance, the librarian of the public library became interested, and announced that he would post on his big bulletin board all letters from farmers offering their wares by parcel post. Scores of people would make notations every day and write for their supplies.

The Housekeepers' Alliance also rendered most useful help in Washington. Through committees it investigated complaints, helped make lists of reliable and satisfactory dealers, disseminated very important information about packing and preparing goods. In connection with little clubs of consumers, commonly made up of people living in the same apartment house or the same immediate neighborhood, it has contributed in most practical ways to get the system working.

Too much emphasis cannot be laid on this kind of

The Cost of Living May Be Reduced

THE era of war prices inaugurated because of the conflict in Europe has greatly increased interest in every device that gives promise of counteracting the tendency to increased cost of living; and among these agencies we are very sure that none will do so much for the people—for producer and consumer alike—as the facilities now offered by the parcel post. It is only necessary to understand them, to use them intelligently, and to divide the advantage between producer and consumer.—Burlison.

work. Patience and education of both consumers and producers in the possibilities of the system are the first requisites. To get the understanding of the system disseminated the Office of Markets of the Department of Agriculture is co-operating with the Post-Office Department.

When the experimental work was undertaken at Atlanta, for instance, the Office of Markets sent a representative, Mr. Guy V. Fitzpatrick, to co-operate with Postmaster Jones. Mr. Fitzpatrick traveled through the State, accompanied carriers on their rural routes, talked with farmers and their wives, and gave demonstrations of methods of packing. Postmaster Jones reported that in the cooler spring weather the daily average of 250 farm-to-table packages was reached by his office. With the coming of hot weather this fell off, and the people who had meanwhile become accustomed to this economical and satisfactory method of getting supplies generally lamented the deprivation.

By the time another summer season comes we hope

that the obstacles to doing business in hot weather will be pretty thoroughly removed.

One of the important results of this system of marketing is going to be to increase the capacity of particular localities to produce the things they consume. For example, the postmaster at Birmingham, Alabama, reported that there were very few truck gardeners in that neighborhood. Birmingham is an industrial city that has grown fast; its surrounding country has not kept pace with the city, and most of the supplies have been shipped in from considerable distances. The development of this marketing system gives the producers, for the first time, opportunity to get right into the market, and it is believed that one result will be a great expansion of this kind of production.

From San Francisco the postmaster reports that producers who offered a definite package of a particular product at a fixed price have been rapidly increasing their business. One, for instance, offered raisins and figs in 5-pound packages; another offered squabs by the dozen with much success. California does not produce nearly all its requirements of butter, eggs, poultry, and the like. Importing them largely, the business has been controlled by the commission men. The opportunity for development of a home industry, which heretofore has had difficulty finding a way into the market for its products, has been made obvious.

From Boston, Baltimore, Washington, Rock Island, and other places came the complaint that both producer and consumer seemed to want all the saving effected by the new marketing method. Of course both can't have it all. The producer will not bother with the scheme unless he is helped by it to better prices; the consumer will not employ it unless he saves by it. The study of prices, expenses, etc., has gone far enough to make it perfectly plain that if they will agree on a fair division of the profits there is ample inducement to interest both sides. That is absolutely necessary.

The two smallest cities in which our experimental promotion of this service has been tried, Rock Island and La Crosse, have developed the fact that in such smaller places there is a less proportionate disposition among the people to avail themselves of it than in larger cities. This is explained on the ground that at smaller places the consumer and producer are commonly in closer touch than in larger places and the possibility of economy through the farm-to-the-table-by-mail plan is not so extensive. Yet even in these places most encouraging results have been obtained, and there is no doubt that the business is destined to a very great expansion.

It should be explained that this service is not limited to the ten cities I have named. These were selected for experiments in pushing and advertising this method of exchange. Without any of this special exploitation, without the publication of lists of buyers anxious to sell and consumers ready to buy, the business has developed into an important factor in the postal business of very many other towns. There is no longer room for doubt that it is destined to an expansion that we can as yet hardly conceive possible.

An Unaccepted Challenge

Who Can Slander Dual-Purpose Cattle in the Face of This Evidence?

IN A RECENT letter addressed to FARM AND FIRESIDE, Mr. H. B. Douglas of Washington State, in discussing a theme presented in the paper some time back, writes as follows:

Since you invite comment as to the dual-purpose cow controversy, I write to inquire whether Prof. Thomas Shaw does not beg the entire question when he charges nearly all the agricultural stations with dishonesty and with "propagating the falsehood that the dual-purpose cow cannot be bred," and refrains from giving details as to the amount of milk produced by a single dual-purpose herd or the cost of producing beef by such a herd. On the other hand, he contents himself with bluntly saying to the farming public instead, "If evidence were brought to them they would reject it."

Professor Shaw is well equipped to furnish details if they would prove his claim. About two years ago he bought in England and Scotland for James J. Hill of St. Paul a herd of dual cows and bull at a cost, as reported in the newspapers, of \$2,000 for the bull and \$500 each for the cows. What average farmer's herd costs one fifth as much? Professor Shaw has since had full charge of these cows under ideal conditions. Why does he not publish their milk records? Also the increased weight of steers raised, including cost of producing both the milk and beef up to the present time of its development?

Will he tell us whether that farm under his management has been run at a profit or a loss, even with these valuable cows. The average farmer must make both ends meet. I have heard a rumor that these cows have not averaged 4,000 pounds of milk annually.

But for the especial request of the editor I would not answer that letter: it betrays so much of ignorance as will be shown, and it has so many statements that are without foundation. It has the redeeming feature, however, of honesty of intention on the part of the writer.

Dishonesty Isn't the Word

It states that I "charge nearly all the agricultural stations with dishonesty." Most emphatically I deny that statement. Can anyone in America fasten on a sentence that I ever wrote charging the professors of the stations with dishonesty? I have charged them with ignorance, not only with what was being done with dual-purpose cattle in England and other countries, but also for saying that dual-purpose cattle can't be bred. But never have I said that in these things they were prompted by dishonesty of intention. Again I return to the charge of ignorance. I claim that a man who says that dual-purpose cattle can't be bred, let him be professor or non-professor, is an ignoramus

By Thomas Shaw

on that question. I claim that a professor who teaches thus is not fit to teach on this question. I go a step further and claim that the news of such teaching has filled the land, and it is my conviction that this country has lost heavily as a result.

Mr. Douglas asks why I refrain from giving details as to the amount of milk produced by a single dual-purpose herd.

This is the Evidence; Read It

It makes me tired to think that such a question has been asked. Where has Mr. Douglas been since I returned from England in the fall of 1913? Have I not stated again and again since that time in public print the production of whole herds of dual cows, and in some instances covering many years? These letters have appeared in leading papers in Chicago, Pittsburgh, St. Louis, Portland, Spokane, Great Falls, St. Paul, and Winnipeg. Must I go through the work again to enlighten one man who apparently has been hibernating somewhere during those months? So great is the accumulation of evidence on this point that I scarcely know where to begin or end. The following, however, will be submitted:

In the Glenside herd of milking Shorthorns at Granville Center, Pennsylvania, 45 records were completed in 1913. These showed an average of 7,950.6 pounds of milk. The five highest averaged 11,960.3 pounds, and the five lowest 5,337.2 pounds. Seven of these were heifers with the first calf. These records were made with ordinary good farm care. In the herd are 71 cows with records of over 8,000 pounds, 23 with records of over 10,000 pounds, and one with a record of over 18,075 pounds.

In 1912 the herd of 30 milking Shorthorns owned by Finley McMartin Claremont averaged 6,150.5 pounds in milk, and the average production in butter was 284.9 pounds. These cows were also kept under ordinary farm conditions. Ten of the number were heifers with the first calf.

The entire Red Poll herd at the Jean Duluth Stock Farm has averaged around 300 pounds of butter for some years past.

In the Little herd at Evansville, Wisconsin, the cow Charlotte B. completed her year's record in January, 1912. It was 15,401.3 pounds of milk, with a test of 3.93 in butterfat.

At Stanford, Montana, one cow gave 10,988 pounds

of milk in 1913, and another gave 10,232 pounds.

In England the herd of milking Shorthorns owned by R. W. Hobbs and Sons has averaged more than 6,000 pounds of milk for several years. This herd numbers nearly 200 cows. A large percentage are heifers. The large herd of South Devons at Preinley average over 8,000 pounds a year. The herd of Red Polls at Rendlesham averaged over 8,000 pounds a year for several years. The Red Lincolnshire herd of John Evans, with an average of over 40 cows and heifers, has averaged more than 8,000 pounds for the past 23 years.

In Britain from 80 to 90 per cent of the milk produced comes from dual-purpose cows. These include the milking Shorthorn, the South Devon, the Lincolnshire Reds, and the Dexter breeds, all of which over there are classed as dual-purpose. The old cow Dorothy at Tring has given more than 10,000 pounds of milk for twelve successive periods. Other instances nearly as good may be cited.

Who Should Experiment if Not the Stations?

In the recent importations of 15 non-pedigreed Shorthorn cows on the way to Mr. Hill's farm more than two thirds have a record of over 10,000 pounds in a year.

Mr. Douglas claims that proof has not been furnished as to the cost of producing beef from dual cattle. That complaint is just. But where does the blame rest? Is it not with our experiment stations? To determine the profit in milk and meat combined is a complicated question, too complicated for the farmer. Why have not the stations settled this question? Why have they conducted virtually no experiments to settle it? They leaped to the conclusion that dual-purpose cattle could not be bred.

Not long ago I sent a challenge to a leading paper in this country and to the men who claim that dual cattle cannot be bred. That challenge was published. It offered to debate this question with any person in the United States on any platform, or to discuss it with anyone in any paper of standing. That offer is still open. It includes Mr. Douglas and any professor of the agricultural colleges. I sincerely hope that some of the wise men at the colleges who say that dual-purpose cattle can't be bred and that there is no legitimate place for them on the farm will accept this challenge.

Some light, however, may be thrown on this question. In the United States the owners of dual herds have up to the present found [CONTINUED ON PAGE 13]



The owner of this farm says: "I could sell 10 carloads of eggs if I had them, where I now sell 10 cases"

The Sterile Egg is Reaching for the Distant Market

By F. Roger Miller

A FRIEND of mine who was experimenting with the sterile egg business became dissatisfied with the parcel-post plan of marketing his eggs because of the time and labor required. He was producing only one or two cases of eggs per week.

He secured copies of the newspapers published in a city 153 miles from Morristown, Tennessee, and located in a district which depends very largely upon other sections for its food supply. The market quotations for several days gave him the current prices to consumers in that city. From the society columns he secured the name of the president of a local housewives' league. To this prospect he addressed a brief but very courteous note advising that he was sending by parcel post a sample dozen fresh, all-white, sterile eggs, suggesting comparison with ordinary market eggs, and concluding with the information that he would be glad to quote prices on regular shipments if the samples proved entirely satisfactory and superior to the average eggs ordinarily offered the consumers of that city. By return mail he received a letter expressing appreciation and requesting prices. Moreover, the delighted housewife volunteered the information that she would be willing to pay more than market quotations in order to secure eggs of the same quality as those first submitted as samples.

The farmer then wrote her in detail, explaining that he was producing only a limited supply, that he preferred to sell the entire output of his flocks to one customer, quoting his own price, describing his farm and packing methods, and in conclusion suggesting that she form a neighborhood club composed of herself and several friends, authorizing him to ship one or two cases per week, all shipments to be delivered to her home and there distributed among the members of the club. He elaborated upon the fact that this arrangement would enable her and her neighbors to secure fresh from the farm once or twice a week, guaranteed fresh eggs of uniform size and color, superior in every way to the product offered on her local market.

Quality Won the Order

He offered no other inducement than quality, and that was sufficient; for three days later he received a standing order for two cases a week and a check to cover the initial shipment.

From this first venture he has secured a regular and well-satisfied customer, and by the same method is developing a greater demand than he is able to supply under present conditions but expects to more nearly meet the additional orders in the near future by largely increased production.

"Somewhere in every large city there are consumers who would be glad to buy direct from the farm," he says. "It is simply a proposition of producing what they want and giving them the opportunity to buy."

This man's plan for finding the customer could be used successfully by thousands of other farmers, and in any instances where it might fail should suggest numerous other methods which might prove just as effective.

I have made a very thorough investigation of the question of marketing as it concerns the successful sterile egg farms in the Morristown district of this great east Tennessee poultry section.

I find that sterile-egg farmers experience absolutely no difficulty in finding profitable markets throughout the year. On the contrary, they are constantly confronted with the necessity for largely increased production to meet the growing demands of their regular customers.

This condition would seem to indicate that poultrymen in other sections must be less enterprising when they experience difficulty in finding a steadily improving outlet for their eggs. My experience and study of the egg-producing business convinces me that the States east of the Mississippi now have a most excellent opportunity to develop egg-farming as an important and profitable department of the poultry industry.

The experiences of the three farmers I have selected represent the advance made in the poultry industry in this locality since egg-farming became popular here.

Forty-two years ago J. H. Bell, a dairyman, became dissatisfied with the prices paid for butter in the near-by markets. He wrote an acquaintance in Atlanta, over 300 miles away, and asked him to send a few names of persons who would be willing to pay a little higher price for fresh butter direct from the farm every week. From this list he secured customers who have been buying produce from this farm regularly from that day to this. He has since been succeeded in the active management of the farm by his son, who to dairying has added sterile-egg farming, catering to a select demand for the best farm product in butter and eggs. Neighborhood groups in the Georgia city to-day are buying their butter and eggs direct by parcel post and express from the Bell farm, and are glad to pay an average price of 40 to 50 per cent net above the quotations in near-by markets.

This method of eliminating the middlemen has worked so well that the Bell laying flocks will be increased to 1,500 hens in the near future. These hens



In this district there is a demand for white eggs of uniform size and quality

will receive the personal attention of the manager.

R. W. Barrow, who retired from a large and successful wholesale dry-goods store to embark in the sterile egg business, secured his first egg customers by writing a New York commission merchant for the names of several large consumers who would be interested in securing a dependable supply of sterile eggs of uniform size, color, and quality. From this original list of prospects he has developed a regular demand which more than covers the output of his farm, and is now preparing to increase his laying flocks to 5,000 hens.

A Dollar and a Half Per Hen Net

Mr. Barrow has never received less than an average of 50 per cent higher price than offered for ordinary market eggs. He began in a small way, and gained a practical knowledge of the business before retiring from other lines and giving it his entire time and attention. He declares that his revenues from the product of 500 hens averaged \$125 a month throughout the year, and that it is easily possible for a sterile-egg farmer to realize \$1,500 a year net from 1,000 hens properly managed.

C. E. Eckel, who owns one of the most modern poultry plants in the South, secured his first customer through an acquaintance in Jersey City. Since his first connection with a large New York dealer he has never been able to more than supply the demands of his regular customers, although the production of his farm meanwhile has increased several times over. He receives from 40 to 60 per cent net above the best prices quoted by local dealers, and considerably above

the top quotations in New York for ordinary market eggs. These are strong statements, but true.

Concerning the demand he says: "I could sell 10 carloads if I had them, where I now sell 10 cases."

All sterile-egg farmers in this district raise Single Comb White Leghorns exclusively, catering to the growing demand for white eggs of uniform size and quality. All eggs are carefully sorted, dirty ones cleaned before shipping, and the occasional eggs of small size or bad shape are discarded. Large customers are supplied in case lots by express or the fast-freight poultry special operated to New York every week, and smaller consumers are supplied by express and parcel post.

Next year a shipping club composed of the largest egg farms in the Morristown district will send a representative into the Eastern markets to sell the entire output of all of the farms in the organization to one or two large customers. The farmers back of the movement believe that this arrangement will give them even higher prices than they are now receiving, besides eliminating the labor and expense of smaller shipments forwarded more frequently.

"How would you go about finding a market for your eggs if you were just entering the business?" I asked one of the pioneers.

"Simple enough," he replied. "If I had no relatives, friends, or friends' friends whom I could ask to place me in touch with large consumers, I would secure the names of the best produce dealers in the largest cities within a radius of 500 miles and write them for quotations on the average number of cases I could supply regularly."

"Or if my output was too small to offer to dealers I would write a number of the large hotels."

Brown Eggs Are Not White

"From either of these I feel reasonably sure that I would secure a satisfactory contract more than sufficient to take care of the supply from a beginner's operations."

"We farmers often fail to find the best markets because of our total disregard for business methods, and failure to understand that the little details which we regard as superfluous are really important items in modern salesmanship."

"A neighbor decided to try a case of eggs a week for a while as an experiment in special marketing. I gave him the name of a dealer whom I was unable to supply. The neighbor told me a few

days later that the dealer was not in the market for sterile eggs. I wrote the dealer for an explanation, and received with his very courteous reply the neighbor's inquiry, miserably scrawled on a soiled sheet of tablet paper. 'If you will vouch for the man, we will try a few shipments of his eggs,' said the dealer, 'but we were compelled to judge him by his letter, and believe you will agree with us that it is rather a seedy-looking salesman.'

"Another neighbor for whom I had secured a contract came to me one day with the information that his customer had canceled the contract without explanation. Upon investigation I found that although his contract called for all-white, all-sterile eggs, the farmer had included in his last shipment several dozen fertile brown eggs because he had 'sold some of the best eggs to a town customer,' had to fill in on the out-of-town dealer to make up the shortage, 'and didn't suppose that it would matter.'

"No good poultryman who will apply modern business methods to his farm," he concluded, "should ever experience serious difficulty in securing and maintaining a profitable demand for his product."

More than half of the sterile eggs produced in the Morristown district are shipped by freight in the regulation 30-dozen wooden egg cases. This is due largely to the fact that a regular poultry train leaves Morristown every Saturday afternoon, and under ordinary conditions reaches New York in time to place from 10 to 20 cars of poultry and poultry products on sale forty-eight hours after shipment. The farmer who produces only a single case of eggs per week can place his goods upon the market just as soon, just as economically, and just as easily [CONTINUED ON PAGE 13]

How Can We Sell This Underwear at 50c a Garment?

You're bound to ask this question when you see Hanes Underwear. Here's the answer. Our mills are right in the heart of cotton land — this means a big saving in handling and transportation charges.

50c per Garment
\$1.00 per Union Suit

Then we buy our raw material in immense quantities direct from the growers — we save you brokers' and other profits.

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Buy none without it

UNDERWEAR

When you examine the elastic, snug-fitting collar, the firmly knit cuffs, together with

The Unbreakable Seams —

your money back or a new garment if they do—you'll buy this underwear in a hurry. Buy two or three suits while you're about it. Only 50c per garment, \$1 per Union Suit.

If you can't find the "Hanes" dealer in your town, be sure and write us.

P. H. HANES KNITTING CO., Winston-Salem, N. C.



Farm Notes

The Ping! Ping! of the Engine

By James A. King

ON THE first real cold days of the fall an automobile owner usually notices that he cannot get the usual power out of his engine. The explosions do not have that sharp ping! ping! to them. The mixture is too thin; too much cold air has come through the air valve without going over the spray nozzle. This makes a slow burning mixture that does not have the "power." The air valve of the carburetor needs tightening so that more of the air will come over the spray nozzle and pick up more fuel. The following general instructions will help.

After the car is warmed up stop it, and tighten the air valve until you get that proper sharp report from each explosion.

Watch it carefully a few minutes to see that it continues that way.

Then run the car at a good speed. If you do not get those same sharp explosions while the car is running, try loosening and tightening the air valve until you do get them. Then see if it works the same when standing still.

Try it back and forth until you get the same uniformly powerful explosions both when standing still and when running at various speeds. It may take a little trying back and forth, but the improved running is worth the trouble.

The Raw-Meat Trail

By Whitney Montgomery

A FEW years ago we gave an old trapper permission to ply his trade in our 800-acre wood pasture. One evening I went out with him to see him bait up his traps. He had caught nothing for two or three days, and even a trapper gets "blue" when he finds his traps empty two or three mornings in succession.

When we left camp I decided to try an experiment. He had dressed a large fish and had left the head hanging by a wire from the limb of a tree. I took the fish head with me and when we were a few hundred yards from camp let it drag on the ground. A good many of the traps were set on logs, and when I came to one of these traps I rubbed the raw end of the head up and down the log. The next morning we took three large minks from the traps on the logs. Almost any carnivorous animal will trail a piece of raw meat or a carcass that is dragged on the ground.

Trapping Muskrats

By Leonard F. Strickler

TO TRAP muskrats in their houses in winter, cut a hole in the side of the house and set the trap inside, on the bed. Fasten the trap to a stick outside the house, closing the opening tight so the diving hole will not freeze. I have best success at this kind of trapping by using a small trap (No. 0) and a good length of chain, as it gives the rat more chance to drown.

In the spring when the ice has just commenced to melt, you will find small piles of grass roots projecting above the ice, with a feed bed directly under it. Set a trap on this bed and cover the hole. Muskrat musk, beaver castor, and mink musk are attractive to the muskrat as a scent. Visit the traps every evening and morning.

Home-Made Blasting Tools

By Paul R. Strain

I THINK more stumps and boulders would be blasted, more trees planted and subsoiling done, with dynamite on the farms if the owners had more suitable tools to make holes for the explosives. It is very exciting to see a blast go off, but it is terribly hard and discouraging to make the holes without proper tools. With my pipe dies and some help from a neighbor I made the tools described below. Purchase 19 feet of galvanized 3/4-inch iron pipe, with two T's for same. Cut the pipe into three 5-foot lengths and four pieces a foot long each. Thread one end of two of the long pieces and put on the T's. Now screw the short pieces into the T's, whereupon you will have two long auger stems with handles.

Now buy two 1 1/2-inch augers without handles, one of cheap quality for dirt, the other of the best grade for wood-boring. Weld them into the bottoms of the pipes and you are ready for dirt and any stump roots you may strike. To pro-

vide for stone, take the remaining 5-foot length of pipe and weld in one end a good piece of tool steel dressed as a churn drill and same size as the augers, so that all drills are same size and will follow each other in the bore hole when necessary. This is sometimes a very essential feature. You will also need a good tamping stick, which should be of straight hardwood, about 5 feet long and a little less than 1 1/4 inches in diameter. Made as above my tools cost me a total of \$4.

The welding of the auger into the iron pipe is a simple matter. I made my first earth auger myself at my small forge. Not being able to make a real weld, I simply pounded and drew in the pipe about the shank of the 2-inch auger, and it has never come loose. Still, I do not like to take it with me on any of my custom jobs, so I had my regular working tools made by a neighbor blacksmith, who charged me 15 cents for each weld on the augers, and a little more for the weld on the churn drill because it had to be done much more solidly to withstand the constant pounding on solid rock. Though I have bored with the wood auger a foot or more into the toughest of wood, that weld has never showed signs of giving.

Two Afflictions—Two Cures

By Harry N. Holmes

IN SUMMER and fall many of us are seriously troubled with an itch probably due to dust from the crops and weeds. Some men are immune, but with others the irritation is almost intolerable. When hot and sweaty, such an itch is veritably the last straw. It even deprives its victims of much-needed sleep at night. A remedy that is cheap, instant, and infallible is carbolated vaseline rubbed well into the skin all over the body. Relief is complete and immediate. As the trouble may recur, the vaseline should be used frequently.

Another affliction appears in the form of excessively sweaty feet which are rubbed raw by heavy shoes. Frequent washing is good of course, but an absolutely satisfactory treatment is the application of powdered borax to the feet and socks. No other foot powder equals this for the purpose.

"How about his folks?" asked a farmer of his daughter who was in process of becoming engaged. "I like a good ear of seed corn, but I want to know what sort of stalk it grew on, too."

A Good Name

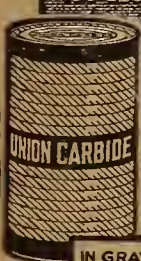
You would not readily part with the good name you have for honesty, sobriety, and fair dealing, would you?

The advertisers in FARM AND FIRESIDE have this same high regard for their good reputation. They are dealing with a vast number of people throughout the country and their success is due largely to this honest, courteous treatment of customers.

Look carefully through the columns of FARM AND FIRESIDE to see if what you need is advertised. If so, communicate with these advertisers. You will be promptly advised where the articles may be purchased in your own town, or your wants will be supplied direct. These advertisers are worthy of your confidence and patronage.

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The Chicago Gas Company has over 500,000 customers. Other big city gas companies have proportionately as many. These millions of city people wouldn't know how to get along without gas. They long ago found it so superior to oil and coal that they hardly know what these things look like.

City folks used to have this great convenience to themselves. But today HOME-MADE ACETYLENE is even a greater boon to country homes than city gas is to city homes. Acetylene is ten times richer than city gas — the light is white, more brilliant, and far more beautiful. Acetylene is also like city gas, a perfect cooking fuel. With an acetylene range in her kitchen the country housewife can enjoy cooking in cool comfort without any of the drudgery of handling kindling, coal or ashes. The light fixtures are, too, handsome brass or bronze — selected from a catalogue of many styles. The men folks on the place can have big white lights of their own in barns and outbuildings — and have all fixed to light with the pull of a chain — without matches. A quarter of a million farmers now make this light and fuel right at home. Each one fills his acetylene generator once a month with the acetylene producing stone, UNION CARBIDE. The generator does all the rest. The new models are inexpensive and are wonderful improvements over the early types.

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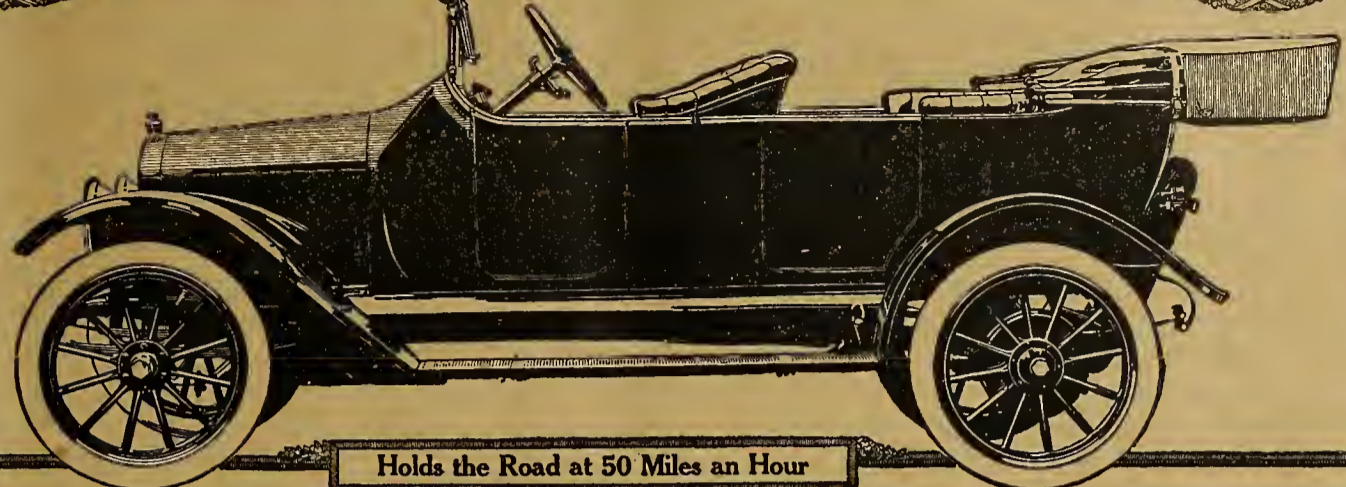
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With 17 New Features

With 17 New Features



Holds the Road at 50 Miles an Hour

The Sensation of the Automobile Year

The biggest automobile value ever offered for less than \$1,000 Our production of 60,000 cars makes the new price of \$695 fully equipped (with 17 new features) possible.

Here are the Seventeen New Features

- 1.—Pure stream-line body. 5.—Tire brackets on rear. 9.—Foot-rest for accelerator pedal. 13.—Hood lights braced by rod running between lamps. 17.—Improved steering gear sports and throttle control on quadrant under steering wheel, electric horn button mounted on end of quadrant.
- 2.—Adjustable front seat. 6.—Spring tension fan. 10.—Tail lights, with license brackets attached. 14.—Famous make of anti-skid tires on rear.
- 3.—Sims high-tension magneto. 7.—Kingston carburetor. 11.—Gasoline tank located under dash seat. 15.—Groosefully rounded, double-shell radiator equipped with shock absorbing device.
- 4.—Three-quarter elliptic rear springs. 8.—Clear Vision Wind Shield. 12.—Crown fenders with all rivets concealed. 16.—Instrument board, carrying speedometer, carburetor adjustment and gasoline filler.

Powerful—fast—unusually graceful and beautiful in its lines—roomy, comfortable and completely equipped with Top Windshield and Speedometer the New 1915 Maxwell at \$695 has more high priced car features than ever put in an automobile before for less than \$1,000.

Automobile experts have refused to believe that anyone could produce a full grown five passenger really beautiful fully equipped car—our with real high tension magneto—our with sliding gear transmission—left hand drive, central control, a car with practically every high priced car feature for less than \$1,000.

Here it is. Here is a real automobile. Here is the easiest car to drive in the World—here is the greatest all around hill climbing car in the world. Here is an automobile to be really proud of.

With Electric Self-Starter and Electric Lights \$55 Extra

The new 1915 "Wonder Car" is on display at Maxwell dealers. See it at once. If there is no dealer in your town write or wire us. Send your name and address for the New 1915 Catalogue. Maxwell Motor Co., Inc., Detroit, Mich.



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More than 37,000 "1915" Maxwells Ordered Within Six Weeks After August 1st

On August 1st, the double page newspaper announcement—reproduced in miniature above—announced the 1915 Model Maxwell "Wonder Car." It was published in the leading newspapers of America and was followed by Maxwell page advertising in this and other prominent national publications.

Within six weeks after August 1st, more than 37,000 Maxwells were ordered by dealers. Everything indicates that, by the time this is printed, orders for at least 50,000 Maxwell cars will have been received.

This tremendous demand proves that the public and automobile dealers have recognized the 1915 Model Maxwell as the biggest automobile value ever offered for less than \$1,000.

The Maxwell Motor Company is now shipping 800 cars a week to dealers. Within a short time, this production will be increased to 1,200 cars per week. To be sure of prompt delivery, go to the Maxwell dealer nearest you and order your Maxwell now.

5-Passenger Touring Car \$695

2-Passenger Roadster \$670 Maxwell Cabriolet \$840 Maxwell Town Car \$920

Any Model Equipped with Electric Self-Starter and Electric Lights \$55 extra

"Holds the Road at 50 Miles an Hour"

\$695

Write for the beautiful 1915 illustrated Catalogue. Address Dept. A.G.
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EDITORIAL COMMENT

FARM AND FIRESIDE

The National Farm Paper

Published every other Saturday by
The Crowell Publishing Company, Springfield, Ohio

YOU'RE on the jury. Ever realize how many decisions of different kinds you make even in a day? And we know you like fair play.

So when you see any opinion advanced or statement made in FARM AND FIRESIDE that seems to you unfair or biased, speak up and say "Fair Play!" This issue, and every other issue, is open to criticism or approval in more than half a million homes besides your own. It's so easy to condemn on appearances. Give us your views and reasons on the other side if you think only one side has been given. Even if you have only something nice to say, send it along.

HERBERT QUICK, - - - - - Editor

October 24, 1914

Johnny's Colt, Father's Horse

MANY a boy's nature has been soured against the farm by the discovery that, though he might own calves, colts, pigs, the same animals belonged to his father when ready for market.

The American farmer begins to feel a good deal the same way about the tariff. When an article is produced for export the world's prices fix its local price and no tariff can do the farmer any good. As soon as there is such a scarcity that a tariff might increase its price at home it goes on the free list.

As soon as the war broke out there was a flood of petitions to Congress to take off the tariff on wheat so that the food of the people might not be taxed.

The petitions were likely to be granted, too, until it was discovered that, transportation counted in, wheat was as high in Canada as here.

The tariff colt may belong to the farmer, but the old horse is the consumer's every time.

An Inadequate Test

THE Holstein-Friesian Association has adopted the week as the time during which cows of that breed shall be under test in order to be admitted to "advanced registry." No experienced dairyman would be willing to buy a cow as an "advanced" milk yielder on a single week's test. Therefore, for the founding of a class of dairy cows which is better than pure-bred, the week's test seems inadequate.

The proof of the cow is what she will do in a year. So many pure-bred cows are only of ordinary quality at the pail that an advanced registry for cows of exceptional class seems necessary; but the "better than pure-bred" cows should be given a test as severe as that of the dairyman who milks for the market. We haven't got down to brass tacks in the advanced registry matter yet.

Turn on the Gas!

IT IS announced that the company which has for years enjoyed the contract for furnishing compressed gas for the Pintseh lights on railway cars is about to enter the rural field and furnish bottled gas for farm use. The claim is made that a bottle containing 300 cubic feet of gas will supply the average farmhouse for a month at a cost something under \$2.50. A German inventor named Blau some years ago invented a gas system of a similar sort, and there is a strong company in America organized to make this gas and furnish it in a compressed form in certain territories. Acetylene gas is now used for cooking as well as for lighting, and there are many excellent gasoline systems. The man who builds a new house should remember these things and

put in gas pipes while the building is under construction. It doesn't cost much then, and the pipes can never be installed so cheaply again, nor can so good a job be done in putting them in.

The time seems to be coming when gas will be as common in farmhouses as in cities. When gas can be bought by the pound at reasonable rates the women who have the trouble of cleaning and filling lamps and building fires will demand them, and there will be no really good reason for saying them nay.

Tampering with Nature's Balance

WHEN a plant, an animal, or a disease is introduced into a new environment, nobody can tell what havoc it will wreak. The English sparrow is a pest in America. The phylloxera, which does very little harm to the vine in America, has done untold damage to the vineyards of Europe. The mongoose, which is useful as a foe to serpents in Asia, has been a calamity to West Indian islands, where it turned its attention to the birds. The water hyacinth is a choice flower in its proper place, but it has become a pestilent river weed and an obstruction to navigation in Florida and Louisiana. The chestnut blight seems to do little harm to the chestnut trees of China, but is likely to make a clean sweep of this valuable timber tree in the United States. The scale insects are virulent in America, while much less so in their old homes. Ordinary domesticated rabbits have overrun Australia so completely as to have become a pest.

The man who imports any living organism into a new milieu without the best of reasons and after due taking of advice is worse than foolhardy. He commits a crime of the sort which the law condemns as so grossly negligent of the rights and safety of his fellow men as to amount to malice in law. Nobody would expect the American muskrat to develop into a pest, but it has become such in Austria.

About nine years ago an Austrian landowner liberated ten pairs of muskrats on his estate near the city of Prague. Freed from their natural enemies they have multiplied enormously. Vegetarians in their native land, they are said to have become fish eaters in Europe. At first they were protected against trappers, but now war is to be declared against them. It is to be hoped that they will be more easily controlled than some of the pests which Europe has sent to us.

Restricting Cotton Acreage

PEOPLE who meet every bad situation by the cry, "Pass a law!" are now urging legislation against the planting of the full acreage of cotton next year. There would seem to be less reason for this in the present case than in most irrepressible crises.

The situation is as plain as the nose on the planter's face.

Why should he be forbidden by law to do so foolish a thing as to plant a big crop of cotton with the warehouses full of unsold bales and the price below the cost of production?

We are not of those who believe that the Government has no business to dictate what a man shall do with his land, but we can see no reason why the law can be supposed to have any excuse for stepping in now in the matter of cotton acreage. The planting of cotton injures no common property, nor the property of any of the planter's fellow citizens.

To overplant is merely unwise. The Government cannot supply sense to farmers. They must look to nature and information for that.

Moreover, it is not at all certain what the situation will be when the time comes to plant cotton again. If the Government will supply the information which it is its function to collect, its duty will end there. If the cotton planters then plunge in cotton on a falling market nobody is to blame but themselves.

Denatured Alcohol Again

AS THE law now stands, the way is open to the American farmer for the establishment of stills for the making of denatured alcohol. The joker in the old law has been removed in the Underwood bill.

To most of us, however, the whole thing is a blank. We see nothing in it. We are informed that the German farmers make denatured alcohol at a profit. We know that denatured alcohol is sold to us in the market at from eighty cents to nearly two dollars a gallon. We know that it is made in the co-operative distilleries of Germany, of potatoes, fruits, and other waste farm products at a cost which makes it a competitor there with gasoline.

But for all that the subject is a blank to us. We do not know how to engage in the business. We have no data as to the possibilities in it.

It is to be hoped that the Casey bill or a similar law will be passed under which representatives of the Department of Agriculture may be assigned to study the matter of practical farm stills, and the organization of co-operative associations of farmers for operating them if it is found commercially profitable to do so.

At present our introduction to the subject is left in the hands of promoters who go about taking their profits from associations of wheedled farmers and leaving in their wake a trail of litigation and abandoned stills.

The whole question of whether we can make denatured alcohol on American farms hangs in the balance and seems to depend on wise governmental action.

Don't believe the advertisements published in some unscrupulous papers that the mule-foot hog is immune to cholera. This breed of hogs will die of cholera as easily and quickly as any other.

A Fair Dog Decision

AMAN near Westwood, Ohio, killed a neighbor's coon dog. The owner of the dog sued for damages. On the trial it was shown that the dog was not listed for taxation according to the law, and the court held that such being the case the dog was not property.

How many of the dogs of this nation are listed according to law? Probably not a very large percentage. Under the Ohio ruling unlisted dogs would seem to be outlaws which may be killed when found trespassing—and probably whether they are trespassing or not—and the killer be subject to no penalty.

Moral: List your dogs if they are worth listing; if not, kill them yourself.

Who Started the Fire?

DID someone set the house afire? Before you accuse anyone consider in how many ways fire may start which are outside the ordinary experience.

At Peoria this year a defective window pane focused the sun's rays and set fire to the curtain. One of those "bubbles" in the glass did it.

A tank of sheep dip exploded in the sun and set fire to a barn in Carroll County, Illinois.

The ladies of the United Brethren Church in Lawrence County, Illinois, left in a closet the rags saturated with linseed oil, turpentine, and gasoline which they had used in cleaning the church. These took fire of their own accord and destroyed the church.

A Quincy woman went to bed with a lighted lamp beside her by which to read. This might have been all right if she hadn't been using gasoline in cleaning the bed. As it was an explosion burned her seriously.

In Rockford the sun's rays set fire to a box of matches and caused a conflagration. You can't always tell.

The Farmers' Lobby

Calamity to Cotton Means Calamity Everywhere

By Judson C. Welliver

WHAT about the 'buy-a-bale' cotton campaign?" the Lobby asked a cabinet officer whose duties bring him into close touch with the Government's relations to national and world business. He looked out the window a half minute; then:

"Nice testimonial of kindly sentiment toward the South," followed by a further lapse into pensiveness; then:

"Perfectly harmless," followed by further rumination; then:

"May even do a little good."

After that he hesitated quite a spell, finally whirled in his chair and faced the interviewer:

"And on the whole perfectly futile."

This last with an air of finality that indicated that his statement of the case was ended.

It can safely be said that the Washington Administration is anxious to help in every sound and practicable way in solving the problem of the South in the matter of cotton. But there is fear that some fantastic projects will gain more of support and confidence than would be helpful.

The country was reasonably assured a very large cotton crop even before the war broke out. At that time it was calculated at perhaps 15,000,000 bales. At the time of writing a good many very respectable authorities insist that the crop may go as high as 17,000,000 bales of 500 pounds. This is a record-breaker yield.

Folks Thought of Food First

If there had been no war in Europe this would have been a year for low cotton prices. We can't expect record-breaking yields and high prices at the same time.

"But," retorts the Southern cotton raiser, "we have a record yield of wheat this year, and it is getting exceedingly high prices. Why doesn't the war treat cotton and wheat alike?"

Easily enough answered. Because people in times of stress—Europe in this war, for instance—curtail everything else before they begin starving themselves. Folks will eat. The old suit can be worn a while longer.

That isn't all either. As soon as the war broke out, people in Europe made a wild rush to lay in food supplies. People with ready money rushed out to buy.

It was during that era of hysterical buying that our wheat prices went up to \$1.25.

Then people got saner. The foreign Governments assured them that they weren't going to starve. People came to believe it, buying fell to normal levels. Wheat, in short, has been through its spasm.

But cotton is not out of its spasm yet. Cotton is very differently affected by the same causes.

The first thing the warring nations thought about when they saw themselves in trouble was something to eat. They hurried out to buy it, and that pushed prices up.

Now, while they were so busy thinking of food, they forgot about clothes; that could wait longer. Consequently the very thing that abnormally raised wheat also abnormally depressed cotton prices.

But as soon as they got over the food scare the people found time to think again about clothes. The result was—and it was an interesting fact too—that at the very time wheat was coming down cotton was beginning to go up.

The balance was beginning to be restored.

The price is getting up around 10 cents again too, which when compared to cotton prices of other years is not half so bad as some people insist on thinking it. So recently as 1902 cotton never touched 10 cents in the entire year; even on the New York market the highest price of middling uplands was 9½ cents. From 1893 to 1899, inclusive, the price never touched 10 cents in New York. The highest point in that market in 1898 was 6 9/16 cents. The big crop of 1912 bore the New York price down as low as 9.35 cents at the low point for that year.

So it appears that cotton is getting, though a little more slowly than wheat, the inevitable recognition that must come to such a necessary of life.

There are in operation in Great Britain about 57,000,000 spindles; in the United States only a little over half as many; on the continent of Europe about 42,000,000; in the Far East about 7,000,000. Total for the world just about 140,000,000.

These are figures on normal conditions. In Great Britain and the United States the industry will not be seriously affected by the war. Each can, in a time of extraordinary demand, handle considerably more cotton than its average; probably one third more.

Khaki is Made of Cotton

Can the manufacturing capacity of the rest of the world be speeded up, under pressure of necessity, enough to take up the slack caused by the idleness of the German mills?

I asked that question of a very high authority at the Department of Commerce, and he replied that in his belief it could. He analyzed it thus:

"We must remember that the British manufacturing capacity is almost half that of the whole world. The British and American capacities together are considerably over two thirds of the world's. British mills are not going to be shut down; the war will not draw away their operatives because not over 10 per cent of these are subject to military demands. The country is full of experienced operatives who can be drawn back

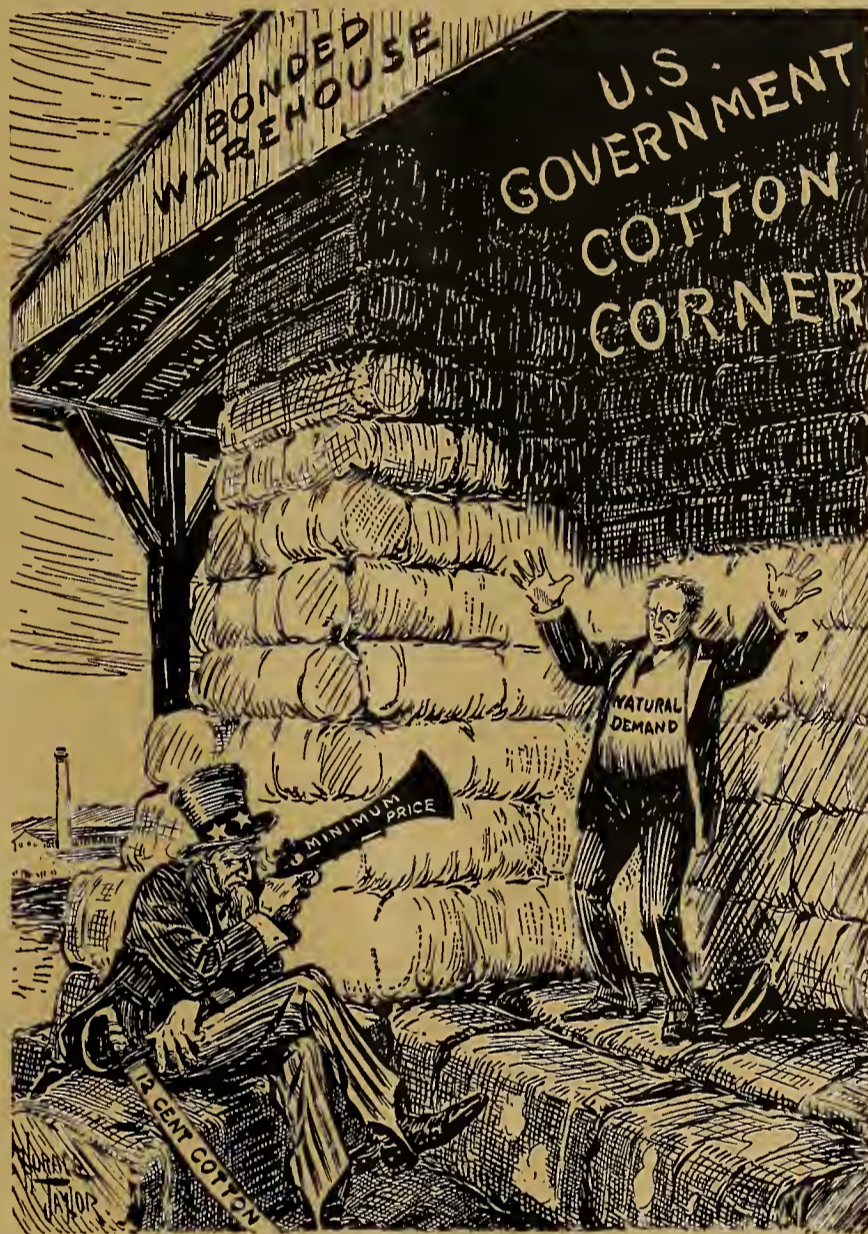
to the mills if they are needed. On the whole, it is confidently to be expected that there will be a big increase in the output of the British mills; they will be after the trade that the Germans have controlled.

"That same is true of the American mills. As soon as things get adjusted to the new conditions the demand for cotton will be limited only by the capacity of the mills to turn it into cloth.

"And the market for it will be found. Millions of men are on the battlefields, and they are the greatest consumers of cotton. They wear khaki—all cotton. A soldier wears out about a suit a month on the average. At home, in ordinary occupation, he might use three suits a year, and those mostly wool at that. Now he becomes consumer of four times as many clothes, and those largely of cotton."

Nothing very bearish about that, is there?

And the evidence is accumulating that the foreign market begins to want the cotton. On one day lately 25,000 bales were reported shipped from Galveston



Isn't there some other way?
Mr. Legislator, your Uncle Sam was tickled when you were elected by "trust regulation" sentiment; and this is what you would have him do!

alone, breaking that port's records. Cotton was already beginning to divide honors with wheat in the rush to Europe.

As to the ships in which to get the cotton abroad Secretary Redfield expressed no worry. "The foreigners will provide them because they'll need the cotton," he said.

The world will go right on wearing clothes. A good many people, aside from soldiers in the field, will have to wear more cotton and less wool than they have been accustomed to use.

With this summary of the world's situation as regards cotton crop, price and demand, what about the buy-a-bale movement, the proposals for having the Government buy part of the crop outright and hold it off the market, and the suggestions of other similar methods to relieve the South?

Cotton is a debtor crop; that is, the average cotton producer is apt to have spent a large share of his crop's value before he actually gets the crop picked. Consequently there is an insistent demand for a market as soon as the crop is ready to sell. A crop of 17,000,000 bales means, at 10 cents a pound, \$850,000,000. To shut down the cotton market, as was almost done for a brief time after the war started, and leave the cotton unsalable in the hand of the producers, would take away that much money. It would leave the South prostrate.

That would mean that the South couldn't pay its bills, at home or elsewhere. It would have to quit buying.

The railroads would be without their most important freight factor.

Northern business that sells its products to the South would have lost its market.

Therefore vast numbers of people in the industrial centers of the country would be unemployed.

So it's no wonder the South is ready for extreme measures to make a market; no wonder the rest of the country wants to help itself by helping the South.

That was what the Government had in mind—to help the whole country by helping the South—when the Treasury announced that commercial paper secured by cotton warehouse receipts would be accepted as security for issues of emergency currency. It arranged for the establishment of warehouses under bond, just as there have long been bonded warehouses for whisky. The certificate of deposit of cotton in one of these official warehouses can be taken to a bank and deposited as collateral to a loan; then the bank in turn can deposit these certificates with the currency association to which it belongs, and get emergency currency under the provisions of the Aldrich-Vreeland currency law.

It is of course necessary when emergency measures of this kind are adopted to recognize that they are temporary.

Just recently complaint has been made that some of the banks in the South have been disposed to hold back their money and pile up big cash reserves, instead of loaning to customers and keeping business moving. Of course if the banks should generally adopt such an attitude the whole scheme would fail. Money only works by circulating.

When Secretary McAdoo received advice that some banks were doing this very thing he promptly denounced them for it. He announced that deposits of government funds would not be made with hoarding banks. There were complaints against the New York City banks for refusing to extend proper accommodations to their customers, but on examination these were found to be almost without exception unfounded. On the other hand, complaints against provincial banks on this same charge were found to be in too many cases pretty well based.

Some Dangerous Schemes

The government authorities take the position that a bank which takes advantage of such a crisis as the European war has caused, to make big profits out of the necessities of the public, is pretty nearly criminal.

All kinds of proposals have been made for relief of the South. One is that the Government accept warehouse receipts for cotton as security and issue money directly to the owner of the cotton. That isn't going to be done because it would bring on inflation.

Congressman Henry of Texas introduced a bill providing that the Government should print \$500,000,000 of national currency and deposit it in the banks of the cotton States to be loaned to producers of cotton, on deposit of warehouse certificates, at the rate of 10 cents per pound of cotton, the interest not to exceed 3 per cent per annum. This measure caused a good deal of amusement. The further provision was made that the loans should be carried at this rate until the cotton could be sold at 12 cents per pound!

The effect of that measure would be to establish at once a minimum price of 10 cents a pound, while many people would insist on holding for 12 cents. The buyers of cotton would be further discouraged, and the country would be doing business on this emergency currency. Because they could get 10 cents a pound, producers of cotton would figure that they might as well raise another big crop next year; and so instead of reducing the yield, as is the natural operation of the law of supply and demand when prices fall, the next crop would be a big one, seeking a market while the present one would largely be remaining in storage. A year hence, as a result, the situation would be worse than ever.

Nobody in Washington suspects that the Henry plan has a ghost of a chance.

Another project was put out by the Atlanta Chamber of Commerce, which wanted the banks of the cotton States to get together in an agreement that they would not lend money to cotton-raising customers unless the latter signed an agreement to reduce their cotton-planting for 1915 by one half.

Reduction of the cotton crop should and will come naturally if prices remain low. It is dangerous business to interfere on any such scale with the commercial law that regulates such things. More diversified farming would be good for the South; less dependence on cotton. But to make a flat requirement that all planters reduce their crop by half would cripple many Southern farmers who have not the machinery, the trained help, the seed, the capital, or the proper soil.

"Safety First" in Marketing Too

It would be fine if the South, for instance, could raise corn and hogs in place of say one fourth of its cotton crop. But to make such a revolutionary change, all in one year, as the transfer of half the cotton acreage to other crops, would be about as practicable as to undertake transplanting the banana crop from the tropics to Labrador.

To summarize it all, I can say with confidence that it reflects the feeling of the men who are making the Government's policy toward this set of questions that before Christmas the cotton crisis will be relieved, cotton will be moving with comparative freedom, and the scare will be pretty much over. Prices will not be so high as if there had been no war, but they will be natural, not artificial, and the country will be safer for having risked no experiments or artificial schemes that looked to inflation of the currency.

THINK HARD

It Pays to Think About Food.

The unthinking life some people lead often causes trouble and sickness, illustrated in the experience of a lady over in Wis.

"About four years ago I suffered dreadfully from indigestion, always having eaten whatever I liked, not thinking of the digestible qualities. This indigestion caused palpitation of the heart so badly I could scarcely walk up a flight of stairs without stopping to regain breath and strength.

"I became alarmed and tried dieting, wore my clothes very loose, and used other remedies, but found no relief.

"Hearing of the virtues of Grape-Nuts and Postum, I commenced using them in place of my usual breakfast of coffee, cakes or hot biscuit, and in one week's time I was relieved of sour stomach and other ills attending indigestion. In a month's time my heart was performing its functions naturally and I could climb stairs and hills and walk long distances.

"I gained ten pounds in this short time, and my skin became clear and I completely regained my health and strength. I continue to use Grape-Nuts and Postum for I feel that I owe my good health entirely to their use.

"I like the delicious flavour of Grape-Nuts and by making Postum according to directions, it tastes similar to mild high grade coffee." Name given by Postum Co., Battle Creek, Mich.

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Look in pkgs. for the little book, "The Road to Wellville."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.

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How Can I Build a Small Greenhouse?

By W. A. Toole

IN CONSTRUCTING several small greenhouses we have found that the most convenient and the cheapest way is first to decide on the size and style of house desired and then to write to various concerns that furnish greenhouse building materials.

They will send plans and estimates of cost free of charge, and the most desirable one may be picked from these. The rafters and other woodwork will be sent all cut to fit, and the ventilating sash joined. Plans for construction are also sent so that it may be put up with only the help of a common carpenter; or, if the owner is handy with tools, no extra help will be needed.

Wooden Walls Are Unsatisfactory

There are many forms of greenhouses with patented features of construction, and after reading literature describing them one almost feels that plants cannot be raised in any other kind. Many of us have to consider the cost quite closely, and to these I would say that common red cypress rafters with gas pipe or angle-iron purlins and purlin supports, and with larger pipe wall supports answer every need and are much cheaper.

The greenhouse side walls are very much better when made of cement instead of wood. Wooden walls can be constructed more quickly and are cheaper, but they soon rot out, and when decay sets in they let out a lot of heat. Wooden walls will usually not last nearly as long as the rafters, and it is a tedious and expensive job to replace old walls under a greenhouse.

After leveling the ground where the greenhouse is to stand dig a ditch along the line of the walls about 2 feet deep and 16 inches wide. At the bottom of the ditch should be widened to form a foot, and to provide a broader foundation. If bank-run gravel is used, such as we have, there will be many rather large stones mixed through it.

The bottom of this ditch, which is to be the foundation for the wall, may be covered with these large stones, and after the concrete has been started stones up to half the size of the thickness of the walls may be worked in. This saves concrete and provides a way of disposing of these large stones. If the ditch has been carefully dug and the sides do not cave in, no form will be needed for the concrete below ground. At the surface of the ground, forms should be set for a wall 8 inches thick. Small greenhouses may need a wall only 6 inches thick.

At the proper point the pipe posts for the side walls should be set in the wall. To hold them to the proper line while finishing the wall, we found the easiest way was to attach the posts to their proper places on the eave plates and then prop the eaves up to the proper line and pitch. Bolts were set in the cement at the top of the wall to attach the sill firmly. After allowing the walls to set for two weeks the rafters were put up and the glazing done. The rafters should be given at least one coat of white lead paint before putting up and another coat before glazing.

A Concrete Chimney for \$50

Metal smokestacks we found rusted out very quickly, and the mortar finally crumbled from brick chimneys; so after studying the question we decided that a concrete chimney would be cheaper than brick. A solid base was constructed 4 feet square. The chimney tapers to 28 inches square at the top, and has a round flue 16 inches in diameter. One-fourth-inch rods were used at each corner for vertical reinforcement. Heavy wires about a foot apart were used for horizontal reinforcement around the chimney. In the base a great many large stones were used, and smaller ones worked in all through the chimney. The chimney was made just a little larger than the makers of the hot-water boiler recommended as the minimum size for best results. The draft is good.

The total cost of this chimney, 36 feet high from the base, including labor, was slightly under \$50, while a brick chimney of the same capacity would have cost over \$75.

Occasionally someone asks as to the use of the old-fashioned hot-flue system

for heating greenhouses. It is cheaper to put in, but it is almost impossible to prevent leakage of gas into the greenhouse, and that means a stunted and unprofitable growth of the plants and flowers.

The Best Kind of Heating Outfit

For small greenhouses hot water is better than steam, as it does not require such close attention to keep an even temperature. Get a heater a little larger than is really necessary. You will find it more economical to fire and it will reduce the chance of a freeze in very cold weather.

A cast-iron sectional boiler is cheaper than a tubular boiler and is safe if a good one is bought. A poor cheap one may crack and cause the plants to freeze up when fired heavily during cold weather.

Many dealers in greenhouse supplies will furnish plans with which anyone may put in his own heating outfit without the aid of a plumber. Pipe up to 2 inches in diameter may be best cut and threaded by the owner. But with a small job it would be cheaper to take the larger pipes to a plumber or machine shop and have them cut and threaded, as stock and dies for large pipe are expensive.

Unless you wish to put up cement benches which in the end will be the cheapest, pecky cypress should be used. This kind of cypress lumber is full of holes and looks to be about half rotten, but it will last as long as clear lumber for greenhouse benches, whether for benches or any other place where wood is subject to decay, pecky cypress is much more lasting than pine or even oak. It can be ordered shipped with the heating outfit and greenhouse material in order to save freight. For glass, use double-strength "A" grade. Double-strength glass will not break so easily in a hail storm, and the best grade of glass must be used or imperfections will act as a burning glass and spoil the plants.

Yellow-Throated Vireo

By H. W. Weisgerber



WITH this bird we have another family represented, although they are so nearly like the warblers that it is often quite difficult to distinguish them. The characteristic trait of the vireo family is to look up for their food; that is, they look up at the underside of the leaves above them for hiding worms. The warblers usually look down or on the ends of the terminal branches. This habit of the vireos usually compels them to fly up after the worms that eat the leaves.

Yellow-throat is often very common during the spring and fall migrations. Then, too, he is easily identified, for his bright yellow throat and breast and line over the eye, the greenish upper parts, and the two prominent white wing bars make a pleasing combination.

The Fast-Growing Hybrid

THE vigor of the hybrid is well illustrated by the much-maligned but useful mule. There are breeders of live stock who have a system of rearing first-generation crosses between very distinct breeds of hogs or fowls with good results, if the breeding is not carried beyond the first generation. Mr. Flippo Gravatt of the Virginia Agricultural College has shown in a very interesting manner this wonderful vigor of the hybrid.

He succeeded in crossing the cabbage and the radish—an almost unheard-of thing.

The plant grew until it nearly filled the greenhouse. It spread all over the place, and when a part of the roof was removed it grew out of the opening, and part way down on the outside. And this behavior on the part of a child of a humble radish and a stocky cabbage! It had none of the valuable qualities of either parent, so its energy was largely misdirected.

And it was a mule—that is, though it blossomed profusely it bore no seed.

Tomatoes That Paid

By J. A. Reid

LAST spring I set out 200 tomato plants in a patch 20x40 feet. The only fertilizer used was baryard manure. The tomato plants were of a common variety which I purchased from a local plant raiser. I paid \$1.50 for the 200 plants. I kept the patch free from weeds, and occasionally watered the plants during the hottest weather. The total yield from the 200 plants was around 27 bushels. I sold 24 bushels to a local groceryman at \$1 a bushel, and we had all we could eat besides. My only outlay was the \$1.50 for the plants.

Can It Be?

ARE cantaloupes controlled by a trust? The federal grand jury at Chicago meeting in August seemed to think so.

Whether there is a cantaloupe trust or not will be in issue at the trial of thirty corporations and firms at Chicago some time in the future.

Testimony before the grand jury tended to show that three fourths of the cantaloupes grown in the United States are controlled by a combination in restraint of trade.

One of the allegations was that the combine allowed the fruit to rot in the fields at times in order that the price might be kept up.

The Money Returns

FORTY years ago two trees of the Washington navel-orange variety were sent to California. These are still growing at Riverside.

The California orange industry is based on the orchards propagated from them.

It would be difficult to cite a similar case of a huge and beneficent business based on so small a circumstance as the shipment of two trees to a particular locality.

A sum estimated at \$500,000,000 is now invested in the industry, and a delicious article of food is made available to a hundred millions of people. The men engaged in this production are so intelligent that they have given the farmers of the United States the best lesson in American experience in the value of co-operation and agricultural salesmanship.

The two original trees were sent by the United States Department of Agriculture. This is one of thousands of similar acts differing in importance in degree only. Probably few of the California citrus growers are aware of the fact that they would not be in the business at all if the Department had not really created it.

This sort of work is being accomplished in every State by its experiment station, and all over the Union by the U. S. D. A. Let us remember these things when these agencies ask for popular or legislative support.

Only a Stray Weed

By T. Greiner

IT IS only a stray weed that you have left growing among your tomatoes, or beans, or elsewhere in the garden. But it grows, and blooms, and bears seeds, thousands of them, and next year, instead of the clean garden, you have thousands of weed plants spring up to give you trouble and cause you work and annoyance. Pull up the stray weed, and if the seeds are well developed, so that there is danger of their maturing, better take the whole plant out of the patch and destroy it. That is the way to keep your garden clean for the future. Did you do it this year?

Water the Wonder-Worker

By T. Greiner

WE CAN see it almost every summer. A quarter acre of garden properly supplied with water will give more and better vegetables during the season than a whole acre under the average conditions of our dry summers. What a chance for the suburbanite who has a small garden and an unlimited amount of water at hand from a tap of the village or city water works, under 30, 40, or more pounds pressure! And much can be done without elaborate fixings and equipment. Fifty or a hundred feet of garden hose and a good lawn-sprinkling device, or a piece of 3/4 or 1 inch galvanized pipe with a 5-cent nozzle inserted every two feet in a line on one side, and this properly connected and freely used, will work wonders in a small garden. Make your gardens bloom as the rose, you people in the suburbs! Learn that water is the wonder-worker.

We Lose a Friend

THE death of T. Greiner, which occurred September 19th at the Memorial Hospital, Niagara Falls, New York, removed from the field of horticulture a gardening expert and self-made agricultural scientist of widely recognized ability.

His work and experiments were carried out on his farm at La Salle, New York, and were a continued demonstration of improved methods in gardening, small fruit culture, and marketing.

He was always ambitious, earnest, and tireless in his endeavors to keep in touch with every progressive idea that would benefit farm and suburban life.

For over a quarter of a century Mr. Greiner contributed regularly and always helpfully to the horticultural department of FARM AND FIRESIDE.

An accident last winter, resulting in a fractured hip, was responsible for his death.

This Wheeling Limestone Crusher Costs 5% Less Than Last Year

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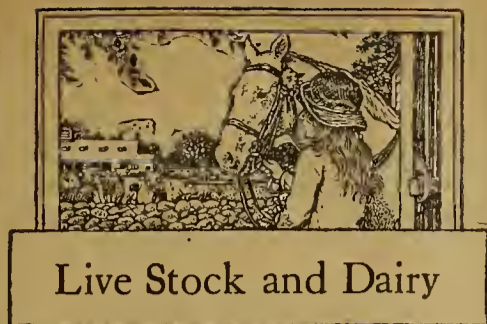
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Live Stock and Dairy

Dehorning Chute and Stanchion

By John Y. Beaty
THE dehorning chute shown in the accompanying picture is used on the ranch of ex-Senator Kern in Sonoma County, California.

The chute is made with a stanchion at the end of it. Just behind this stanchion is a door, and in the rear of the stall is an adjustable 2x4 which holds the animal firmly from the rear after the head has been fastened in the stanchion in front.

The entire chute is made of heavy material so that there will be little danger of anything breaking if the animal should



Make it of strong lumber throughout

lunge or throw itself. The stanchion is made in the form of a door so that the dehorned animal may be let out in front. This is an improvement over many dehorning chutes, for it is much easier to get the animal out, and then all of those that have had their horns removed are in one yard, while the other cattle are in another. The chute is in a permanent location. When the animal is fastened in the stanchion, ropes are run from the head around the posts on either side. This holds the head firmly so the horns may be easily sawed off.

Restrict the Dog—and His Owner

By Robert M. Carrons
I WAS twice driven out of the sheep business by dogs, suffering almost the total annihilation of my flocks.

A flock that has been harassed by dogs will become timid of every unknown sound or movement. I have known a leaf blown by the wind or a rabbit starting suddenly from covert to stampede a flock that had been chased by dogs. The sheep get wild and suspicious, feeding only furtively, and are ready at any suspicious or unusual sound to scatter in panic.

I have for years been fighting for the sheep business here in Washington County, the old Pennsylvania county that was once the foremost county of the United States—and therefore of the world—in fine wool production. Now, unfortunately, the county has very few, if any, more sheep than dogs within its borders. It formerly had a half million sheep; to-day we have 20,000 dogs, little more than 7,000 being returned for taxation. All these 20,000 dogs have perfect liberty under present existing conditions to wander at will.

The flockmaster must build fences to confine his animals upon his own premises, but the dog owner doesn't. The dog owner must provide provision to feed his animals. He cannot turn them out, as the dog owner does his dogs, to forage upon the neighborhood. Taking into consideration the fact that a flock of sheep represents considerable value and that, on the other hand, the dog is entirely worthless in an economic sense to his owner as well as the public, is it not to be wondered at that the dog has been allowed to destroy and drive out of existence the sheep?

Taxation of dogs, as has been attempted, and as still advocated by those who would compromise, is not the answer to the sheep and dog problem. The tax fund, even if sufficient to pay all losses to flock owners from the ravages of sheep-killing dogs, can never compen-

sate for the insecurity. No man who expects the destruction of his flock will invest his money in sheep. The taxation of dogs, no matter how high a tax is imposed nor how zealously collected, is not going to destroy the mutton hunger of the dogs. As long as the dog has freedom of access to the sheep pasture, day or night, he will find a way to satisfy that mutton hunger.

The only way to prevent the dog from satisfying this craving at the expense of flock owners is to require the dog owner to control and confine this dog upon his own premises, just as the sheepman, the cattle, horse or hog owner, is required to confine his live stock upon his own premises.

There should be a law enacted making it a criminal offense, punishable by fine and imprisonment, for any dog owner to permit a domesticated wolf, for such a dog is, to roam at large. With such a law should go the right of anyone to destroy any such dog found at large.

We realize the aptness of many dog owners to take private revenge for the killing of a dog, but we believe public opinion, and the law sustaining it, would deter such overt violation of natural justice.

Don't Pasture Cornstalks

THIS may seem like a broad bit of advice, in view of the millions of acres of stalks which are fed off every year in the corn belt. But it isn't our suggestion. It is the advice of the U. S. D. A.

"As death from cornstalk disease is generally sudden, and there is little opportunity for treatment," says a government publication, "animals should not be turned into a field with standing stalks."

There are good reasons aside from loss by this mysterious disease why the stalks should not be fed off in the field; and for this reason, if for no other, we join in the advice. The feeding of standing stalks is usually safe, but every man who practices it runs the risk of finding dead in his yards valuable cattle which were ready to help in making profits the day before.

Nobody seems to know just what there is which occasionally gets into a field of stalks which is deadly poison to cattle. But we do know that if the stalks are cut at the proper time for making fodder, cured, and removed from the field the danger is avoided.

Stalks fed in the barnyard are safe, and better than stalks fed in the field because they are cut when all the feeding value is in them, or should be, at least.

Stalks shredded and fed in the barn or yard are better yet because the stalks themselves will be eaten. Stalks made into silage at the proper time are better still because they will not deteriorate on the approach of spring; they are juicy and palatable to the stock, and will be eaten up clean.

In these days of silos, rather low-priced shredders and cutters, and efficient engines, every man should try to avoid both waste and cornstalk disease by feeding his corn in the most efficient way.

Did the fear of frost drive you to put your silage in too early? This fear spoils more silage than any other cause. A good proportion of the ears should be well denting before corn is siloed. Better take the chance of frost than cut it too early. Even if frosted and dried it will make good silage if water is added when put in.

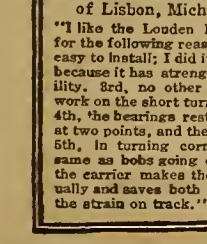
SPEAKING of the meat supply, beef-eating England expects in a few years to receive a great deal from South Africa. Great areas of that country can grow from five to eight crops of alfalfa per annum, and irrigation is expected to increase the acreage enormously. The farmers are already getting into the live stock business in an up-to-date way, shipping in great numbers of the best breeding stock from the British Isles and elsewhere.

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The Loudon Litter Carrier
will enable you to pick up the manure at each stall and convey it direct to the manure pit or to the spreader, without any hard lifting or pushing. A light pull on the hand chain will raise or lower the carrier to height desired, and it will stand firmly at any elevation, empty or loaded; has no trouble-making ratchets, brakes or clutches. Has the most powerful lifting gear of any carrier and moves easily on roller-bearing trolley.

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Turn to Page 195

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His Own Daughter

Her Flight in an Aëroplane and Her Descent With Cupid

By Edwin Baird

Part II

THE Aviation Meet burst upon Chicago in a blaze of glory. Not since the Columbian Exposition had there been such a dazzling "big time." Rural consins througed the streets and stores. Hotels and restaurants overflowed with business. Street peddlers, selling miniature airships, souvenir post cards, aërial streamers, lined the down-town curbs. The newspapers published "Aviation Extras." Michigan Avenue was a craning neck. Sky-scrapers gazed agape. Everywhere were crowds, crowds, crowds. The Lake Front, from Randolph to Twelfth streets, was the center of attraction. Grant Park was the aërodrome; enclosed on one side with grandstands, streaming with varicolored banners, roaring with brass bands and thundering multitudes, it fairly trembled with gala joy.

Here, then, those men—and they were mostly young men—who are the pioneers in the conquest of the air daily flew in their flimsy crafts, coquetting every moment with black-visaged Death, circling, buzzing, darting in and out above the oval-shaped field like intoxicated insects around a brilliant light. Chicago had gone aviation mad. It was the topic of the hour. Everybody talked it everywhere. It was hurled at you in unique advertisements; it was seen in store windows, in street cars, in summer gardens. It was heard in theaters. At last Chicago's eyes had been caught by a glitter that made her pause in her hurry-scurry scramble for the slippery dollar and turn aside. High-tensioned business men, working at white heat, snatched a few minutes from their feverish haste to watch the birdmen swoop and soar above the city. Millionaires and laborers, society women and shopgirls, bank presidents and clerks, were alike enthralled by the grand exhibition, and alike gave voice to the same feeling of awe.

And yet, notwithstanding all this, Bradbry Cole had not been near Aviation Field, had not watched an airship, and, what was more astonishing, did not intend to do either. From the beginning he had stubbornly made up his mind in that regard.

"Nothin' but a circus stunt," was his harsh verdict, and with a decisive gesture he had waved it away.

But on the third day of the Meet it so happened that he was entertaining sundry merchants from the country who brought custom to his firm, and since their presence in Chicago was due largely to a sightseeing desire, his duty as host was plain.

So at three o'clock that Monday afternoon old Cole's dogmatic resolve was broken. He and his guests sat in a box overlooking the aërodrome. Gradually the air became filled with the sky craft, humming, whizzing, swooping eagerly to and fro in jubilant flight. The crowds cheered. The bands played. The day's sport was on.

And old Cole's antipathy vanished as the mist before the sun. He came, he saw, he capitulated.

In his box party were two business associates, and they sat, one on either side of him, and talked volubly upon aërial things. But he paid them scant heed. Indeed, he scarcely heard them, so engrossed was he in gazing skyward. He was fascinated, awe-struck, dnm-founded. The monoplanes, traveling with incredible velocity, sweeping through the air like monstrous beetles, especially held him spellbound. Now a biplane, a hundred feet overhead, would rush by with breathless speed. Again, with a roar and a swirl, one would dash toward the earth at ninety miles an hour, only to shoot upward again like some mammoth bird of prey. Or anon one would rise higher and yet higher, straight into the zenith, until it became but the merest speck against the antm sky. All of which was to him most wonderful and amazing.

Not one of the hundreds of thousands who watched the flights that day was more enraptured than he. In his own way, he was as happy as a schoolboy,



Bob, watching them breathlessly through the field glass, called out shrilly: "He's got her loose now"

freshly freed from studies. There were times when he gave ebullient vent to his excitement, but even then he could express little beyond, "By George, it's overwhelming! Simply overwhelming!"

One ship, or its pilot, particularly interested him. None of the others ent quite so many daring capers, nor rounded the pylons at quite so dangerous an angle.

"Who is that fellow?" he asked, pointing a thick finger at the biplane which just then was describing a spiral from an altitude of some fifteen hundred feet.

One of the men ascertained the number and consulted his program.

"Harry Winfield," he answered. "Chicago boy, you know. Nerve? Say, that kid's got the nerve of a steel bear trap! Look! Say, just look at that, will you? Ever see anything like it?"

Winfield was flying earthward at terrific speed, his ship undulating and swaying from side to side with alarming dizziness; but suddenly, with a quick upward flit, he made a spectacular turn and soared away toward the lake, and soon became a black, moving dot in the billowy clouds.

Old Cole uttered a subdued snort, scratched his third chin, and turned his attention to a monoplane race just starting.

His friend went on: "Winfield's got a duck, too—hydroaëroplane, you know. Made it himself. Brought it down this morning. Got her in his hangar now. Think he'll make a fight this afternoon."

"Humph!" said old Cole, scowling at the monoplane.

"Yep," went on the other positively, unconscious of the firebrand he was wielding, "his mechanic is bringing her out. See? Harry ought to be back right away now."

Old Cole grunted again and fished for a cigar.

"Winfield's making a pot of money," continued that young aviator's admirer. "Copped a prize for duration Saturday. Bet he cops another to-day. All his, too. He's an independent, you know. Don't have to split up with a manager. And his regular pay is two dollars a minute for every minute he's in the air—"

Cole turned upon him fiercely.

"Gimme a match!" he thundered, and tore the end from his cigar with his bared teeth.

It was at this moment that a speck, momentarily growing larger and undoubtedly an airship, was first descried against the northern sky. First one or two, then ten, then hundreds, then thousands of persons were looking and point-

ing toward it. Binoculars and field glasses of a hundred sorts were leveled upon it. It waxed larger with every second. One of the men in Cole's party distinguished its outline through his field glass. It was a monoplane, flying some three hundred feet above the earth and making straight toward Grant Park. Closer and closer it drew, growing more and more distinct. And now, glistening in the afternoon sun, it stood out whitely against the blue of the sky.

And now it was directly overhead. A mighty shout went up from the crowd, starting at the northern end and sweeping pell-mell to the southern extremity, as the craft, flying very low now, winged its way southward. Simultaneously two things were observed: the ship was unnumbered, hence it was unofficial—an unknown interloper—and though driven by a man, just behind him, waving her handkerchief to the tumultuous grandstands, sat a girl. It was this which set the multitude in a roar.

As the ship flew over Cole's box he of the glass stood up and "sighted" her delightedly. Suddenly he caught his breath, lowered his glass, raised it again to his eyes, and squinted with slow amazement.

"Why," he said, "w-why, I'll be damned!"

He sat down dazedly and handed the glass to the man sitting on the other side of Cole. But now the monoplane was a thousand feet away, and its pilot and passenger could not be discerned.

Cole was on his feet, waving his hat aloft, staring after the gypsy ship, wild as the wildest of them, cheering himself purple. In his excitement he noted nothing wrong with the man at his left, and as the aërial rover flew on around the course and rounded the pylons at the northern end for a second trip he turned excitedly to the one at his right.

"Lemme have that thing, Bob. I want to take a look at that little woman. By George, she's a plucky one!"

The owner of the field glass grabbed rudely, though too late. Old Cole already had the instrument in his hand and was training it on the approaching monoplane.

Of a sudden his plump fingers tensed convulsively. He gasped. His face went ghastly white. As the aëroplane swept by, a hundred feet away, he moistened his lips as though they were parched.

"Evelyn! . . . Merciful God!"

The monoplane churned its way southward while the crowd cheered itself hoarse. He sat down, rose again, stood leaning heavily against the railing in front of him, his hands opening and closing clammily, his eyes straining out across the aërodrome in pursuit of his daughter's winged craft flashing gayly in the sun. He heard somebody shout, "Look, she's going over the lake!"

People chatted excitedly on all sides of him. Some shouted. Others cheered. The confused uproar of whirring motors beat upon his ears.


Still he pressed, stiffly silent, against the railing, his wet hands clenched, his teeth locked, his face ashen; and still the airship, bearing his daughter, danced merrily on across the sparkling water. Now it showed plainly against the autumn sky; again it was scarcely visible. And then he saw that it had stopped, saw it hang poised in the still air a moment, saw it zigzag crazily, saw it fall—

A woman screamed. A man standing near-by swore vividly. And a groan of anguish welled up from the depths of the father's heart and was smothered with a violent oath, and he slumped down into the chair behind him, a dead, sodden weight, the fleshy cushions of his perspiring palms pressed tightly to his eyes.

There fell an awful silence all around him. It enveloped the grandstand in a pall. The thousands, frantically boisterous a minute before, were now still as death. He felt a hand on his shoulder, heard his friend's voice, soothingly:

"Brad, old man, their engine must have gone dead on them. They—they're in the lake. Dropped heavy like a rock. She'll be saved, though. Come with me—"

He was never quite clear about what



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followed. He remembered leaping to his feet, shoving his friend aside, vaulting the railing . . .

And then he was tearing madly, stumbling, across Grant Park toward the lake. The hot tears burnt his eyeballs, dried upon his hardened cheeks; his big, gross body was torn with sobs. What he intended to do, Heaven knows. He knew only that his daughter was near death, was perhaps already dead, and that he was going to her—going to her.

Three policemen who had been in angry pursuit of him clear across the field laid hands upon him roughly. Mad-dened with grief and rage he struck out and felled one of them to the ground. But the other two held him fast.

"'Asy now! No funny business!" His friends came running up, one of them carrying the field glass, which was pressed into his hands. But his vision was obscured. He handed it back.

"You look, Bob, and tell me what you see."

Bob focused the lens upon the wreckage five miles from shore. There was an agonizing wait.

"They're both in the water," he said at last. "He's paddling about, but she seems to be caught, somehow, in the machine. Oh! The white-livered skunk! He's swimming for it, and leaving her to drown!"

His voice was drowned out by a great roar of propellers, and a huge object swept thunderingly over their heads.

"It's Winfield!" shouted one of the

policemen above the din. "That's th' b'y as'll get her."

As gracefully as a sea gull in full flight Winfield sent his hydroaëroplane out across the lake, skipping across the water and winging his way toward the struggling girl (whose identity he could only surmise) in a straightaway, beautiful flight. In a trifle over four minutes he was at her side.

Bob, watching them breathlessly, through the field glass, called out shrilly: "He's got her loose now. . . . A motor boat's scudding toward 'em. . . . Not in it with Harry's duck, though. . . . Now he's got her in it. And here he comes with her!"

Like a Broddingnagian albatross the man-made water bird came flying swiftly toward them, its gigantic canvas wings flashing at the rippling waves and alive with grace and movement in the westerling sun. As gently as a feather kissing a forest pool it alighted upon the surface of the water not ten feet away.

A minute later Cole stood at its bow. There was only one seat in the hydro-plane, and that but a small one—and Evelyn's arm was around Winfield's neck and his was about her waist.

Old Cole, seeing this, blinked his eyes, licked his lips, and cleared his throat with a tremendous noise. Then his demeanor changed. And when he spoke it was in a tone he had never been known to use before.

"Evelyn, you must come home now, my girl, right away. And you too, Harry."



"Hello, Jim, I didn't know you bought a new buggy!"

"I haven't. This is the same old girl in a new dress."

"Been painting, eh? Reminds me I must get after this machine of mine."

"This paint is just as good for autos as it is for buggies. And putting it on is a cinch!"

"Maybe you think so, Jim, but painting first and then varnishing is an awful lot of work."

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Bill and Jim found it was economy to occasionally visit the Sherwin-Williams store in town, where every paint for the farm is sold. Better try it.

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Beginning in the Next Issue
THE BROWN MOUSE, a Serial, by Herbert Quick

An Unaccepted Challenge

[CONTINUED FROM PAGE 4]

such a demand for bulls that they have had no occasion to grow the males for steers. In England the males of non-pedigreed dual cattle are almost invariably grown for beef and sold at the age of two years. This is not true of the males of the grade dairy breeds. The male calves of these are invariably sold as veals. The breeders in many instances have told me that at twenty-four months those hand-fed, skim-milk-reared calves bring about as much at that age as a beef steer reared on the dam. Let it be remembered that such beef comes from all the breeds of cattle named above. Even the little Dexter is always in evidence at the Smithfield Fat Stock Shows. At Preimley I saw a 3-year South Devon steer that weighed 2,800 pounds. This steer is from the herd where a large proportion of the cows give over 8,000 pounds a year.

We have a steer in the recent importation that at two and one-half years weighs 1,650 pounds. He was hand-reared. This steer will probably be shown at the coming fat-stock show at Chicago.

At least half of the meat produced in England comes from dual-purpose cattle, and the men who grow them pay an annual rental of \$5 to \$15 an acre for the land.

Why should Mr. Douglas say that I have had full charge of the cows imported last year for Mr. Hill? I imported those cattle for Mr. Hill. There my work ended. I am not in Mr. Hill's employ. I am in the employ of the Great Northern and Northern Pacific railroads. My work is taking charge of the experi-

ments those roads are conducting in the dry-land country in the Northwest. I do not see Mr. Hill's farm where the cattle are, half a dozen times in a year.

Mr. Douglas asks why the results in milk production are not published. Does he not know that these cattle have not been out of England yet more than ten and one-half months? Does he not know that importing a cow while in milk destroys her milk record for that year? Does he not know that if the cow is dry but soon to calve, her first period of lactation is interfered with by the hardships of the journey? Why not be reasonable, Mr. Douglas? I take it for granted that Mr. Hill will publish records in due time, but of that I don't know. I am not running the herd.

Mr. Douglas comments on the prices paid for those cattle. The price was high, \$500 each. But how comes it that those cattle fetch such prices if they are a delusion, a myth, and a snare, as our wise ones say they are? How comes it that such cattle command the highest prices on the average of any cattle in England? In the present importation is one cow that cost \$1,750. That milking Shorthorn is not registered. She cannot be recorded in the English or the American books. That was the price put upon the cow by the owner before he knew that Mr. Hill was seeking such animals. Why did he price her so high? Because this cow, belonging to that class which "can't be bred," was the champion cow of all England.

When will the opponents of this idea look beyond the little horizon that hems in their vision?

Sterile Egg Reaching for the Distant Market

[CONTINUED FROM PAGE 5]

as the dealer who ships in carload lots. Farmers who cater to the select trade afforded by hotels, restaurants, boarding houses, and neighborhood clubs, however, find it more convenient to the consumer and equally as profitable to themselves to ship by express, using the regulation cases and quoting all customers f. o. b. the shipping point.

The average distance for freight and express shipments varies from 300 to 600 miles. The general experience so far, as to promptness of delivery and condition when received, has been very satisfactory.

The third and newest method of shipping is by parcel post, which up to the present has been restricted to small orders from customers within a distance of 300 miles, the record distance for parcel-post shipments so far being 306 miles.

Different kinds of corrugated straw-board containers are used by the shippers, all of them possessing about the same merit in strength, convenience, and shock-absorbing qualities. Poultrymen generally discourage the

parcel-post method, however, preferring to develop regular trade on standing orders for case lots.

Aside from the wholesale dealers, hotels, restaurants, and boarding houses, the only other market open to the producer is that afforded by private families in the large cities. To remove these private families from the parcel-post class, thereby relieving the farmer of the additional expense for containers and time and labor required for special packing and more frequent shipments, the neighborhood-club plan was devised, and now operates to the advantage of both producer and consumer. It is easily inaugurated, perhaps upon the suggestion of the farmer, as in the first instance I mentioned.

Every city within 300 miles of the nearest shipping point is full of selling opportunities for the poultryman who reads, thinks, profits by the experience of others, conducts his farm upon a strictly business basis, and goes after the consumer by the legitimate methods of modern salesmanship.



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The Market Place



Capt. W. S. A. Smith, of Iowa
One of Farm and Fireside's authorities on marketing. Captain Smith discusses in the next issue the practicability of dual-purpose cattle on corn-belt farms

Distributing the Bale

THE consolidated warehouses of Screven County, Georgia, have adopted a plan for holding cotton, which seems to have some advantages over the "bny-a-bale" movement.

On September 19th they began issuing cotton certificates which at once commenced circulating as money. The cotton was in warehouses, and on it the warehousemen had paid seven cents a pound. The farmers were thus given from seventy to a hundred per cent of the value of the crop in cash, and were allowed the additional privilege of redeeming their certificates at any time within six months if cotton came to be worth more than seven cents.

Merchants began taking the cotton receipts as money, just as they took the clearing-house certificates of the banks in the panic year of 1907-08. The banks received them in payment of notes. The S. & G. Railway accepted them for freight.

In truth, these certificates are reported to have entered into circulation about as freely as greenbacks would have done. The town at once felt the relief which comes from the wise extension of credit in times of difficulty, and up to this writing the expedient seems to have been such a success that it may be widely copied.

To be sure, the cotton certificates are based partly on public spirit and partly on the faith that cotton will not go below seven cents. If it should have such a disastrous fall, those who own the certificates will take small losses; but the whole scheme is based on the theory that losses are possible and that it is a good thing to distribute them. The certificate scheme enables every man who receives any of this scrip to "buy a bale" or such part of a bale as the paper represents, and carry it for such time as he pleases or take the cotton for it.

The farmer has the option to take his seven cents and dispose of his certificate, or keep his certificate and take chances on a better price for cotton. The scheme doesn't solve the cotton problem, but it absorbs the shock. Nothing can solve the cotton problem save time and probably a restricted acreage next year.

Give Us Your Facts

IN A PAST issue of this paper Mr. Bradley Hancock, Jr., had an article on the manure spreader. It was a good article because it was based on what he had himself observed. It came out of his own experience.

One passage in it read as follows: "I spread manure with the spreader on 25 acres of wheat—a medium top dressing—and on a 25-acre block adjoining—same quality of land—I spread the same quantity of manure from the wagon with manure forks. The plot of land on which the manure had been used yielded 39 bushels per acre, while the other block averaged less than 25 bushels to the acre, and the growth of the latter wheat was uneven and bunched, while the wheat on the first block was even."

This does not mean that the manure spreader is always good for an 11-bushel increase in wheat. It means that under the circumstances, and that one time, it made about that difference in that field. The test was not an exact one.

A scientific experimenter would be able to point out several reasons why these results could not be used in a bulletin. But such results as these repeated on hundreds of farms do prove that the manure spreader is a mighty good thing. Give cases enough, and they prove it quite as well as any laboratory experiments can prove it.

Such ways of writing experiences are what this paper would like to get in large numbers. It would like to get them covering every branch of farming and stock-raising. It can't get enough of them.

There are thousands of readers of this who have had experiences which would be helpful to other farmers if they would only let us have them. We are always on the lookout for them.

The mail which brings one of them in is always welcome.

Comparisons of yields, contrasts of results, things which happened on your own farm or that of your neighbors—these are the things which we would like to get, to read, and as to the best letters to print and to pay for.

Advertising Did It

By J. A. Reid

LAST fall I had 25 pure-bred barred Plymouth Rock cockerels to dispose of. They were good birds, and I had often seen friends pay \$5 or \$10 for birds no better than mine. I was therefore unwilling to sell mine at the market price.

After considering various ways I concluded that the only profitable way of disposing of them would be by advertising them.

After looking over about a dozen different publications I decided to advertise them in a farm paper having a fairly large circulation. I had a small ad inserted saying I had some pure-bred, vigorous Barred Rock cockerels to sell as breeders. The price asked was \$3 and \$5 each.

While I was waiting for the ad to appear I had some envelopes and letter-heads printed—on the very best bond paper, of course.

After waiting what seemed like a century to me the paper containing the advertisement arrived, and a few days later I was receiving several replies every day.

I wrote in response to each person that answered my advertisement a neat, courteous letter, explaining just what I had to sell and the price I asked for them.

Within one month all my cockerels were sold, and I had to return a few orders that I couldn't fill.

I received just \$80 for my 25 cockerels. My expenses for advertising, printing, etc., were just \$8.50.

The Profit I Made

By J. A. Reid

INSTEAD of waiting until March or April, I started hatching chicks in January of last year in order to have some spring chickens to sell when the price was the highest. Of course I knew that chicks could not be raised under ordinary conditions at that time of the year, therefore I remodeled a 10x20-foot poultry house to raise them in. The house was made absolutely tight all around, an extra window was added, and a partition made of poultry netting was put in the middle, thus dividing the house into two compartments. A small cannon heater was set in the center of one side of the poultry house, the side in which the chicks were kept the first six weeks. Three inches of finely cut straw was placed on the floor for warmth and to provide exercise for them.

As soon as the chicks were hatched they were put in the side of the poultry house having the heater. The heater warmed it up nicely.

I made several hovers out of cheese boxes. Several openings were made in them at the bottom. These were never used except at night, when they were placed around the heater and the chicks put under them. After several nights the chicks would go under them of their own accord.

During the first six weeks the chicks were fed a bran mash three times daily, and commercial chick feed was fed twice every day. Clean drinking water was kept before them constantly, and after they were three weeks old meat scrap and grit also.

When the chickens were six weeks old I removed them into the other part of the house. The netting partition left the heat over from the other part, and the temperature was just right inside, although the thermometer registered as low as 15 degrees below zero outside.

I set my 140-egg incubator four times, setting a total of 562 eggs and hatched 334 chicks. From the 334 chicks I raised 276 to a marketable age.

My total expenses for eggs for hatching, oil for incubator, feed, coal for heater, etc., were \$64.75. The total amount received for the "springers" was \$139.43, leaving a net profit of \$74.68.

OUTSIDE of Utah, American beet growers are wondering where they will secure sugar-beet seeds for next year. The American supply comes from Germany. In the Utah field the growers were fortunate enough to secure a supply before the war broke out.

Splendid bargain for every woman

The handiest garment to have in winter and most convenient on chilly spring and fall days. This excellent sweater coat is made of worsted and cotton, more serviceable than all wool. Has wide double ruff collar, reinforced seams, double cuffs, two side pockets, double border. Medium heavy weight. Sizes 34 to 44. No. 39E72, Maroon; No. 39E74, Oxford; No. 39E76, Tan. State Number, size and color, \$1.49 Price, prepaid. Cannot be duplicated elsewhere for less than \$1.75.



We pay all delivery charges on all merchandise shown in the first 64 pages of "Your Bargain Book" wherever you live. We also pay freight on 100 pounds or more in many states, and part of the freight in many other states on practically everything in our book. Read all the facts about our liberal free delivery offers on pages 2 and 3 of "Your Bargain Book". We guarantee quickest delivery, newest styles, personal attention to your order and courteous treatment of any letters you may send us. Write postal now for your free copy of this great money-saving catalog.



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At the Nation's Gateway
Charles William Stores
312 Stores Bldg., 115 E. 23rd St., New York

NO LONGER

A "One-Horse Farmer"

Down in Louisiana lives L. D. Burns, a farmer. He was convinced that he could make bigger profits if he knew how to treat his farm scientifically. He could not, however, spare the time to attend the State Agricultural College.

He became interested in the Agricultural Course offered by The Scholarship Bureau. These are his own words:

"I was a 'one-horse farmer' for a long time, following the methods used by my great-grandfathers. Using the knowledge gained from your general farming course, I have this year made more money than ever before."

An Agricultural Course Without Cost

The Agricultural Course which has proved so successful in increasing the profits of Mr. Burns and hundreds of other farmers is offered without cost in return for a few hours of your spare time. In earning the course, renewals for FARM AND FIRESIDE, WOMAN'S HOME COMPANION and THE AMERICAN MAGAZINE will count the same as new subscriptions.

Write for the little booklet, "An Agricultural Course Without Cost."

THE SCHOLARSHIP BUREAU
FARM AND FIRESIDE
SPRINGFIELD - OHIO

Ways to Make Home Homey

Some Clippings From the Housekeeper's Scrap Book

Why Chimneys Smoke

By Fred Telford

THE Lurtons moved into their new house early in June, and every member of the family was highly pleased.

"Why shouldn't we be satisfied?" Mrs. Lurton asked a caller. "We planned this house years and years before we got it, and then spent seven thousand dollars to build it. We'd be cranks if we couldn't please ourselves."

With the coming of cold weather, however, the first trouble developed. The weather turned cold during the day, and the house became chilly.

"I think you'd better start the furnace, George," Mrs. Lurton told her husband in the middle of the afternoon. "The kitchen range and the grate are hardly enough."

Mr. Lurton acted on her suggestion. The furnace smoked slightly at first, which was to be expected. It smoked more in ten minutes, which was contrary to all specifications. In half an hour the whole house was full of smoke and bad-smelling gases, and the family had recourse to neighbors and the yard while Mr. Lurton worked in the basement to put out the fire he had started.

"The chimney's stopped up," he asserted to a sympathetic neighbor. "I'll see about it in the morning."

"Probably full of birds' nests," agreed the neighbor.

In the morning, however, no birds' nests or other obstructions could be located. The pipes in the furnace seemed open, but the starting of another fire resulted as before. Mr. Lurton shook his head, Mrs. Lurton declared she never had had any confidence in the man that sold them the furnace, and neighbors suggested all sorts of unreasonable explanations. Mr. Lurton compromised by sending for the furnace man.

"That's easy," the latter said when the situation was explained to him. "I'll fix that in no time."

Wherewith he fell to tinkering, and at the end of half an hour started another fire—and again the family moved out of the house.

The contractor, the mason, and the architect were all called for in turn, with about the same results. The furnace worked occasionally, but most of the time the smoke persistently went every way except out of the chimney. At the end of the month every child in the neighborhood knew the Lurtons owned another of those mysteries—"a chimney that won't draw."

An old carpenter summed up the neighborhood belief thus: "It's a funny thing about chimneys: some of 'em draw and some of 'em don't, and the old Nick himself can't tell why or why not."

With the coming of colder weather the chimney kept up its reputation of smoking less and less; and finally it worked perfectly unless the wind was in the south or the weather warm. Thus the situation stood when in February an old friend of Mr. Lurton's, a professor of physics in a college, came for a week's visit. Mr. Lurton explained the "mystery" to him.

"I've seen these 'mysteries' before," replied the professor smilingly. "We'll investigate after breakfast."

After half an hour's work inside the house and out the professor was ready to report.

"There are three things wrong," he explained. "The chimney isn't high enough. When the wind is in the south it comes over the roof, is deflected down the chimney, and spoils the draft. Then the chimney's too big and too cold. You see, the air gets lighter when it's heated, and the cold heavy air pushes it up. But your chimney is so large that you can't heat the gases in it very hot without a roaring fire; and then you have it on the outside of the house too, where the cold air cools it off. When I get home I'll send you a set of rules for a successful chimney."

A week later the rules came. Here they are:

1. The chimney must be large enough to carry off the smoke and gases.
2. It must not be too large, as then the gases will not be heated very hot and will not become so light as to be pushed out at the top rapidly.
3. It should be straight and smooth on the inside, so as not to retard the upward current of air.
4. It should not be placed outside the building or against the outside wall, as in this position the gases inside become chilled and the upward draft is not strong.

5. It should be high enough to extend above other buildings and adjacent parts of the roof, so that currents of air may not be deflected down it.

6. It should be as high as is consistent with convenience and appearance, so that there may be a long column of heated air.

7. It should be lined on the inside, making it double-walled, to protect the heated gases from cooling.

"It is not always possible to follow all these rules," the professor's letter concluded, "but if any are violated and the chimney fails to work you need not talk about the 'mysterious' draft. And if all these rules are observed the chimney won't smoke."

The Family Towel Supply

By May Emery Hall

ISN'T it strange and almost laughable that a momentous discovery which has changed the physician's attitude toward the problems of life and death—I mean the discovery of the part played in illness by disease germs—should also affect the housekeeper in her selection of a towel supply? This world is a unit, and the longer we live in it the fewer barriers are left standing between momentous matters and comparatively trivial ones. The housekeeper taking care of her linen closet is co-worker with the doctor in the great crusade of preventive hygiene.

If we apply this principle definitely to

back, or "huck" as it is commonly called, is a far more practical material than damask. It is more durable and less linty. Fringed ends should be avoided, as they mat easily, and when partly worn give a bedraggled, ragged edge that is not pleasing. Should you, however, have fringed towels in your assortment the best way to treat the fringe is first to shake it against some resisting surface, then finish the smoothing process by the use of a fringe brush that comes specially for the purpose. It has stiff bristles arranged on a slant and is easily manipulated.

A plentiful supply of bath towels is a necessity in every home. It is well to have them marked, either by initials or distinctive borders, so that each member of the family can keep his own separate, for it is not always possible to discard these large towels after one or two uses. If one's skin is not too tender, the so-called linen bath towel can be recommended for a brisk, invigorating rub-down. It generally sells for 50 cents apiece in the smaller sizes, and is almost indestructible. The writer has had one in steady use for about eight years, and there are no signs of its wearing out in the near future. Cotton ones may be bought at half this price.

Hand-knitted towels of spool tape, recently recommended in FARM AND FIRE-SIDE'S fancy-work department, are soft and strong.

Entering the realm of the kitchen we

Pumpkin Pies—By Harry M. Dean

PUMPKIN pies! I seem to taste them as I slowly write this down,

All the spicy, fragrant flavor when they're baked a golden brown.

For no matter what they call it, and no matter what its guise,

They can never make the equal of those old-time pumpkin pies.

Pumpkin pies! Ah, golden autumn with the apples glowing red,

With the big white stars a-sparkle in the velvet vault o'erhead,

With the smoke-wreaths slowly floating o'er the scarlet-wooded hills,

When a peace that passeth naming all the world with rev'rence fills.



Pumpkin pies! Ah, glad Thanksgiving with the family 'round the board, There to give Him all the credit for the bumper crops they'd stored;

From the turkey and the cranberries to the final grand surprise

There was nothing that was better than the old-time pumpkin pies.

Pumpkin pies! We'll ne'er forget them, though we drift

where they're unknown, They will hang about to haunt us like a pleasant day that's flown.

Like the face of some dear loved one, they appear before our eyes, And we find that we are longing for some old-time pumpkin pies.

the towel supply it means that we must avoid the indiscriminate family use of the same towel by various members of the family. Some member of the household may be ill—if with nothing more serious than a cold—and will then surely pass on the cold-in-the-head or sore-throat germ on his towel. It means also that we should avoid the repeated use even of our own towel, for wherever dirt is there lurks the possibility of disease-breeding germs.

To meet these newly recognized facts the paper towel in many States has become obligatory in public laboratories. These are also available for the home, but there is a cheerlessness about them which the housekeeper resents. She has learned, therefore, to select for her guest-room a small towel of the size used by barbers, which may be laundered with less labor than a handkerchief. These towels can be bought at 5 and 10 cent stores at the price of two for five cents. Or they can be made of fine linen and paid for accordingly.

As face and hand towels for the household too, particularly where there are children or farm hands, these are exceedingly useful and hygienic. If each member of the household likes to keep charge of her own supply, these can be distinguished by a thread of color or by an initial worked with that degree of elaborateness or simplicity for which there is time and inclination. Papier-mâché letters as foundations for the embroidery can be bought of mail-order houses in many sizes and styles.

Infants' towels of the same size but of the finest, softest texture make welcome gifts to mothers of babies. They may be charmingly cross-stitched in Mother Goose figures.

For the ordinary face towel hucka-

find that a good quality of crash will answer all our towel needs acceptably. It can be bought at from 12½ to 15 cents a yard. One yard is a good allowance for the dish towel. I have bought these towels of shorter length, already hemmed, for 12½ cents each, but whereas the toweling itself was of fairly good quality the straightness of the hems was not such as would satisfy the over-particular. The same crash that serves for the dish towels is suitable for roller towels for the kitchen door. For these, just double the quantity is required. The housewife will have frequent recourse to these unless she introduces into her kitchen a roll of absorbent paper towels, which will save the wear and tear of the crash towels to an extent quite worth while.

A Pretty Floor Rug

By Dick Dickinson

NO FARMER'S wife need long in vain for a pretty floor rug. The art of tanning has so advanced in the last few years that skins never used before are now highly prized. Only the most expensive rugs will equal in beauty the one made from a spotted calf that has been kept sleek and fat for the veal market. A shining black skin also makes up well.

Some breeds, especially the long-haired Galloways, have coats better adapted for this use than others; but one will rarely have difficulty in finding a suitable hide in any herd of young calves.

If the color is not attractive but the texture of hair is, the skin can be dyed the proper color at small additional expense.

Skin the animal carefully. Of course the work of tanning cannot well be done at home, but any reliable furrier will attend to that matter for you.

Remember This on Wash Day

By Helena Korte

FOR fruit stains on table linen or other white goods, boiling water is the best and safest remedy. Stretch the stained portion, before it is wet, over a pan or pail, and pour boiling water through it until the stain disappears. It will not take long, but the water must be actually boiling when it is taken from the fire.

Acetic acid will restore colors that have been injured by alkali, and soda or ammonia will restore colors that have been faded by acids.

A little vinegar in the rinsing water is good for colors, especially blue, and will keep colored stockings from fading. If black stockings are rinsed in water that has been strongly blued their color will keep fresh until they are worn out.

A fine rinsing water for natural-colored linen is made by boiling an armful of hay in a few gallons of water. It gives just the right tone of color. When hay water is not available put a bit of brown package dye in the rinsing water. This is good for brown gingham also, and for tan stockings.

A small amount of red dye in the water used for rinsing red and pink cottons will keep their colors fresh.

One good method for laundering garments of delicate colors is to put them first into turpentine water—one teaspoonful of turpentine to one gallon of tepid water. Soak in this solution one hour, then wash in warm, not hot, water, with a little mild soap dissolved in it. Do not rub soap directly on the garment. Rinse quickly and thoroughly, and dry in the shade.

For dark prints and gingham no method can be better than the one used by a woman I knew many years ago, one who, from youth, had been trained in all the thorough ways of New England housekeeping. She washed all colored cottons in a thin flour starch, usually through two waters, the second a little thinner than the first, using no soap, unless on exceptionally dirty spots. She used one copious rinsing water, then turned the garments wrong side out and dried them in the shade. Usually enough starch remained in them to stiffen them sufficiently. She ironed them on the wrong side, and finished by turning and pressing out hems, tucks, etc., as seemed necessary, on the right side. Her own neat house dresses were of black print. Treated in this way they looked like new until almost worn out. Her children wore cheap calico, but they always seemed well dressed.

After flannel has been washed and rinsed, rinse it again in tepid water that has a little glycerin in it—half a teaspoonful of glycerin to enough water to cover a pound of flannel. If it has been properly washed this will keep it beautifully soft.

Wash silk handkerchiefs and ribbons in salty water, and iron wet.

The Mantle Kerosene Lamp

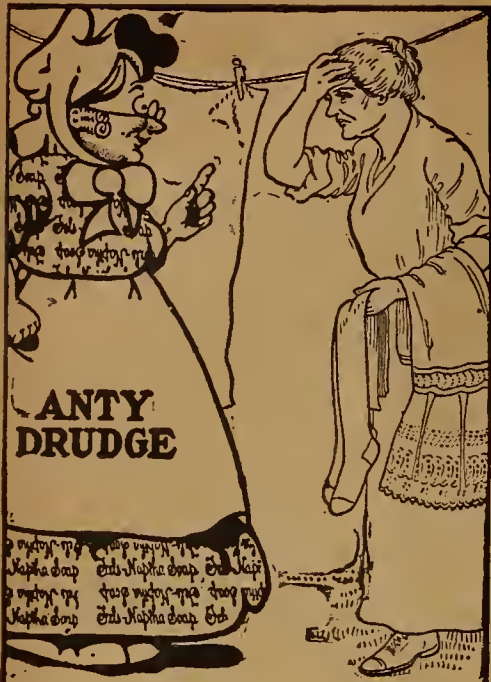
By Josephine E. Toal

THE mantle kerosene lamp is coming into favor in the farm household. It is a wonderful improvement over the old-style kerosene lamp in that it produces a vastly better light and burns less oil. The character of the light is similar to that of the Welsbach mantle on the gas jet—a white, softly diffused light when shaded.

A specially constructed mantle lamp is necessary, costing \$2.50 or \$3 for the ordinary kind. The mantles range in price, according to quality, from 15 to 35 cents each, the higher-priced ones being more economical in the long run because of greater durability.

Like gas mantles they require careful handling because of frailty. The lamp should never be moved carelessly, and when once lighted is better not moved at all while burning. Trim the wick evenly to get good results. A gentle brushing with a small bristle brush, such as a toothbrush, is the best mode of trimming. Do not let the flame stream up and blacken the mantle. In case of this happening, turn the flame very low to allow the mantle to cool, after which a gradual turning up will burn the black off and the mantle will be restored. In lighting the lamp have the wick low when the chimney is placed, and do not turn up to the full light for several minutes.

The mantle lamp requires more care than the ordinary one, but any person can soon learn how to run it, and cannot but be pleased with the excellent results.



Anty Drudge—"My goodness, Mrs. Careless, have you got neuralgia again? That's just what I told you would happen, washing the old way, with hot water. You have to rub the clothes so hard you get all overheated, and then you fill your kitchen with hot, sudsy steam while you boil your wash. No wonder you take cold, coming right out in the air. I haven't had a cold nor neuralgia since I started using Fels-Naptha Soap and cool or lukewarm water for my washing and all my house work."

Lots of women don't know how to do their work easily, quickly and better than it was ever done before—but there is a way.

It's the Fels-Naptha way.

Fels-Naptha Soap, in cool or lukewarm water, without hard rubbing or boiling, makes the dirtiest clothes clean and white. It's just as good for all kinds of housework and in the milkroom, and it's the pleasant way to do disagreeable work.

Buy it by the box or carton and follow directions on the Red and Green Wrapper.

Fels & Co., Philadelphia



A Husking Bee

By Chas. B. Driscoll

IT'S forty years ago to-night since that old husking bee in the big barn of Silas Wright, where Love found you and me. So let us husk together here while evening shadows fall, in memory of that night, my dear, and I shall tell you all the precious things I told you then, just forty years ago, and you shall tell me once again the things you whispered low.

To-morrow comes Josephus Gray with steel and noise and steam to husk our corn the modern way. To-night we two may dream that Time has turned back forty years, and here we sit once more, while into your half-willing ears a tale of love I pour. You've found your blood-red ear of corn which huskers all would find; its color both your cheeks adorn, and if a man were blind he'd know what kind of tale I tell to those half-willing ears. The story that I told you—

Well, has it grown old with years?
 Changed are the harvest customs now, the husking bee is past, the sunny hair about your brow is turning gray at last. Just for to-night, though, we'll revive the old-time husking bee, for old-time Love is still alive and speaks to you and me.

Why the Silage Spoiled

By W. E. Morton

SEVERAL years ago, when the silo was in the trial stage, a progressive farmer of a northern Wisconsin county erected a silo and filled it at what he understood to be the proper time.

When the silo was opened it was found to contain a mass that resembled barnyard manure in appearance and vinegar in taste.

When fed it scoured the stock and gave no increase in the flow of milk.

The most unfortunate result was that the people of that region thereupon condemned silos in general, and six years passed before any farmer in that part of the county tried one again. The same thing has occurred in many other communities, and even now thousands of farmers are trying to do dairying without a silo because they fear that they will make sour silage.

He Cut It Too Green

The cause of this man's failure to make good silage, and the cause of most failures in corn-silage making, lay in the condition of the corn when it was ensiled, for he cut his corn while it was too immature.

His corn, practically in the milk when ensiled, contained perhaps three per cent or more of sugar and a large percentage of water. When the corn was cut this sugary juice covered all the corn and furnished excellent food for certain types of bacteria which are ever present in all top soil and most dust, and get into the ensiled corn in great numbers. The growth of these bacteria in his silo caused a fermentation which resulted in the formation of about one per cent of lactic acid—the acid of sour milk.

These bacteria can withstand but about one per cent of the acid they produce—that is, when they have produced an amount of acid equal to one per cent of the entire weight of the silage they become dormant. When their work ceased the remaining two per cent of sugar was acted upon by certain yeasts which promptly changed all the remaining sugar into alcohol and then ceased work.

At the cessation of their activities other types of bacteria set to work upon the alcohol and in a few days more had transferred it into acetic acid—vinegar. The liquid in the silo was now a pickle which in two or three weeks had penetrated all the ensiled corn, rendering it soft and succulent; but, unfortunately, there was in this pickle one part of the healthful, appetizing milk acid and two parts of the strong, sharp vinegar acid, and as a result the whole mass of silage was more of a poison than a food.

Too Much Vinegar Acid

Had the corn been cut a week or two later the sugar would then have been in

great part changed into starch, and the effect upon the fermentation would have been marked. For example, more mature corn would have contained perhaps one and one-half per cent of sugar instead of three per cent; the one per cent would have largely changed to milk acid, leaving the one-half per cent to become vinegar acid. The mild milk acid would then be present in twice the quantity that the other would be, and the result would be a sweet, appetizing taste and odor and a healthful, succulent food.

Overripe corn, or corn that had been badly frosted, would have made good silage, for either would have contained less sugar than the corn that was ensiled; they would have simply lacked water enough in the leaves to dissolve the sugar and to make the corn pack well in filling. The necessary water could have been easily supplied by running a stream upon the corn as it went up the elevator or blower.

Of course the easiest way would have been to cut the corn into the silo just as the kernels were glazed and well deuted, and when the lower leaves of the plants were becoming ripe and dry.

In that condition the sugar content of the plant would have been relatively low, and the water content relatively high, so that a good grade of silage would have been possible without the necessity of adding water to the corn.

Moldy Because of Air Pockets

Last fall a farmer filled his silo with corn that was rather overripe and slightly frosted. When opened it was found that from top to bottom there were pockets of moldy silage. The resulting loss of feed was a very serious one to him.

He now knows that plenty of water added to the corn as he cut it would have ensured him excellent silage. The dry, fluffy corn held in it so much air that when the three fermentations discussed above had taken place there was still oxygen present in these pockets of air all through the corn mass. This condition allowed a further change to take place because the oxygen made possible the growth of molds which cannot exist without free oxygen.

Evidently the molds had used up all oxygen, for had there been a sufficient supply of it the successive action of molds and bacteria which would have followed each other would have reduced the entire mass of silage to the condition which always exists at the top of any silo when it is opened, or will be found where the doors are not air-tight.

Hence the more corn that can be packed into a silo the less air can be present, and there is no possibility of the fermentations proceeding further than

the formation of vinegar acid. Well-packed corn means good silage if the corn is well matured.

Still another man who has a milk route in a small city found so much mold all through his silage that he had fed out all that was fit for use before the first of March, last spring. As the corn was in the proper condition when ensiled and had been well packed into the silo, he was utterly at a loss for some time to account for the cause of his difficulty. His silo is provided with a drain pipe, and this drain had led off the juice or pickle formed by the fermentations and the settling. As the juice had drained down it had drawn enough air after it to supply the molds with oxygen. This year he is going to plug the drain, for the more perfectly the air is excluded and the better the silage keeps.

The ideal silo should be very high—three or four times its diameter—so that the silage would settle very solidly because of the height of the column of corn, and it should be provided with a drain which could be kept closed until the liquids interfered in getting out the silage.

Mold will frequently be found next to the walls of concrete or stone silos. This is due to the fact that porous walls take some of the juice or pickle, leaving the silage next to the wall in a dry enough condition so that air readily enters and causes the growth of molds, or else the silage near them is of inferior quality to that further in. Porous walls may be rendered tighter by washing them with cream mixture of cement in which three per cent (of the weight of the cement) of cheap petroleum oil is thoroughly mixed.

Fill the Silo Full

A man who did some hard thinking, over the fact that no matter how much he packed the corn into his 30-foot silo there was ultimately about 25 feet of silage, decided to try a succession of fillings.

He filled the silo as full as he could get it, allowed it to stand for a day or so until it had settled well, filled it again, packing it all that was possible, again let it stand until he had made three different fillings.

When the last filling had settled he found that the silo was within less than two feet of full, and when the feeding was begun the silage was of better quality than usual. The successive fillings had not only given him about eight tons more of feed, but the additional weight of it had packed it so completely that the air had been thoroughly excluded.

Now this man makes a practice of keeping but one man in the silo to distribute the corn while filling, but he makes three or four fillings.

The Wisconsin Experiment Station has found that the protein content of silage can be so raised as to make the feed nearly a balanced ration by ensiling soy beans with the corn. The beans are planted at about the same time as the corn (preferably in another place and not between the hills of corn), then the two are cut when the corn is at the proper stage for ensiling. One load of soy beans cut in with four loads of corn has given a good proportion.

Value of a Warm Day

If an unusually late cutting (filling) has to be made for any reason, it has been found that much better results are obtained if the work is done on a warm day.

This is because bacterial action is much faster in a warm medium. If the corn is warm when ensiled the bacteria get a better start and the resulting fermentations are much more thorough.

The refilling of silos with dry corn has often been tried, but a really good grade of silage has not been obtained no matter how much water was added. The reason appears to be that the temperature of the ensiled corn is so low that bacterial action is greatly retarded and the fermentations are incomplete. No doubt if it were possible to wet down such corn with warm water very good silage could be made.

Undoubtedly the silo and corn silage are the greatest assets of the modern dairy farmer. It is to be sincerely hoped that the too prevalent idea that silage-making is largely a matter of luck will pass, and that the American farmer will realize that silage-making is practically an exact science.

THE Nebraska Station states "there will always be some waste on the top of a silo unless the feeding operations are begun soon after filling. Tight packing of the top by days of tramping will lessen the spoilage. Chaff or cut straw spread over the top will also help. An Iowa reader claims to have almost entirely avoided this trouble by wetting the top layer thoroughly and sowing it very heavily with oats. The grains sprout and seal the silage with an air-tight layer."

There is Money for You in Your Neighbor's Wants

Ways to be Prosperous Though You Stay at Home

By Mary Hamilton Talbott

WHEN the country or small-town woman or girl finds herself obliged to earn money without leaving home, she generally turns desperately by correspondence to some means which lie far from that home, and which bring her into direct competition with women who can roam from one trade center to another. This is her first error, and is sure to cost her money instead of adding to her income. For instance, a farmer's daughter studied proof-reading by correspondence, and then tried to get into communication with publishers who sent out proof-reading. While she was undoubtedly qualified to make money at this work she was many miles from a publishing center, and this meant heavy expressage on packages, even if she could find a publisher who would send his work so far away. After many efforts she found that the woman who would read proof must live in the town or city where the printing is done. She must go to work at the same hour the typesetter goes, and work practically at his elbow. Bookmaking, magazine and newspaper publishing are now such rapid processes that there is no time to send out proofs by express, to wait the pleasure or leisure of the home worker.

The misleading advertisement for home workers is a rock upon which many uninitiated meet with financial distress. A girl who did not want her neighbors to know that she had to earn money answered an advertisement for home workers. It assured readers that "big money" could be earned writing circular letters and addressing envelopes at home. The girl was informed that in order to secure the work she must buy a small typewriter from the firm which would give her employment. She spent almost her last cent for the typewriter that turned out to be a mere toy. It broke down before she had mastered its use. The firm had furnished no guarantee, and she had nothing to show for her bitter experience. Another girl who actually sent money to a concern for paper, envelopes, and pens with which to "do writing at home" found that she could earn ten dollars a thousand writing lengthy circulars, addressing the envelopes, and furnishing the names of possible purchasers of the small patented articles which the circulars advertised. In offices where thousands of envelopes must be addressed, girls are employed to do this either by hand or on typewriting machines. They work with amazing rapidity and earn from five to eight dollars a week, seldom more than a dollar for a day of nine or ten hours. Hence it can quite readily be seen that the home girl cannot begin to compete with them.

Beware of the Baited Trap

The daughter of a Pennsylvania farmer thought to turn her ability for rapid crocheting to account, and answered an advertisement in a city paper for home crocheters. When I met her she was wondering why she did not hear from the firm. I could tell her why. The crocheters who answered that advertisement and procured the work were residents of the most wretchedly crowded homes in the city. One member of the family calls for and delivers the work, and anywhere from five to seven others crochet, not for a few hours a day, when the other work will permit of leisure, but all day and far into the night, and in the end the earnings of the family barely suffice to keep the wolf from the door. The manufacturer's "home work" is the worst form of industrial slavery against which three or four hours a day does not count even for pin-money. What could even a fast crocheter at home make at the rate of five cents each for baby saccos, even though the materials are furnished, when she must pay expressage both ways?

The same conditions prevail in embroidery circles. No matter how rapidly you embroider you cannot compete with the experienced foreign workers who work by the piece or hour in the great trade centers. I met a girl last summer in a small town who was expecting to make a good bit of money embroidering collar and cuff sets to be sold through an exchange. She writes me that after she paid her dues, the commission on sales, and no end of stamps to ship her work and conduct correspondence concerning it, she had concluded to seek a means of money-making nearer home, also she found to make a success of this work she must keep ahead of the styles, and this she could not do living so far from fashion centers.

A means of making money at home which seems to appeal to the country woman in particular is writing words for songs which she hopes to sell to music publishers. One woman I know worked diligently at a song-poem, and sent it to the writer of an advertisement for such poems. A few days later she was delighted to receive a courteous letter saying the poem had been accepted. The letter continued: "Your song contains that element of human interest that usually appeals to and holds the ear of a music-loving public. I am confident that with a suitable setting it would be accepted by a publishing house in this city." And all this was to cost her only ten dollars. It looked as

if the setting was considered suitable, for in a short time a music-publishing firm wrote her and said her song had been accepted if she would forward twenty-five dollars for the music. Greatly pleased that she seemed on the verge of success if not fame, she forwarded the money. In return for her thirty-five dollars she received as her "royalty" a dollar in stamps. The United States Government is constantly warring upon these publishers and may in time wipe them out.

One might go on and name a long list of the various means which women who wish to make money at home try, only to find them either myths or themselves brought into competition with women who are on the spot and, too, are willing to work for almost nothing. Why not instead look for your market near home? First take account of stock of yourself, your time, strength, and fitness; then your home, its equipment and possibilities; of your neighbors, their needs and their purses. And without doubt success will come where you can work most easily and most quickly and for persons who want what you have to give.

What Can You Do Well?

For instance, I know a country woman who had gained a reputation among her neighbors for jellies made of wild fruits, and when the problem of money-making confronted her she turned this to account. Have you ever tried in the city to buy elderberry, wild strawberry, or wild crab-apple jelly? They are as hard to get as sweets from the Far East. Nearly everybody who has lived in the country knows that there is a sweetness, a tang, a bouquet to wild fruits and



He gave her orders for wild fruit jellies

berries unobtainable in the cultivated varieties. My friend took samples of her jellies and jams to a grocer with a wealthy trade who was so well pleased with the samples of her art that he gave her orders for all she could do in this line. She developed her homely talent instead of seeking some new environment or new training.

But there is one precaution to be carefully observed in putting up jellies for fancy city trade. The country woman who intends to enter this field of opportunity should first get in touch with the most exclusive grocer in the large city nearest her. The object of this preliminary correspondence with the city grocer is to give him an opportunity to furnish the glasses, or at least to designate the style of tumbler in which he prefers to have the jelly placed. Each has his own ideas on the subject. He knows what appeals to his particular trade, and a failure to observe that peculiarity is likely to bring defeat. The appearance of the package counts for much. Again, he may wish to give special directions in regard to the consistency or degree of stiffness in the jelly demanded by his trade.

Open Your Eyes and Roll Up Your Sleeves

A girl when dining at a city restaurant noticed the exorbitant prices quoted for guinea squabs. She visited a poultry commission merchant before going back to the farm and asked him if there was a demand for guinea fowls.

"A decided one," was the prompt reply, "and I don't see why some of the women who have the chicken craze don't wake up to the fact that there's money in guineas. The man or woman who would make a specialty of raising them, feeding them as they should be fed, and putting them on the market at the right age in fancy condition could get top prices and have a sure market, a fancy market. It's a 'get rich' proposition."

Starting with the few guinea fowls about the farm which had been kept to frighten away hawks and vermin but which no one ever thought of eating, this girl is building up a profitable trade with some leading hotels and restaurants in the city nearest to her.

Even if mother has the butter and egg money, there are other farm products that a girl can market. If she lives near a town of any size that town must boast of its fastidious housewives, its local aristocracy. Let her find a market for practical things among these people.

I lived in a small town where the families who did not have



The typewriter turned out to be a toy

their own garden were dependent for green vegetables upon the supply shipped to the greengrocers from the city commission merchants until one girl who could not induce these men to patronize her hotbed products—for the reason her supply might not be up to standard; she might not raise enough to supply them, and they would not know how much to expect from her and how much from the commission merchants—made a house-to-house canvass among the housewives and offered them her freshly picked vegetables at the same price they had been paying. She was just brave enough not to cut under the prices of the local grocers. Her list of customers grew. She came to town three times a week, and when the greengrocers found she was cutting into their trade they capitulated, and to-day she supplies them all.

But, says some impatient girl, look how long it takes to build up a trade like that, to establish a market. How long a time do you think it takes a successful stenographer to be in a position to make a bare living?

A woman in a small town with a few hours a day of spare time felt she should utilize it for profit. She could do nothing, she thought, which would appeal to anyone, but several people had admired her petticoats. She made some and put them in the store of her brother-in-law. They were work petticoats of seersucker, gingham, and galatea cloth, and dress petticoats of cambric, nainsook, and lawn. The greatest demand was for working skirts, which were very simple with generous hemmed bounces attached to the skirt portion with a bias band or a strip of machine-made feather-stitching. Their merit lay in the well-turned and wide hems and the fact that at the first pull the string did not come out. She is now hardly able to supply the demand.

The woman who can make plain working dresses and aprons invariably can find sale for them among her neighbors. Many women who do not sew are glad to purchase home-made things which can be depended upon not to come to pieces at once, instead of the things so many are forced to buy at the nearest small store owing to lack of time to make. I know lots of farmers' wives who never sew except to mend and darn, although I believe most people think these women always make what they wear.

You really don't know what your neighbors want until you try to find out. If you must be a stay-at-home, seek a market as near your home as you possibly can, and develop some homely talent before you try to do anything by mail. Look yourself, your friends, and your neighbors over and be assured you will find something to offer them.

The House Shall Bloom Like the Rose

By Corinne Harris Rust

WHEN house plants are taken from their winter quarters, whether this be the pit or the window garden, they should be repotted at once. First snip off all dead leaves and straggling growth with a sharp pair of shears, lift the plants from the pots, and shake every particle of dirt from the roots. Put a handful of pebbles in the bottom of the pots to insure good drainage, then fill with the richest earth that can be obtained.

A little well-rotted cow manure put in first, and leaf mold to fill the pot, is the best soil for geraniums, begonias, cacti, and all other house plants. After being repotted the plants should not be exposed to the sun for several days, as the hot sunshine will cause the leaves to wilt and greatly retard the growth.

To obtain a fine, showy collection of geraniums, take strong cuttings from the old bushes and root them early in spring for the summer and fall blossoms. These young plants make better foliage and give a greater profusion of bloom than the older plants do.

The cuttings are so easily rooted that one need feel no misgiving in planting them. Fill a small goods box half full of earth which is well mixed with sand, set the cuttings about an inch and a half or two inches in the soil, and keep them damp—not wet, as too much water will cause them to rot. They grow up very fast and can be transplanted as soon as they grow three or four new leaves.

I am often troubled with small white insects and little worms in the earth in the flower pots. When I find them I make a strong solution of saltpeter, and water the plants with this. Two or three applications, about a tablespoonful at a time, will rid the plants of pests. This saltpeter solution will not injure the plants in the least, but is death to animal life.

Rex begonias should never be cut or divided, as this will injure them both in looks and growth. When they grow too large for the pot they should be given a larger one in which to spread their roots.



"These are made of real country feathers"

FOUND OUT

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No one is in better position to know the value of food and drink than a trained nurse.

Speaking of coffee a nurse in Pa. writes: "I used to drink strong coffee myself, and suffered greatly from headaches and indigestion."

"While on a visit to my brothers I had a good chance to try Postum, for they drank it altogether in place of coffee. After using Postum two weeks I found I was much benefited and finally my headaches disappeared and also the indigestion."

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A Kalamazoo Direct to You

The Child at Home

An Experiment in Taking My School Into a Home

By Helen Johnson Keyes, Fireside Editor

I HAVE been training fourteen children between the ages of four and seven in a class held at my house which I call the School of Play because the work is modeled on the Montessori principle of the child's teaching himself through his play instincts. Rosaltha and Billy are two of the once troublesome children who have ceased to be troublesome because of their interest in the work.

SUDDENLY I rushed out of the room in my School of Play where three of the children were sweeping and dusting, and took down the receiver of my telephone which hung in the hall.

"Give me Mrs. William Bailey," I said.—"Oh, Mrs. Bailey, may I bring Rosaltha and Billy to your house on Thursday afternoon to get supper and clear away afterwards?"

"I don't hear you," Mrs. Bailey's voice answered over the telephone.

I knew she heard but could not credit her hearing because of my strange proposition. I repeated it.

"Let Billy and Rosaltha get our tea?" she almost screamed.

"Yes, Thursday," I answered. "We'd come about four."

"I haven't no insurance on my dishes!" she derided. "Keep 'em plugging up cardboard holes with cooky cutters and walkin' the rail fence. It costs less'n experiments with china and carpets."

"Please, Mrs. Bailey," I urged, "I'll insure everything they touch one hundred per cent on its value."

So with a parting exclamation to the effect that I was as odd as they make 'em she consented and hung up the receiver.

The idea had come to me suddenly. My School of Play was six months old and my children had learned how to do a great many useful things—such as sweeping and dusting, table setting and serving, and even simple cooking and laundry work—under the influence of other children doing the same kind of things, and yet when they were in their own homes they made no effort to continue these tasks. From the point of view of their mothers they were little better trained than when they came to me.

Obviously this was all wrong.

I resolved that they must learn to do practical things as well as how to do them.

Therein lies the difference, I think, between merely learning things and being educated.

You may know a lot of things, but if you have not the habit of doing them at the right time, in the right place, with the right spirit, you are of no use to the world.

If you are of no use to the world you are not educated.

To overcome this difficulty I determined to take my children by twos or threes or fours into homes and have them help with the housework.

Of course they could not perform their tasks there as easily and well as in the school because they would have to work with stoves, sinks, and shelves made for adults, whereas I had furnished my

School of Play with all these things cut down into sizes convenient to children. Nevertheless the splendid training in the use of their muscles and the accurate use of their five senses which the Montessori playthings and exercises had given them would necessarily manifest itself in a dexterity unusual for their ages.

When Thursday afternoon came and I dismissed the School of Play early, Rosaltha and Billy were in a state of exuberant excitement. They bounded ahead of me along the side path, rattling the wonderful fallen leaves of autumn with their feet, until they reached Mrs. Bailey's door.

"Great pair, them two," remarked Billy's mother, turning and indicating her son and Rosaltha as we followed her into the parlor. "Good thing, ain't it, Rosaltha," she added, "that Billy don't wear long curls? No need of hidin' the shears in this house, is there?"

Rosaltha turned scarlet. I had treated as too shocking for discussion the episode to which Mrs. Bailey referred, when Rosaltha had cut off the rave curls of poor little Pearl Gerry at my valentine party. My silence had evidently bored gimlet-like into her conscience, as I had intended it to do. After the scarlet faded from her face she turned white, and her poor little under lip trembled as she replied.—and I thought the reply very successful:

"Mrs. Nella [this is what the children called me] didn't hide them anyway. I cut out an apron with them this mornin'."

There was in that reply the kernel of all I believed about training children. Rosaltha understood it—understood very simply that instead of hiding the instruments of misdeeds I believed in finding some practical and interesting use for them.

Mrs. Bailey, on the other hand, was utterly unconscious that wisdom had spoken to her, and she continued bantering as she and I sat down and the children edged around the room uncomfortably:

"Lining yourself with gold, ain't you, Rosaltha? Gold fillin's in your teeth and gold bows to your spectacles!"

Rosaltha turned from a begonia in the window and looked unhappily at me.

"That's gold invested, isn't it?" I said, smiling. "Good teeth help a good digestion; good eyesight helps a good brain; a good stomach and a good brain make a good worker."

At this point Billy changed the logic of our talk by an irrelevant flight of his own thoughts. He was kneeling on a chair and studying the upholstery.

"Yesterday," he invented, very solemnly and deliberately, "I went out to draw some water. When I picked up the bucket there was a bird's nest in it and five blue eggs. Pretty soon the mother bird came and sat down on the handle of the bucket—"

"Why, Billy," cried his mother, "how can you tell such lies? You're a wicked boy and you'll—"

Billy turned round, sat down, and looked at Rosaltha for justification.

"It's just because she's old, Billy," Rosaltha comforted him. "They can't understand make-up stories when they're so awfully old."

That was not the soft answer that turneth away wrath. Mrs. Bailey lacked a few weeks of thirty-five and was a little vain of the youthful glow of pink still in her cheeks and of her rounded lines.

"Montessori doesn't rhyme with manners anyhow," she grumbled.

"Why can't motherhood rhyme better with childhood?" I cried. Matters were so uncomfortable anyway, I thought I might as well make them a little worse.

"These children think you are old when you're still as pretty as a girl, just because you keep nagging and misunderstanding them. When they do things that grown-up people don't want to do you call them naughty, whereas they are only different. A child is not an imperfect, feeble-minded adult; he's something absolute and complete in himself. He has his own standards and his own conceptions and his own mental images. When he makes up a very pretty story, as Billy did just now, and you classify it as a lie, he naturally considers you old and stupid. A lie means to him the cowardly thing some boys tell when they want to escape a punishment. What has that to do with a pleasant story about a bird?"

"Well, I guess they're all alike," said Mrs. Bailey, who has a way of cheerfully missing your point. "They all fib and speak impudent."

"They don't at all," I cried with the same kind of exasperation and despair with which one sometimes tries to make a deaf person understand. "No child fibs except the mean, cruel, cowardly kind. Billy was not fibbing; he was telling a story—just as Dickens and Shakespeare told stories. We're all geniuses for a minute in childhood, and then the minute passes and most of us forget so absolutely that instant of imagination in our lives that even when it flickers up in our children we have no sense of meeting a mood which for a minute long ago was ours too."

"Well," said Mrs. Bailey, "I've only the one, and I never took much to children before I had him, so I don't pretend to be up in these high-brow ideas."

"They're not high-brow; they're just common sense," I began. Then I remembered that I had not come to argue but to let Rosaltha and Billy show their powers of cooking and serving. "When can we get to work on our supper?" I asked. "Your supper, I mean."

"Well, if you're set on doing it," she said, "you'd better begin, for Mr. Bailey'll get back about five. I've got a few extras baked, so if children's cooking don't suit him he'll not starve."

She showed us where she kept her things, and we unpacked a small basket of provisions which we had brought with us in order to carry out the bill of fare which we had planned.

"Now you and I will go out on the porch," I said to Mrs. Bailey, "and do some talking while the children get our meal."

Home-Made Candies for Hallowe'en—By Anna Nixon

CREAM FUDGE—This candy entails more work than ordinary fudge, but if directions are carefully followed the result will be a smooth, creamy, fine-flavored product, a very aristocrat among fudges. Cook two cupfuls of granulated sugar and one cupful of cream until the mixture will form a soft ball when dropped into cold water, adding one saltspoonful of cream of tartar when it begins to boil. To prevent sticking, stir gently but constantly from the time the kettle is placed over the fire until done cooking. Pour on a platter which has not been buttered but which has been moistened by brushing with the hand dipped in cold water. Let stand until perfectly cold, then work and turn with a strong-bladed knife or heavy spoon until a creamy, fondant-like mass is formed. Mold into a ball, cover with a damp cloth, and set away for an hour; it may then be worked and kneaded with the hands until soft and smooth, packed in a bowl, and kept covered with a damp cloth until it is to be served. When wanted, add to a part of the fudge chopped nuts, figs, or dates as desired.

OLD-FASHIONED NUT CANDY—Nothing can surpass the delicious flavor of candy made after this simple recipe, which was

a favorite two or three generations ago: Place two cupfuls of light brown sugar and one-half cupful of water over the fire and stir until the sugar is dissolved. When the mixture begins to boil, add a



Old-Fashioned Nut Candy

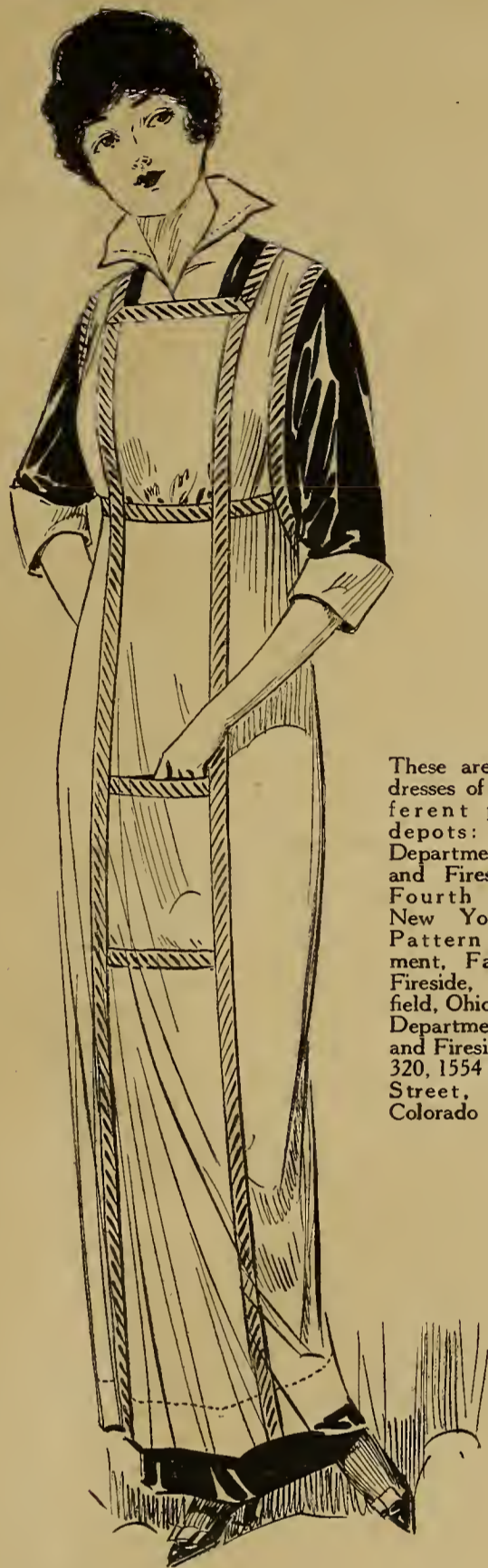
tablespoonful of vinegar. Cook until the syrup will spin a thread, adding two level tablespoonfuls of butter shortly before it reaches this point. Pour the candy over a cupful of broken hickory-nut, pecan, or black walnut meats which have been spread on a buttered platter. Mark in squares when nearly cold. When cold, break apart and wrap each square in waxed paper.

NUT PUFFS—Boil two cupfuls of light brown sugar and two tablespoonfuls of corn syrup with one-half cupful of water until the mixture will spin a thread. Pour a little of the syrup over the stiffly beaten whites of two eggs; beat until thoroughly mixed, then gradually add the remainder, beating all the time. Continue the beating until the mixture begins to stiffen. Add a cupful of chopped nut meats, and beat again until the candy will hold its shape when dropped from the spoon. Drop by heaping teaspoonfuls on waxed paper. The rough, irregular shape is characteristic of these puffs and no effort should be made to smooth them.

POP-CORN AND NUT CRISP—Cook one cupful of granulated sugar, one-third cupful of corn syrup, and one-half cupful of water to the soft-ball stage; then add one-fourth cupful of New Orleans molasses, one-half tablespoonful of butter, and a pinch of salt, and stir constantly until the mixture becomes very brittle when dropped into cold water. Take from the fire and pour over three quarts of freshly popped corn to which a cupful of shelled peanuts has been added, mixing and stirring the corn so that all will be coated. Spread out on a buttered platter so that it can easily be broken apart when cool.

An Apron You Will Want

Miss Gould, the Fashion Editor, Chats With Our Readers and Tells How to Make This Practical Apron



No. 2653—Housework Apron with Pocket—32, 36, 40, and 44 bust. Material required for 36-inch bust, four and three-fourths yards of twenty-four-inch material, or three and one-half yards of thirty-six-inch material. This pattern costs ten cents. It may be ordered by mail from one of our pattern depots

These are the addresses of our different pattern depots: Pattern Department, Farm and Fireside, 381 Fourth Avenue, New York City; Pattern Department, Farm and Fireside, Springfield, Ohio; Pattern Department, Farm and Fireside, Room 320, 1554 California Street, Denver, Colorado



No. 2653

IT IS some little time now since I have had a chance to chat with our readers, so I am going to take this opportunity not only to tell about the apron shown on this page but also to renew my acquaintance with our old readers and to meet the new ones.

In the past issues of FARM AND FIRESIDE I have been showing the new fall costumes. Some of them may have seemed a little extreme to you; nevertheless I showed them, feeling sure you would want to know about the new changes because they are many and decidedly different.

Every woman likes pretty clothes, and even if she can't have as many of them as she wishes she likes to see them. Then every woman who is a real woman and a housewife also takes a keen pride in the little every-day simple costumes that she wears at home. She likes a dainty striped gingham or crepe dress, or a pretty apron to slip on over her dresses when working about the house or in the kitchen. For this reason I have especially designed the apron shown on this page. This design offers so many suggestions for fabrics that I want to tell you a few that particularly appeal to me. First of all, for very practical wear I like it made of galatea, which is so closely woven that the garment would not only be serviceable but would also save the dress beneath from getting spotted. Dark blue, green, and brown are good colors, and to keep the apron from being too somber the trimming bands may be of plaid or striped galatea. For less heavy work striped gingham and chambray are nice, with the bands of plain material;

while quite the newest fabric for aprons is cotton crepe in plain or striped design; and, let me tell you, this is an extremely satisfactory material to use, as you know it never has to be ironed.

Aside from using this apron for housework it also serves as a practical design for a bath apron for the mother who has a young baby to bathe. If used for this it is wise to have the apron of Turkish toweling or rubber sheeting. The pocket in front is a convenient receptacle for sponge, towel, and other bath necessities, or for a duster and brush when the apron is used for housework.

The skirt of the apron is made with a narrow front gore and the back and side portions are in one piece. The apron has a becoming slightly high-waisted effect. The straps in back are attached to the front of the waist portion at the shoulder seams, and there are strings which tie in a bow at the back.

The pattern for this apron costs ten cents, and the materials need not cost more than twenty-five, though of course they can be better if preferred. The way to get this pattern is to write to one of our pattern depots, enclosing ten cents in payment of the pattern, which will be sent by return mail. The addresses of the pattern departments are given in the type just next to the illustration of the apron.

The pattern is most simple to use. After cutting out the apron the seams may be joined on the outside, and the armscye and neck edges may be turned on the right side. Then when the inch-wide bias bands are applied the raw edges are covered and the finish is extremely easy.

VELLASTIC

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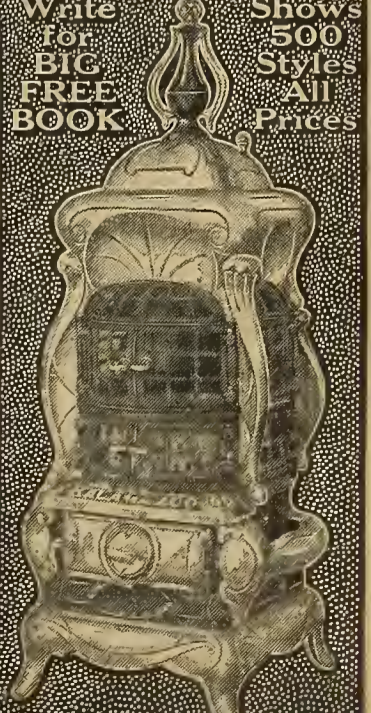
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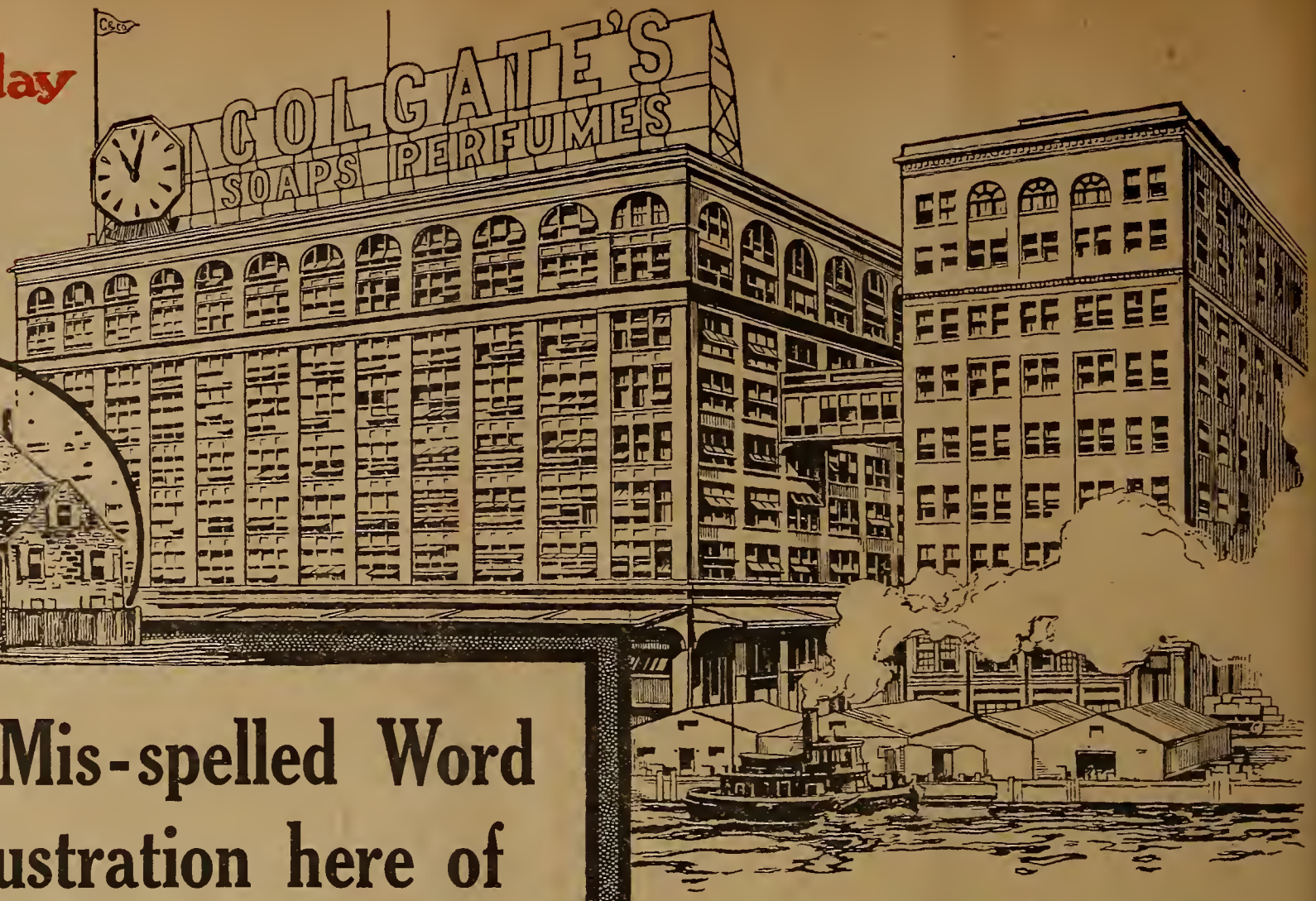
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FARM *and* FIRESIDE

EVERY OTHER WEEK • • THE NATIONAL FARM PAPER
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E

ESTABLISHED 1877

*“You marry! Humph!”
said Fennie*

Beginning

THE BROWN MOUSE

By HERBERT QUICK



WHENEVER we boys found anything animal, vegetable, or mineral—almost—which looked not absolutely repulsive, our first query always was, "Is it good to eat?"

That is the oldest question in the world. Every animal asks it a dozen times a day, and lets sight and smell answer it. Now that war is making a world-wide scarcity, "Is it good to eat?" becomes a world-wide question for the human beast.

Take the whale, for instance. We have been wasting the meat of the whale all the many years during which we have been slaughtering this largest of mammals. Why? The whale is a swimming beast which suckles its young and lives on clean food. Now there is a movement on foot to begin the canning of whale beef, to be sold at a low price to those who have the open-mindedness and strength of palate to tackle it.

In Japan the meat of a red dog is a great delicacy, and dogs of other colors are preferred to beef, mutton, or poultry. Pork is looked upon by the Japanese with much the same lack of appetite with which we regard the meat of the dog or horse.

Horse beef was not eaten in France until after the great siege in 1871. Now it is a regular article of commerce. They ate it and found it excellent. Dogs and cats too were found rather tasteful. Why not? Many people declare that they would as soon eat a cat as a rabbit or squirrel—and usually they are those who will eat none of them. Probably they are correct in saying that one is as good as another, and are mistaken only in believing that none are good.

We used to think the Indians' eating of muskrat flesh an evidence of the inherent depravity of the savage, but really the Indians knew more about the matter than we did. The United States Department of Agriculture assures us that the muskrat is as good eating as its fellow swimmer, the duck. Probably the first man to eat a duck thought himself a bold fellow, and was rather ashamed of it. That is the way many hunters still feel about the mud hen, or coot; but when this bird is properly parboiled and roasted, and served as mallard at a city café, the same man smacks his lips over its savor and pays a dollar and a half for it. Why not? The mud hen lives on the same food as the duck.

Anyone who has ever eaten a fat young woodchuck knows that it is good, but a great many who are greedy for the meat of the coon or the bear would refuse in disgust to taste the juicy woodchuck. All prejudice. It is just as good as 'possum, and only those who do not know will refuse to eat 'possum. As for the badger, I have never tried it, but I have no doubt it is good eating, unless mayhap it is too tough; some beasts and birds are, it is to be

WITH THE EDITOR



confessed, and some, like the pelican, are both too tough and too strongly flavored by their diet—in this case, fish. The loon may be classed with the pelican in this respect. People who trap skunks and utilize their fat as a by-product of the fur trade often eat their flesh, cooked as it is in the trying-out process. They pronounce it delicious.

And there are legends of the eating of rattlesnake meat by those who collect and sell snake oil. Why not? The iguana and other large lizards of the tropics are habitually eaten by travelers in those lands, and that with a relish. Why not our common snakes? Not that the writer cares for any just now, thank you,—but he is willing to admit that his declination is based on prejudice, pure and simple. As for the venom of the rattlesnake, it is not in the flesh, and would do the eater no harm if it were, since it must be introduced into the blood directly to do its toxic work. The skunk's pronounced odor is abroad only when he feels it necessary to expel it in self-defense: his meat is no more contaminated by it than is venison by the scent glands of the deer.

A great many people reject the most toothsome dish of eel because, forsooth, the eel looks snaky. We hate to eat our most repulsive enemies, it appears, or anything that looks like them. I suspect that primordial man was too big a coward to procure tiger meat, or snakes, and so formed the habit of eating mutton instead. The flounder is universally accepted as a food fish, but we never eat the stingaree. Does anyone know whether the stingaree is bad or good for food? Or do we eschew him because of the very justifiable prejudice against the general character of a fish which has a whip-like tail with a sting in the end thereof?

Whether the dogfish is eatable or not, just now slips one's memory, but it is suspected that its name keeps it from filling a useful rôle in the human stomach. The fishes wrongfully excluded from the menu are too numerous to be mentioned. The tuna was formerly on the list, but the stone once rejected of the builder is now the head of many a corner in the fish market. The jumping mullet of Gulf waters was once thought to be not only common but unclean. Redfish, red snapper, pompono, Spanish mackerel, and others caught in the same waters were called by the fisherman "good fish" and the mullet were cast away; but for many years the same toilers of the sea have been making their livings from the delicious mullet chiefly.

We pay high prices for oysters and clams of the salt-water kinds, but it took the United States Department of Agriculture experts to point out the value of the salt-water mussel as food. There are literally oceans of them—good food going to waste. What's the matter with the fresh-water clam? It looks just as good as an oyster—which isn't saying much, perhaps. The eating of the common snapping turtle is distinctly *déclassé* in our rural districts, though the thing is done by the cognoscenti; but we buy the animal at three dollars a plate as terrapin. As a matter of fact, the despised "slider" is just as good as the terrapin.

How do you like snails? The average American who accepts his food on tradition and wastes a continent in order that he may live on white bread, bolted meal, and sirloin steak recoils in horror from the idea of eating snails; but in France the snail is as much liked as birds' nests in China. Within a year or so a workman in Paris sued his employer for personal injuries incurred in his work as a maker of artificial snails. This let the cat meat out of the bag. The demand is so great that there are not enough natural snails to supply it, and this guileful business man had perfected machinery and a formula whereby he took the lights of animals—quite as good food, I suspect, as their livers—and the flesh of cats, and therewith filled second-hand snail shells for the epicures, none of whom could detect the imposture. It was a nefarious scheme, of course, but it serves the present purpose of rebuking a people who in the midst of war taxes and increasing cost of living neglect all the things herebefore mentioned, including snails and cat's flesh.

This has led us far afield, ashore, and asea from whale beef, but if the truth has been emphasized that we waste a vast deal of excellent food through prejudice and lack of knowledge it will not have been written in vain.

Herbert Quick

LOOK FOR FARM AND FIRESIDE'S NEXT ISSUE

Every page of our next issue is planned to be useful and entertaining, for it is possible to be both.

Of course "The Brown Mouse," our new serial story by the Editor of FARM AND FIRESIDE, will be given a prominent place. This story will appeal to everyone. Be sure that you read the beginning chapters in this issue.

But of course this is simply one of many features of excellence in the next issue. Here are some of the items to be discussed: Farm score cards, good dairymen and bad ones, how to protect trees from rodents, trapping as it interests farmers, winter eggs.

These and many other good things are coming to you November 21st.

And that reminds us, are you going home for Thanksgiving?

The Old Folks on the Old Farm will be lonesome on Thanksgiving Day—unless their absent children do something to show that they remember.

If you live in the town and don't go home if you can, or if you live in the next county or township and are not planning to be with the family on Thanksgiving, don't read our Thanksgiving story, "Secrets," by Helen Peck.

But if when the day comes you plan to have done, by visit, letter, telegram or otherwise, the thing which will make the home hearts, and your own hearts, as warm as hearts should be on Thanksgiving, then read "Secrets." It is as sweet and homey and tender and American as—as—as a Thanksgiving pumpkin pie! A splendid story!

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SATURDAY, NOVEMBER 7, 1914

The Brown Mouse

The Romance of a Farm Hand Who Upset a School District

Jennie Said "Humph!"

By Herbert Quick

Part One

"but of course you can't see much good in that."
 "No, for it doesn't get you anywhere, you know. You're a great deal more able and intelligent than Ed—and see what a fine position he has in Chicago. . . ."
 "There's Mother, you know," said Jim gently.
 "You can't do anything here," said Jennie. "You've been a farm hand for fifteen years . . . and you always will be unless you pull yourself loose. Even a girl can make a place for herself if she don't marry and leaves the farm. You're twenty-eight years old."

"But a man teaching in the country ought to be able to marry."

"Marry!" said Jennie rather unfeelingly, I think. "You marry!" Then after remaining silent for nearly a minute she uttered the syllable without the utterance of which this history would not have been written. "You marry! Humph!"

Jim Irwin rose from the bench tingling with the insult he found in her tone. They had been boy and girl sweethearts in the old days at the Woodruff schoolhouse down the road, and before the fateful time when Jennie went "off to school" and Jim began to support his mother. They had even kissed—and on Jim's side, lonely as was his life, cut off as it necessarily was from all companionship save that of his tiny home and his fellow workers of the field, the tender little love story was the romance of his life.

Jennie's "Humph!" retired this romance from circulation, he felt. It showed contempt for the idea of his marrying. It relegated him to a sexless category with other defectives and badged him with the celibacy of a sort of twentieth-century monk, without the honor of the priestly vocation. From another girl it would have been bad enough, but from Jennie Woodruff, and especially on that quiet summer night under the linden, it was insupportable.

"Good night!" said Jim—simply because he could not trust himself to say more.

"Good night!" replied Jennie, and sat for a long time wondering just how deeply she had unintentionally wounded the feelings of her father's field hand, deciding that if he was driven from her forever it would solve the problem of terminating that old childish love affair which still persisted in occupying a suite of rooms all of its own in her memory, and finally repenting of the unpremeditated thrust which might easily have hurt too deeply so sensitive a man as Jim Irwin. But girls are not usually so made as to feel any very bitter remorse for their male victims, and Jennie slept very well that night.

II

Jim Feels the Solitude of His Oddness

GREAT events, I find myself repeating, sometimes hinge on trivial things. Considered deeply, all those things which we are wont to call great events are only the onward and visible results of occurrences in the minds and souls of people.

Sir Walter Raleigh thought of laying his cloak under the feet of Queen Elizabeth as she passed over a mud puddle, and all the rest of his career followed as the effect of Sir Walter's mental attitude. Elias Howe thought of a machine for sewing, Eli Whitney of a machine for ginning cotton, George Stephenson of a tubular boiler for his locomotive engine, and Cyrus McCormick of a sickle bar, and the world was changed by those thoughts, rather than by the machines themselves. John D. Rockefeller thought strongly that he would be rich, and this thought, and not the Standard Oil Company, changed the commerce and finance of the world.

As a man thinketh so is he; and as men think so is the world. Jim Irwin went home thinking of the "Humph!" of Jennie Woodruff—thinking with hot waves and cold waves running over his body, and swellings in his throat. Such thoughts centered on his club foot made Lord Byron a great sardonic poet. Byron's club foot set him apart from the world of boys and tortured him into a fury which lasted until he had lashed society with the whips of his scorn.

Jim Irwin was not club-footed; far from it. He was bony and rugged and homely, with a big mouth and wide ears, and a form stooped with labor. He had fine, lambent, gentle eyes which lighted up his face when he smiled, as Lincoln's illuminated his. He was not ugly. In fact, if that quality which fair ladies—if they are wise—prize far more than physical beauty, the quality called charm, can with any propriety be ascribed to a field hand who has just finished a day of the rather unfragrant labor to which I have referred, Jim Irwin possessed charm. That is why little Jennie Woodruff had asked his help with her



Jim countered with an awkward swinging uppercut

"It's all wrong!" protested Jim gently. "The farm ought to be the place for the best sort of career."

"I've been teaching for only two years," Jennie stated, "and they say I'll be nominated for county superintendent if I'll take it. Of course I won't—it seems silly—but if it were you, now, it would be a first step to a life that leads to something."

"Mother and I can live on my wages—and the garden and chickens and the cow," said Jim. "After I received my teacher's certificate I tried to work out some way of doing the same thing on a country teacher's wages. I couldn't. It doesn't seem right."

Jim rose, and after pacing back and forth sat down again, a little closer to Jennie. Jennie moved away to the extreme end of the bench, and the shrinking away of Jim as if he had been repelled by a negative magnetism showed sensitiveness, or temper.

"It seems as if it ought to be possible," said Jim, "for a man to do work on the farm, or in the rural schools, that would make him a livelihood. If he is a field hand it ought to be possible for him to save money and buy a farm."

"Pa's land is worth two hundred dollars an acre," said Jennie. "Six months of your wages for an acre—even if you lived on nothing!"

"No," he assented, "it can't be done. And the other thing can't either. There ought to be such conditions that a teacher could make a living."

"They do," said Jennie, "if they can live at home during vacations. I do."

A FARM HAND nodded in answer to a question asked him by Napoleon on the morning of Waterloo. The nod was false, or the emperor misunderstood—and Waterloo was lost. On the nod of a farm hand rested the fate of Europe.

This story may not be as important as the Battle of Waterloo—and it may be. I think that Napoleon was sure to lose to Wellington sooner or later, and therefore the words "fate of Europe" in the last paragraph should be understood as modified by "for a while." But this story may change the world permanently. We will not discuss that, if you please. What I am endeavoring to make plain is that this history would never have been written if a farmer's daughter had not said "Humph!" to her father's hired man.

Of course she never said it as it is printed. People never say "Humph!" in that way. She just closed her lips tight in the manner of people who have a great deal to say and prefer not to say it, and—I dislike to record this of a young lady who has been "off to school," but truthfulness compels—she grunted through her little nose the ordinary "Humph!" of conversational commerce, which was accepted at its face value by the farm hand as an evidence of displeasure, disapproval, and even of contempt.

Things then began to happen as they never would have done if the maiden hadn't humphed, and this is a history of those happenings.

As I have said, it may be more important than Waterloo. "Uncle Tom's Cabin" was, and I hope to make this a much greater book than "Uncle Tom's Cabin."* And it all rests on a "Humph!" Holmes says:

Soft is the breath of a maiden's
 "Yes,"
 Not the light gossamer stirs with
 less . . .

but what bard shall rightly sing the importance of a maiden's "Humph!" when I shall have finished telling of what came of what Jennie Woodruff said to Jim Irwin, her father's hired man?

Jim brought from his day's work all the fragrances of next year's meadows. He had been hauling manure. All things have opposite poles, and the scents of the farm are no exception to the rule. Just now Jim Irwin possessed in his clothes and person the olfactory pole opposite to the new-mown hay, the fragrant butter, and the scented breath of the lowing kine—perspiration and top-dressing.

He was not quite so keenly conscious of this as was Jennie Woodruff. Had he been so, the glimmer of her white piqué dress on the bench under the basswood would not have drawn him back from the gate. He had come to the house to ask Colonel Woodruff about the farm work, and having received instructions had gone down the walk between the beds of four-o'clocks and petunias to the lane. Turning to latch the gate, he saw through the dusk the white dress under the tree and, drawn by the greatest attraction known to nature, had reentered the Woodruff grounds.

A brief hello betrayed old acquaintance and that social equality which still persists in theory between the workpeople on the American farm and the family of the employer. A desultory murmur of voices ensued. Jim Irwin sat down on the bench—not too close, be it observed, to the piqué skirt.

There came into the voices a note of deeper earnestness, betokening something quite aside from the rippling of the course of true love running smooth. In the man's voice was a note of protest and pleading.

"I know you are," said she; "but after years don't you think you should be at least preparing to be something more than that?"

"What can I do?" he entreated. "I'm tied hand and foot . . . I might have . . ."

"You might have," said she; "but, Jim, you haven't . . . and I don't see any prospects . . ."

"I have been writing for the farm papers," said Jim,

*One of my friends is afraid you'll think I'm in earnest about this, but I'm not. You'll see the joke of comparing this with "Uncle Tom's."

lessons rather oftener than was necessary in those days in the Woodruff schoolhouse when she wore her hair down her back.

But in spite of this homely charm of personality Jim Irwin was set off from his fellows of the Woodruff neighborhood in a manner quite as segregative as was Byron by his club foot. He was different. In local parlance, he was an off ox. He was as odd as Dick's hatband. He ran in a gang by himself, like Deacon Avery's celebrated bull. He failed to matriculate in the boy banditti which played cards in the haymows on rainy days, told stereotyped stories which smelled to heaven, raided melon patches and orchards, swore horrible, like Sir Toby Belch, and played pool in the village saloon.

He had always liked to read, and had piles of literature in his attic room which was good because it was cheap. Very few people know that cheap literature is very likely to be good, because it is old and unprotected by copyright. He had Emerson, Thoreau, a John B. Alden edition of Chambers' Encyclopædia of English Literature, some Franklin Square editions of standard poets in paper covers, and a few Ruskins and Carlyles—all read to rags. He talked the book English of these authors, mispronouncing many of the hard words because he had never heard them pronounced by anyone except himself, and had no standards of comparison. You find this sort of thing in the utterances of self-educated recluses. And he had piles of reports of the Secretary of Agriculture, college bulletins from Ames, and publications of the various bureaus of the Department of Agriculture at Washington. In fact, he had a good library of publications which can be obtained gratis or very cheaply—and he knew their contents.

He had a personal philosophy which while it had cost him the world in which his fellows lived had given him one of his own, in which he moved as lonely as a cloud, and as untouched by the life about him.

He seemed superior to the neighbor boys, and felt so; but this feeling was curiously mingled with a sense of degradation. By every test of common life he was a failure. His family history was a badge of failure. People despised a man who was so inconspicuously smarter than they, and yet could do no better with himself than to work in the fields alongside the tramps and transients and hoboes who drifted back and forth as casual labor and the lure of the cities swept them. Save for his mother and their cow and garden and flock of fowls and their wretched little rented house he was a tramp himself.

His father had been no better. He had come into the neighborhood from nobody knows where, selling fruit trees, with a wife and baby in his old buggy, and had died suddenly, leaving the baby and widow and nothing else save the horse and buggy. Mrs. Irwin had labored in kitchen and sewing-room until Jim had been able to assume the breadwinner's burden, which he did about the time he finished the curriculum of the Woodruff District school. He was an off ox and odd as Dick's hatband largely because his duties to his mother and his love of reading kept him from joining the gangs whereof I have spoken.

His duties, his mother, and his father's status as an outcast were to him the equivalent of the Byronic club foot, because they took away his citizenship in Boyville, and drove him in upon himself, and at first upon his school books which he mastered so easily and quickly as to become the star pupil of the Woodruff school, and later upon Emerson, Thoreau, Ruskin, the poets, and the agricultural reports and bulletins.

It degraded him to the position of an intellectual farm hand, with a sense of superiority and a feeling of degradation. It made Jennie Woodruff's "Humph!" potent to keep him awake that night and send him to the road work with Colonel Woodruff's team next morning with hot eyes and a hotter heart.

What was he anyhow? And what could he ever be? What was the use of his studies in farming practice if he was always to be an underling whose sole duty was to carry out the crude ideas of his employers? And what chance was there for a farm hand to become a farm owner, or even a farm reuter, especially if he had a mother to support out of the twenty-five or thirty dollars of his monthly wages? None.

A man might rise in the spirit, but how about rising in the world?

Colonel Woodruff's gray percheros seemed to feel the unrest of their driver, for they fretted and actually executed a clumsy prance as Jim Irwin pulled them up at the end of the turnpike across Bronson's Slew. The said slew being a peat marsh which annually offered the me of the Woodruff District the opportunity to hold the male equivalent of a sewing circle while working out their road taxes, with much conversational gain and no great damage to the road.

In fact, Columbus Brown, the pathmaster, prided himself on the Bronson Slew Turnpike as his greatest triumph in road engineering. The work consisted in hauling, dragging, and carrying gravel out on the low fill which carried the road across the marsh, and then watching it slowly settle until the next summer.

"Haul gravel from the east gravel bed, Jim," called Columbus Brown from the lowest spot in the middle of the turnpike. "Take Newt, here, to help load."

Jim smiled his habitual slow gentle smile at Newton Brouson, his helper. Newton was seventeen, undersized, tobacco-stained, profane, and proud of the fact that he had once beaten his way from Des Moines to Faribault on freight trains. Newton was out on the road work because he was likely to be of little use on the farm. Clearly, Newton was on the downward road in a double sense, and yet Jim Irwin rather liked him.

"The fellers have put up a job on you, Jim," volunteered Newton as they began filling the wagon with gravel.

"What sort of job?" asked Jim.

"They're nominating you for teacher," replied Newton.

"Since when was the position of teacher an elective office?" asked Jim.

"Sure, it ain't elective," answered Newton. "But they say that with as many brains as you've got sloshing round loose in the neighborhood you're a candidate

that can maybe break the deadlock in the school board."

A slide of earth from the top of the pit threatened to bury Newton in gravel, sand, and good top soil. A sweet-clover plant came down with it. Jim Irwin pulled it loose from its anchorage, and after looking attentively at the roots laid the whole plant on the bank for safety. "What do you want of that weed?" asked Newton.

Jim picked it up and showed him the nodules on its roots—little white knobs, smaller than pinheads.

"The most wonderful specks in the world," said Jim. "Ever hear of nitrates to enrich the soil?"

"Ain't that the stuff the old man used on the lawn last spring?"

"Yes," said Jim, "your father used some on his lawn. We don't put it on our fields in Iowa—not yet; but if it weren't for those white specks on the clover roots we soon would—as they do back East."

"How do them white specks keep us from needin' nitrates?"

"It's a long story," said Jim. "You see, Newt, before there were any plants big enough to be visible—if there had been anyone to see them—the world was full of little plants so small that there may be billions of them in one of those little white specks. They knew how to take the nitrates from the air—"

"Air?" ejaculated Newton. "Nitrates in the air? You're crazy!"

"No," said Jim, "there are tons of nitrogen in the air that presses down on your head, but the big plants can't get it through their leaves or their roots. They never had to learn because when the little plants—bacteria—found that the big plants had roots with sap in them, they located on those roots and tapped them for the sap they needed. They began to get their board and lodgings off the big plants. And in payment for their hotel bills the little plants took nitrogen out of the air for both themselves and their hosts."

"What d'ye mean by 'hosts'?"

"Their hotel keepers—the big plants. And now the plants that have the hotel roots for the bacteria furnish nitrogen not only for themselves but for the crops that follow. Corn can't get nitrogen out of the air, but clover can—and that's why we ought to plow down clover before a crop of corn."

"Gee!" said Newt. "If you could get to teach our school I'd go again."

"It would interfere with your pool-playing."

"What business is that o' yours?" rejoined Newt defiantly.

"Well, get busy with that shovel," suggested Jim, who had been working steadily, driving out upon the fill occasionally to unload. On his return from dumping the next load Newton seemed quite amiably disposed toward his work fellow, in a superior way—quite the habitual thing in the neighborhood.

"I'll work my old man to vote for you for the job," said he.

"What job?" asked Jim.

"Teacher for our school," answered Newt.

"Those school directors," replied Jim, "have become so bullheaded that they'll never vote for anyone except the ones they've been voting for."

"The old man says he will have Prue Foster again, or he'll give the school a darned long vacation, unless Peterson and Bonner join on someone else. That would beat Prue o' course."

"And Con Bonner won't vote for anyone but Maggie Gilmartin," added Jim.

"Aud," supplied Newton. "Haakon Peterson says he'll stick to Herman Paulson until the hot springs freeze over."

"And there you are," said Jim. "You tell your father for me that I think he's a mere mule, and that the whole district thinks the same."

"All right," said Newt. "I'll tell him that while I'm working him to vote for you."

Jim smiled grimly. Such a position might have been his years ago if he could have left his mother or earned enough in it to keep both alive. He had remained a peasant because the American rural teacher is placed economically lower than the peasant.

He gave Newton's chatter no consideration. But when in the afternoon he hitched his team with others to the big road grader, and the gang became concentrated within talking distance, he found that the project of heckling and chaffing him about his eminent fitness for a scholastic position was to be the real entertainment of the occasion.

"Jim's the candidate to bust the deadlock," said Columbus Brown with a wink. "Just like Garfield in that Republic convention he was nominated in—eh, Con?"

"Con" was Cornelius Bonner, an Irishman, one of the deadlocked school board, and the captain of the road grader. He winked back at the pathmaster.

"Jim's the gray-eyed man o' destiny," he replied, "if he can get two votes in that board."

"You'd vote for me, wouldn't you, Cou?" asked Jim.

"I'll try anything wance," replied Bonner.

"Try voting with Ezra Bronson once, for Prue Foster," suggested Jim. "She's done good work here."

"Opinions differ," said Bonner; "an' when you try anything just for wance it shouldn't be an irrevocable shtip, me b'y."

"You're a reasonable board of public servants," said Jim ironically. "I'd like to tell the whole board what I think of them."

"Come down to-night," said Bonner jeeringly.

"We're going to have a board meetin' at the schoolhouse, and ballot a few more times. Come down and be the Garfield of the covintion. We've lacked brains on the board, that's clear. They ain't a man on the board that iver studied algebra, 'r that knows more about farmin' than their imp'yers. Come down to the schoolhouse and we'll have a field hand address the school board—and, begosh, I'll move yer illiction meself! Come now, Jimmy, me b'y, be game. It'll vary the program anyhow."

The entire gang grinned. Jim flushed.

"All right, Cou," said he. "I'll come and tell you a few things—and you can do as you like about making the motion."

III

The Road Gang Discovers a Pugilist

THE great blade of the grading machine, running diagonally across the road and pulling the earth towards its median line, had made several trips, and much persiflage about Jim Irwin's forthcoming appearance before the school board had been addressed to Jim and exchanged by others for his benefit.

To Newton Bronson was given the task of leveling and distributing the earth rolled into the road by the grader—a labor which, in the interest of fitting a muzzle on his big mongrel dog, he deserted whenever the machine moved away from him. No dog would have seemed less deserving of a muzzle, for he was a friendly animal, always wagging his tail, pressing his nose into people's palms, licking their clothing, and otherwise making a nuisance of himself. That there was some mystery about the muzzle was evident from Newton's pains to make a secret of it. Its wires were curled into a ring directly over the dog's nose, and into this ring Newton had fitted a cork through which he had thrust a large needle which protruded, an inch-long bayonet, in front of Ponto's nose.

As the grader swept back, horses straining, harness creaking, and a billow of dark earth rolling before the knife, Ponto, fully equipped with this stinger, raced madly alongside, a friend to every man, but, not unlike some people, one whose friendship was to be dreaded.

As the grader moved along one side of the highway, a high-powered automobile approached on the other. It was attempting a run across the swale for the hill opposite, and making rather bad weather of the newly repaired road. A pile of loose earth which Newton had allowed to lie just across the path made a certain maintenance of speed desirable. The knavish Newton planted himself in the path of the laboring car and waved its driver a command to halt. The car came to a standstill with its front wheels in the edge of the loose earth, the chauffeur fuming.

"What d'ye want?" he demanded. "What d'ye mean by stopping me in this kind of place?"

"I want to ask you," said Newton with mock politeness, "if you have the correct time."

The chauffeur sought words appropriate to his feelings. Ponto and his muzzle saved him the trouble. A pretty pointer leaped from the car and, attracted by the evident friendliness of Ponto's greeting, pricked up his ears, and sought, in a spirit of canine brotherhood, to touch noses with him. The needle in Ponto's muzzle did its work to the agony and horror of the pointer, which leaped back with a yelp and turned tail. Ponto, in an effort to apologize, followed, and finding itself bayoneted at every contact with this demon dog the pointer definitely took flight, howling, leaving Ponto in a state of wonder and humiliation at the sudden end of what had promised to be a very friendly acquaintance. I have known instances not entirely dissimilar among human beings. The pointer's master watched his strange flight, and swore. His eye turned to the boy who had caused all this, and he alighted pale with anger.

"I've got time," said he, remembering Newton's impudent question, "to give you what you deserve."

Newton grinned and dodged, but the bank of loose earth was his undoing, and while he stumbled the chauffeur caught and held him by the collar. And as he held the boy the operation of flogging him in the presence of the grading gang grew less to his taste. Again Ponto intervened, for as the chauffeur stood holding Newton, the dog, evidently regarding the stranger as his master's friend, thrust his nose into the chauffeur's palm, the needle necessarily preceding the nose. The chauffeur behaved much as his pointer had done, except that the pointer did not swear.

It was funny—even the pain involved could not make it otherwise than funny. The grading gang laughed to a mau. Newton grinned even while in the fell clutch of circumstance. Ponto tried to smell of the chauffeur's trousers, and what had been a laugh became a roar, quite general save for the fact that the chauffeur and Newton did not join in it.

Caution and mercy departed from the chauffeur's mood, and he drew back his fist to strike the boy—and found it caught by the hard hand of Jim Irwin.

"You're too angry to punish this boy," said Jim gently, "even if you had the right to punish him."

"Oh, cut it out," said a fat man in the rear of the car, who had hitherto manifested no interest in anything save Ponto. "Get in and let's be on our way!"

The chauffeur, however, recognized in a man of mature years and full size, and a creature with no mysterious uedle in his nose, a relief from his embarrassment. Unhesitatingly he released Newton, and blindly, furiously, and futilely he delivered a blow meant for Jim's jaw, but which really miscarried by a foot. In reply Jim countered with an awkward, swinging uppercut, which was superior to the chauffeur's blow in only one respect—it landed fairly on the point of the jaw. The chauffeur staggered and slowly toppled over into the soft earth which had caused so much of the rumpus. Newton Bronson slipped behind a hedge and took his infernally equipped dog with him. The grader gang formed a ring about the combatants and waited. Colonel Woodruff, driving toward home in his runabout, held up by the traffic blockade, asked what was going on here, and the chauffeur, rising groggily, picked up his goggles, climbed into the car; and the meeting dissolved, leaving Jim Irwin greatly embarrassed by the fact that for the first time in his life he had struck a man in combat.

"Good work, Jim!" said Cornelius Bonner. "I didn't think 'twas in ye!"

"It's beastly," said Jim, reddening. "I didn't know either."

Colonel Woodruff looked at his hired man sharply, gave him some instructions for the next day, and drove on. The road gang dispersed for the afternoon. Newton Bronson carefully secreted the magic muzzle, and chuckled at perhaps the most picturesquely successful bit of devilry in his varied record. Jim Irwin put out his team, got his supper, and went to the meeting of the school board. [CONTINUED IN NEXT ISSUE]

Florida Farming With the Wind Let Out

Why Some Are Anxious to Jump In, While Others Want to Jump Out

By George B. Hill

FORTUNE in Florida farms. "Vegetables marketed every month in the year." "Home of the golden orange—seven hundred to a thousand dollars an acre."

Yes. You've guessed it. Those quotations are from land-company advertisements.

I am not going to quarrel with the truth of the advertisements. The trouble with them is that they do not tell anywhere near the whole truth.

For instance, I saw last winter a patch of a little over an acre that had raised \$1,200 worth of lettuce, which was only one of three crops that had come off the same ground within the year.

That's what the land agents tell you about. But a few miles away were two whole settlements of Northerners losing money and aching for a chance to pull out.

The fault does not lie with Florida, but with her boomers and boosters. In so far as they spread the knowledge of the legitimate opportunities the State offers, they do real service. But they go farther, and fill the settler with such inflated expectations of huge success that he is unprepared to face conditions as they are.

The Soils are Mostly Sandy

At the start the newcomer stands a chance of getting a bad bargain in land. A Northerner can form no safe judgment of what he is buying unless he first takes time to gain some knowledge of Florida soils.

We can leave out of consideration the general farming regions in the north of the State, the interest of most Northerners being confined to the citrus belt, in the middle third of the peninsula, and the winter vegetable regions, which are in the southern third and scattered localities of the middle third.

In these regions we find the two features most typical of Florida—a summery winter, and sand. Northerners, who have formed their ideas from the Oklawaha River pictures in school geographies, are surprised to find very little swamp, such land being confined to the Everglades and occasional smaller regions.

Florida sand is of all degrees of excellence and worthlessness. The natural timber is the best rough indicator of farming value. What the natives call "hammock" lands bear a heavy growth of hardwood trees, with cabbage palmettos in the moister places. These are the best all-round lands, oranges thriving on "high hammock," ten feet or more above water level, while lower hammocks are first class for truck.

"High pine" land is rolling, and bears forests of Georgia (long-leaf) pine, with little undergrowth. The bigger the trees the better the soil. This land is light for truck, but good for citrus fruit where there is clay subsoil near the top. Where the sand is "bottomless," orange trees run to wood and bear late.

Make Your Visit in Summer

"Scrub"—dense low thickets, usually on light white sand—is useless except, sometimes, for pineapples.

"Flatwoods" are level, low-lying pine lands. In the rainy season they are wet, often flooded. Where they can be drained they are good for truck. But in flatwoods, especially where there are saw palmettos among the pines, look out for hardpan, for it causes the usual difficulties.

Those four classes cover nearly all Florida soils. There are local variations, as the southeast coast pine lands, with limestone subsoil, top-notch for truck or fruit. There are also muck soils—drained swamps—the largest areas around the Everglades. These are equal to "low hammock" lands for truck, and need less fertilizer, according to the experience of residents. Even this short account of the way Florida soils



The best time to judge drainage condition is in July or August. The picture shows a lake bordered by flat woods

vary will serve to show the prospective buyer why he should stop, look, and listen, seeking information from residents not in the land business.

Drainage should be looked into with thoroughness. One of the two hopeless settlements I spoke of at the start of this article neglected this. In winter the land there seems ideal. But in summer, the rainy season,



Bit of "hammock" land lightly wooded with palmettos



High pine land. The bigger the trees the better the soil, as a rule

the fields lie inches under water. You couldn't raise anything but a splash, which has no market value.

The best single tip I can give is: Look at the land, if possible, in July or August, when drainage can be judged with certainty.

There is another consideration as vital as the quality of the land—marketing facilities. The second of the settlements mentioned is running to seed for lack of

satisfactory markets.

When you read of the wonderful things that grow in Florida, reflect also that they must travel two hundred to thirteen hundred miles to market. The local trade is limited, and many are competing for it.

In well-established communities, facilities are good. The orange grower, for instance, has these choices: He can sell his crop on the trees to the local orange-packing houses or to outside buyers; he can sell through

the Florida Citrus Exchange, a co-operative organization that will pack, ship, and market his oranges on a commission basis; or he can hire picking and packing done and ship for himself. This competition assures fair prices.

But in smaller places where all the buying is done by a single packing house, the farmer must expect to sell at "the other fellow's price," or ship for himself, which is difficult.

As for vegetables also, where large amounts are produced there are buyers to whom sales can be made f. o. b. Or the small grower may dispose of his crops to a neighbor who ships carloads.

Land Values and Prices

Where not enough is raised to attract buyers, as in most new settlements, the grower has no alternative to doing his own shipping. Rates are high, freight and commissions on vegetables amounting to about one third the selling price; but where railroad service is good and the commission man honest the grower can still make good money. The service, however, is often very bad, especially on branch lines. Many growers, too, have lost heavily through dishonesty of commission men.

Now for land prices. Rural Florida is still thinly peopled, and quantities of raw uncleared land can be had from owners, local agents, or the "colonization companies" which advertise in the North and run excursions. It sells for from \$10 an acre (rarely) to \$150. The commonest price is between \$30 and \$40, and the location should have unusual advantages to warrant a rate much above that. Nearness to shipping point counts heavily, most roads being sandy.

Colonization companies offer tracts as small as five acres. The Northerner, used to large acreages, should remember that ten acres in successful fruit or truck pays as well as a quarter section in a grain region, and that eight acres of oranges with two of truck is all an active man can handle.

Orange groves in bearing are for sale in small numbers for \$500 to \$1,000 an acre. The more one learns about citrus fruit before buying the better. For instance, be sure the trees are standard varieties, for numerous groves are planted with inferior seedling trees.

Not a Poor Man's Country

Truck land in cultivation costs as high as \$1,000 to \$1,500, largely because of the improvements and drainage and irrigation systems.

Many newcomers underestimate the capital they will need. The cost of bringing a ten-acre orange grove to bearing is about as follows: Land, \$350; clearing, \$350; buildings and fence, \$1,000; water supply, \$150; horse, wagon, implements, \$375; trees and labor setting them, \$850; fertilizer, total for five years, \$1,000; feed, five years, \$750; sundries, \$300. Total, \$5,125.

A strict accountant would add the value of the owner's labor—about \$18 per acre per year. Clearing costs from \$20 an acre on open pine land to \$100 and over on hammock.

Many farmers grow vegetables and hay between the trees, and help make expenses by working out, the grove requiring about ninety [CONTINUED ON PAGE 19]



This picture gives you a good idea of an improved Florida truck farm. A good crop of peas is shown here

The Headwork Shop

Devices That Will Help to Make Your Winter Comfortable



"Things look fine here, Mary. What did you do with your carpets?"

"Had them made into rugs. Got tired of

sweeping, sweeping, sweeping. Now I pick up these rugs, brush the floor and when I'm through I know it's clean."

"What's on this floor? It certainly is pretty and glossy."

"That's *Sherwin-Williams Floorlac*—a stain and a varnish combined. It's made to be walked on and even John's boots don't scratch it. And it's just as good for furniture or woodwork. Notice how the chairs and table harmonize with the floor? They are done over with *Floorlac*, too."

"Did you put *Floorlac* in the other rooms, too?"

"No, only here and in the hall. We used *Sherwin-Williams Inside Floor Paint* everywhere else. Some of those floors were past varnishing; they were too worn. But this paint made them look like new. We wouldn't go back to the old way for anything. Come and see the other rooms."

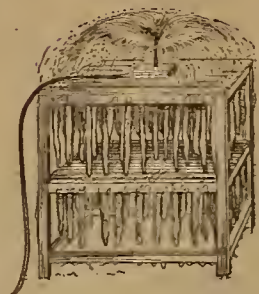
If you want your floors to look like Mary's see the Sherwin-Williams dealer in town. He carries everything in the paint line for the farm.

**SHERWIN-WILLIAMS
PAINTS & VARNISHES
FOR THE FARM**

Also
Insecticide and Fungicide Makers
Best dealers everywhere. Address
inquiries to
691 Canal Road, N. W., Cleveland, O.



Ice Logs for Summer Use



THE Swiss Government is perhaps the most economic and paternal in the world. It has instilled the spirit of economy until home invention has been a natural sequence. The domestic life of the peasant class

and the town worker is full of many little makeshifts that would surprise the American. One day I saw an old farmer building a framework about 15 feet square just outside his chalet. At first I thought it was the beginning of a shed. Apparently the timber had been used for the same purpose at some previous time, as all the joists and beams fitted together and were fastened by wooden pegs.

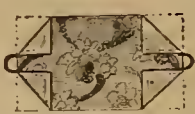
The entire framework was erected in a few hours, and it looked like the frame of a small two-story house without a roof. Beams and scantling were laid across the top of each floor loosely about a foot apart. Projecting from the center of the top layer was the nozzle of a garden hose fed from a water torrent (on other occasions where I saw it the supply was from wind-mill power) with enough force to send the stream a few feet in the air, and it fell back in a drizzle over the whole top area, and then of course dropped back onto the layers of beams over the first floor.

The water was not turned on until late in the afternoon, and during the night the ice gathered in great crusts on all the beams and descended at close intervals in gigantic icicles. Small nails driven into the bottom of the beams helped the icicles to form at the desired places. Within two days these icicles had reached several feet in length, and these great crystal logs were then cut down and stored away in sawdust in a vault cut into the side of a hill. In other cases the ice was stored in ice houses. This operation was repeated several times, with the result that the farmer packed away enough for adequately supplying a good-sized dairy and a small cheese factory through a warm summer.

I saw this same contrivance in Berne, where the process was made very simple by use of the city water. The ice so cropped was invariably pure. The proprietor of a popular summer resort told me that he supplied the demands of his establishment in this way. He was much surprised when I told him that I had never seen the operation before.

DESHLER WELSH.

Carpet-Bag Wood Carrier



A SIMPLE and effective wood carrier may be made from a piece of old carpet and a leather strap. Take a piece of carpet about 3 feet long and 2 feet wide, fold over, and sew the corners, leaving about 6 inches of edge at each end, attach the leather handles to these 6-inch edges and the wood carrier is complete.

To use, place the sticks of wood in the carrier parallel to the 6-inch edges and bring the handles together.

WATSON DAVIS.

Chain Loop for Snow Roads

FASTEN enough logging chains together to make a chain 30 feet long. Fasten one end about 3 feet to one side of center of hind bob of sled. Then fasten other end to the opposite side of bob at the same distance from center. If 6-foot logging bunks are used, ends of chain may be fastened to ends of hind bunks. If box or rack on sled is not wide enough a 2x4, 6½ feet long, may be fastened to bob.

The loop in chain drags snow into holes in the road made by the horses' hoofs and into ruts made by sled runner.

It also packs and widens the road so sleds will not slew off so easily; also when sled slews it draws chain to outside of slew, which draws snow in without filling opposite track. This contrivance is better than snow plowing or rolling.

T. W. NICHOLS.

Mirror for Cleaning Wells



TAKE a small hand mirror, and when the sun is quite low, as in the morning or late afternoon, throw light into the well and see if there are any objects which ought to be removed.

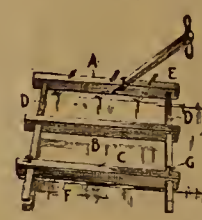
To get dead frogs, rats, and such things out of the well, take a stiff piece of wire 3 feet long, bend so as to make a ring in the center, and bend the ends to form hooks. Now take a piece of ordinary screening about 12 inches square and place across the hooks. Then with small wires fasten the screening to the hooks. Attach the well rope to ring and, using your mirror for light, put the net under the object and draw up slowly.

R. F. WHILDEN.

Here is a much better method: Put on the saddle or harness, as the case may be, and hang the bridle on it so the bit lies against the horse's side. Then throw a blanket or grain bag over it and go into breakfast or do other work until you are ready to use the horse. The heat from the horse's body makes the bit warm and comfortable. I also do the same thing when feeding on the road in cold weather. This simple device has saved my horses from many a frost-bitten tongue or aching tooth.

LEWIS B. HALE.

Easy Way to Mark Ice



WITH this little marker you can't help getting the blocks all the same size. You can make them square or rectangular, according to the way you set the two thumb screws (G). These screws

which were taken from an old wringer, hold the outside 2x4 (C) fast on the two cross bars (D). The bars are ¾x2x11 inches, and are marked off in inches. By placing C so that mark 17 is seen on inside, you mark 18-inch blocks.

Two-by-four A has three iron teeth, placed equal distances apart, at an angle of about 30 degrees. These teeth are ¼x1½x8 inches, and project about an inch. The points are sharp, and beveled to about 45 degrees.

C has a piece of heavy sheet iron 1½ inches wide running its full length. It projects about an inch so it will run in groove made by the teeth.

The handle is fastened on by two pieces of strap iron screwed

firmly to it and by means of a bolt passing through A just back of second tooth. In this way the handle may be raised or lowered. A and B are permanently fastened to the cross bars, and are 8 inches apart.

The device does away with handling a cold, wet, icy board, and makes less labor at the ice house, for your ice is all the same size and you can mark it all in a half hour.

You simply push it ahead of you, or you can have a horse pull it.

GEORGE D. ROOD.

Rapid Snow Pusher

THIS extremely simple snow tool is good for clearing paths and cleaning the snow off porches and steps. Take a piece of strong hard-wood board (A) 1 by 2 feet and half an inch thick. Bevel the bottom to a blunt edge. To this board nail a handle (B) made from a 4x1-inch board about 5 feet long for a man of average height. Dress it off and smooth the handle, making it comfortable to the grip.

Now nail two strong braces on diagonally as illustrated. Have the bottom of the braces and the handle an inch from the edge.

The sketch shows the back of the snow pusher. Use it with the other side uppermost.

This tool is light, handy, much more rapid than a shovel, and even wet snow does not stick to it.

R. V. BROWN.

Sled From Plow Handles

TAKE a pair of old plow handles. Then nail planks over the part marked A in the drawing. Bore holes in the parts marked B, and run an iron rod through them. The sled is now ready for use. It will run easily on snow, and if not too heavily loaded can be used on sod or hard ground.

BOLIVER BYERS.

Feed Cooker—Home-made and Portable



TAKE a sheet of heavy iron about 30 inches wide and 3 inches longer than the circumference of your iron kettle, measuring just under the lugs. Then with an old ax or cold chisel cut it in the shape shown at top of sketch. Make

the chimney hole 6 inches in diameter. Then take a stovepipe elbow and cut it in narrow strips about 2 inches from one end. Bend half the strips out at right angles and place the others through the chimney hole, afterward bending them out at right angles also.

Punch two holes at each end of the sheet and bolt the ends together. Use a piece of sheet iron for a door. Put a few bricks inside, several inches apart, and build your fire on them. Place your kettle in the top and you will be surprised how little wood this feed cooker takes.

A Muck-Scraping Help



THE sketch shows a serviceable scraper made of a manure fork and a piece of 2x4, 12 inches long. Bore quarter-inch holes in the 2x4 as far apart as the distance between the tines of the fork.

If a permanent scraper is desired, bore the holes 1 inch deep and drive the fork in securely. But if the scraper and fork are to be used separately, bore the holes 3 inches deep and stick the tines just tight enough to make them stay. When you need the fork without the scraper attachment, put your foot on the 2x4 and pull the fork out. Bevel the side opposite the holes to make a sharp edge.

This attachment is especially good for scraping wet bedding, manure, and cleaning out calf pens. FRED SCHWANEBECK.

Good Way to Warm the Bit

A COMMON way of warming a horse's bit is to breathe on it, but in very cold weather this is ineffectual.

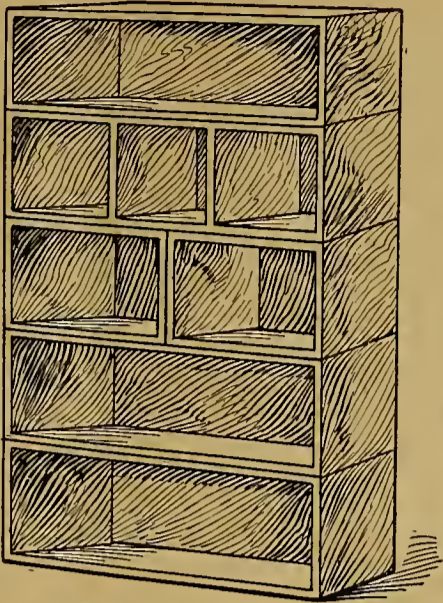
The first-prize contribution on this page has been judged to be: "Ice Logs for Summer Use," by Deshler Welsh.

For Boys Who Like Carpentry

Possibilities of the Packing Box Plus the Boy

By H. N. D. Crafts

BOYS, if you like carpentry you can add much beauty to your homes. Remember, it is always the personal touch which gives a house its character and charm. One of your sisters may have an eye for combining lines and colors; let her set the furniture about. Your mother may love needlework and design; let her make the sofa cushions and table covers. But there should always be boys in a household who know how to make things—boys who when they look at a stack of boxes see in them the skeletons of that mending stand which would be a convenience to Mother, and that music stand for which Sister has longed, and the bookcase to put beside the table where the young folks study, and which will hold books, pads, and pencils.



Ready for story books and playthings.

Children's Bookcase

A bookcase for the school and other books belonging to the children may be made by placing boxes on top of one another as shown in the illustration. Boxes for the purpose may be secured at the grocery store. Get those that are not too deep; all the boxes used must be the same depth. They should be thoroughly cleaned, then stained with black stain of dull finish; two or three coats are necessary to make them look really handsome. When the staining is finished the boxes must be piled up against the wall as shown in the illustration. They need not be nailed together, for if detachable they are easier to move when the room is cleaned. A curtain rod may be fastened on the top box and a curtain hung in front of the case.

Fill the top of the case with books, and use the smaller boxes beneath as pigeon holes for the stationery used by the children in their studies at home.

If the case is used in the children's room, a dresser scarf may be placed on top and a mirror hung above. The bookcase then becomes available also as a dressing table.

As a matter of fact, the possibilities of the ordinary packing box are rarely realized by the person who has never experimented with it. The wood in these boxes, if properly finished, is remarkably decorative. It should not, however, ever be finished with ordinary paint or colored stain. It requires a careful sandpapering, after which it should be enameled or oiled. Most of this wood has a beautiful grain which is revealed by the sandpapering, and if it is afterward well rubbed down with furniture oil, until it acquires a high polish, it is as handsome as some of the most expensive woods on the market. This finish is not expensive. Energetic rubbing is required, however.

A Convenient Mending Stand

If you spend a nickel at the grocery store for the covers of two cheese boxes, you can make a good mending stand. Select four pieces of wood, each 3 feet long, 2 inches wide, 1/2 inch thick. Attach the lids of the cheese boxes by uprights as suggested in the illustration. Sandpaper the rough wood and shellac it, or give it two coats of enamel. Pink, blue, white, or light green may be used, and the stencil design put on top. The bottom shelf of the stand may be used for stockings and other mending, and the top for spools, needles, cushions, and the like. It makes the stand much prettier if the top shelf is lined and fitted with straps and cushions and the other furnishings of the work basket.



Mending stand

Music Cabinet

A music cabinet which is pretty and useful can be made from a store box. The cabinet is 3 feet high, completed, and has four legs, each 25 inches long and 1 1/2 inches square. Make a frame for the body which is 5 inches from the floor. Place two shelves inside, using the bottom for a third shelf. The door should have two cabinet hinges and a catch. The inside and outside must be well sandpapered and given two coats of white enamel, then the outside decorated with a stencil design in a color to match the furniture of the room.

Especially in such pieces of furniture as this is there the chance for you to show your originality. The exact form of the cabinet and its decoration should harmonize with its surroundings—the carpets or rugs, the woodwork, and the other furniture. This is easily possible for the boy who can "see the thing before it is made," and then can follow his vision.

Music cabinet—open

Kitchen Cabinet for Mother

By Charlotte Bird

THE foundation for a home-made kitchen cabinet must be a kitchen table. For the lower part a box must be found which will fit under the table and allow room for casters. The casters should be fitted into the bottom corners of the box so that the box can be easily pushed under the table and pulled out again. A drawer pull will cost five cents; this should be fitted to the front at a height convenient for pulling the box out. The box must then be fitted with a close cover, on hinges.

The ordinary box is rough inside, and for our cabinet it must be made smooth. It is first divided into two or three compartments, as desired. These should be neatly and closely lined with oilcloth. This should be closely tacked over every surface and well into all the corners, so that there may remain no cracks through which the food may sift down underneath the lining. The inside of the top should be covered with the same oilcloth in the same careful way.

If you are ingenious you can fit just under the top of the table some supports on which a board for cutting bread and another for the kneading of bread or rolling out pie dough can be made to slide in and out. A porcelain knob can be fitted into the front edge of each board, and the two will cost ten cents.

Now for the upper part of this kitchen cabinet. Again a box should be secured of just the right width to fit the length of the table. With a saw and a few smooth light boards any boy can divide up the space inside this box. Instead of drawers he can nail in little supports for shelves and then fit in the shelves themselves. With the original box cover, doors, or at least one wide door, can be made. If the cover is damaged substitute a curtain.

The cabinet should be painted all over, including the inside of the cupboard. If this latter is painted with white it will add to the sightliness.



Music cabinet—closed

Listen to this:

P. A. spells "pa"—and that means Prince Albert is the daddy of 'em all! And that's so! Because Prince Albert jammed into a jimmy pipe has everything—flavor, aroma, quality. It's so ripping good for what ails your smokappetite that the sight of a tidy red tin just jams joy into your system.



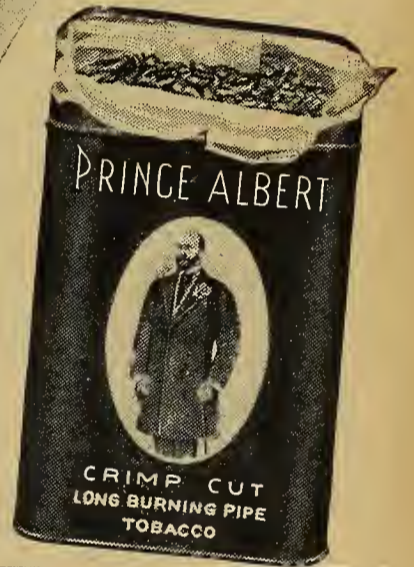
You buy Prince Albert just like you know what you're on your way for. Tippy red bags, 5c; tidy red tins, 10c; also handsome pound and half-pound humidors.

R. J. REYNOLDS TOBACCO CO. Winston-Salem, N. C.

PRINCE ALBERT

the national joy smoke

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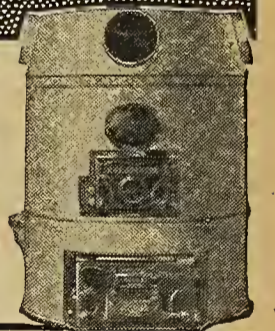
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The Market Place

An Exchange of Ideas on Farm Finances

Helping the Cotton Growers

TWO of the best hotels in Chicago—high-class hostleries where everything is the best—use, and for years have used, mercerized cotton table napery. In other words, as an Irishman might say, but probably wouldn't, all their table linen is cotton.

Cotton is woven in the most exquisite designs in spreads, napkins, and the like, and if American women who love beautiful things of the sort will all buy them in cotton which we grow in the United States, and avoid linen which we don't, it will be both wise and helpful to our saddened cotton growers.

Cotton is a beautiful fiber, as well as a cheap one. Why not take on the burden of buying a part of a bale by giving cotton the preference whenever possible? Farmers are among the most inveterate wearers of cotton. An Indiana man wears blue denims all the time week days and Sundays because, he says, he can have a dozen pairs of them and change three times a day if he feels like it, thus feeling always clean.

If every farmer in the United States would adopt his plan it would pretty nearly clean up the glut in the cotton market.

Beef a Future By-Product

THOSE who have been following the discussion of dual-purpose cattle will be interested in the opinions of Capt. W. S. A. Smith of Iowa. Captain Smith is a successful feeder and breeder of beef cattle, and his contributions to FARM AND FIRESIDE'S live-stock and marketing columns have inspired a great deal of confidence. Here are his views:

The surest money the corn-belt farmer can make is through the milch cow, both directly and indirectly, and it stands to reason that in order to do this he must keep only cows that pay more than their board. If the farmer has a really good cow she is a machine which the more he puts into her the more he gets out of her.

But farming, with most farmers, follows the line of the least resistance. Hence, many a good cow through improper feed and development is born to blush unseen and waste her fragrance on the desert air.

The highly specialized dairy cow in the ordinary farmer's hands, and fed and cared for as the ordinary farmer feeds and cares for her, would not only soon lose her record but would produce almost 50 per cent less milk. It is necessary, then, in advocating a cow for farmers, to advocate something that he will do, for milking on most farms is not a business but a chore. Realizing that our future supply of beef must eventually come largely from corn-belt farms, and realizing that the only way the corn-belt

farmers will ever do it is to be shown that it can pay, not as a product but as a by-product, I am greatly in favor of the dual-purpose cow.

Turn the Waste into Milk

I have never considered it advisable for an amateur farmer to put all his eggs into one basket and go slap into a herd of cows with all its attending risks, but I do hold that on every corn-belt farm six cows, or even more, can be kept on what is now absolute waste, and if three of these cows are milked for family use and the other three raise the six calves, they would all be on a paying basis, if good cows.

Is there such a thing as dual-purpose cows? Yes, in England there are districts where they are very common.

At a farm sale in South Dakota this last spring, calves sold as high as \$38 per head, and with the surety that beef and milk are on a high basis for years to come. If the farmer is alive to his opportunities he will begin to make what is now his waste pay.

I do not believe it possible as yet to raise calves in quantity for beef alone, on high-priced land, that is to allow a cow to simply raise her calf, but I do think a few can be made to pay well, along the lines already outlined. The ideal way, of course, is a regular dairy, but we are not all built to make good dairymen.

Bear in mind that dual-purpose cows, like any others, must be properly bred to do well. A scrub beef cow that gives just a few dribbles of milk when prices bump on the bottom of the market is not a dual-purpose cow. A dual-purpose cow should come from good dual-purpose stock and also have good care. When these conditions are fulfilled, both beef and milk can be produced profitably and at the same time.

My Share of the Apple Crop

AMERICA'S apple crop, at a reasonable estimate, this year will approximate fifty million barrels. This sized crop would furnish one-half barrel, or 150 apples, for each member of our population. An apple a day eaten out of hand by Uncle Samuel's family from October to March would consume our entire crop. This makes no allowance for pie timber, apple sauce, and baked apples.

Our normal export of apples is about two million barrels, so should no apples go abroad this year we can each be allowed a half dozen more, 156 apples per capita. Really our apple market should not suffer if those six apples are kept at home. As a matter of fact, we each ought to have our half-barrel of apples for eating and the other half-barrel for cooking purposes, for

An apple a day
Keeps the doctor away.

Corn Money Came Easy

By J. A. Reid

EARLY in the spring of 1913 I moved my poultry yard to another location and planted sweet corn in the plot formerly occupied by it. The patch was about 100x150 feet in size, and I planted about 5,000 stalks in it.

The total yield was about 400 dozen ears.

I sold the corn to a grocer, and therefore did not realize as much from it as though I had sold it myself. I received an average price of 15 cents per dozen for it. I received just \$61.75 for the corn from this patch, while my only expense was 25 cents for the seed corn.

The corn was of no special variety. I purchased the seed from a neighbor. It was planted in the latter part of April, and no fertilizer was used, as the soil was rich with poultry manure.

After it was planted the corn received no attention whatever except a thorough weeding every two weeks.

THE European war made so much noise that we couldn't hear the opening of the Panama Canal; but it opened just the same, and is doing business.

More Lost People

RALPH WOOSTER BEARDSLEY has been lost to his family since 1882. He left his home in Royal Center, Indiana, and went to Menomonie, Wisconsin. He wrote home in 1888, and was then in Minneapolis, Minnesota, working at carpentering on Pillsbury's flour mills. Any information leading to his whereabouts will be gladly received by his sister, Mrs. Julia E. Brown.

CAN any reader inform me of the whereabouts of Bert Wiles or his wife Henrietta, or his son Orren J. Wiles, who left Mansfield, Pennsylvania, about fourteen years ago, presumably for California, and have not been heard from since? Orren J. Lovell.

GUY O. BENNETT, now about 25 years of age, left Michigan in the fall of 1909. The following spring he was in St. Louis, but left there, and since that time he has been a lost son to his mother, I. J. Bennett, who is anxious to hear from him or from anyone who has a knowledge of his present address.

JOSEPH WRANA was last heard from by his brother, Adam Wrana, in 1903. Joseph bought a farm in Wisconsin at that time, and has not been heard from since. Any clue to his whereabouts will be greatly appreciated by his brother, Adam Wrana.

Address correspondence in care of Editorial Department, Farm and Fireside.

Hiram and the Sausage Maker

By Henry Wolfe

"HIRAM, Charley just telephoned that He and Jen will be over to spend the night. I want you to get some pork for supper," said Mrs. Hiram.

"All right, Mother, I'll go right over to Walter's and get a loin from that shote we sold him yesterday."

Walter Griggs had been buying pigs from Hiram for a couple of years, one every fortnight from October to March. He had insisted on having them a little better than the average run, neither too fat nor too lean, and had stipulated that the pens be kept clean. In return for this he paid Hiram a cent a pound above the prevailing price.

Hiram hitched up old Kate and was soon greeting Griggs.

"I've come for a loin from that pig I sold you yesterday, Walter. Mother expects company and needs it for supper."

"Anything else except that, Hiram. I can't do that for anyone. It's the first and last rule over here that every bit of the good part of the pig goes into my sausages."

"Sho, that's a good idee. I'm glad someone's doing that. What I've read about them packers makes me sick to eat their old stuff. But I don't want much, just a little piece."

"I can't let even a little piece go. If I did, where would be my reputation? It would be known to everyone around here and then some of my customers would hear of it. Boom! One grand explosion and no reputation left. Come, let me show you around my shop and then you'll see for yourself how nice we keep everything."

The two men entered the little shop which had undergone a transformation since the time when its uses had been proclaimed by the sign, "Boots and Shoes Repaired Here." Paint, soap, water, and elbow grease had performed miracles.

"We never wear overshoes or fur coats into our workshop, Hi," said Griggs, suiting his action to his words and removing both before entering the room where the work was going on. "We get in the habit of keeping things just as clean as we know how."

The walls of the room were clean as only fresh paint could make them; they looked clean, smelled clean, and felt clean. The floor had been scrubbed and was covered with newspapers evidently laid down that very morning. The work tables were of scrubbed white boards, boards so fresh-looking that they made you want to eat from them. The two girls helping Griggs wore full-length white aprons and white caps.

"Well, I snum! I never expected to see things like this, Walter. I've heard tell that you did things up neat and was awful fussy, but I never s'posed that it was like this. I've been meaning to get over here for a year but never got the time."

"Here's the way we do things," continued Griggs as they entered the workshop. "The pigs are first washed and scraped out in that outside room, and then cut up. Then we carry the pieces into the girls who carve the meat from the bone and cut it into small pieces. Then these small pieces I carry in tubs over to this grinding machine in the corner. I mix the seasoning up with them and turn them over and over with this paddle so as to get them all thoroughly mixed together. Then I run them through the grinder which is run by a gasoline engine. That next machine, there, stuffs the bags. I weigh each one so's to be sure to get full weight, twist up the top of the bag, and it's ready for packing. Each bag goes in a cardboard carton, with my name and label on the outside. We wrap them up in brown

paper and tie them with brown string. That's the girls' notion, but I believe it's a good one. We're old-fashioned about the bags. The girls make them out of cotton stuff for me."

"I like all this fust rate, Walter, but you and I have got to make a living. Does it pay?"

"I sell all I make, Hi, at a price that nets me 23 cents a pound right here. You know what I pay you for the pork. I send it all over the country. Of course, long-distance shipments are at a direct loss, but they bring me back friends and make an indirect gain."

"How do you sell it? Where do you get the customers?"

"I began selling to my friends, and then to their friends. Then I began to advertise a little. Almost everybody orders again, and often get their friends to send for some too. So it grows of itself. Now do you see why I couldn't let you have that loin? Suppose anybody had found it out? Suppose that I had known it myself? I'd have let my standard go down a bit that once, and then once started it would have kept sliding until it hit the bottom."

"I-vow I don't want a loin, Walter. I want to buy some of your sausage. If Mother doesn't like it after I tell her about how it's made she's hard to suit."

"Where did you get this sausage, Mother?" asked Charley at the supper table.

"Ask your pa, he's all worked up over it. It's a wonder he's kept still as long as he has," she said with a twinkle.

After Hiram had told his morning experiences, Charley turned to him and asked: "What could I get it for at wholesale, do you suppose? That's just the thing I've been looking for. So many of my customers want country sausage, and want it the best money can buy."



Crops and Soils

Turning Corn Into Hay

By Douglas Malcolm

AFTER the corn is husked it is estimated that the shredded stover from an acre of corn amounts to between 2 and 3 tons. This stover is the best substitute for hay that we know when used as the rough part in the winter's ration of the stock.

The average yield per acre of hay, according to government figures, is about 1.3 tons. The average price per ton on the farm was last year \$12.43. Last year where farmers exercised the option of shredding their cornstalks and feeding it as hay and selling their timothy and clover they were \$12.43 richer for every ton so sold. And they had in all 65,000,000 tons on which to exercise this option. This seems like a simple statement to the individual corn grower, and yet, considering the hundred million acres of cornstalks which will be available this fall, it comes to mean an increase in the farm income of the country of many millions of dollars. And what is of even more importance at this time of devastation and waste in Europe, it means a conservation of animal food too plentiful to be neglected and too valuable to be wasted.

A Chance to Save 40 Per Cent

The magnitude of this saving is indicated by the fact that from 30 to 40 per cent of the nutritive value of the corn crop is in the stalk, husks, and leaves; only about 60 per cent is in the ear. This 60 per cent, however, is the marketable crop, whereas the rest is the by-product to be used at home. But this by-product commercially releases other products, such as hay, which are staple marketable articles.

Shredded stover is within the reach of every farmer, whether he has a silo or not. It is doubly valuable to the silo owner because it can be fed along with silage. With a non-silo farmer it should be fed with clover or alfalfa as a balanced part of the grain ration.

In an experiment conducted at the New Jersey Station recently, the difference in the value of shredded stover as compared with the cornstalk as it came from the field was brought out. It was found that of 200 pounds of cornstalk fed to a cow during ten days, 60 pounds, or 30 per cent, remained uneaten. This corn was unshredded but carefully harvested. In writing of this experiment the editor of Farmers' Bulletin No. 107 of the U. S. D. A. Series says: "Shredding would no doubt have resulted in a more complete consumption of the stalks."

In another experiment at the Agricultural College in Nebraska, in which the object was to ascertain the comparative feeding value of stover fed with alfalfa, it was found that "Stover fed with alfalfa returned a value of \$4.57 per ton in comparison with alfalfa at \$6.00 per ton as the sole roughness."

Corn stover does not aim to compete with corn silage, but in an experiment described in the Pennsylvania Bulletin No. 83 the stover and the silage were tried out with two lots of six steers each. They were fed with the concentrates corn and cottonseed meal. In the 126 days of the test it was found that silage produced considerably more beef, but that stover was a less expensive ration. The average gain on corn stover was 214 pounds per steer during that time, and on silage 240 pounds per steer. The silage ration, however, cost \$109.91 as compared to the stover ration, which cost only \$103.73.

Corn Stover Isn't Corn Silage, Then

In other experiments it has been found that shredded stover is practically equal in every way to timothy, but not so good as either clover or alfalfa. It is best fed with either of these, because the part which the animals do not eat is scattered around the stable and becomes part of the humus to build up next year's crop. Where, however, it is fed with concentrates without the accompanying alfalfa or clover, it is a very conservative estimate to say that three acres of shredded cornstalk is equal to one acre of the best quality of hay. This, as we suggested, enables the farmer to dispose of his hay as a cash crop, thus bringing nearer the new lighting system or the college course or the automobile.

Apart from its strictly feeding value,

EW

shredded stover is unique in its fertilizing qualities. In the ordinary stable the most valuable elements of nitrogen and other salts contained in the refuse are lost. Corn stover is singularly absorbent, acting like a blotter in retaining stable liquids. It is easily handled and easily distributed with the spreader. Rough cornstalks do not absorb, and many straws only partly save this nitrogen. Of course all farmers cannot be trained chemists, but they can all be trained savers when the quality of their land is at stake. Evaporation, seepage, sunlight, and wind can almost make a manure pile zero in efficiency, where, by using a spreader each day, or as soon as there is a sufficient load, to get it on the fields at once, its efficiency, with no trouble or extra work, can be figured around par. Corn stover adds to this bulk from the stable.

Shredded Stover Costs Nothing

In regard to the cost of shredding, for many years there was considerable question, but it has been figured down now that in regard to actual wage hire a man can cut his corn with a corn binder, haul it to his machine, and husk it and shred it at identically the same cost per bushel as he would have to pay if he hired the cutting and husking done by hand in the field. Shredded stover, hence, costs absolutely nothing. The time and labor saved by machines over hand work are sufficient to make up for the work done in shredding. The farmers who believe that husking and shredding mean an additional outlay of capital should consider this fact carefully, as it is their opportunity to get something for nothing.

It is not always necessary to buy a husker and shredder, as most commu-

But probably the finest of all fertilizers, and the one that is best adapted to frequent and continuous use in all cases, is that made from the common barnyard manure. To make it, one should first place a shovelful of the manure in an old pail and pour thereon enough hot water to fill the pail. After this has set for some time the water may be poured off and strained through a piece of old screen. Only a little of it will be needed for each watering, as the solution will need to be diluted to the color of weak tea. If the pail of manure and water is kept in an outbuilding and only the properly diluted mixture brought into the house, its odor will not prove offensive.

Leaf mold is a good fertilizer. It can of course be procured in the woods, and may be worked into the soil, or, better still, mixed with ordinary garden loam at the time of repotting. One successful grower of plants who finds it impossible to go to the woods rakes up a pile of leaves every fall and covers them with old boards. They are ready in the spring.

If we would force our plants to their loveliest growth and blossoms we must never use fertilizer, especially the liquid varieties, oftener than once a week. One can overdo the fertilizer business very easily.

Another thing I believe to be true is that the plants prefer a good, thorough soaking once a week to the tantalizing little dribbles so often given.

Cost of Tractor Plowing

By Alonzo Price

THE picture shows a gasoline tractor of 15 horsepower pulling a four-bottom 14-inch plow with a drag behind it. This outfit breaks and drags about ten



The men can be sociable and work in the shade and still plow ten acres a day

nities have men who do custom work, although the larger farmers frequently prefer to have their own outfits rather than depend upon the trade. They can do this because shredders are made in so many sizes, varying in capacity from 250 to 1,000 bushels of corn in a 10-hour day. The smaller ones, of course, are more appropriate for the individual owners.

The food value and the fertilizing value are the two essential money-making reasons why the corn should be shredded and fed. The labor-saving reason is slightly different. The use of the corn binder and the husker and shredder purely from a labor-saving point of view have done much to change corn-raising from being one of the most arduous forms of agriculture to one of the easiest.

Food for House Plants

By Pearle W. McCowan

A YOUNG plant not yet thoroughly rooted does not require any fertilizer. It is only when the root has become thoroughly established and has thrown out its countless little runners that the need for fertilizer becomes apparent. Indeed, if applied sooner than this it is apt at least to retard seriously the growth of the young plant.

Of the various fertilizers that may be used, perhaps the cleanest and least objectionable in every way is the common household ammonia, applied in the proportion of a teaspoonful to a gallon of water. This, however, should not be used oftener than once a week. It will be found especially beneficial to those plants that are grown largely for their foliage, as the ferns, leopard plants, begonias, and the various kinds of coleus.

Ferns also like a few drops of castor oil now and then, while a plant of any variety will appreciate a teaspoonful of good commercial fertilizer once in a while. Either of these may be worked well down into the soil with a common kitchen fork or a hairpin. Finely cut tobacco leaves applied in the same manner, or, better yet, tobacco dust which may be purchased at almost any store which sells the weed, will also be found to be an excellent fertilizer, besides proving valuable as an insecticide.

PRESSED HARD

Coffee's Weight on Old Age.

When people realize the injurious effects of coffee and the change in health that Postum can bring, they are usually glad to lend their testimony for the benefit of others.

"My mother, since her early childhood, was an inveterate coffee drinker, had been troubled with her heart for a number of years and complained of that 'weak all over' feeling and sick stomach.

"Some time ago I was making a visit to a distant part of the country and took dinner with one of the merchants of the place. I noticed a somewhat unusual flavour of the 'coffee' and asked him concerning it. He replied that it was Postum.

"I was so pleased with it that, after the meal was over, I bought a package to carry home with me, and had wife prepare some for the next meal. The whole family were so well pleased with it that we discontinued coffee and used Postum entirely.

"I had really been at times very anxious concerning my mother's condition, but we noticed that after using Postum for a short time, she felt so much better than she did prior to its use, and had little trouble with her heart, and no sick stomach; that the headaches were not so frequent, and her general condition much improved. This continued until she was well and hearty.

"I know Postum has benefited myself and the other members of the family, but not in so marked a degree as in the case of my mother, as she was a victim of long standing." Name given by Postum Co., Battle Creek, Mich.

Postum comes in two forms:

Regular Postum—must be well boiled. 15c and 25c packages.

Instant Postum—is a soluble powder. A teaspoonful dissolves quickly in a cup of hot water and, with cream and sugar, makes a delicious beverage instantly. 30c and 50c tins.

The cost per cup of both kinds is about the same.

"There's a Reason" for Postum.

—sold by Grocers.

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An Ideal Xmas Gift Made doubly interesting by the little figures of the German Peasant and his good Frau, who comes in and out to tell you what the weather will be.

Size 6½ x 7½; fully guaranteed. Sent postpaid to any address in U.S. or Canada on receipt of \$1

Agents Wanted David White, Dept. 15, 419 E. Water St., Milwaukee, Wis.

"VELVET gets a good many puffs in th' papers," sez a fren' th' other day. "True," sez I. "But the best puffs VELVET gets is the everyday puffs out of the million or more pipes of them that use it."

Velvet Joe



Use is the final test. On that test VELVET grows apace. Not phrases but facts are increasing the sales daily. Your tin of VELVET comfort awaits you, for 10c, at the nearest dealer's.

Liggett & Myers Tobacco Co.

EDITORIAL COMMENT

FARM AND FIRESIDE

The National Farm Paper

Published every other Saturday by
The Crowell Publishing Company, Springfield, Ohio

YOU'RE on the jury. Ever realize how many decisions of different kinds you make even in a day? And we know you like fair play.

So when you see any opinion advanced or statement made in FARM AND FIRESIDE that seems to you unfair or biased, speak up and say "Fair Play!" This issue, and every other issue, is open to criticism or approval in more than half a million homes besides your own. It's so easy to condemn on appearances. Give us your views and reasons on the other side if you think only one side has been given. Even if you have only something nice to say, send it along.

HERBERT QUICK, - - - - - Editor

November 7, 1914

Apples and Cotton

SOME cotton growers are disappointed because the Government of the United States has not adopted positive measures to prevent the price of their staple from falling below a certain level.

They should remember that the task of supporting the price of our greatest export crop in the face of the collapse of foreign demand is one by which even the financial powers of the Federal Government might be overtaxed.

Moreover, some other products are as badly off as cotton. Among these—and they are not a few—may be mentioned that great staple, apples. This fruit is now selling below the cost of production because of the effects of the war in Europe.

The apple growers would no doubt be very glad to have the Government buy their product at a minimum price of say \$3 a barrel, but such a policy would load the taxpayers with a burden for the benefit of one class of producers; for the growers, encouraged by government support of their industry, would yield to the temptation to extend their operations until even the Government would be swamped in a quagmire of apples.

What both sorts of growers need is all the financial help the market will warrant. Anything more will merely postpone the evil day and make things worse.

If either apples or cotton or naval stores or any other war-stricken product fails to receive all the support the market warrants, the fault lies with our financial and credit system, and should not be attributed to the absence of any government valorization scheme.

The losses in apples and cotton will have to be borne. All any credit system could do would be to prevent unnecessary losses.

So long as the war is conceded to be inevitable, some losses are inevitable.

That's the pity of it. An Austrian count has the power, by a paper ultimatum, to rule the cotton growers of Texas or the apple producers of New England by one and the same governmental crime.

Russia's War Profit

THE peasantry of Russia has been noted for drunkenness. Poverty is the great cause of drunkenness, and the Russian peasant has been and is very poor. Ignorance is the fattening ration of drunkenness, and they have been very ignorant.

But the Russian Government has not tried to fight the liquor evil, rather it has deliberately debauched the poor by fostering the trade in Russia's national drink, vodka. A drunken peasantry does not think on its oppressors; so the oppressors of the muzhiks did all they could to keep them drunken. A large proportion of the

revenues of the empire was derived from the sale of the liquor: ignorance, drunken submission, and money for the Government—these things worked together for the plans of the ruling caste and the degradation of the poor.

When the war opened, however, it found in power certain men who had seen that the vodka evil was sapping the very life of Russia, and all at once, as a war measure, the liquor shops were closed. For the first time in their lives the peasants remained sober. They may have been intoxicated with the war fever sedulously preached to them by their priests at the behest of the Czar, but as for alcoholic intoxication, they were free of it.

The results are said to be marvelous. Even in the midst of the dreadful struggle of the war the peasants are better and happier than when they had the open vodka shop. They find that of the two evils war is less than drunkenness. They are living better, saving their small earnings in part, becoming better and more efficient men.

If this experiment in prohibition is carried on to success as a permanent policy in Russia it will be the most complete demonstration of its benefits ever given to the world. It will show just what the evils of vodka were. It will show, too, the extent to which prohibitory laws can be enforced under an absolute despotism. And it may make some of our more enthusiastic prohibitionists look longingly towards the Czar's dominions as they see the difficulties which beset the enforcement of such laws in a country in which the officers in charge of it are elected by local popular vote.

An All-American Conference

THE need of closer relations with the countries of South and Central America is universally recognized. Closer business relations cannot be attained without personal relations. Let us suggest that the winter of 1914-15 should be utilized by a conference of the business men of the entire Western continent. Let the bankers, manufacturers, merchants, and carriers of both divisions of the Western continent meet somewhere and talk things over.

A good place for the meeting is at the Canal Zone. Just seeing what the United States has done in digging the Big Ditch, policing it, eliminating disease and graft at the same time, and conquering nature in so many splendid ways will be an education to our Western neighbors in the real meaning of the word "American." It will make for friendship.

Incidentally our business men will in such a gathering find out how really able and enterprising our Latin friends are. They will find out by face-to-face conference just what we must do to get the great trade which all agree awaits the right sort of a policy on the part of the American business community.

Isn't it a good idea? Then why doesn't some one make the proper move? Let some of our great business associations get busy enlisting the interests of our own people, and making the cables hot to the nations to the south.

Horses and the War

IN SPITE of the development of the bicycle, the motorcycle, the motor car, and the airship, the horse is still the chief reliance for transporting large bodies of troops rapidly and over long distances. The age of cavalry is not past. The cavalry charges which depended for their effect upon the shock of the mounted troops upon the opposing lines are no longer effective owing to machine-gun fire and the longer distances covered by rifles, but the present European war finds cavalry in constant use. These troops are the scouts, the reconnoiterers, for the hosts of infantry and artillery. Great masses of cavalry screen the front of the advancing army. Armies of cavalry dash to advanced positions, dismount, and fight on foot until the other troops can

come up. War is far more fatal to the horse than to the man. In the Boer war it is stated that 400,000 horses were destroyed.

With the British Empire, France, Russia, Belgium, Serbia, Montenegro, Germany, and Austria-Hungary at war the loss of horses must be something unprecedented. Next to the waste of human life this is the most pitiful phase of this wicked contest.

The farmers of Europe will face an almost horseless era when the war is over. Cattle are more in use as draft animals there than here, and will doubtless take the place of horses in so far as the herds are not used up to feed the armies and the population. Motor cars and motor trucks will be put in service to carry the loads formerly drawn by horses.

And perhaps we shall see the dairy cow yoked up to do double duty. As a matter of fact, it is probably true that the greatest loss in power in the live-stock world lies in the fact that cows are allowed to devote themselves to the production of milk alone when they might just as well do some form of work in addition to their dairy performances.

German tests show that while cows working under the yoke do not give quite as much milk as when allowed to loaf they give nearly as much. War should produce some good, and perhaps this will bring about the utilization of the leisure of the cow.

The Insects and the Farm

ENTOMOLOGY is a long word, and entomologist a longer one; but everyone of us should study entomology and become entomologists. That is, we should make as close a study as possible of insects.

We see them flying and hopping all about us, and we hear their multitudinous sounds, but we know very little about them. They do enormous damage to our crops, gardens, and live stock, yet most of us possess very little more actual knowledge of them than did our ancestors before there was such a science as entomology.

Dr. F. M. Webster of the Department of Agriculture once spent an hour in a wheat field with its owner. At the end of the hour the farmer asserted that he had been raising wheat for fifty years, and had found out during that hour that things were going on in the way of insect operations in his wheat of which he had never had the slightest idea.

All those years he had been losing money by these things of which he had no knowledge, but which a trained entomologist was able to tell him about, and actually show him in an hour. An hour with a man who knows is better than half a century of listening to sounds, watching hoppings and flyings, and accepting ancient misinformation.

A millionaire banker and farmer once took an entomologist to his 18,000-acre farm to investigate the ravages of a "new insect" which was destroying the corn. The "new insect" was the well-known Western corn-root worm, which is easily controlled by a proper rotation of crops.

Another corn grower followed instructions and got rid of the corn-root worm, but accused the entomologist of not knowing his business when the next year his oats were eaten by the army worm on the same fields. He regarded the army worm and the corn-root worm as the same thing.

In one county a demonstrator who was trying to find out what the soil lacked for the growing of corn found that the trouble was not in the soil itself but in a certain insect pest with which it was infested. The owners of the soil had never suspected the nature of the trouble.

And yet the knowledge we need is easy to get, and not hard to understand.

The Farmers' Lobby

Cotton Plantations Need the Negro—Will They Keep Him?

By Judson C. Welliver

HERE is a little rice story that points a cotton moral. It was told to me by an expert in agricultural theory and practice who thinks there is the possibility of a vastly greater calamity to American agriculture in the present cotton prices than most people have yet realized.

He is afraid the remedies thus far proposed may be worse than the disease.

The very day that this rice story was told to me I read in the papers that President Wilson is not giving much encouragement to people who want to cut down next year's cotton crop by half or more.

It made me wonder if some cool-headed Southerner had been telling the President some practical facts. Being a Southerner himself and afflicted with an analytical mind, maybe the President knew it without being told.

Anyhow, to the rice story and its moral.

Once upon a time there was a great production of rice in the swamp sections of the South Atlantic coast. It was profitable and seemed likely to go on forever and ever.

Then the Gulf rice fields began to develop; and presently they were turning out so much that rice didn't pay to raise. The Atlantic coast growers laid off. They'd wait until prices promised some profit.

Now see what happened to them:

Their rice laborers were negroes who through many generations in Africa and our own swamp sections had become immune as regards malaria. They didn't get it. They were the only people capable of raising rice in that coast region.

When rice culture was suspended these immune laborers scattered. Then the price went back, and when it was time to resume the business they couldn't be brought back.

They have never come back.

Neither has the rice crop of the South Atlantic coast. "And it never will; it never can," impressively declared my expert.

Remember the Rice Lesson

Now for the cotton moral. He stated it thus:

"Cotton is king; and the army of servitors who uphold his power is made up of negro laborers.

"Let that army be dispersed from the cotton fields, and it will never be brought back.

"Nothing is so certain as that the negro plantation laborer, out of work and instantly out of money, will drift to the town and city.

"Once there he almost never gets back to the soil.

"The farm, which needs him, has lost him. The town, which doesn't need him, has him on its hands.

"The Atlantic rice growers let him go, and they lost their industry with him. People who are advising the South to cut its cotton acreage half or more for next year will do well to consider what it will do to their labor.

"Unless they find something else with which to keep the labor busy and on the land, they will lose it; and a repetition, with cotton, of the disaster that rice suffered would be a calamity not only to the South but to the nation and the world.

"For there is no single crop in all the world that is so important to all the world as the cotton yield of the American cotton States. I don't think it is too much to say that if a mistake now should deal such a blow to cotton as the Eastern rice industry sustained it would be looked upon a generation hence as the deepest scar that the present war had made on the world."

Rather impressive language that!

Yet when I went away from the departmental expert, lest perchance he might be regarded as an impractical high-brow, and began asking farmers who farm farms—people who know the business of raising cotton and handling negro labor—I found them putting the case just as strongly. Their first fear concerned this labor difficulty.

It's a problem for the South, first, to reduce the cotton output of next year as much as possible; and, second, to keep the labor from leaving the plantations, and thus precipitating in the future a still worse condition.

How is that to be done?

Go back now to the expert.

So gravely is this problem of cotton and labor regarded by the authorities at the Department of Agriculture that they are rushing work on a bulletin of special advice to Southern farmers about this cotton crisis. They are appealing to farm experts in the South, as well as to the Department's own specialists, for advice about meeting the situation.

And first of all the advisers come up with this:

"Raise what you must eat!"

That is the basis of the whole project. It is not half so appealing to the imagination as the great scheme recently proposed from London, of an international cotton pool with perhaps \$300,000,000 capital for the purpose of buying up a vast store of cotton and holding it as a world reserve stock against periods of possible short production in the future.

EW

But it is chock-full of common sense just the same. Which same has been notably absent from much of the cotton discussion.

"Let me illustrate," proceeded our expert friend. "How many people know that practically all the vetch seed used in this country is imported from Europe? or that already there is certainty of a very short supply?"

"Now, I don't advise people to quit cotton and go raising vetch seed. That would be sheer nonsense. But I do say that the small number of people in this country who know how to produce vetch seed should get busy and produce it. There'll be money in it; big money.

"This is no time for inexperienced people to jump into such specialties as this. It might make their second estate worse than their first. But the man who knows how to raise seeds in general will do well to inform himself about the outlook for those kinds with which he is familiar and can get best results.



His eyes should be kept on the opportunities of the farm

"Take clover. That comes largely from abroad too. It will not come next year as heretofore. Raise it.

"But above all, let every Southern farmer plan his work for next year with the idea of raising what he will eat, just as far as possible."

There has been a very wide-spread circulation of the advice to Southern farmers to cut out the cotton and go into corn-raising. To a certain extent the best authorities agree that this is a good move, but they urge that it may be overdone very easily. Here's a corn story with a moral:

A number of years ago the boll weevil invaded Louisiana and made cotton-growing unprofitable. At that time Louisiana was a buyer of corn. The Louisiana price was the Chicago price plus freight down to Louisiana.

Tom Sisson's Explanation

Many Louisiana planters went into corn-growing. The earliest of them made good profits, for they sold at the Chicago price plus freight.

But Louisiana presently was raising so much that instead of a deficit it had a surplus of corn. Then what?

The price fell to the Chicago quotation minus freight! Not much money in that!

The State didn't have live stock to convert its corn into something profitably marketable.

And that's what's the matter with the live-stock proposition in the South now.

It's all well enough to advise the Southerners to go out and buy live stock right away; but where will they get the money to pay for it?

Tom Sisson, Congressman from Mississippi, who farms some thousands of acres and knows all about cotton and cotton problems, lectured a group of friends the other day about practical aspects of this problem.

"It's no use telling our people to rush out and buy

live stock, and then raise corn to feed it," he said. "The man who most needs the live stock hasn't the money to buy it; and the man who has the money, in such a time as this, is going to feel so comfortable about it that he will not want to speculate in live stock. The one can't stock up, and the other doesn't need to."

"Tell them to hang on to every pig, every sow, every calf, every chicken," declared the expert, to whom we will return for a moment. "Almost every small farmer can manage somehow to get enough of these to raise his own meat, and to consume a good share of the corn it will be practicable for him to raise. Raise as great a variety as possible of the things that can be eaten, for there will be mighty little money with which to buy."

But whatever the cropping or live-stock plan that may be adopted, all the conservative and really intelligent Southern authorities invariably come back to the basic proposition that shouldn't be forgotten:

"Keep the negro labor."

That means, first of all, that cotton must not be abandoned. If one farmer is determined to cut it out entirely, he should consider what his neighbors are doing. Perhaps enough of them will continue in cotton to insure employment, at some sort of wages, for the neighborhood's colored labor. One of the strong reasons in favor of corn is that, next to cotton, the Southern negroes know most about raising corn. It will help to keep them on the soil.

Dr. W. J. Spillman, head of the Office of Farm Management of the Department of Agriculture, outlines his advice to the Southern farmers in a most effective statement. He has this labor thought always close to the top of his mind.

"Taking the South as a whole," he said, "only 28 per cent of the land is under cultivation. For every 28 acres cleared and cropped there are 72 acres still in timber.

Dr. Spillman's Opinion

"More than anything else, in the broader view of the South's agricultural needs, there is necessity for getting more land cleared and under crops. This is an ideal time to do some of this work. Labor will be very cheap. It can be kept busy, even though at low wages, clearing land. Then it will be there when it is needed again for crop-raising.

"If the States were to consider issuing bonds as a means to tide over this emergency, they would do well to loan out the proceeds with a view to getting land cleared. That would be a great permanent increase in the wealth of the country. The cotton crop is going to remain the mainstay of Southern agriculture; it mustn't be sacrificed for the future. Nothing else would be so profitable on the whole. The world is its market, and will continue to be. On the whole, experience has proved that wars affect agricultural production and prices much less than seems just now to be imagined."

There are some considerable sections in the South where wheat is not raised, and could be. Doctor Spillman advises against wheat unless in a small way for food at home, lest the labor leave.

"Most Southern farm families," he said, "work on the family income, rather than the per-acre income basis. A family can grow a few acres of wheat, some winter oats, some corn, and a little cotton, and this arrangement will keep the labor occupied all the time and prevent its leaving."

There has been a good deal of the suggestion that the South ought to produce more vegetables and truck for the Northern markets. The Department authorities reply emphatically, "Don't!"

Don't, first, because there isn't enough demand. Too much truck is already raised at a loss. A big trucking campaign in the South would mess up the labor situation, and result, it is declared, in disaster.

Don't, second, because trucking for city markets is an involved sort of business that is not at all suited to an emergency such as the present.

"And tell them not to go in for anything expensive in potato culture," add the authorities. "In 1907 there were 250,000 acres of potatoes in Texas that were never dug because they weren't worth it. The tendency to overdoing such crops must be watched."

To the Northern farmers the Department has no particular advice to give. It guesses that if they go ahead about it as if there were no war and no cotton crisis they will do pretty well. But there will probably be one variation from this.

The country raised the biggest wheat crop in its history this year. If there had been no war, prices would have been very low, and that would have caused, under the natural law of supply and demand, a smaller planting for next year.

But the war broke out in time to hoist prices just before the time for putting in winter wheat, and as a result the reports indicate a very large area of the winter grain is being put down.

The spring-wheat territory will have a chance to save the day; and the Department will undertake, in due time, to advise what ought to be done.

Superior—

"Surpassing others in greatness, goodness, extent or value of any quality."—*Century Dictionary.*

That's the definition, and that's why Post Toasties are called the

Superior Corn Flakes

—the surpassing, delicate Indian Corn flavour being sealed in by skillful toasting with sugar and salt.

Post Toasties

are made in clean, airy, modern factories—cooked, seasoned, rolled and toasted to crisp golden flakes—

Ready to serve direct from the package.

To secure the Superior Corn Flakes, ask for

Post Toasties

—sold by Grocers.



Live Stock and Dairy

Copperas and Cottonseed Meal

PEOPLE who feed cottonseed meal occasionally lose animals by a form of poisoning. In hogs the trouble starts with loss of appetite, and runs into short, rapid, shallow breathing, paleness of the skin and membranes of the mouth and other localities, imperfect vision extending to blindness in some cases, weakness of the legs, and death.

Professor Withers of the North Carolina Experiment Station, believing that the trouble arises from a chemical poison for which an iron salt might be an antidote, tried feeding copperas to rabbits with the cottonseed meal, and found that rabbits fed on the ration with cottonseed meal died, that when they had copperas with the ration they were rarely or never affected by the cottonseed meal, and even that the copperas will cure them when they begin to be poisoned. Then he tried it on pigs, and found that the copperas diminished, if it did not entirely prevent, the bad effects of the cottonseed meal when the latter was fed at the rate of a hundred more than a pound of meal daily to a hundred pounds of hog. He recommends that in case of a loss of appetite on the part of the hog the cottonseed meal be taken from it for a few days, or until the appetite returns, in the meantime continuing the copperas. He gives the following directions for feeding the copperas:

Dissolve a pound of copperas in fifty gallons of water. For each pound of cottonseed meal in the feed mix in thoroughly a gallon of this copperas solution for each 100-pound hog. If the pigs

weigh only 50 pounds, give half as much per head, and for larger animals, more of the copperas according to weight.

Cottonseed meal is one of the cheapest and best concentrates for the feeder. Its drawback has been its poisonous qualities when fed too heavily or too long.

If the sulphate of iron—copperas—will remedy this trouble it is a good thing to know.

Contagious Mammitis

By Dr. A. S. Alexander

DAIRYMAN asks me what disease is indicated by the following symptoms: "One quarter of a cow's udder becomes swollen and feverish. During the time it is swollen and has fever the cow does not eat, and the milk comes thick and in chunks. This condition will last from three to five days. After the fever and swelling have gone the cow gives very little milk from the affected quarter. The cow seems to be in pain."

The form of udder disease is evidently contagious mammitis. This malady is always accompanied by fever, whereas common or simple garget rarely causes a fever. When a cow is affected, instantly isolate her, and keep her away from other cows until she is perfectly well. The disease commonly is spread by infection from the stable floors and gutters, or the infective matter is carried by the hauds of the milker.

Treat the case at the outset by administering a full dose of epsom salts as a physic. Foment the udder three times a day, stripping away all milk, and at night give a thorough rubbing with campho-phenique. If this remedy does not prove effective, rub in iodine ointment once a day, and if that does not avail use mercurial ointment in the same way.

My Profits From Sheep

By J. L. Corathers

THIS is my experience with a small flock of sheep which, in two years, netted 238½ per cent on the investment. Following is a full account of the transactions:

Sept. 18, 1912—To 15 head sheep	\$68.00	
June 18, 1913—By 84 lb wool @ 20c	\$16.80	
Aug. 30, 1913—By 14 lambs, 1,070 lb @ 5½c	58.85	
June 8, 1914—By 77½ lb wool @ 25c	19.37	
July 27, 1914—By 14 lambs, 1,070 lb @ 6c	64.20	
July 27, 1914—By head old sheep	71.00	
July 27, 1914—To balance account	162.22	
	\$230.22	\$230.22

Note the odd coincidence in number of lambs each year and weight of same. I consider that the sheep paid for their keeping in the added fertility and destruction of filth, etc., so I feel that I have the \$162.22 clear gain.

EDITORIAL NOTE: Mr. Corathers may add to his profits the amount we paid him for the letter. We would rather have a hundred letters of this sort from a hundred practical farmers, telling actual experiences of profit or loss, than one great article by any man, no matter how prominent. Please follow Mr. Corathers' example and add to your income by writing the truth, for the truth is interesting no matter who writes it.

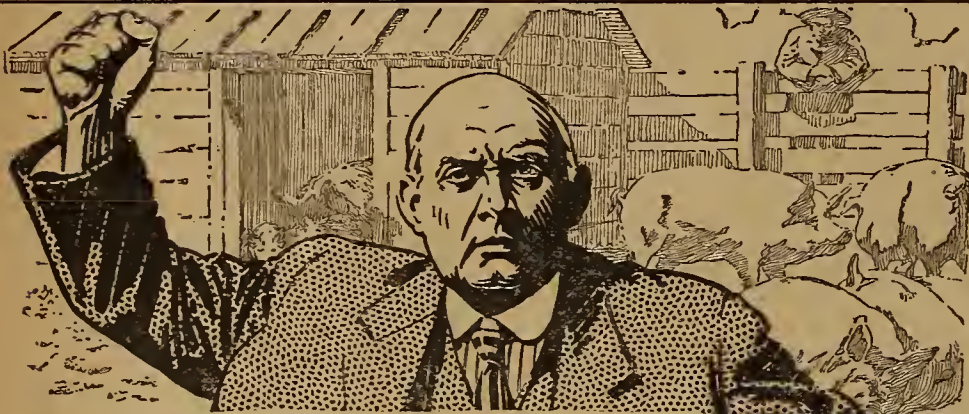
Get Guaranty With Horse

A NEW YORK subscriber wants to know how to protect himself when buying a horse from a dealer in order to be sure the horse is not doped. Dr. A. S. Alexander gives his opinion on this subject for the benefit of FARM AND FIRESIDE readers:

Ordinarily a purchaser is allowed twenty-four hours by a reputable horse dealer in which to try and return any horse he sells as "sound." In some cases a horse is sold "on trial," but in great horse markets like that of Chicago twenty-four hours is the limit for a sound horse. Horses are also sold as "serviceably sound," or "work and wind only," or "to halter," and the buyer takes his chances.

When a horse has been doped for heaves the disease symptoms will be likely to return in twenty-four hours if the horse is given all the drinking water he will take and is fed generously on bulky feed. He can then be thoroughly tested for wind by running and by dragging a wagon with a locked wheel.

Where cocaine is used to hide lameness, its effects will pass off in a few hours. A hypodermic injection of morphine, strychnine, or similar drug will pass off in twelve hours or less. Cannabis indica or chloral hydrate makes a horse sleepy for from twelve to eighteen hours unless the dose is very large, in which case the effect will last longer. The only sure way to protect yourself is to buy a horse from a reputable dealer and get a written guarantee of soundness signed before a witness.



"Not the Cure But the Prevention of Hog Diseases, Is Your Big Problem."

Swine epidemics are constantly playing havoc in different parts of the country. Be on your guard.

My message to you is *Prevention*, and almost the whole secret of prevention lies in proper feeding and sanitation. Keep your hogs toned up and free from worms—keep the animals, pens, troughs and runs clean and disinfected and you'll have very little trouble raising healthy, weighty stock.

DR. HESS STOCK TONIC

Makes Stock Healthy and Expels Worms

Dr. Hess Dip and Disinfectant

Destroys Germs—Deodorizes—Cures Skin Diseases

These two preparations are the result of my lifetime experience as a doctor of veterinary science, a doctor of medicine and successful stock raiser. Dr. Hess Stock Tonic will put your animals in a thriving condition, make the ailing ones healthy and expel the worms. Contains tonics to aid digestion and appetite; *blood builders* to enrich and tone up the blood; *laxatives* for regulating the bowels and *vermifuges* to expel worms.

Sanitation has been my constant message to you for many, many years, through the agricultural press, as being an absolute necessity for the prevention of disease.

Dr. Hess Dip and Disinfectant destroys disease germs, foul odors, and is an effective remedy for parasitic skin diseases. For cleansing hog-pens, stables, barns, outhouses, sinks, drains, troughs, garbage cans, etc. Put it in the hog wallows, sprinkle it around the poultry houses—use it wherever there are foul odors, filth, lice, scab, sheep ticks, mange, etc. It is non-poisonous and non-irritating; always uniform in strength and one gallon makes 75 to 100 gallons of solution.

So sure am I that Dr. Hess Stock Tonic will put your animals in a thriving condition, make the ailing ones healthy, and expel the worms—that Dr. Hess Dip and Disinfectant will destroy foul odors and disease germs, prevent and cure skin ailments and keep your premises clean and sweet smelling—that I have authorized my dealer in your town to supply you with enough for your stock, and if these preparations do not do as I claim, return the empty packages and my dealer will refund your money.

The above dependable and scientific preparations are never peddled—sold only by reputable dealers whom you know. I save you peddler's wagon, team and travelling expenses, as these prices prove: Dr. Hess Stock Tonic, 25-lb. pail, \$1.60; 100-lb. sack, \$5.00; smaller packages as low as 50c (except in Canada and the extreme West and South). Dr. Hess Dip and Disinfectant is sold in pint bottles, quart and gallon cans, also in barrels.

I have a book about Dr. Hess Stock Tonic and Dr. Hess Dip and Disinfectant that you may have for the asking.

DR. HESS & CLARK,

Ashland, Ohio

GILBERT HESS
Doctor of
Veterinary Science
Doctor of Medicine

Dr. Hess Poultry Pan-a-ce-a

A splendid poultry tonic that shortens the moulting period. It gives the moulting hen vitality to force out the old quills, grow new feathers and get back on the job laying eggs all winter. It tones up the dormant egg organs and makes hens lay. Also helps chicks grow. Economical to use—a penny's worth is enough for 30 fowl per day. 1½ lbs. 25c; 5 lbs. 60c; 25-lb. pail \$2.50. Except in Canada and the far West. Guaranteed.

Dr. Hess Instant Louse Killer

Kills lice on poultry and all farm stock. Dust the hens and chicks with it, sprinkle it on the roosts, in the cracks and dust bath. Also destroys bugs on cucumber, squash and melon vines, cabbage worms, etc., slugs on rose bushes, etc. Comes in handy sifting-top cans. 1 lb. 25c; 3 lbs. 60c. Except in Canada and the far West. I guarantee it.

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Blatchford's Calf Meal

has been known as the complete milk substitute since the year 1800. It prevents scouring and contains just the ingredients necessary to promote early maturity. Sold by your dealer or direct from the maker.

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Send your name and address and get actual figures that show the possibilities for making money from your calves. Blatchford Calf Meal Factory, Dept. 4038 Waukegan, Ill.

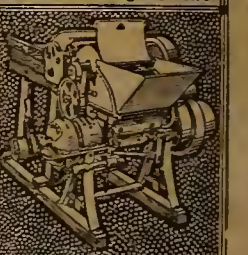
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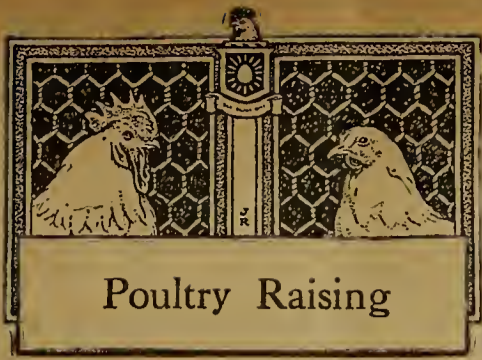
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My Experience with Trap Nests

By Earle B. Shaw

IFIRST became interested in the trap-nest method of breeding poultry as the result of reading articles appearing in poultry and agricultural periodicals in the fall of 1907.

Many of the trap nests that I have seen are worse than useless except as a means of separating many poultrymen from a portion of their hard-earned cash. The average trap nest is too complex.

Finally I became convinced that the name "Ideal" as applied to Wellcome's "Ideal" trap nest was not a misnomer, and I installed "Ideal" traps at the ratio of one nest for each four birds. The nest boxes were constructed from boxes procured at 10 cents apiece. By using care in selecting these boxes I found some that would cut to very good advantage.

One Nest for Four Hens

The trap attachments, which are patented, I purchased from the patentee. These nests when completed cost me approximately 25 cents each.

These nests have been in constant use in my laying pens for about six years, and are still working perfectly.

As my trap nests are constructed entirely of wood, with the exception of a few screws and strap hinges, there is practically nothing to get out of order. The single-compartment "Ideals" that I am using take but very little more room than common open box nests, and can be placed in almost any position in the laying house that would be suitable for open nests of any type.

Do I consider trap-nesting under the system that I am using as practical for the farmers keeping from 50 to 100 birds each?

The trap nest for the person who is breeding along rigid lines for improvement is not only practical but almost indispensable. However, the trap nest must have attention, and unless you can and will visit your nests at least four times daily, and in extreme hot weather six times a day, don't use trap nests. It is nothing short of cruelty to keep a hen confined in a trap nest for five or six hours during hot summer weather.

The extreme filthy condition of many poultry buildings always reminds me of the old story of the fabulous King Augeas, that renowned possessor of a stable, containing 3,000 oxen, that had not been cleaned for thirty years. The story goes that Hercules cleaned it out in a single day. If some modern Hercules could be impressed into service in all of the poultry coops that are in a condition similar to that of the Augean stables the increased egg production of the country that would surely result would affect market conditions more than any tariff bill that ever was drafted, or any war that was ever imagined.

The Labor Expense is Worth Noting

The labor item is about the only extra expense worth considering in trap-nesting. The laying hens must all be leg-banded with different numbers. A convenient form of record sheet should be tacked up near the nest boxes so that each bird may be quickly credited with the egg she has laid. Practice makes perfect, and I find that I can tend the traps much more rapidly than when they were first installed. By planning to look after the nests at feeding times and when making trips to the houses with fresh water, green food, etc., I am able to greatly reduce the time needed. Although I am a one-armed person I am able to attend to the nests at the rate of two per minute, including the recording on the record sheet. Of course empty nests require only a passing glance from the attendant.

At the close of each calendar month the various record sheets are posted to the egg ledger and at the close of the year the egg ledger is footed up to ascertain the individual egg record of each bird kept for the entire year.

My estimate of the time required for the bookkeeping for a flock of 100 hens is one day's work a year on the egg records aside from the nest-tending already mentioned.

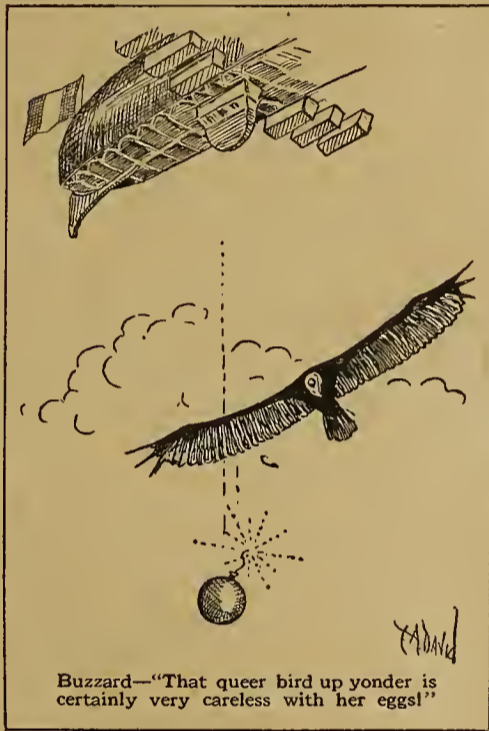
The objection is raised by critics of trap-nesting that hens won't use the traps and persist in laying on the floor and elsewhere. After almost six years' experience with "Ideal" trap nests I can state that although pullets sometimes

drop their first eggs about the poultry house the percentage of eggs laid outside the nests is smaller than when I was using open box nests.

Some readers will ask, "What does it all amount to?" Just this: it shows which hen lays the eggs. It enables you to pick out the 250-egg hen, the 200-egg, the 150-egg, the 50-egg hen, and the drone. Let us not lose sight of the fact that feeding the drone is one of the greatest leaks of the average poultryman. It enables the attendant to become familiar with each bird in his flock. The frequent handling of the bird tames her, and the tame hen is usually a paying hen. It enables us to breed from our best layers and thus increase the prolificacy of our flocks. It is the only practical way that the breeder can pedigree his stock. If for any reason it becomes desirable to open the traps for a time, they may be changed to open nest boxes almost instantly, and are just as quickly transformed into traps again whenever desired.

These nests when placed in a building away from laying hens make truly ideal nests for incubating hens, as the hens may be removed once a day for feed and water. When they return to the nest they lock themselves in and all other hens out, so that they cannot crowd on and break the eggs. I have used these nests in my hatching each spring for several seasons with excellent results.

Since introducing trap nests I am able to base my results not on flocks but upon individuals. To-day I know which of the birds are fit only for the hatchet and which deserve to live.



Buzzard—"That queer bird up yonder is certainly very careless with her eggs!"

Parcel Post for Eggs?

By L. H. Cobb

"DO I keep a few chickens?" That depends on what you would call a "few chickens." I had this past season 135 Buff Orpington and 9 White Orpington hens. I sold 6,000 eggs for hatching from March 9th to June 9th. Since then I have been selling all the eggs I get to a club in Kansas City. Last winter I sold to this same club.

I have been sending eggs by parcel post in the first and second zone for both hatching and eating, to the third and fourth zones for hatching. During the breeding season I sent several thousand eggs in this manner, most of them in lots of four dozen, though I sent some in 12-dozen lots.

I Wrapped the Hatching Eggs in Cotton

The hatching eggs were wrapped in cotton and packed in regular parcel-post egg boxes made of corrugated strawboard. Two thicknesses of the board surrounded the eggs on all sides, and one thickness of fillers separated them. The egg and cotton were made to fill the compartment compactly so there was no shaking around. Where the cases were used the eggs were packed in cartons, cotton being used as in the parcel-post boxes. Some excelsior was placed under the bottom layer of cartons to prevent any jar in setting the case down roughly, but no other packing was used except four or five thicknesses of newspaper around and under each layer.

The eggs for eating were shipped in 4-dozen parcel-post boxes, 12-dozen cases, and a few in cartons packed in baskets. The single eggs were wrapped in pieces of newspaper to prevent shaking.

Now for the results. There was practically no breakage in either case, not more than ordinarily when shipping by express. The boxes were not smashed up badly, and were used over and over. The delivery was prompt, and no boxes were lost en route. Except in a couple of cases where especially requested, they were not insured.

Those shipped for eating were satisfactory, but for hatching there was trouble.

While the complaints were not many considering the large number who received them thus, yet they were enough to show that in many cases the eggs were entirely ruined, even when not an egg was broken. When I discovered this I asked many of those who received boxes to report to me when they hatched, and compared the results with the express shipment. In only one case was there a bad report from an express shipment, while there were probably a dozen from parcel-post shipments. Some of the very best reports were from parcel-post shipments, however.

From my experience it would seem that there are some clerks in the postal service who had a "pick" at parcel-post boxes. The very worst reports came from Oklahoma. While only about 15 per cent of the shipments were sent to Oklahoma, more than half the complaints came from there. This seems to me to indicate that there was a clerk, or maybe a couple of them, on the route from Kansas City leading toward Oklahoma that Uncle Sam should give a permanent leave of absence.

The shipments in light wooden 12-dozen cases, which, in the first and second zones, can be sent as outside mail, being addressed and handled just the same as express, seemed to go through in every bit as good shape. A case of eggs shipped thus costs less than by express by the old rates, but about the same by the new rates which went into effect in July.

The Old Plan Was Not Satisfactory

Next year I shall try a new plan in shipping eggs for hatching by parcel post, and I believe it will solve the problem. I will have a second box made of corrugated board three inches larger each way than the regular parcel-post boxes I used this year. I will pack the eggs just the same as before, but will put the parcel-post box inside this other box and pack an inch and a half of chaff or excelsior all around it. This will take but a few cents more postage, probably about 15 cents altogether on a three-setting lot (4-dozen box) where sent to the first or second zones, and they will be protected from any severe jars. If this does not prove satisfactory I doubt if we can ship eggs by parcel post. My shipments last season were so far from satisfactory I will not send them that way again except where it is unavoidable.

It is in the first and second zones on large shipments, and in all zones on small shipments, that the parcel-post rates are cheaper. Where the postage on a box is as much as the minimum rate express there is not much difference now in the rates. Anywhere in the first or second zones it takes a 20 to 30 pound package to bring the postage up to the minimum express rate, which runs from 25 to 35 cents. A box of four dozen eggs in a parcel-post box, plain, costs 13 cents for the first two zones, 20 for the third, and 28 for the fourth. The outside box that I plan to use next year would weigh not over two pounds with excelsior packing, I believe, which would add 2 cents in the first two zones, 4 cents in the third, and 6 cents in the fourth, yet leaving the transportation cost not over half the express rates in the first zones, and not nearly equaling express rates in the third and fourth.

What's Good for Runner Ducks?

By P. F. Woodworth

THE expensive rations for Indian Runners advocated by some would leave no chance for profit. They consist of several kinds of whole grain, and many an interested party aware of the appetite of the better-known Pekin duck shudders at the prospect. Consequently the little Runner has one more obstacle to surmount.

Economy should be foremost in the mind of a breeder who intends to produce large quantities of duck eggs for the market, therefore he should studiously avoid whole grains. Aside from the extra cost it is impracticable. The duck's peculiar process of assimilation is not adapted to this kind of food, and anything that cannot be quickly digested causes a lack of nutriment and the egg factory goes on short time. I have known a flock of ducks to refuse food for twenty-four hours after a heavy feed of whole corn.

To those who wish to produce large numbers of finely flavored Indian Runner duck eggs at the least cost I would say: Cook your unsalable vegetables, any kind, but especially mangel beets. They are easily grown in large quantities. Mash them up when hot and add a small amount of bran or provender and a little meat scrap three times a week. The Indian Runner duck will lay more eggs than the best hen that ever scratched up the garden.

The person who neglects to add a flock of these valuable birds to his stock of poultry is denying himself the luxury of fresh eggs when the unresponsive hen has her annual attack of the sulks.



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Then is the time to try Grape-Nuts, the most scientific and perfect food in the world.

A lady of Washington says: "Three years ago I was very ill with catarrh of the stomach and was given up to die by one doctor. I laid in bed four months and my stomach was so weak that I could not keep down medicine or hardly any kind of food and was so weak and emaciated after four months of this starvation that my daughter could easily lift me from bed and put me in my chair.

"But weak as my stomach was, it accepted, relished and digested Grape-Nuts without any difficulty the first time that wonderful food was tried.

"I am now strong and in better health than for a great many years and am gradually growing still stronger. I rely on Grape-Nuts for much of the nourishment that I get. The results have certainly been wonderful in my case and prove that no stomach is so weak it will not digest Grape-Nuts.

"My baby got fat from feeding on Grape-Nuts. I was afraid I would have to stop giving the food to him, but I guess it is a healthy fat for his health is just perfect." Name given by Postum Co., Battle Creek, Mich.

Look in pkgs. for the famous little book, "The Road to Wellville." "There's a Reason."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.



Live Stock and Dairy

Success With Colts Explained
By W. F. Purdue

IN AN experience extending over a period of twenty-five years a friend of mine has lost but seven colts out of fifty-three foaled for him. He has one mare, now twenty-three years of age, that has foaled seventeen colts, only two of which were lost before weaning time. This mare is a one-half grade Morgan, weighing 1,200 pounds. Rearing a colt nearly every year she has at the same time rendered efficient service as a work animal at all times. Last season she did much of the spring plowing and planting.

This man estimates the value of the forty-six colts reared to weaning time as being close to \$4,000 at that age. But as most of them were retained and sold as mature horses at prices ranging between \$100 and \$225, a sum considerably in excess of \$4,000 has been received for the colts produced on this one farm.

The Mares Get Only a Short Vacation

Some men have the impression that there is a loss in the use of a mare preceding and following foaling. This loss is usually overestimated. The farmer of whom we are writing works his mares right up to foaling time, and he believes that they are the better for it. They need exercise in any event; they are always much better off if given regular exercise than if allowed to stand idle in their stalls. Their work, of course, should not be unduly severe immediately preceding foaling, and they should be fed generously. With the approach of foaling time the mares are placed in roomy box stalls and watched carefully.

This may seem a needless precaution, but it is one which has saved the lives of several valuable colts.

After foaling, the mares are given a vacation of nine or ten days, at the end of which time, if work is pressing, they are again put to work. Under proper feed and good management excellent results are secured from this practice. It is sometimes contended that colts treated in this way rarely do as well as those which are permitted to run with their mothers in a pasture field for several weeks, but this farmer's colts grow just as thrifflily as those on other farms where the brood mares are given a long vacation after foaling.

Of course good judgment is used in working the dams. He takes care not to overheat them, and especially not to permit the colts to nurse immediately after bringing their mothers to the barn in a heated condition. While the colts are young the mares are brought to the barn in the middle of the forenoon and after-



The brood mare mentioned, and one of her seventeen colts sired by a Norman stallion

noon to permit the colts to feed. The brood mares on this farm are given a good grain ration both before and after the colts learn to eat grain with them, but no special feeds are employed except that some stock food is given each day.

Feeding for Good Younglings

THE new-born animal will never grow as fast again as he has been growing during the period of gestation; and after he sees the light he will grow faster for the first month than he will ever grow again. Growth is a process that slows up from birth to maturity.

That is why the cheapest meat and weight we can make on our stock is made early in the life of the animal fed.

All this assumes that the youngling arrives on this mundane sphere in good condition, and ready to strike his gait as a growthy addition to barnyard society. If he is in bad condition he becomes a runt.

Cost of Feed Per Pig

Can we feed the mother so as to give the young thing the best start? And can we feed so as to make the younglings more numerous? John M. Evvard of Iowa tried different systems of feeding on sows and ewes, with results that every one of us ought to think about. Some sows he fed during pregnancy on corn alone, some on corn and a heavy supplement of meat meal, some on a light supplement of meat meal, some on corn and clover, some on corn and alfalfa, and some on corn and linseed-oil meal.

The sows fed on corn alone produced the lightest average litter, as well as the lightest average pig. All the lots fed on a supplement to the corn carrying much protein had larger average litters, and larger average pigs as well. The cheapest pigs were produced with a feed of one pound of meat meal to thirty pounds of corn—seven and one-tenth cents per pig. Of all the feeds mentioned above, the pigs from the sows fed on corn alone cost most at birth, twenty-nine and three-tenths cents per pig.

Sows fed on a mixed feed consisting of three parts oats, three parts bran, three parts middlings, and two parts meat meal dropped an average of ten and six-tenths pigs per litter, costing forty-five cents each, while the ones fed on corn alone had a record of only seven and six-tenths pigs, and the larger litters were heavier pigs.

The pigs fed on protein-bearing supplements were thriftier, had more and better hair, lived better, and cost less. Similar results were observed with the ewes, and probably they hold good with all farm animals. But the matter is especially important with swine, as they are ordinarily more dependent on the feeder than other live stock.

MANY lambs die in the feed lot for no other reason than their inability to adjust themselves to feed-lot conditions after a summer on grass. New feed, new quarters, crowding—these are enough to kill a tougher animal than a lamb. The good feeder studies the matter and adopts common-sense methods adapted to his peculiar conditions to save the lambs as much of the shock as possible.

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- Natural Gray Worsted, medium weight per garment 2.00
- Natural Gray Australian Lamb's Wool, winter weight per garment 2.50

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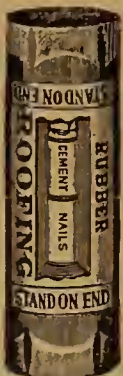
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5,000 rolls that were on the docks at New York City for export.

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Farm Notes

The Virtue of a Drop

By William J. Burtscher

WITH one drop of syrup
You can draw a dozen ants;
With one drop of water
You can stick two postage stamps.

With one drop of gravy
You can make an ugly blot;
With one drop of gas line
You can clean away the spot.

With one drop of liquor
You can odorize your breath;
With one drop of poison
You can put ten bugs to death.

With one drop of coal oil
You can make a little light;
Into one drop of ink
You can dip your pen and write.

In each drop there's virtue,
And if you would reach the top—
There are a lot of things
You will find you'll have to drop.

Cost of Clearing Land

"DON'T buy timber land for farming purposes unless at least ten acres of it have been cleared and are ready for the plow." This is the advice of the U. S. D. A. to a settler who has little capital and no experience. After a study of twenty different tracts of logged-off land in Michigan, Wisconsin, and Minnesota the Department experts conclude that the most economical method of handling all logged-off land before stumping it is cutting and burning the second growth, pasturing for several years, and keeping down all sprout growths. On heavy soils, dynamite with 20 to 30 per cent of nitroglycerin is an economical method of destroying stumps. Good stump pullers remove them at about the same cost. On lighter soils, stump pullers are cheaper. The total cost of clearing timber land is from \$35 an acre upward.

Wants Good Signboards

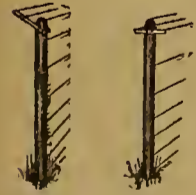
By Philip M. Marsh

I AGREE that a "Signboard Day" would prove beneficial. But while we are instituting such a day for such work, why not include the other side of the work—erecting new signs?

Probably there are few more bothersome single features about our country roads than the lack of proper signboards directing travelers and stating correct distances. Ever since I can remember there has been an old unreadable signboard at a road corner near my place. Every time I have passed it I have vainly tried to read it. No one seems to take real interest in the upkeep of signboards and road posts. A neatly painted sign, or a continuous every-mile series of signs along a road, keeps the community spirit bright and satisfies travelers.

Making Fences "Fool-Proof"

By Frank H. Jones



WOVEN - WIRE fences are one of the easiest things in the world to climb over. To render them secure against trespassers and at the same time keep the dangerous portion of the fence above the level of passing persons or animals where it can do no harm, either of the methods shown in the accompanying sketch can be used to advantage.

Barbed wire strung on the tips of a cross arm of about 18 or 20 inches span, and fastened about 6 inches below the top of the fence post, or on a strip nailed slantwise at the top of the post, will form an effective barrier to any attempts to climb over the fence. The cross-arm method makes a stronger construction, and will foil attempts to climb it from either side. If this method is used the fence posts should be about 6 or 8 inches higher than the top of the wire fencing. The method of running the barbed wire on a strip nailed slanting up into the air from the top of the post is not as strong, but serves to run the protecting wire over the inside of the field where the fence posts are set on the property line. If possible, strips of iron should be used

in this method and bolted to the posts with lag screws. The cost is not much greater and the wire can be fastened by tying it onto the iron strip with other short pieces of wire. The last method should not be used unless the fence itself is high enough to keep the projecting strip clear of passing persons or animals.

Crooked Loan Schemes

IN ITS Weekly News Letter to Crop Correspondents the U. S. D. A. issues a warning which all borrowers should heed. It calls attention to the scheme of certain loan companies that promise cheaper money than anyone else can get for them. Such a company will offer to lend money on good security for about 3 per cent interest and allow you to repay the loan in easy instalments.

The scheme sounds good, but when you sign your name to the papers you merely sign an application for the loan and you do not get your money, and neither do you know when you are going to get it. But by signing the paper you have obligated yourself to pay a certain amount every month. The publicity which rural credit has received has caused dishonest loan companies to follow the band wagon.

If anyone offers to lend you money for less than 5 per cent be cautious. Consider the matter overnight; in the morning look for the joker in the papers.

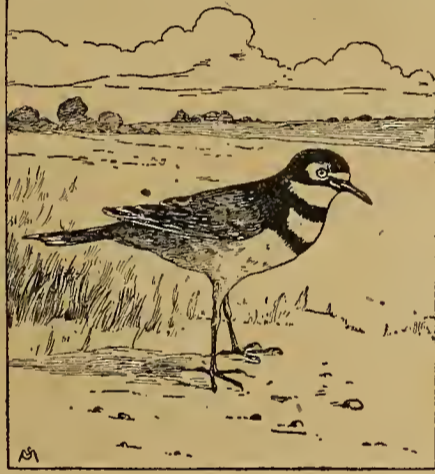
The Killdeer

By H. W. Weisgerber

WE OWE our thanks to a kind Providence that created in this plover such a miniature body that it is not worth the powder to send the few shot through its feathers to secure so small a carcass. And so, instead of being hunted, it is allowed to do the work that Nature intended it should, and only occasionally is it shot at, and then only by some unthinking man or boy.

It frequents the low-lying pasture meadows and plowed fields that lie in the vicinity of water, be the latter large or small; for it is, after all, only a shore bird, and like its kind delights to tread the water's edge to find food.

Its eggs, however, are placed on the ground, for nest it can scarcely be called, and the farmer is continually finding



these slight depressions while cultivating. And I hold him in high esteem who is so kind and considerate as to sacrifice a few hills of corn in order not to disturb the nest of these birds, for they are valuable in destroying grasshoppers, crickets, and that destructive cotton insect, the boll weevil. They will repay the price of many ears of corn.

This bird's ability to run rapidly over the ground, its startling flight, or its crying "killdee, killdee" notes are so well known that a further description is unnecessary.

IN UTAH a stallion will not be given a license unless he is free from blemishes which tend to descend to his get. Bone spavin, side bones on the front legs, turning hind feet, and enlarged side bones have been causes for refusal of license in recent months. What the State does in Utah we should all do for ourselves when left to ourselves by the law.

New Books

SOIL MANAGEMENT, by the late F. H. King. Dr. King's name is sufficient to recommend the book. It is unfortunate that he died before completing this work, but the chapters were so nearly complete that Mrs. King has been able to collect them, and they are now published in this volume. Dr. King's extensive studies in China, Korea, and Japan are brought to bear upon our own problems here in America. Published by the Orange Judd Company, New York. Price, \$1.50 net.

PRINCIPLES OF IRRIGATION PRACTICE, by John A. Widtsoe of Utah. With a firm faith in the present and the future of irrigation farming, Dr. Widtsoe has made this book valuable for farmers everywhere. While it pertains chiefly to the arid sections, the possibility of irrigation in humid climates is not overlooked. It is aimed to aid the farmer who is a student of his business, and it will do that if used. Well illustrated. 496 pages. The Macmillan Company, New York. Price, \$1.75.



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Garden and Orchard

Purple Martins as Orchard Sentries

By L. A. Potter

AS THE Editor of FARM AND FIRESIDE has asked how many readers have colonies of purple martins, my hand goes up. In the last fifty years I have changed my residence three times, and in all these years I have provided for my colony of purple martins. This year I have about one hundred birds, and have spent much time in building nesting boxes of many different plans of architecture. I consider my time well spent, for without the cheery chirp of the martin my home would indeed be lonely.

This year is locust year in eastern Ohio. Our last visit from these pests was in 1902, when my colony of martins was very large. Had it not been for the martins the locusts would have ruined my apple orchard. From early morning till late at night a stream of birds was constantly on the wing in quest of the locusts. The birds did not bother the locusts when they were quiet, but the moment one moved, a martin had him. Thousands of locusts lay around the nesting boxes, and the chickens ate what the martins left. The birds were constantly skirting the apple rows in the orchard and I suffered no loss.

In spite of its activity the purple martin is stupid in many ways, and eternal vigilance against the sparrow is the only thing that will save the martin. When the martins are away from their nests the sparrows will get in their work by filling the nests with trash. Then it is an easy matter for the sparrows to keep the martins out. The best plan is to keep a repeating shotgun handy and not allow any sparrows near the martins' nesting boxes. Wait till you have a good bunch of sparrows to shoot at and then send a load of No. 7 or 8 shot at them.

Humus Makes Easy Sledding

By T. Greiner.

THE successful garden is the garden that is full of decaying vegetable matter or humus. With such soil to work with it is easy to raise good vegetables and plenty of them. The task is hopeless when undertaken on land that is hard, close, lifeless for the lack of humus. Humus keeps the soil open, porous, loose, and gives the right kind of bacteria a chance to work, and the plant roots a chance to push through in all directions and to find moisture. Humus, like a sponge, retains moisture, the water that is the wonder-worker.

A well-drained muck is almost ideal in that respect. If new, a small dressing of stable manure will start the work of helpful bacteria, and applications of mineral fertilizers, such as wood ashes and bone and potash salts, will supply the needed plant foods. For ordinary uplands heavy applications of stable manure may be necessary. Even rotted straw will help to improve the texture of the soil if time for its full decay can be given. Or the hard land may be seeded to winter vetch, in summer or fall, and a

full growth of this turned under next season. Or a good growth of clover may be plowed under in the same way. One or the other of these means must be used. Plenty of humus is essential to success. You cannot raise satisfactory garden crops without humus.

It Won't Work

By Alvin T. Jones

WHAT H. C. Kegley said about stopping cabbages from bursting by breaking the tap root with the spade interested me. I have raised thousands of cabbages and have suffered some loss by bursting. I never get quite so hot under the collar as at seeing the top of a cabbage head crack open, and sometimes the top of a pointed head of cabbage will jump over to one side. When one year I had a choice lot of fine cabbage heads all perfect and nice I listened to such advice as Mr. Kegley gives. In a few days my nice cabbage heads were like a cow's udder after the milk has been drawn. Sure, it stopped them from bursting! I felt more like bursting than the cabbages did.

The facts are these. A good cabbage plant grows much like a tree. It has a tap root, and many side roots that extend quite a little out to all sides of the main stem. You can't break the tap root loose without loosening those feeders, and when you do that you produce bad results. I have been raising cabbages for a good many years, and my experience has led me to look for a strain of cabbage that is not so liable to burst. When it does burst I sell it at a reduced price.

As to pushing the heads over to one side, I can't do that either. Might as well try to break the roots of a young tree.

The Perfect Grape

By Charles I. Reid

THE usual crop from the average grapevine is far from perfect, fully 50 per cent of the yield being spoiled by vermin. This is the reason grapes do not sell very readily on the markets.

There is a very simple way of securing a perfect crop from any vine; simply exclude the damaging vermin.



The bag is tied securely

While the grapes are still small and green they are placed into paper bags and the top of the bag is tied securely around the stem with strong cord. This is done with all the grapes on a vine except a few bunches which are left in the open to enable one to determine when the crop is ripe. The bags exclude the vermin, and therefore the grapes are all perfect and much larger than ordinarily.

The large photograph shows two bunches taken from the same vine, one having been tied up in a bag and the other exposed.

In order to obtain the very best results it is advisable to tie the bag very securely around the stem, but not tight enough to damage the stem.

Grapes raised in this manner are in great demand in hotels and other markets, and bring the very highest prices.



One was protected, the other wasn't—that's all

Diversified Farming Safest

AN APPLE orchard in New York State, containing 15 acres and 527 trees, has been the object of detailed study for two years by the U. S. D. A. Accurate records were kept of the cost of spraying, barrels, seed for cover crops, and other expenses. The orchard is over fifty years old, well located, and is a part of a farm of 122 acres on which potatoes, wheat, beans, sheep, and horses are raised. The Department experts sum up their conclusions with the advice that:

"The cost of growing apples is lessened by growing them in connection with other farm crops and utilizing the man and horse labor on these other crops also."

In other words, the farming that usually pays best is the kind where the equipment and labor of both men and horses can be used all through the year, and where the owner is not dependent on one sort of crop.

Diversified farming is not always the easiest, but it is the safest and usually the most profitable—even in this era of specialization.

THE Northwestern Fruit Exchange, with headquarters in Portland, Oregon, has appealed to the railroads for a reduction in freight rates of 20 cents per 100 pounds. The Exchange asks that this emergency rate be put in for six months in order to help move the Northwestern apple crop, estimated at 15,900 carloads.

The direct cause for this petition is the cutting off of export markets. The lower prices which will prevail for apples when the crops are put on the market are expected to be barely sufficient to pay the cost of transit and delivery unless the rates are lowered.

Double-Decker Berry Trellis

By Mabel H. Wharton

THE sketch shows a trellis which has found favor in blackberry sections. It consists of two parallel rows of 2x4 posts set 6 feet apart in the row, and 18 inches from each other crosswise. These posts are 4 feet high, and on the tops of them run heavy-gauge wires fastened with staples.

Two other wires fastened in the same way are placed on the posts one foot from the ground. A number of notched boards made on the order of a swing board are placed between the wires, top and bottom, about 4 feet apart. These boards act as a support to the vines, which are trained to run along the trellis thus formed. The new shoots (next year's bearing vines) as they grow are trained along the under set of boards.

At the end of the season when the old runners are cut away the small boards are easily moved, the new vines lifted to their position of prominence on the top, and the lower boards are again free for the next year's growth.

This method is used a great deal in California for loganberries, and the Himalaya blackberry, which sends out such long runners. It is a comfortable height for picking, and a whole field may be planted in this way with parallel sets of trellises.



EDITORIAL NOTE: Where new plantations or plantings of loganberries and similar heavy-growing cane and vine fruit are trellised as above recommended, it is important to have the double-deck supports ready before the plants begin the season's growth; otherwise the extremely rapid extension of the vines soon makes the proper placing of the long canes a difficult and disagreeable task.

A Fifty-Dollar Experiment

By D. Andrew McComb

TO SAVE a little time in apple-picking we tried an experiment last year which, so far as we know, was original with us. We contracted with a commission house to take 200 barrels of our apples at \$2 a barrel. They were good quality and averaged well in size. We had packed and sold apples before without one word of complaint, and supposed we knew the business pretty well.

We were careful to have the apples properly assorted as they were picked, throwing out all that were below size or otherwise unsuitable for market. I did all the facing myself, and kept close tab on the apples as they were emptied from the pickers' bags into the barrels. I did the pressing, heading, and marking. I knew it was a good job and could see no reason why they were not in first-class order when we shipped a few days later.

The next day after the apples arrived at the commission house, about ten days from the time we began to pick and pack, I had business down that way and called in for the check.

"Come back here," was about the first

thing I heard from the buyer. "I thought you were going to send us good apples and full measure."

I couldn't speak at first, for I didn't know whether it was a joke or otherwise. But when I came to myself I said, "Yes, sir, that's just what we did."

"Look here," he continued as he dumped one of our barrels on the floor. Then he grabbed his cruel little hatchet and jabbed it into the head of another barrel and in a twinkling he emptied it by the other. He then rolled out several other barrels and rocked them back and forth a few times and said, "I guess you didn't use any press on these apples."

The evidence was so keen and convincing that I felt like a thief, and for a time I couldn't answer him. There before me lay two piles of apples with a peck of mushy, rotten ones in each lot. And the barrels he rolled over the floor sounded more like big rattleboxes than packed barrels.

When I assured him that I packed the apples myself and was sure they were right, and asked if he could account for it, he began to question me:

"How long were they picked before packed?"

"Packed direct from the trees," I replied.

"There's your mistake," he assured me, and continued: "Apples should always



These fancy New York apples sell for 5c each—they are well packed

be allowed to lie on the ground at least a week before packing. This," he explained, "gives them a chance to season, and the overripe ones will show decay in that time and can be picked out instead of being allowed to rot in the barrel, and shrink and loosen the whole pack."

The lesson was mine, and I paid for it without much to say when I accepted a check for \$350 instead of \$400.

EDITORIAL NOTE—The obvious lesson here brought out by this apple-packing experience is rather too sweeping. The dealer's counsel to "let the apples season on the ground for a week" is good for the earlier varieties that do not mature uniformly, but later in the season when the weather is quite cool such varieties as the Baldwin and other solid, strong-skinned, late-keeping apples may safely be barreled as picked from the trees, but should be left unheaded for a week if the market is distant. Apples that are to be held in storage in barrels for some time before marketing should not be headed until about time for shipment.

The Legume for Nitrogen

THE legumes as a source of nitrate are rather too slow in action to give real immediate profits when used to produce great money crops." This is the statement made by an advocate of the use of nitrate of soda on American soils.

Such a statement should not lead anyone away from the main fact that legumes grown with other crops in a field benefit those other crops the first year. The second year the soil itself is much better from having grown the legumes than if nitrate of soda had been used and no legumes grown.

Legumes are our natural nitrate producers. The nitrogen is cheaper, too, when furnished us in this form. And yet we should remember sodium nitrate for its value in getting quick results. It is beneficial to almost every crop when applied in the right amounts and at the right time. For quick results when starting a pasture on poor land, as an application to orchard soil for hastening fruit, in market gardens where crops demand much nitrogen, and in many other places sodium nitrate is indispensable. Such crops as potatoes, garden and truck crops grown in colder sections need quick-acting nitrates in addition to legume nitrogen to push the crops before the organic source is ready.

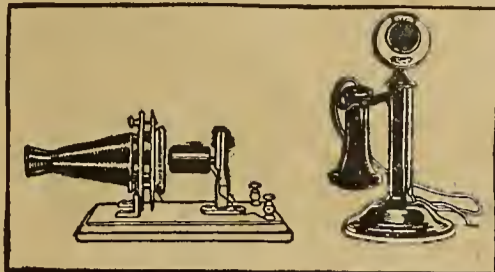
But on the average extensive farm let us depend largely upon the legume.

THE man of the hours is the American farmer: eight in the morning and eight in the afternoon.

IN WISCONSIN potato fields it has been discovered this year that the Rural Yorker is mixed with the Green Mountain variety. The station experts advise the growers to get rid of the mixed seed and get pure strains. The Green Mountain potato has white flowers and green stems; the Rural New Yorker variety has stems and flowers of a purplish color.

How the Public Profits By Telephone Improvements

Here is a big fact in the telephone progress of this country:



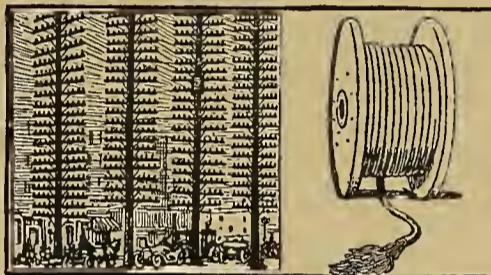
Original Bell Telephone 1876

Standard Bell Telephone To-day



Early Telephone Exchange

Typical Present-day Exchange



If City Wires Were Carried Overhead

800 in Underground Cable

Hand in hand with inventions and developments which have improved the service many fold have come operating economies that have greatly cut its cost.

To appreciate these betterments and their resulting economies, consider a few examples:

Your present telephone instrument had seventy-two ancestors; it is better and cheaper than any of them.

Time was when a switchboard required a room full of boys to handle the calls of a few hundred subscribers. Today, two or three girls will serve a greater number without confusion and very much more promptly.

A three-inch underground cable now carries as many as eight hundred wires. If strung in the old way, these would require four sets of poles, each with twenty cross arms—a congestion utterly prohibitive in city streets.

These are some of the familiar improvements. They have saved tens of millions of dollars.

But those which have had the most radical effect, resulting in the largest economies and putting the telephone within everyone's reach, are too technical to describe here. And their value can no more be estimated than can the value of the invention of the automobile.

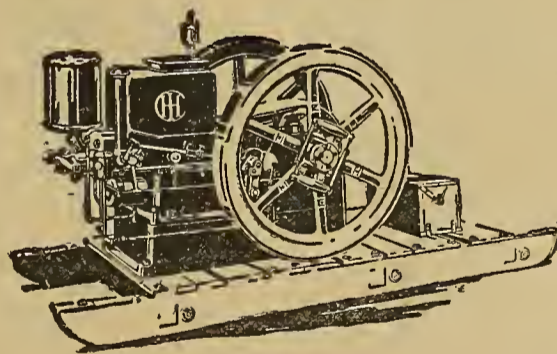
This progress in economy, as well as in service, has given the United States the Bell System with about ten times as many telephones, proportionate to the population, as in all Europe.



AMERICAN TELEPHONE AND TELEGRAPH COMPANY AND ASSOCIATED COMPANIES

One Policy One System Universal Service

International Harvester Engines Two Lines—Mogul and Titan



"WHICH engine shall I buy?"

If this question troubles you, a little careful observation and investigation will show that the International Harvester engines are the most satisfactory. No doubt is left in your mind when the advantages of features like the following are clear to you: Extra large intake and exhaust valves, proper distribution of weight, cylinder and piston construction, careful workmanship, prompt repair service, etc.

Ask the men who have used IHC engines. That is the best test. They will tell you of the excellence of IHC construction, simplicity, strength and durability.

Study the engines yourself at the nearest dealer's where International Harvester engines are sold. They are made in all styles, and range in all sizes from 1 to 50-H. P. They operate on low and high grade fuels.

Write for our interesting and instructive catalogues, and when we send them we will tell you where the engines may be seen. A postal will do.

The IHC Line

- GRAIN AND HAY MACHINES
- Binders, Reapers
- Headers, Mowers
- Rakes, Stackers
- Hay Loaders
- Hay Presses
- CORN MACHINES
- Planters, Pickers
- Binders, Cultivators
- Ensilage Cutters
- Shellers, Shredders
- TILLAGE
- Peg, Spring-Tooth, and Disk Harrows
- Cultivators
- GENERAL LINE
- Oil and Gas Engines
- Oil Tractors
- Mannre Spreaders
- Cream Separators
- Farm Wagons
- Motor Trucks
- Thrashers
- Grain Drills
- Feed Grinders
- Knife Grinders
- Binder Twine

International Harvester Company of America

(Incorporated)



CHICAGO

Champion Deering McCormick Milwaukee Osborne Plano

USA



Let Me Give You a Few Ideas

By Evaline Holbrook

WELL, here is Christmas again! Most of us have been circling around in the whirligig of time with never a thought of it. Yet, lo, it glitters in front of us with frosty skies, spluttering candles, and mysterious whisperings!

Beautiful, beautiful, but, oh, how sudden! What can I make? What do my friends want? I am not quite satisfied to rely entirely on the love in the gift. I want to tuck a real use in with the love.

Well, fortunately, Evaline Holbrook has not been traveling as carelessly as we in the whirligig of time. She has been looking and planning and working, and now she has several stockingfuls of ideas for us.

Each pattern costs four cents and a stamped, self-addressed envelope. Address Evaline Holbrook, Farm and Fireside, Springfield, Ohio.



Ivers & Pond PIANOS

combine the best features of half a century's experience in piano building with the latest ideas of the day. 400 Leading Educational Institutions and nearly 60,000 discriminating homes now use the Ivers & Pond.

We build uprights, grands and players, all of but one grade—the highest.

Our new catalogue will safeguard you against possible piano disappointment and may save you money, too. Write for it.

How to Buy

We will personally select for you a beautiful IVERS & POND Piano, and ship it for trial in your home (If we have no dealer near you), in whatever state in the Union it may be. Catalogue showing all our latest designs and a personal letter with prices and description of attractive plans for easy payments, mailed free.

Fill Out and Send This Coupon to

IVERS & POND PIANO CO.
125 Boylston Street, Boston, Mass.

Please mail me your new catalogue and valuable information to buyers.

Name _____
Address _____

Make 30 to 60 Weekly

Selling our new unequalled gasoline table and hanging lamp for lighting city and rural homes, stores, balls, churches. Most powerful light known. ABSOLUTELY SAFE.

WE LOAN YOU SAMPLE

More brilliant and many times cheaper than gas or electricity. Guaranteed five years. Everyone a possible customer. No experience necessary. Exclusive territory free. Write today.

SUNSHINE SAFETY LAMP CO.
309 Factory Bldg., Kansas City, Mo.

HARTSHORN
SHADE ROLLERS

Original and unequalled. Wood or tin rollers. "Improved" requires no tacks. Inventor's signature on genuine.

Stewart Hartshorn

The BEST LIGHT

Positively the cheapest and strongest light on earth. Used in every country on the globe. Makes and burns its own gas. Casts no shadows. Clean and odorless. Absolutely safe. Over 200 styles 100 to 2000 Candle Power Fully Guaranteed. Write for catalog. AGENTS WANTED EVERYWHERE.

THE BEST LIGHT CO.
212 E. 5th St., Canton, O.

1 cup Brown Sugar
1 cup White Sugar
1 cup Milk. Pieces of Butter, size of Walnut, half cake of Chocolate, pinch of Salt.

Boil over low fire. When done stir in half cup chopped walnut meats. Add half teaspoonful vanilla, stir until creamy and pour into "Wear-Ever" biscuit pans.

Make this Fudge in a

"Wear-Ever" Aluminum Sauce Pan

"Wear-Ever" utensils get hot more quickly and stay hot longer than other ware. Use them and save money, time and labor.

Replace utensils that wear out with utensils that "Wear-Ever"

Write for booklet, "The Wear-Ever Kitchen—full of things you should know about aluminum ware."

WANTED: Men to demonstrate and sell "Wear-Ever" Specialties. Only those who can furnish security will be considered

The Aluminum Cooking Utensil Co.
Dept. 57, New Kensington, Pa., or Northern Aluminum Co., Ltd., Toronto, Ontario
Send prepaid 1-qt. "Wear-Ever" Stewpan. Enclosed is 20c in stamps—money refunded if not satisfied
Name _____
Address _____



By and by it will be time to skate. Doesn't this hood make you long to glide off upon the ice? Make it for some friend who knows the message of winter and its great call to the out-of-doors. Jack Frost can't nip through it



What about evening parties? Do you gather in the schoolhouse or the church parlors for winter romps sometimes? I think the girl who wears this hood will have the finest boy in the county to go home with her. Give it to someone who will make that boy happy



It is not so hard to step out of bed on winter mornings if you can step into such a foot warmer as this. I don't know anyone who wouldn't like it, but for Mother or Grandmother it is ideal. It is "just the thing I wanted" kind of present



How to enjoy a cold bedroom



Men are so hard to give to! Try this knitted muffer



An Irish medallion for your friend who makes her own clothes

Be a Friend to the Boy—By Mrs. Walter R. Dickson

WHEN Henry and I moved into our new home in a Western town, we were middle-aged, disappointed people. Our home was childless; we had left a grave behind, and were working under a burden of debt. Every day I went to work and came home late, tired and anxious about the business.

Our nearest neighbor down-town had a son of seventeen who came into our place of business many times a day—a boy of moods—one day down in the depths of despair and the next in the wildest spirits. Social conditions in the town were as bad as it was possible for them to be, and this boy was without friends, without ambition, and a bankrupt physically.

For a year or more we "passed by on the other side;" then on Christmas morning someone brought me a dressed chicken, and this boy, who happened to be near, asked jokingly, "Why don't you ask me to dinner?" adding wistfully, "We're not celebrating, and no one in this town ever asks me into his home."

In a lightning flash I saw my merry family Christmas vanish, but the boy's

face was too full of entreaty to resist, and I cordially invited him to return.

It was an after-church dinner (for we like the Christmas service, and always go). Henry and Jim sat in the kitchen beside the cook stove while I fried chicken, mashed potatoes, and whipped cream for slaw, and we talked of everything old and new under the sun. That day for the first time I caught glimpses of a mind and soul of such rare possibilities that I was excited.

Well, that visit was the first of many, until now we share him almost equally with his father and mother. Strength has come back to him, ambition wakened, and he has taken his rightful place as the first young man of the town. As for us—I can scarcely tell you what it has all meant to us.

It has filled our home with young people and our empty hearts with love. Even now I am starting a savings account for Jim junior's college education. Jim senior and I have many plans as to the way that boy is to be raised.

I am sure this one small sacrifice was the best investment we ever made.



FOR a luxury of comfort and warmth undreamed of—wear

VELLASTIC

Ribbed Fleece-Lined Underwear

The VELLASTIC fabric is soft like velvet, and elastic. Its peculiar weave holds the fleece so that it can never wash away, wear off, knot or grow soggy or unpleasant to the skin.

For Men, Women and Children

VELLASTIC Union Suits (or separate garments) are sold by most dealers. Price 50c and up.

Write for Bodygard Book No. 39

UTICA KNITTING CO.
Utica, New York



Makers of Bodygard Underwear. Vellastic—Lambdown—Springtex



SEVEN-PIECE Without Cost LINEN SET

This charming Table Set, composed of one 16-inch Centerpiece, four 4-inch Doilies, and two 6-inch Tray Cloths, stamped on Imported Irish Linen, is given to introduce THE PEOPLE'S HOME JOURNAL to new readers. All of the pieces are finished with scalloped edges and the graceful basket and scroll design is to be worked in a combination of Solid, Eyelet and Punchwork Embroidery.

THE PEOPLE'S HOME JOURNAL publishes each month many short stories and serials by the best authors, and also a number of interesting and entertaining departments. Its beautiful colored art covers and illustrations are the work of the best artists. The regular subscription price is 50 cents a year.

To introduce the Magazine to new readers, we will enter a trial 6-month subscription to THE PEOPLE'S HOME JOURNAL for 25 cents and send, without cost, and all charges paid, the Beautiful Seven-Piece Linen Set as shown and described above.

MAIL YOUR ORDERS AT ONCE TO DEPT. O
F. M. LUPTON, Pub., 23 City Hall Pl., New York City

PARKER'S HAIR BALM

A toilet preparation of merit. Helps to eradicate dandruff. For Restoring Color and Beauty to Gray or Faded Hair. 50c. and \$1.00 at Druggists.

This Little Girl Had A Spinal Deformity

Little Miss Taylor had Potts Disease, a progressive, destructive disease of the spinal column, usually tubercular, and often accompanied by paralysis. The trouble in this case had been in existence three years when her mother, Mrs. W. S. Taylor, R. F. D. No. 2, Clinton, Ind., brought the child to this Sanitarium, Feb. 22, 1910. At that time, because of the disease and deformity of the spine, the child's head was forced forward—her chin in contact with her chest.

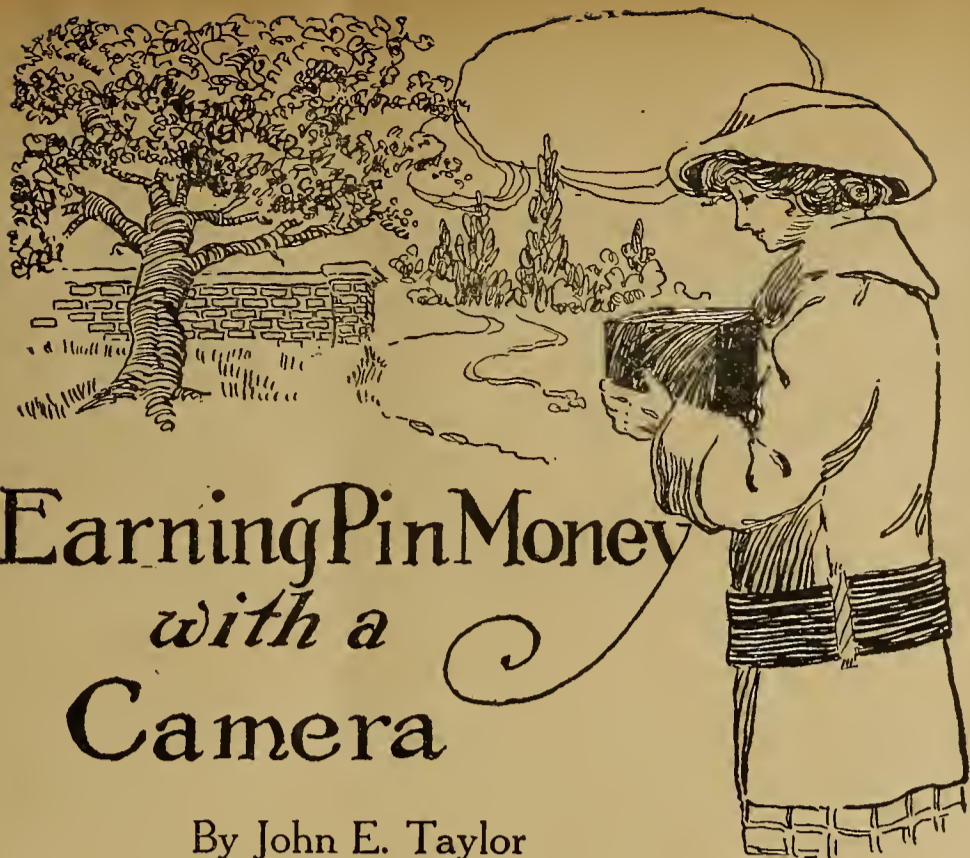
This picture, recently taken, shows her condition and appearance at this time. Write Mrs. Taylor. *In treatment of this case plaster paris was not used.* The

L. C. McLain Orthopedic Sanitarium

is a private institution, devoted exclusively to the treatment of crippled and deformed conditions, especially of children and young adults.

Write us freely regarding Club Feet, Spinal Diseases or Deformities, Infantile Paralysis, Hip Disease, Bow Legs, Knock Knees, Wry Neck, etc. We will send you descriptive literature and advise you fully. Ex-patients as references every where.

THE L. C. McLain Orthopedic Sanitarium
905-Y Aubert Ave., St. Louis, Mo.



Earning Pin Money with a Camera

By John E. Taylor

I KNOW a girl living on a farm in Maine who makes all her pin money with a camera. She is not particularly talented in any line, but she has found this work not only interesting but the means of earning a good yearly income. Her equipment for the work was a small 4x5-inch folding camera and its supplies.

A Girl With Open Eyes

The first picture that she took to send to a publication was of her dog, Rover. He was a large dog with curly black hair, and made such a good picture that it sold at once. This of course encouraged her, and she took other pictures of things near at home—her father's flock of sheep, a registered cow which was annually exhibited at the fairs, the apple orchard which was the talk of the town, and a mother hen with her ten chicks. She found this kind of subject always had a good market in farm magazines. A good set of farm buildings, a particularly nice barn, and handy tools were also very acceptable.

When this girl's grandparents had been married fifty years they were given a sort of reception by their children, and all of the relatives came to it. There were four generations represented, and it occurred to the young girl that some newspaper might like a picture with a short article telling about the people. She found a ready sale for it in all the local papers, and this led her to take other family groups, four and five generation families, aged couples, and school-anniversary pictures.

In some paper this girl saw a prize offered for the best picture of some freak of nature. She remembered having seen a curious tree tied into double knots. She got a snapshot of this and received second prize against two hundred contestants.

Almost every business has a trade journal, and this young lady found that these papers like pictures illustrating some phase of their business. She got a print of a large-cement silo and a short write-up about it, and sold it quickly.

In the village near her home there was a fire which destroyed much property, but one building in the range of the fire did not burn. This was because it was covered with asbestos. Of course it was a great advertisement for asbestos, and a magazine interested in its manufacture paid her a good price for the picture.

Seeing the Story

At first my friend sent in her photographs without any accompanying text, but she found that the editors would either send some one to get the story or would write to her asking for it. Thus it was that she began to write articles to go with the pictures she took. Now when she sends a print she finds out all the peculiarities of the subject, and everything that will make an interesting story, puts the material into readable form and sends it with the print, stating in a letter or a corner of the manuscript that it is submitted at the regular rates, and enclosing stamps for its return if unavailable.

Kittens That Earn Money

By Mrs. Marion G. Curtis

OUR baby girl was about two years old when she was presented with a beautiful silver-gray Angora kitten two months old. She at once named her Lady Dorothy. I had been told that these cats were extremely hard to raise, took cold easily, and were not gentle as the common breed. I have found this entirely without foundation. They are as gentle, as sweet of disposition, as any pets I know, and are very easily reared

if a little common sense is exercised. One day about a year later the thought came to me, "Why not raise Angora kittens for profit?"

From a friend who did not understand taking care of the cats I purchased a yellow Angora named Sir Thomas. Since Lady Dorothy's first litter of kittens, which numbered five, I have never made less than \$10, the first litter netting me exactly \$19.

To care for these pets is very simple. Do not allow them to roam out in the wet grass on a rainy day; keep them in a wire enclosure with plenty of yard if possible; never allow them raw meat, but feed them thoroughly cooked beef and liver, boiled, fried, or baked potatoes and warm milk. The moment they seem at all indisposed drop one teaspoonful of lime water in their milk and water. I shall be glad to answer any questions relating to their care, and I wonder why more discouraged farmers' wives do not take up this novel and interesting method of earning money.

Making Friends With Water

By Hilda Richmond

AMOTHER who was forced to go away from home in cold weather and leave her delicate five-year-old daughter in the care of a sister-in-law went in such a hurry that she forgot to give all the directions she thought necessary.

The youngster strenuously objected to being bathed, saying her mother never did so in cold weather for fear she would take cold, but her protests went for naught. When the mother returned she was amazed to find the child stronger than when she left, and she had not had a single cold during her absence. The wise aunt explained the situation by saying plenty of water inside and out would keep all children healthy. And she was more nearly right than the mother thought.

Clean bodies inside and out will ward off disease as if by magic. It is a matter of history that all through the Dark Ages, when the most dreadful plagues ravaged Europe on account of the unclean habits of the people, the Jews were almost immune because their religion calls for bathing and cleanliness. Even country houses that are not equipped with bathrooms and hot and cold water, at least have a warm kitchen that can be used by every member of the family, and no one need go dirty in cold or warm weather. By drinking plenty of clean, cool water the inside of the body may be kept clean, and every function of the body will be better off for the internal and external bathing.

Especially where there is a tendency to blood diseases is water most useful. Water will make constipation almost impossible if combined with proper exercise, and most blood diseases come from poisons retained in the system.

"First thing in the morning and last thing at night" is a good adage to bring up children on, for a drink in the morning after cleaning the teeth and one at night after the same process is a habit that will last through life.

Once we had a neighbor who was in delicate health and whose only use for water internally was to wash down medicine with. He was scrupulously clean about the outside of his body, but he never dreamed of cleaning the inside.

At last his doctor ordered him to stop all medicines and drink water whether he liked it or not, and the effect was wonderful.

A daily hot bath is needed especially in winter. By bathing at night the danger from cold is avoided. And as for drinking water, every season demands plenty of the life-giving fluid. A cup of tea or coffee or cocoa with a meal may do no harm, but always there should be plenty of water between meals.

A hot bath will soothe a sick person as nothing else can, and the very first thing every trained nurse does upon taking charge of a sick room is to bathe the patient. An old lady watching a trained nurse care for a patient remarked with slight scorn, "Why, I could do every blessed thing that girl has done, and I wouldn't charge twenty-five dollars a week." The feeble voice of the granddaughter from the bed made answer, "Yes, Grandma, you could, but you didn't." Many amateur nurses might give baths and see that the patient gets all the clean, cold water necessary, two most important things in nursing, but they don't.

Of course the water must be pure, or it will do more harm than good, and it must be used regularly. Clean men and women and children are better fitted for every duty in life than unclean ones, and surely they are healthier and happier.

A COLORADO bird lover has found that houses made for wrens should have entrances no larger than those made by an inch auger if the English sparrows are to be kept out.

How One Woman Made Her Concrete Sink

By Maude E. Hymers

MANY a country housewife envies her city sisters the greater kitchen convenience afforded by connection with a sewer. The sink alone saves so much in time and strength as to make a great difference in the day's work.

A resourceful woman who realized this, yet felt that they could ill afford the expense of sink and connections, has provided for herself a substitute that answers every requirement. She had seen the men-folk mix concrete for making troughs around the barn, from which was born the idea.

Having on hand two starch boxes she proceeded to cut one down to the proportions of the average sink, about 18 by 30 inches in size and 6 inches deep, having the bottom an inch smaller than the top. This she set, small side up, in another box just two inches larger all around than the first one. A tin funnel was set on top of the smaller box at one end.

Concrete in the proportion of one part cement to three of sand was now filled in all around the sides between the two boxes and spread over the bottom of the smaller box, fitting it in closely around the funnel, which, however, she took care not to disturb. When the cement hardened the boxes were removed, leaving a cement form for sink. Heavy iron brackets screwed to the kitchen wall supported the sink. A piece of large size hose was then fitted to the funnel, running down through a hole in the floor and emptying outside at some distance from the house.

Florida Farming With the Wind Let Out

[CONTINUED FROM PAGE 5]

days' work in all during a year.

The fifth year, ten acres of oranges, planted 69 trees to the acre, as is usual, and figuring price at a dollar a box, should yield \$500 to \$600. This increases up to the tenth year, when the trees reach full bearing. From then on, averaging good seasons with bad, they should yield \$7,000 a year. If not injured, trees live for generations.

Some advertisements quote loftier rates than a dollar a box. Prices fluctuate from year to year and in each season, and \$1.50 is often paid, but as an average, selling on the trees, \$1 is the surest figure.

Even when you have let the wind out of the orange proposition it remains exceedingly attractive. Annual expenses on ten acres should not exceed \$600, which means first-rate returns. Grapefruit pays even better than oranges, the yield being greater and the price at present higher.

Consider the Frost Risk

The citrus fruit business is, nevertheless, by no means fool-proof. Differences of cultivation have surprising effects on tree growth and yields. There is also one unavoidable risk—frost. North of Tampa the grower should reckon on losing about one crop in seven, the danger varying with lay of the land and nearness to water and forest. South of

Tampa frost is not impossible, but less frequent. Frosts heavy enough to kill trees as well as fruit, like those which swept the State in 1894-95, are likely to occur not oftener than once in a generation, but the investor must recognize the risk of them.

For trucking on new land the expenditure necessary up to the time of putting in the first crop will total not less than \$4,700, this including ditches and tile drains but no irrigation system.

Truck, with the best management, pays slightly better than oranges. One good authority gives this instance: Lettuce, planted in fall, \$300 net profit per acre; eggplant, on same ground in spring, \$400 net profit per acre; cowpeas in summer, plowed under for green manure.

There are several points, however, which one should ponder on before staking his capital in Florida trucking. First, success is probable only in the best locations, with respect to soils, shipping, and labor. Second, marketing is sometimes hazardous, as I have pointed out. Third, trucking requires an immense amount of special knowledge.

These winter vegetables are responsive to every difference in cultivation and moisture; they must be guarded against insects, blight, wilt; the packing of each sort is an art in itself, poor work meaning the spoiling of a shipment. Further, the grower must have the executive

ability to boss, on a ten-acre place, five to eight men constantly, and extra help occasionally.

In a word, the business is to be mastered only by study and experience. Even a successful Northern trucker has to learn all over again. The newcomer, unless he can afford to lose money his first seasons, should go in with an experienced man, or else enter the business by degrees, clearing and tilling two or three acres at a time and learning as he goes.

Disinterested Figures are Scarce

Above all, the newcomer should not attempt the growing of one specialized crop, like celery, a single failure with which will wipe out his funds.

Pineapples are like truck, profitable but demanding expertness. Pecan trees do well, though it is hard to get disinterested figures on returns. Papaws, mangoes, and the other tropical fruits mentioned in advertisements will grow, but that is as far as one gets, for they will not sell.

Dairying Undeveloped

There are few dairies in southern Florida, and milk is 12½ cents a quart. But at that, dairymen make no better profits than in the North on 7-cent milk, as most of the feed is shipped in at high cost. Theoretically, silage corn and

roots can be grown profitably; but practically, nobody is doing it. Barn cost and hard labor, of course, are cut down in this climate.

The investor should not figure on making his profits out of the rise in value of his land. Real-estate men point to the remarkable increase between the census years of 1900 and 1910, but in the former year prices had not recovered from the drop they took after the big freeze. A slow increase is probable, but jumps are unlikely, except near tourist towns.

Many real-estate men are beginning to see that exaggerated advertising does not pay, and the more reputable of them now not only welcome full investigation, they advise it. Florida offers many sound opportunities to the man who comes with no false notions and his eyes open.

WHY pay the same for one horse as another? What is a horsepower? H. W. Currin, who runs a 2,000-acre fruit and grain farm in Oregon, hires a great many horses, and pays for a small horse \$1 a day, for medium to heavy horses \$1.25, and for heavy horses \$1.50. Four small horses cost him \$4 a day, while three heavy ones that he gets for \$3.75 do just as much work and take less stable room and feed. Anyhow, that is what he is reported to say. Have any of our readers any views on this subject of the small versus the large horse?

The Emerson PLAYER-PIANO

THE MOST MODERN AND THOROUGHLY MUSICAL PLAYER MADE TO-DAY—BY IT YOU CAN PRODUCE *MUSICIAN'S MUSIC* ON A FAMOUS INSTRUMENT

The Emerson Piano

A DEMONSTRATION REVEALS THE REASON FOR Emerson NATIONAL POPULARITY

AGENTS IN PRINCIPAL CITIES AND TOWNS.

SEND FOR CATALOGUE

Emerson Piano Co.
BOSTON MASS.



Big FREE Catalog is full of Bargains like this. WRITE for copy

NEW ENGLAND MERCANTILE CO.

SUGAR 3¢ per pound

When bought with other merchandise

Premium Coupons on All Orders
331 Pounds Sugar, \$1.00

Why continue to pay the dealer's high prices when you can buy groceries and other merchandise direct from us at a big saving? We protect your pocketbook yet give highest quality and guarantee satisfaction or money back. Premium Profit-Sharing Certificates increase your savings. Start the saving today—write for Catalog No. 40

Reference: Federal Trust Co., Boston

NEW ENGLAND MERCANTILE CO.
39-52 India Street BOSTON, MASS.

EARN \$12 IN NOVEMBER

By acting as our local representative in securing subscriptions for *Farm and Fireside*, the *Woman's Home Companion* and *The American Magazine*. This is the big subscription season. Thousands of subscriptions for our publications are expiring at this time. Renewals count the same as new subscriptions. For particulars write to

CHIEF OF SUBSCRIPTION STAFF

Farm and Fireside Springfield, Ohio

AGENTS--200% Profit

Foot Scraper and Cleaner—Needed on every porch and outside door-step. Right now is the time to sell it—A winner. C. F. Draper, Mass., first order for 200. C. A. Johnson sold 40 in 1 1/2 days. W. W. Harpster, Pa., made \$27.45 in 4 evenings, spare time work. Write quick for terms and free sample. A postal will do.

THOMAS CO., 2946 West St., Dayton, Ohio

MEN WANTED

Prepare as Firemen, Brakemen, Motormen, Conductors, colored Train Porters. Standard roads. No experience necessary. Uniforms and Passes furnished. Write now. Name position you want.

1. Railway C. I., Dept. 32. Indianapolis, Ind.

FREE to Hunters and Trappers

Fine Taxidermy Book Now Free. 32p. with hundreds of photos of mounted birds and animals. Learn this profession. Save your trophies. Decorate your home and den. Learn to Stuff Birds, animals, game heads, tan furs, make rugs & robes. Quickly learned by men and boys. Big profits from spare time. Intensely interesting. Investigate. Write today for free book. Only a few free—so rush.

NORTHWESTERN SCHOOL OF TAXIDERMY
4039 Elwood Building Omaha, Nebraska

FOR INFORMATION AS TO LANDS IN

THE NATION'S GARDEN SPOT

THAT GREAT FRUIT AND TRUCK GROWING SECTION—ALONG THE

ATLANTIC COAST LINE RAILROAD

IN VIRGINIA, THE CAROLINAS, GEORGIA, ALABAMA and FLORIDA. Write to

Wilbur McCoy, A. & I. Agent, Desk B Jacksonville, Fla.

G. A. Cardwell, A. & I. Agent, Desk B Wilmington, N. C.

Save \$5 to \$23

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The Child at Home

The Supper Two of My Children Cooked

By Helen Johnson Keyes

THE Montessori method of training children is intensely practical. Where the methods of the kindergarten emphasize the esthetic attributes of childhood, the Montessori principles get down to practical, concrete accomplishment.

For this reason it seems to me that Montessori has a message of peculiar usefulness to the farm home, where the amount of work to be done makes it necessary for the children to contribute their labor, while they are still very young, to the maintenance of the home.

With the idea of developing little children to enjoy the home tasks and to perform them so easily and deftly as to be real helps and supports to their mothers, I started a class of fourteen youngsters between the ages of three and seven years, which I named the School of Play. This name sums up the principle of the training. It is through play, play closely adapted to the instincts and to the muscular and nervous powers of the children, that we gain our end.

The child feels that he is amusing himself; he is highly entertained. Yet every exercise and game has its direct purpose—his training—not by teaching or example but by opportunity. His instincts and muscles and five senses are supplied by these games and exercises with opportunities to develop themselves.

All at once there blossoms—or, as Doctor Montessori expresses it, there *explodes* into being a tiny child who can be trusted to carry hot dishes and delicate china; whose pride in the School of Play leads to an instinctive labor in its behalf with broom and duster.

All this is the result of *play*, play which to the great teacher, Doctor Montessori, who invented and systematized it, is a profound science, but which to the pupil is merely a round of entrancing occupations.

I found, however, that my children were not carrying into their homes the same love of work which they showed in school, so I formed the plan of taking my little pupils by twos and threes into the farm homes around us to show what they could do.

My first experiment of this kind is made with Rosaltha, a child two years older than the oldest of my class, whom I have adopted for six months because her mother could not manage her, and Billy Bailey, a boy of five years who was thoroughly stupid and irritating till Rosaltha took him in hand.

These two youngsters are getting supper in Billy Bailey's home.

"Now, Billy, think it out right yourself. That's the only way to get an education."

Thus Mrs. Bailey and I heard Rosaltha admonish Billy as we approached the kitchen to see how the children were progressing with tea.

The kitchen was arranged with the dining-room on one side of it, and as we opened the door we confronted Billy, a tray with seven butter plates in his hand, studying the table in a perplexed effort to decide on which side of the tea plates those butter plates should be put.

"All rules are for comfort, Billy," pursued Rosaltha, greasing a frying pan. "Now you just sit down and pretend like you is buttering bread and see which side is the easy reach."

Billy did it and decided correctly. "Real interested, ain't you Billy?" said his mother. "Seems like as if you had to go away from your home to get to caring about it. Well, I guess Rosaltha's got the idea all right, better'n I ever would. I never was much of a hand to show a child. Never had no patience. I'd have whipped those plates out of his hand and set them round myself."

Yes, Rosaltha had the right idea. And how she did control Billy! She controlled him because she fascinated him. He liked to be drawn about by the magnet of her imagination. He was born a disciple, just as she was born a leader. Together they made a most efficient pair, and my observation of them gave me a hint which has often been helpful in dealing with other children in my care. Most of us are born either leaders or

disciples. The child who is born a leader needs to have some child near in whom he can see his own ideas at work. The disciple is as necessary to the leader as the leader is to the disciple. If he does not find one such friend to guide and sway and to reflect himself in, he usually becomes overbearing, quarrelsome, and bossy with everybody—the plague of the neighborhood.

The child who is born a disciple, on the other hand, is often languid, silly, irritating, until he finds a leader. Then his morose and ineffectual disposition is transmuted into one as happy as a bubbling stream rushing along to turn the big mill wheel.

I believe it would be a help to mothers if they found out in the case of each child whether he was a leader or a disciple, and found the opposite for him in some companion. Moreover, these two types should be differently trained: the one for a life of aggression, construction, and control; the other for a life of perceptions, responsiveness, and altruism.

tion at this supper. One is that eggs should be beaten before they are scrambled, preferably the whites and yolks separately and the whites stirred in when the yolks are almost cooked; but separating the yolks is a little difficult for children. Another is making hash. I have taught Rosaltha to grind the meat and potatoes very fine and have them perfectly dry, then to put them in a large frying pan where the desired amount can lie stretched out like a fish until a stiff crust is formed on the under side. By this time the whole thing is cooked through and should be placed unbroken in the same fishlike shape upon a platter. I'm going to help Rosaltha with it now, for it is not easy to dish it properly.

"No criticism coming your way for eggs and hash," said Mr. Bailey some five minutes later when we were all seated and eating. "Now, what's your third fad?"

In answer to his question I uncovered a dish of smoking spaghetti.

"This," I said, lifting up on two spoons endless strands. "Neither spaghetti nor macaroni should be cut before cooking. Tell Mrs. Bailey how you cooked it, Rosaltha."

"I let a big bunch of it drop slow out of my hands into boiling salt water,"

said Rosaltha. "It boiled hard twenty minutes, and I gave it one stir while it was cooking. I boiled two and one-half pints of milk in a double boiler, thickened it with three tablespoonfuls of butter and three of flour mixed together and three tablespoonfuls of grated cheese. Then I put the spaghetti into a baking dish, poured the sauce over it, scattered more cheese over the top, and let it just brown in the oven. Billy grated the cheese."

"Double your recipe next time," commented Mr. Bailey, stuffing his mouth very full indeed.

"So we are invited for a next time, are we?" I inquired, eying Mrs. Bailey and serving her a second time to hash.

"I'll stay at home whenever you'll come," she complimented. After a pause she added: "I don't see myself setting no more tables either, with a boy like Billy to set them for me. The cloth so straight and the flowers so pretty and all the mats and dishes so nice! It makes me right proud."

She stretched out her arms to Billy, and he rushed into them.

"I guess the only trouble with Billy's been his mother," she half sobbed, cuddling him.

"That's the only trouble with most naughty children," I said gently. "their mothers. And now that we're finding it out, and Rosaltha's helping us, we'll not have many more disappointing kiddies."

Rural-School Culture

By Mrs. J. F. Wells

I WAS much pleased with the article referring to the Ogden Fund. If it can be used in the right way for "the new kind of rural school," what a blessing it will be!

What is wanted in the rural districts is the kind of school that will meet the needs of to-day. If we want to educate our boys and girls away from the farm our course is plain, for we can send them to the city schools. I don't believe we want our children educated away from the farm. What we do want is a broader conception of what rural education means. We do not want our boys and girls educated to think there is nothing but hard work on the farm. Rather do we want them taught to see and appreciate their wonderful advantages.

The right kind of education will make country children proud of their surroundings.



Which?

By

Pauline Frances Camp



TWO little plants lived, each in a pot.

And one had flowers and one had not.

One wore a dress of quiet green,

With never a hint of brightness seen.

Not a bit of cheer did it give the room!

The other was gay with bud and bloom;

Powdered o'er with a rosy snow,

It stood in the window, all aglow.

Should you pass the florist's some winter day,

Which would you choose to bear away?

Two little girls lived in one cot,

And one was pleasant and one was not.

One had a frowning and fretful face,

With never a twinkle to lend it grace.

The other dimpled with budding smiles,

Merry glances and saucy wiles;

Turned up corners and jolly kinks,

And happy sparkles and beams and winks!

Should you ask one of these little girls to tea,

Which of the two do you think 'twould be?



?



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No. 2626

No. 2625—Long-Sleeve Waist: Lapped-Over Vest

36 to 50 bust. Suitable for development in serge, ratine, wool crepe, or cotton peau de pêche. The price of this pattern is ten cents

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26 to 40 waist. Width at bottom in 26-inch waist, two yards. The price of this skirt pattern is ten cents

No. 2628—Two-Piece Tucked Panel Skirt

26 to 40 waist. Width at bottom in 26-inch waist, two and a fourth yards

No. 2631—Tucked Long-Shouldered Blouse

32 to 42 bust. Material for 36-inch bust, two and seven-eighths yards of thirty-six inch. The price of this pattern is ten cents

No. 2338—Empire Negligee with Short Sleeves

32 to 44 bust. Material for 36-inch bust, four and one-eighth yards of thirty-six inch. Pattern, ten cents



No. 2592

No. 2592—Skirt with Plaited Tunic

22 to 32 waist. Width at bottom in 26-inch waist, one and one-half yards



No. 2641



No. 2606
No. 2607



No. 2606
No. 2607



No. 2644

No. 2641—Girl's Tucked Dress with Raglan Sleeves

1 to 6 years. Material for 4 years, three and one-fourth yards of twenty-seven-inch, or two and three-eighths yards of thirty-six-inch. The price of this dress pattern is ten cents

No. 2606—Misses' Long-Waisted Blouse with Chemisette

14 to 18 years. Material for 16 years, three yards of thirty-six-inch, one-half yard of contrasting, and three-eighths yard of net for chemisette. The price of this blouse pattern is ten cents

No. 2644—Girl's Three-Piece Suit: Circular Skirt

6 to 12 years. This suit is excellent for development in contrasting materials, such as serge and plaid or checked worsted. The price of this suit pattern is ten cents

No. 2640—Boy's Rompers with Kimono Sleeves: Two Styles

1 to 6 years. Material for 2 years, one and five-eighths yards of thirty-six-inch, with three-eighths yard of contrasting material. The price of this romper pattern is ten cents



No. 2640

No. 2607—Misses' Box-Plaited Skirt with Yoke

14 to 18 years. Material for 16 years, four yards of thirty-six-inch material, or two and three-eighths yards of fifty-four-inch material. The plaited portion is joined to a shallow yoke. Price of this pattern is ten cents

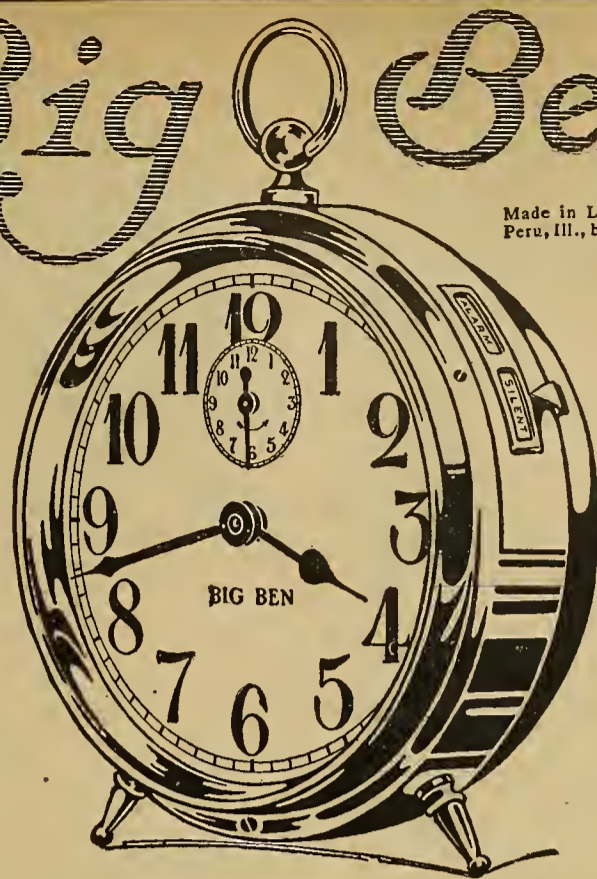


No. 2628 No. 2641 No. 2631 No. 2644 No. 2592

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In fact, his makers think he's the prize clock—the American People certainly have pinned the blue ribbon on him. \$2.50 is his price—a pretty small price for a grand champion.

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(241)

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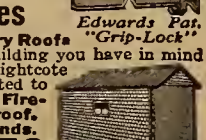
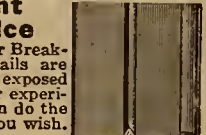
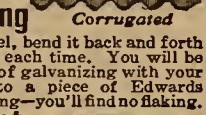
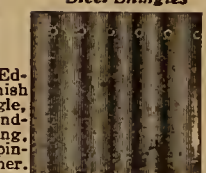
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A Rail Fence—By Charles B. Driscoll

YOU can't say I'm slow, unprogressive, Old-fashioned, a foggy, a mutt, For I've long had a farm automobile, And my airship is on the way—but I confess to a certain revulsion, A feeling not founded on sense, Concerning the rapid extinction Of the old, inefficient rail fence.

The heralds of progress: suburban, the farmers who wear linen pants, Have condemned it as unscientific. Of course unproductive romance And mere sentiment hallowed and holy in a memory mellowed by years Can hardly obtain against reason, and if sometimes my eyes fill with tears

While I watch the old rails disappearing before the new woven-wire fence, Just figure your dad's getting childish, that he needs a new dipper of sense.

You'll notice I've left a bit standing In the meadow lot next to the wood. It's a silly old man's pet idea, And of course it don't do any good, And the rails are of walnut, and solid, Worth almost their weight in fresh gold, And the furniture man wants to buy them— Yes, sonny, your dad's growing old.

In just such a meadow as this one, by just such a woodland as that, With just such a fence in the background, your mother and I one day sat.

She plucked a wild daisy to pieces while we talked of the joy there would be

When I would live only to love her, and she would live only for me.

The days came. They went. She is waiting In the land where folks never grow old; Where they say the great City of Light is, With its towers and pavements of gold.

But I don't think she waits in the City. In a meadow somewhere by a wood,

Reserved for the poor weary workers whose lives, although simple, were good.

She is waiting to welcome her lover with a love that is pure and intense,

And I think we shall sit there forever, we two, by a crooked rail fence.

Tell the furniture man I can't see him. No, the rest of the rails are all sold. Don't mind, it will not be long, sonny, Your dad's sure enough growing old.

Farm Wit and Wisdom

Condensed and Modified From Various Sources

REPRESENTATIVE MacDONALD of Michigan has introduced a bill for a national labor exchange. Every postmaster, according to its terms, would be made a labor agent, and every post-office an employment office. The advantage of the scheme lies in the fact that it covers the country and might do much good in providing places where jobs and men might register. Its weakness lies in the fact that the postmasters cannot be expected to take much personal interest in the labor problem, and that the plan would fail for lack of skilled attention.

A KANSAS farmer gleaned his stubble fields with hens and a portable henhouse. He changed the location of the house often enough so that the wheat was all saved and converted into eggs and poultry.

AMERICAN hens lay slightly over \$300,000,000 worth of eggs a year. That is, every person eats on an average \$3 worth.

THE minister of health of New South Wales, Australia, has refused the oleomargarine manufacturers the privilege of coloring their product so as to make it look like butter. "It may be a good food," said he, "but if it is colored to look like butter, and put up in the same sort of packages, it is hard to tell it from butter. This cannot be permitted. You will have to build your trade on its quality, not its color." Good doctrine for America.

WHO works for money alone gets what he works for and no more.

NATURE loves a cheerful hustler.

THE European mangels will be the greatest in history—only it is spelled "mangles."

WE MAY as well prepare for it everywhere. The city of Milwaukee has taken a firm stand against the sale of any milk there except that from tuberculin-tested cows. The cost of the testing will be shared between the State University and the dairy interests.

THE American Federation of Labor is now granting charters to unions of farm laborers. And Wylie Gillen, a fruit packer and grower of Fresno, California, went on record before the Federal Commission on Industrial Relations as in favor of such unions. "I have come to this conclusion against my will," said Mr. Gillen, "but I realize that only by organization can farm laborers elevate their standards."

WILL the binding twine in straw injure live stock? Who knows? Let's hear from those who have had actual experience.

A HIGH-TEMPERED milker holds up the cow's milk. The cow can't help it.

ALFALFA takes its place nicely in a five-year rotation—corn, a small-grain nurse crop, and three years of alfalfa.

VERY few people eat the common mushroom called the puffball. Yet the puffball is good for food, and does not resemble any poisonous variety. Slice them and fry them in butter or fat after dipping them in a milk-and-egg batter. Don't use them after they begin to turn dark.

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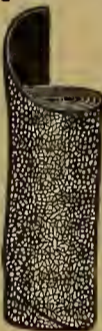
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FARM *and* FIRESIDE

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ESTABLISHED 1877

THANKS

THOU Mighty Lord, from out whose hands the nation's blessings flow, we praise Thee not with crashing bands, but humbly bowing low; thus would we our poor voices lift:

“We thank Thee for Thy love, for every good and perfect gift that cometh from above;

“For harvests which have filled our bins, for rains which Thou didst give, for Thy forgetting of our sins, and teaching us to live;

“For that our country has been blest with peace, though Europe bleeds, and we, Thy children of the West, may yet relieve the needs of all those millions through whose gore the royal butchers wade, the while they drown in cannon's roar the law which Thou hast made;

“We thank Thee, Lord, that we may still reach forth a kindly hand and help to bring peace and good will to every war-crazed land.

“Lord, who didst give to men Thy peace, we ask Thee not for power to make our streams of gold increase, to make our foemen cower, but that as friends of every race we may bid warfare cease, as messengers before Thy face, announce Thy gospel, Peace.”

CHAS. B. DRISCOLL

WITH THE EDITOR

"On Christmas laugh and make good cheer,
For Christmas comes but once a year."

I WANT every one of the FARM AND FIRESIDE readers to have a really merry Christmas. And for fear that many of them will forget something the recollection of which will darken that fine old festival, I am writing this.

The day may come with the whitened fields and the sparkling snow which we traditionally associate with it, or clothed with the verdure which has given vogue to the proverb, "A green Christmas maketh a fat churchyard," but to most Americans it will come under circumstances of comfort and safety for which we all must be thankful when once we seriously think of the matter.

No cavalry has trampled our fields to clods.

No batteries have plowed our farms with shot and shell, or rutted our gardens and orchards with iron wheels drawn by the huge tractor chariots of this awful year's artillery.

No infantry has dug our fields into trenches which will for years render them sterile.

No storm of gunfire has wrecked our houses and barns. Our fields are not the burial places of our sons, fathers, and neighbors, nor of long lines of insulting invaders.

We are a safe, peaceful, and prosperous people. Some of us are not as prosperous as we should like to be, but compared with our blood relatives in the stricken fields of France and Belgium, Poland and Austria, we are all wonderfully blest.

And now let us consider the poor Belgians. They were a happy, an industrious, a peaceful, a prosperous people—and like a tornado war burst on them. The Belgians were and are blameless. They are like a group of children playing and prattling by the roadside and wantonly trampled into the earth by a band of steel-shod ruffians.

German, French, or British—whichever wins, the Belgians lose. They lose their homes, their jobs, their wives, their children, their husbands, the very land from which they have made their peaceful livings.

Henry Clews, the well-known New York banker, is treasurer of the Dollar Christmas Fund for Homeless Belgians, and I am afraid you will think of the dollar you might have sent him unless I call your attention to the fact that Mr. Clews is authorized to receive the dollar and that if it is sent him it will be wisely used for the relief of the Belgian sufferers.

I am afraid you will think of this after you have sat down to your Christmas dinner—and if you do, it will spoil the day for you. I am afraid you will not be able to "laugh and make good cheer" as you



might. So I am publishing a letter which Mr. Clews has sent me, and I leave the rest to you.

In view of the countless appeals, both national and local, which have been made to American sympathy in behalf of the victims of the war, one can only plead the immeasurable extent and pathos of the Belgian tragedy to warrant the addition of still another to the list. And the poignant sorrow of the situation is not lessened by the thought that the sum total of all the funds collected here and in Europe can only in a very small part—so vast and increasing is the need—assuage the sufferings of Belgium's unhappy people, while no money contribution whatever can atone for the loss of Louvain and a score of fair Belgian cities lately radiant with the splendor and glory of centuries.

The Dollar Christmas Fund in behalf of which I appeal as treasurer is a cause which should find a warm response in the hearts of all Americans doubly blessed in their isolation and detachment from the vortex of horrors and bloodshed and agony of the battlefields in Europe. It is an effort organized with the approval and support of some of our most respected and representative citizens to capitalize a portion of our Christmas bounty and good will in behalf of the most afflicted and destitute of Belgium's stricken population, the committee including Prof. Henry Fairfield Osborn, Melville E. Stone, Col. George T. Harvey, George T. Wilson, and Dr. William T. Hornaday. No matter how numerous and insistent the appeals for aid, Americans, I feel sure, will not refuse to subscribe to a fund which will help during the Christmas season to spread a ray of sunshine over the homeless refugees of a storm-tossed country. This Dollar Christmas Fund appeals to one and all irrespective of creed or race, and more especially to those who have not yet contributed to any existing fund. It is in complete sympathy with every other appeal in behalf of Belgian refugees and differs from other appeals only in the sense that the total sum received will be forwarded as a special Christmas contribution from the people of this country to the

destitute people of Belgium, an expression of sympathy with sorrow from one people to another, and a tangible proof that Christmas good will even in these days of strife and bloodshed has not disappeared from the earth.

It is estimated that close upon two million people with breaking hearts have fled from their country, leaving shattered homes and hopes behind. The flight of the innocent, the unfortunate, the women and children, the aged and helpless, from their Fatherland presents one of the most agonizing and appalling pictures of human misery in the annals of history, ancient or modern. Tens of thousands have already found a home in England, other thousands are in Holland, and still other unnumbered thousands are wandering in France. The record of misery compiled from imperfect statistical information is still far from complete, but it may be said with absolute truth that despite all governmental assistance and private charity in Europe there are still many thousands of families in actual want. And the number tends rather to increase than diminish. It is for these distressed ones we make special appeal to one and all to send a dollar—more if you can—as a special Christmas gift from America. Such a gift will surely be remembered by the beneficiaries long after the war has ceased, and no man's Thanksgiving or Christmas Day will be the less happy because in some cases the gift may entail some measure of personal sacrifice.

In England a similar fund, called "The Shilling Christmas Fund," has been started. Lord Burnham is the president, and he has cabled that the "conditions of want are unspeakable." All the money collected here, as in England, will be presented at Christmas, and will be applied for purposes of relief in the way of food and shelter after consultation with the officials of the Belgian Government. We hope with your aid to remember every distressed Belgian man and woman, not forgetting the fatherless babes—"The Orphans of War." I repeat, therefore, with great earnestness, send along your dollar bill—and send more if you can. All contributions should be addressed to the treasurer, and each will be promptly acknowledged.

Any friends willing to collect subscriptions are invited to apply for authorized "Dollar Christmas Fund" collecting card to the honorary secretary, Percy Bullen, 66 Broadway, New York City.

I am sure that my readers will forgive me for calling their attention to this matter, and to the fact that Mr. Henry Clews's address is Broad Street, New York City.

Belgium is a crushed people—crushed into a million fragments. Every fragment is a human being, and suffers. Hundreds of thousands suffer for the things which we have and can divide with them by sending a dollar to the Christmas Fund for Homeless Belgians.

Even though for their sake, we went without a special Christmas dinner, but not many of us will need to do that, I hope.

Herbert Quisk

DO YOU CARE FOR AN INDEX?

We usually take space on this page to call your attention to things which are coming.

Now we want to talk about the past.

The reason lies in the interest which our subscribers are manifesting in the index of the last volume—that is, of the twenty-six numbers which closed with the September 26th issue.

The index is now being arranged. We have been working on it for several weeks. It takes a great deal of time because we want to make it accurate and complete. It will direct the reader to the exact issue and page where any article appeared during the months of October, November, and December, 1913,

and January, February, March, April, May, June, July, August, and September, 1914. Those issues make up volume 37.

If you care for an index of this volume address your letter to Index Editor, FARM AND FIRESIDE, Springfield, Ohio. We shall hold your request until we are able to fill it.

We believe we can do so by Christmas. We shall try to. Write in any time; your request will be filed and you will get a copy of the printed index just as soon as we can send it to you. When you do get it you will be surprised to see how many good things come to you in the course of a year in the pages of FARM AND FIRESIDE.

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SATURDAY, NOVEMBER 21, 1914.

The Brown Mouse

The Romance of a Farm Hand Who Upset a School District

By Herbert Quick

Part Two

PART ONE introduced us to Jim Irwin, a hired man on Colonel Woodruff's farm—a man of much reading, lofty thoughts, and low wages. His heredity is shiftlessness and failure. Jennie, his employer's daughter, who is a country-school teacher, thinks Jim is likely to continue the strain, and she tells him so. What Jennie thinks is of large consequence to Jim. He is asked in a spirit of ridicule and bantering to serve as candidate for district-school teacher, to break the deadlock on the school board, and as he has definite theories about country schools he accepts the challenge and promises a speech.

IV

A Joke Which Refused to Die

THE deadlocked members of the board had been so long at loggerheads that their relations had swayed back to something like amity. Jim had scarcely entered when Con Bonner addressed the chair.

"Mr. Prisdint," said he, "we have wid us t'night a young man who nades no introduction to an audience in this place—Mr. Jim Irwin. He thinks we're bull-headed mules, and that all the schools are bad. At the proper time I shall move that we hire him f'r teacher, and pinding that motion I move that he be given the floor. Ye've all heard of Mr. Irwin's ability as a White Hope, and I know he'll be listened to wid respect."

Much laughter from the board and the spectators as Jim arose. He looked upon it as ridicule of himself, while Con Bonner regarded it as a tribute to his successful speech.

"Mr. President and Gentlemen of the Board," said Jim. "I'm not going to tell you anything that you don't know about yourselves. You are simply making a farce of the matter of hiring a teacher for this school. It is not as if any of you had a theory that the teaching methods of one of these teachers would be any better than, or much different from, those of the others. You know and I know that whoever is finally hired, or even if your silly deadlock is broken by hiring a new candidate, the school will be the same old story. It will still be the school it was when I came into it a little ragged boy"—here Jim's voice grew a little husky—"and when I left it, a bigger boy but still as ragged as ever."

There was a slight sensation in the audience, as if, as Con Bonner said about the knockdown, they hadn't thought Jim Irwin could do it.

"In all the years I attended this school," Jim went on, "I never did a bit of work in school which was economically useful. It was all dry stuff copied from the city schools. No other pupil ever did any real work of the sort farmers' boys and girls should do. We copied city schools—and the schools we copied are poor schools. We made bad copies of them too. If any of you three men are making a fight for what Roosevelt's Country Life Commission called 'a new kind of rural school,' I'd say, fight. But you aren't. You're just making individual fights for your favorite teachers."

Jim Irwin made a somewhat long speech after the awkwardness wore off, so long that his audience were nodding and yawning by the time he reached his peroration, in which he adjured Bronson, Bonner, and Peterson to study his plan of a new kind of rural school,—in which the work of the school should be correlated with the life of the home and the farm,—a school which would be in the highest degree cultural by being consciously useful and obviously practical.

Three sharp spats of applause from the useless hands of Newton Bronson gave the final touch of absurdity to a situation which Jim had felt to be absurd all through. Had it not been for Jennie Woodruff's "Humph!" stinging him to do something outside the round of duties into which he had fallen, had it not been for the absurd notion that perhaps, after they had heard his speech, they would place him in charge of the school,

and that he might be able to do something really important in it, he would not have been there.

As he sat down he felt himself a silly clodhopper, filled with the east wind of his own conceit, out of touch with the real world of men. He knew himself a dreamer. The nodding board of directors, the secretary, actually snoring, and the bored audience restored the field hand to a sense of his proper place.

"We have had the privilege of list'nin'," said Con Bonner, rising, "to a great speech, Mr. Prisdint. We should be proud to have a borned orator like this in the agricultural pop'lotion of the district. A reg'lar William Jennin's Bryan. I don't understand what he was trying to tell us, but sometimes I've had the same difficulty with the speeches of the Boy Orator of the Platte. Makin' a good spache is one thing, and taching a good school is another, but in order to bring this matter before the boord I nominate Mr. James E. Irwin, the Boy Orator of the Woodruff District, and the new White Hope f'r the job of tacher of this school, and I move that when he shall have received a majority of the votes of this boord the secretary and prisdint be instructed to enter into a contract with him f'r the comin' year."

The seconding of motions on a board of three has its objectionable features, since it seems to commit a majority of the body to the motion in advance. The president, therefore, followed usage when he said: "If there's no objection it will be so ordered. The chair hears no objection, and it is so ordered. Prepare the ballots for a vote on the election of teacher, Mr. Secretary. Each votes his preference for teacher. A majority elects."

For months the ballots had come out of the box—an empty crayon box—Herman Paulson, 1; Prudence Foster, 1; Margaret Gilmartin, 1; and everyone present expected the same result now. There was no surprise, however, in view of the nomination of Jim Irwin by the blarneying Bonner, when the secretary smoothed out the first ballot and read: "James E.

Irwin, 1." Clearly this was the Bonner vote; but when the next slip came forth "James E. Irwin, 2," the board of directors of the Woodruff Independent District were stunned at the slowly dawning knowledge that they had made an election. Before they had rallied, the secretary drew from the box the third and last ballot, and read: "James E. Irwin, 3."

President Bronson choked as he announced the result—choked, and stammered, and made very hard weather of it, but he went through with the motion, as we all run in our grooves.

"The ballot having shown the unanimous election of James E. Irwin, I declare him elected."

He dropped into his chair, while the secretary, a very methodical man, drew from his portfolio a contract duly drawn up save for the signatures of the officers of the district and the name and signature of the teacher-elect. This he calmly filled out and passed over to the president, pointing to the dotted line. Mr. Bronson would have signed his own death warrant at that moment, not to mention a perfectly legal document, and signed, with Peterson and Bonner looking on stonily. The secretary shoved the contract over to Jim Irwin.

"Sign there," said he.

Jim looked it over, saw the other signatures, and felt the impulse to dodge the whole thing. He could not feel that the action of the board was serious. He thought of the platform he had laid down for himself, and was daunted. He thought of the days in the open field, and of the untroubled evenings with his books, and he shrank from the work.

Then he thought of Jennie Woodruff's "Humph!"—and he signed.

"Move we adjourn," said Peterson.

"No 'bjection't's so ordered," said Mr. Bronson.

The secretary and Jim went out while the directors waited.

"What the Billy—" began Bonner, and then finished lamely, "What fer did you vote for that dub, Ez Bronson?"

"I voted for him," replied Bronson, "because he fought for my boy this afternoon. I didn't want it stuck into him too hard. I wanted him to have *one* vote. How was I to know you'd all hand him one?"

"An' I wanted him to have wan vote, too," said Bonner. "I thought meself the only fool on the boord—an' he made a spache that ained wan vote—but f'r the love of hivin, that dub f'r a teacher! What come over you, Haakon? You voted f'r him too."

"Ay wanted him to have one vote, too," said Peterson.

And in this wise Jim Irwin became the teacher in the Woodruff District—all on account of Jennie Woodruff's "Humph!"

V

The Colonel Names Jim a Brown Mouse

IMMEDIATELY upon the accidental election of Jim Irwin to the position of teacher of the Woodruff school he developed habits somewhat like a ghost's or a bandit's. That is, he walked of nights and on rainy days.

On fine days he worked in Colonel Woodruff's fields as of yore. Had he been appointed to a position attached to a salary of fifty thousand dollars a year he might have spent six months on a preliminary vacation in learning something about his new duties. But Jim's salary was to be three hundred and sixty dollars for nine months' work in the Woodruff school, and he was to find himself—and his mother. Therefore he had to indulge in loose habits of night-walking after hours, or on holidays and in foul weather.

The Simms family, being from the mountings of Tennessee, were rather startled one night when Jim Irwin, homely, stooped, and errandless, silently appeared in their family circle about the front door. They had lived where it was the custom to give a whoop from the big road before one passed through the palin's and up to the house. [CONTINUED ON PAGE 19]



I nominate Mr. James E. Irwin, the Boy Orator of the Woodruff District

The Farm Score Card—Look Out!

It is More Difficult to Use Than the Tax List

By D. S. Burch, Associate Editor

WE KNEW it. And, sad to relate, there is no official fool killer to stop it. The farm score card has come. It hasn't arrived with quite the confidence of other score cards, but it is here just the same.

A score card is simply a contrivance for helping a person to size anything up. It calls attention to points that might otherwise be overlooked and gives a definite value to each one. For example in scoring butter: 45 points are allowed for flavor; 25 points for texture; 15 points for color; 10 points for salt; 5 points for appearance of package.

Butter is sold on the market according to its score, and though experts seldom agree exactly on every point mentioned on the score card the total scores are surprisingly close. But even with the possibility of error, which is always present in human judgment, butter scoring is the best means we have of knowing the quality of butter.

Judging live stock and corn is familiar to all, though not used commercially to any large extent because of admitted inaccuracies and also the inability of different judges to score with even approximate uniformity.

A few years ago the "Woman's Home Companion" started the scoring of babies. They have made and are making a great success of it. Mothers and fathers have brought their babies to the fairs where the contests are held. The babies with the best bodies and best dispositions get the highest scores. It arouses everywhere a lot of interest in the best care of babies.

The score card is all right for commercial products, and even for babies or anything that can't help its condition or influence its destiny. But when you score a farm you are dealing with a complex business which includes human beings who think for themselves.

About a year ago the editors of FARM AND FIRESIDE considered the matter of a farm score card, and even went so far as to get one up. You will see that it fits any and every kind of a farm and puts emphasis on the important things in farming according to their relative value (in the opinion, of course, of the origi-

nators of the score card). We intended to have a Model Farm Contest and give a prize to the person getting the highest score. But on thinking the matter over carefully we decided it was not possible for any judge or judges to go on a farm and give it an even approximately correct score; so the matter was dropped.

Since that time two score cards have appeared. One is the output of the Department of Agriculture at Washington in a response to an invitation from a committee in charge of a Farm Management Contest in the Middle West. The other is the ingenuity of Mr. J. S. Collier, county agent for Kankakee County,

Illinois. Mr. Collier's score card has the advantage of being short, but it is extremely undiplomatic, for it does not consider the lady of the house at all. The government score card has many good points, but it seems indefinite as to the relative importance of the subjects listed. We are not satisfied at all with the FARM AND FIRESIDE score card, but we present it here simply to bring out ideas.

The way such a score card works is about like a tax list, only instead of putting down amounts the judge who is scoring the farm puts down credits, and your total score is supposed to tell how near your farm is to perfect. The judge must be competent, for when such a score card is wrongly used it is an abomination, as most dairymen who ship milk and have had their dairies scored know. Still some score-card system of comparing farms is crowding on us, and if we are going to have one let's have a good one and use it right. It may be a good thing if it helps to call attention to possible improvements in farming and living. But we would dislike to see it used to point out that John Jones's farm is any better than Tom Thompson's. When you are scoring a farm remember that you are also scoring a home and the people in it. The commercial standard by which the affairs of the world are now judged is probably no more correct than the physical standard of primitive man, by which men were once judged by their muscular strength.

Before giving a farm a high score because of equipment and improvements, the judge ought to know how the money that bought the equipment was made. I am not so sure that the farm which looks best always ought to be scored highest.

The inner side of family life should by rights be considered, but for obvious reasons that can never be. The only true standard is the ethical standard, and one of the first obstacles met there is, "Judge not that ye be not judged."

Let's not get too enthusiastic over the farm score card.

Farm Score Card of Farm and Fireside

		Date.....	
Person in charge of farm.....		Perfect	All'd
P. O. address.....			
HOUSE:	Appearance.....	2	
(10 points)	Convenience.....	2	
	Construction.....	2	
	Sanitation.....	2	
	Water supply.....	2	
BARN:	Appearance.....	2	
(10 points)	Convenience.....	2	
If one barn is	Construction.....	2	
adequate and	Sanitation.....	2	
there are no	Water Supply.....	2	
other buildings,			
double the			
barn score.			
ALL OTHER	Appearance.....	2	
BUILDINGS:	Convenience.....	2	
(10 points)	Durability.....	2	
	Sanitation.....	2	
	Adequacy for needs.....	2	
SOIL	Economy of manure and		
FERTILITY:	fertilizers.....	10	
(20 points)	Facilities for their distri-		
	bution.....	2	
	Maintenance of conditions		
	for growing nitrifying leg-		
	umes.....	5	
	Extent to which used.....	3	
SOCIAL and EDU-	Family church activities...	4	
CATIONAL	Family school activities...	4	
ACTIVITIES:	Other family activities....	4	
(20 points)	Efficiency in road improve-		
	ment.....	4	
	Social atmosphere in the		
	home.....	4	
NET INCOME	If less than 1% on invest-		
FROM FARM	ment.....	0	
PRODUCTS	If between 1 and 4%.....	5	
(INCLUDING	If between 4 and 6%.....	10	
NECESSITIES):	If between 6 and 10%.....	15	
(30 points)	If between 10 and 15%.....	20	
	If between 15 and 20%.....	25	
	If over 20%.....	30	
	Total.....	100	

Government Farm Score Card

Location.....	Owner or tenant.....
Name of operator.....	Type of farming.....
Type of farming.....	Area of farm..... acres. Tillable land..... acres.
Area of farm..... acres. Tillable land..... acres.	Names of Judges.....
Names of Judges.....	Date.....
Date.....	Points to be judged.
Points to be judged.	Deductions for deficiencies.
Deductions for deficiencies.	
	1. Size of farm.....
	Is the farm large enough to admit of a fair profit, considering the type of farming followed?
	2. Location.....
	Is the farm well located with reference to roads, market point, school, church, and social center?
	3. Type of farming.....
	Are the crops grown and the stock kept of the best kinds, considering soil, climate, size of farm, location, and market and labor conditions?
	4. Organization.....
	Is the right proportion of land devoted to each crop? To pasture? Is too little or too much productive live stock kept? Is the farm work well distributed throughout the season? What provision is there for winter work for the hands?

5. Soil management.....	Are crops rotated to best advantage? Are legumes grown as extensively as they should be? Is the manure properly handled and properly used? Are waste materials, such as straw, corn stalks, etc., returned to the land? If manure is insufficient, is proper provision made for supplying humus by green manure crops, stubble, sod, etc., to plow under? Are the right kinds and amounts of fertilizers used? Are actual crop yields satisfactory?
6. Quality of the business.....	If dairy cows are kept, are they good producers? Are the other farm animals of such quality as to bring top prices in the market? How about the quality of wool, butter, etc., produced on the farm? Quality of grain: Is it free from weed seeds and trash? Is the hay clean and bright? Are the farm products properly housed and cared for? Quality of work stock.
7. Economy and adequacy in equipment.....	Are the following items of equipment adequate for the needs of the farm? a. The farmer's dwelling. b. Houses for laborers. c. Barns and storehouses. d. Fences. e. Drainage system. f. Water supply for live stock. g. Implements and machinery. Are any of the above items more elaborate and expensive than conditions justify? Are more or fewer work animals kept than should be?
8. The farmstead.....	Considering the size of the farm, the topography, and the location of near-by country roads, is the farmstead properly located on the farm? Are the various buildings conveniently located with reference to each other? Is the right amount of land devoted to yards, lots, etc.?
9. The farm home.....	Are the women who do the work in and about the farm home provided with proper equipment and conveniences for their work? Have they labor-saving devices? Is the arrangement for storage of food supplies, fuel, water, etc., adequate? Is the garden well located? Are the poultry houses handy and well located?
10. General conditions.....	Are the buildings, fences, roadways, and drainage system kept in proper repair? Are the fence rows kept clean? Does the farm produce its own supplies to the extent it should? Are the garden and orchard adequate for the needs of the people living on the farm? Total deductions..... Final score (100 minus total deductions).....

Farm Score Card of J. S. Collier

1. Drainage.....	10%
2. Physical condition of soil.....	10
3. House.....	10
4. Barns, cribs, and other necessary buildings.....	10
5. Crop rotation.....	10
6. Soil.....	5
7. Orchards, garden, and small fruit.....	10
8. Improvements made in soil in past two years.....	10
9. Fences.....	10
10. Condition of public highways adjacent.....	10
11. Condition of farm animals.....	5
Total.....	100%

Butter Pays the Mortgage

A Case Where Careful Planning and Preparation Made up for Inexperience

By A. Cornell

I PRESUME that I really began to evolve into a dairyman back in my boyhood days. I worked and longed for a combination of circumstances that would put our family resources in such shape as to make it possible for me to go to a near-by academy for a part of the school year.

My father was anything but a dairyman. He was quite an extensive farmer and hog raiser and cattle feeder for a few years about that time. However, it seemed that year after year we would branch out and rent what cheap land about four men and teams could handle, and through the spring and summer we would work and hope—we lived far enough west in the corn belt to know what it was to hope—that the season would be favorable for a good crop, but when fall would come we would consider ourselves lucky if we could gather half a crop. Then after the crop would be gathered we would begin building our hopes on another gamble at the wheel of fortune; namely, being lucky enough to escape being cleaned up by the swine plague and then getting in on a sufficiently high market to net us a real nice profit.

Year after year rolled around and the mortgage on the farm remained unpaid, and what higher schooling I got was obtained under such conditions as caused me to look with little favor on extensive farming and

stock-feeding as a sure road to independence, not to mention affluence.

Of course our experience taught many things that were of interest and value, and had we kept on in those lines we would doubtless have profited from the knowledge thus gained.

One extreme brings on another, so when I came to face the problem of working myself and my own little family into a home which I could hope to free from the well-nigh universal mortgage, I determined to choose something that promised more as a sure thing even if it did not promise so much in big-sum returns.

It happened to be the period following the first use of the cream separator on the farm. Here and there was an occasional user of what is now an almost indispensable machine. I sent for separator catalogues and experiment station bulletins. I studied the separator question, the cow question, and the cream question. Convinced that no cow keeper could afford to do without a separator, I sent and got a machine of the make that appealed most to my fancy. I learned how to use the Babcock tester and how its use stimulated interest in dairy investigation.

I soon got well started on my own account as a cream-separator agent, and then I was called on by a representative of one of the large centralized creameries of the Middle West. The outcome of that call was the closing of a contract with that company relative to promoting and operating a cream-receiving and testing station. This brought me face to face with the farmers of that territory, with the arguments calculated to arouse interest in milking cows and buying machines and giving them instructions in the matter of the proper handling of milk and cream. The creamery company had gone to some expense to teach me such arguments as would be effective.

After a year of that sort of work, however little my arguments impressed the farmers I dealt with, I myself was so thoroughly convinced of the practicality of the dairy business that I severed my connection with the company and settled right back to a first-hand dairy business on our heavily mortgaged farm.

A man is not necessarily a dairyman, however, just because he happens to have a mortgaged farm and no other visible means for its payment than a bunch of pick-up, mougrel cows and such accessories as a cream separator and a Babcock tester.

In my connections with the raw-cream end of the

creamery business I had learned some things that had set me to thinking. I had been deeply impressed with the unsavory condition in which much of the gathered cream left the farm and also something of the same condition in which practically all of it reached the factory. How a buttermaker could so disguise flavors and odors and rank condition generally and make a product that could get a welcome outside of a soap or axle-grease factory was beyond my grasp of dairy lore.

With my mind thus impressed I determined to prepare for doing the milk and cream end of the work properly, and right there is where I felt sure that I had an idea having possibilities in it. I had driven over those hills and dales for miles in every direction in my quest for possible separator customers, and I knew that there was not a farmer near or far who had prepared or was likely to prepare for doing the dairy end of the farm work properly. And how could the farmer's wives be expected to make anything but what they did make in the butter line, or deliver anything but what they did deliver in the cream line?

Solving the Cooling Problem

I would go to the necessary expense for the equipment with which I could at least hope to control conditions and temperatures so as to improve my chances of making a creditable product. Then I would make butter and go after consumers in the only town of any importance that was located in those parts.

The class of consumers I coveted was the class that was at that time paying five to ten cents per pound more for creamery butter than they would have had to pay for common farm butter. Being enthusiastic, I confided a hint of my ambitions to one of my "long-headed" farmer neighbors. This friend promptly gave me the laugh, and assured me that I would soon find that I was not the only old woman in the country who could make good butter.

Other advisers, in the persons of the "old women," and the "new women" too, for that matter, assured me that I would find that without ice it would be impossible to get the butter in condition to print and deliver in pound packages during the hottest part of the year, as I had to make a 12-mile drive to reach the town. It was on this particular that I myself was most apprehensive. I knew, however, that my well-meaning friends had not yet grasped the full import

of the meaning of that ambition that I was nursing relative to thorough preparation.

Our house and well were located, as all farm-houses and wells should be, on higher ground than that occupied by the barnyard. In fact, the barnyard was on a slope that extended considerably lower than the surface of the ground where the house and well were standing. Like most all wells of the Middle West, ours had a windmill over it. My plan was to dig and construct an underground cave near the well. To make the cave answer the purpose for which I was planning I would wall, arch, and floor it with concrete, put a tank in, and lay a pipe from this tank to the stock tank in the barnyard.

At that time the use of concrete was not so generally understood as now. Predictions of failure of that concrete to come up to my expectations were rife among my neighbors, but I had sent and got a book telling about concrete and its many uses.

I went right after it, and made my own forms for both wall and arch and constructed an underground room 10 by 16 feet and large enough to stand up in. I had studied the proposition carefully, and the result was most satisfactory. Knowing that there would necessarily be a great deal of going up and down the steps, I made them with particular care as to spaciousness and ease of ascending and descending. This is a feature that should always have particular consideration, for a little careless work or niggardly economy on this matter of stairways has been the nightmare and cause of many serious accidents.

I now had a butter-making room that was the source of not a little pride. The well was inexhaustible and supplied cold water (54° F.). The tank was an ideal place to keep butter and cream; in fact, I really had no use for a lower temperature. I soon learned that by turning a pan over the top of a jar or can and placing a weight on top I could completely submerge the cream and butter, thus making it still better than simply having them float on the surface of the water.

I had most effectually demonstrated what could be done in the way of controlling conditions to make possible the making of good butter. I knew that having conditions under my control was the long step that I could depend on to take me out of the reach of competition. It was the first essential of making uniformity possible, for uniformity was of the greatest importance in winning and holding the trade I wanted.

I had solved the problems of the making and molding. But as I couldn't take the tank and cave to town with me, I had yet to demonstrate that I could haul that butter over twelve miles of rough roads in the hottest weather and deliver it in good condition.

I soon had a plan. In carrying it out I had the tinner make me a good, substantial tin box 16 by 16 inches square and 10 inches deep, with a lid flanging down about 2 inches over the outside. I could put 15 one-pound prints to each layer, and by having two pairs of brackets soldered to the inside of the box I could place two floors in it which provided for three layers of 15 pounds each, thus relieving the under layer of the weight of those above it. The outside flange of the lid made it possible (after the butter was molded and placed in the box) for me to put a weight on the lid and settle it to the bottom of the tank. I left it there overnight, so that it would be in prime condition for starting on the trip to town early the next morning. As a final precaution, when I was ready to start for town I threw a covering of wet burlap over the box to take advantage of the cooling principle of evaporation.

I Had a Twelve-Mile Drive

Up to this point my wife had seriously doubted the possibility of delivering the butter in pound prints during the hot weather. That day promised to be a hot one, but she admitted that if I drove pretty hard I might get in with the butter still inside of the parchment wrappings. My own hopes were high, and temperature quite normal for the first of August, until I got about halfway to town and found a washout that caused me to make a several miles out-of-the-way drive. That put lead to my hopes and boil to my temperature, for at best I could not hope to make the added drive short of an hour's extra time. Imagine my gratification, however, upon reaching town to find that butter in the best of condition. The groceryman, knowing the distance I had driven, was more surprised even than I was. That was the beginning of a most satisfactory business with that groceryman.

I might add that I have since learned that the secret of that butter keeping its shape so well through that long drive rested largely in the fact that the cream had been kept at the proper temperature previous to being churned.

Reckoning With the Rodents

We Must Protect Our Young Fruit Trees—How to Do It

IF WE have a few hundred or some thousands of young fruit trees, how shall we best safeguard them from rabbits and mice? A few dozen trees do not present much of a problem, but when thousands are in danger the matter is a serious one to the farmer who hopes for success.

FARM AND FIRESIDE three years ago gave the successful experience of Mr. A. J. Rogers, Jr., a Michigan horticulturist and practical fruit grower. Since then we have heard encouraging reports from orchard men who have used Mr. Rogers' remedy. Among these the Editor of FARM AND FIRESIDE has used this repellent on his young peach and other fruit trees for two winters with complete success. This wash saved his



An open protector does not harbor insects

trees when the rabbits had made a good start in girdling them. He recommends this method.

The wash is made by slaking a peck of good stone lime in soapy water, diluting to a thin consistency, and adding one-half gallon of crude carbolic acid, four pounds of sulphur, and one gallon of soft soap. The trunks of the trees are painted with this in the late fall.

Mr. Rogers has also made use of wire screenings, wood veneer strips, and other barriers, but finds the wash best adapted to large orcharding operations.

How the Kansan Does It

A quickly made repellent found quite effective by a Kansas orchardist is commercial aloes, one pound to four gallons of water. This gives the bark a very bitter taste.

EW



As far as material is concerned it is cheap

Another repellent is made by mixing one gallon of buttermilk and one-half pound common stove soot. This mixture is boiled for twenty minutes and applied by spraying or brushing.

Oklahoma fruit trees are reported safe from rodent injury after applying this wash: Water, one gallon; soap, one pound; crude carbolic acid, three ounces.

This wash is applied with a brush after thorough mixing.

A Pacific Coast Repellent

In the noted fruit-growing sections of the Pacific coast the following rodent repellent has been found to give good satisfaction: Flowers of sulphur, yellow ochre, wheat flour, and linseed meal, each four pounds; and four ounces each of turpentine and asafetida. In addition to these, one pint of alcohol and six eggs. (Age of the eggs not given—why not old ones?) Mix all these materials with enough buttermilk to make a thick mash, then dilute to a thin paste with sweet milk and apply with a brush.

Besting Them With Barriers

Where the trees to be protected do not exceed a few hundred there are various barriers that answer the purpose well. Whatever protection is used it is the part of wisdom to remove all brush piles, thickets, or anything that will serve as a lair or protection to rabbits and mice. By so doing the number of rodents will be materially lessened in any given vicinity.

We are fortunate in being able to give in the following paragraphs the experience of Mr. G. F. Potter, a

fruit grower and scientific orchardist of Wisconsin. The photographs of the tree protectors used by Mr. Potter add to the value of his recommendations.

Wire Netting, Cornstalks, and Veneer

Probably the best protection for young fruit trees against gnawing by mice and rabbits during the winter is one-fourth-inch mesh wire netting. This is cut in pieces 24x12 inches and rolled into a cylinder 24 inches long by 2 to 3 inches wide. With this, as with all other protectors, the lower end must be carefully pushed down to meet the surface of the ground all around the tree. While giving perfect protection the



This protector must be removed each spring

wire netting is open and therefore can be left on the trees year after year without harboring insect pests or disease. After placing cylinder around the tree, tie it with wire or binder twine to prevent its unrolling.

The lower two feet of straight cornstalks from which the leaves have been stripped make a good protector if tied about the tree as shown in the accompanying photograph. There should be no wide cracks between the stalks. This is a cheap form of protector as to material, but is slow and expensive to apply and is also best removed in summer.

The veneer wrapper is cheaper than netting, but as it excludes air and sunshine it must be removed in spring and applied every fall. It is purchased ready for use from fruit-box or tree-protector companies, and is tied onto the tree, as illustrated, with cord or soft iron wire. The wire must be carefully taken off with the wrapper to avoid girdling the trees.

WON'T MIX

Bad Food and Good Health Won't Mix.

The human stomach stands much abuse but it won't return good health if you give it bad food.

If you feed right you should feel right, for proper food and a good mind is the sure road to health.

"A year ago I became much alarmed about my health for I began to suffer after each meal no matter how little I ate," says a Denver woman.

"I lost my appetite and the very thought of food grew distasteful, with the result that I was not nourished and got weak and thin.

"My home cares were very heavy, for besides a large family of my own I have also to look out for an aged mother. There was no one to shoulder my household burdens, and come what might I must bear them, and this thought nearly drove me frantic when I realized that my health was breaking down.

"I read an article in the paper about some one with trouble like mine being helped by Grape-Nuts food and acting on this suggestion I gave Grape-Nuts a trial. The first dish of this delicious food proved that I had struck the right thing.

"My uncomfortable feelings in stomach disappeared as if by magic and in an incredibly short space of time I was again myself. Since then I have gained 12 pounds in weight through a summer of hard work and realize I am a very different woman, all due to the splendid food, Grape-Nuts." Name given by Postum Co., Battle Creek, Mich.

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Ask your dealer about the American Dark Chaser or write for large illustrated circular.

American Gas Machine Co., 496 Clark St., Albert Lea, Minn.

Trapping
A Neglected Source of Revenue

By W. C. Satterlee

UNDER present conditions, when the high cost of living is always staring us in the face, no source of revenue should be overlooked. Most of us are on the alert as far as actual soil products are concerned, and no new crop that promises good returns remains long without attention. But we are too much given, as a rule, to considering the possibilities of making money from this source only, and other means of increasing the income pass by unnoticed. One of the good things that is often overlooked is trapping. Fur-bearing animals are frequently found in plenty in the fields and woodlands, and their hides will bring good prices.

The skunk is one of the most common of fur-producing animals, and this odoriferous creature ranges from east to west and north and south as far as farming territory extends. It brings more money to the American trapper than any other fur bearer found on farm lands. The fur has become quite popular in late years.

Skunks are found most abundantly in hilly districts, for in such territory there are more dens in which they can make their homes. In other places they often resort for shelter to lumber piles, out-buildings, and openings under dwellings.

Some of the Best Traps

Ordinarily they are averse to digging dens for themselves, but will do so if necessary. Where woodchucks are found, skunks usually make their homes in deserted dens of these animals. Skunk dens are so common that almost every country-raised person knows what they look like. There may be difficulty in distinguishing between the inhabited dens and those which are empty or inhabited by woodchucks. Under such conditions it is a good policy to trap every den which shows claw marks in the entrance, or exhibits any other signs of being in use.

The traps used for catching skunks are the Nos. 1 and 1½ Victor, Oneida Jump, and Newhouse, also the Nos. 91 and 91½ of the two latter brands. The 1 and 1½ are standard traps, but the Nos. 91 and 91½ are special patterns designed for general use in trapping small and medium-sized animals, particularly skunks. Their double jaws give a double grip and twice the holding power of a plain jaw trap.

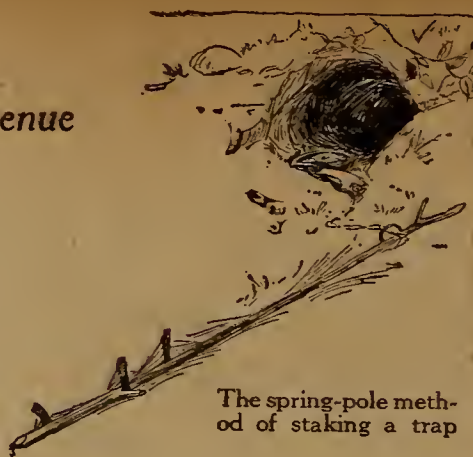
A skunk fairly caught in one of these double-jaw traps cannot possibly escape. The use of these patterns is advised, but in case a cheaper article is desired the Victor brand is the greatest value obtainable, and to make sure of getting the genuine Victor trap see that it has a letter V punched through the pan, the circular plate by means of which a trap is sprung.

Skunks are usually trapped at the entrance of the den. Having located a den which appears to be inhabited, the trapper scoops out a little "nest" for the trap in the entrance of the hole, making this excavation deep enough so that when the trap is placed in position its jaws and pan will be just a little below the level of the floor of the passage. Then cover the trap lightly with dead grass, dry loose dirt, or whatever like material is convenient. Draw the chain out full length and fasten in one of two ways.

Ways of Staking the Trap

A stake may be driven through the chain ring, thus fastening the trap securely. When so fastened the captured skunk will retire into the den as far as the trap and chain permit. Killing by means of a pistol or rifle is then easy, for drawing on the chain brings the animal's head into view, and in case it discharges its scent this will be ejected into the den, where it will do no harm. The only thing against the use of a stake is that when a trap is thus solidly fastened the animal has ample opportunity to use its strength in attempting to escape. However, if double-jaw traps are used the skunk will not get out.

By fastening the chain securely to the butt end of a stout bush or branch cut from a tree and placing this on the ground beside the den the bad feature of the stake method is overcome. The detached branch allows the captured animal to get away from the den some distance if he feels inclined to do so, but at the same time retards his movements so that he cannot get far away. No matter how firmly the branch may become fastened in the surrounding growth the captured animal cannot get much of a pull on the chain and trap, for the springy branch yields slightly no matter which way he pulls. When the trap is fastened in this way the skunk may be killed with a rifle.



The spring-pole method of staking a trap

Or instead of the above method the chain may be attached to the small end of a slender ten or twelve foot pole, the pole securely fastened by three stakes at the butt end as shown in the sketch. Where the surroundings make this plan feasible it is the best style of trap fastening, for it has the same yielding feature as the brush drag, keeps the skunk from going far into the den as well as does the stake method, and has the additional valuable feature of allowing the trapper to drown the captured animal if water is found near at hand.

This is accomplished in the following manner: If the trap has been properly set the skunk will invariably be caught by a front foot. By approaching slowly and cautiously, stopping and standing perfectly still when the skunk raises its tail or otherwise threatens to void its scent, the trapper may approach with perfect safety near enough to reach the butt end of the pole. He then lifts the pole, trap, and skunk from the ground and carries them to the water. It is very difficult for a skunk suspended by a front foot to throw its scent, but if its hind feet or tail are allowed to come in contact with any solid object disaster is sure to follow. Having reached the water the trapper slowly and steadily lowers the skunk into it and pushes him beneath the surface, holding him there until he drowns. This is a safe and humane way of killing trapped animals.

How to Skin a Skunk

Although trapping at the den has been described here in detail, other ways may be employed for catching skunks. A trap set in the entrance of an artificial bait enclosure with a tempting bit of food properly placed for a lure will catch skunks. The pen may be made of stones, stakes, chunks of decayed wood, or any other convenient material. A hole in a bank of earth with a bait inside and a trap at the entrance will often prove successful.

The value of a skunk is in its fur, and to secure this the animal must of course be skinned. This is properly done by splitting the skin down back of the hind legs, cutting carefully around the scent glands. The skin is then peeled from the legs and rump, and by means of a split stick it is stripped from the tail. It is then worked down over the body to the front legs, which are stripped to the feet, where the skin is cut loose. Then it is drawn down to the head, where the ears are cut free from the skull and the skin loosened from around the eyes and mouth, the last operation being the severing of the skin at the tip of the nose.

The more neatly this work is done the greater will be the value of the skin, and during the entire operation it must be kept clean. After the skin has been removed from the body, draw it over the end of a tapered board and peel off all fat and flesh. Then draw out a thin board shaped to fit the skin, fasten the edges with tacks, and suspend it in a dry airy place where it is not exposed to the sun or artificial heat, until completely cured.

While the skunk only has been mentioned, it is by no means the only valuable fur-bearing animal found on the farms. The fox, mink, muskrat, opossum, raccoon, and weasel are all found in or near farming districts, and each of these is the wearer of a valuable coat of fur.

Don't Use Poisons

The use of the steel trap for the capture of animals is advised. Many other methods of capture have been tried, but practically all trappers admit, after trying other ways, that catching animals with steel traps is the most practical and economical method. The use of poison and the digging open of dens are especially frowned upon, for these wasteful ways soon exterminate the animals and they yield very little to the user.

DAIRY cows will consume 35 pounds of silage per day; beef cattle, 30 pounds of silage per 1,000 pounds of live weight; sheep, four pounds per day; horses, 15 to 20 pounds per day, according to size and work.

These figures are based on observations by the U. S. D. A.

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Farm and Fireside, Springfield, Ohio

The Prayer of a War Lord

By G. Henry



PRAISE God from whom all blessings flow. Let me bow low before Thy Son from Whom our life did come.

Let me atone for the wrongs I've wrought by deed and thought. And if perchance by action I may in any way earn salvation, I beg of Thee on bended knee to grant to me forgiveness for the blood I've spilt, if Thou but wilt.

To Thee on high I lift my cry—as the widow doth sigh for the sons and husbands who lie mangled and moaning and dead because of such as I.

Have mercy upon me in my misery; let Thy kindness shield me.

Let me be received—unworthy, wicked, shunned, accursed, driven hence, abhorred, a foul thing to avoid—protect me from the wrath of those I have deceived.

O God in heaven, look upon Thy world which I sold to the kings of war and bloodshed, and from which one million

souls have sped to Thee—but leaving loved ones here below who detest me.

Let angels weep no more for war lords; but for their victims should Thy mercy fail to help uplift them from the slough and pitfall dug by such as I, who dare to cry for help after drenching the world in gore as never life before.

For I the warrior have begun to think, and to sink—down, down, down from whence no man or falsehood returneth. For such, it hath been read, is the judgment of the dead—who, betrayed, have strayed from Thy road and Thy Son and Thy teachings.

Please, Father, have mercy upon the souls which for gold were sold to the gun gods—for Thine is the power, and not mine.

And never more shall such as I profess to be divinely appointed to misinterpret Thy word into bloodshed, the battle, and the sword. Amen.

In the Nick of Time

THE Panama Canal was completed in the nick of time.

So it seems, at least, if one may judge from the new uses to which it will permit California to put some of her natural products.

Talcum powder is made from talc which is imported from France and Italy. California has the best talc in the world, but could not compete with the water-borne talc of Europe. Now she will have water transport through the canal, and will get into the market to sell the 13,000 tons we import yearly.

Kaolin is an earth which is used for various purposes to such an extent that we imported nearly 300,000 tons last year. California has not been able to sell her kaolin on account of the freight. The canal will remedy that.

For similar reasons California will be able to supply the four million dollars' worth of manganese per year which we have imported, and also an annual supply of magnesite valued at \$1,400,000. Since the war broke out magnesite, which is used in making steel, has gone up at times to \$130 a ton. California can load it on boats for \$8.

Our Western States can produce Jasper, oxides, ochres, mica, asbestos, numbers, siennas, and similar minerals, inexhaustible quantities of pumice stone which has been imported from Italy, and many other minerals and chemicals. Most of these are heavy and cheap, and could not have been supplied in the absence of water transportation. The canal will help in enabling us to work out our own salvation from the effects of the war.

Worse Than Wasted

WHEN the Western States were settled and their roads laid out, the chief thought was to have the highway wide enough so that wagons could find unbroken prairie sod on which to travel in wet times. There had to be a place on which to "turn out" when the natural tough sod was cut through by the wheels. Anyone who lived in a prairie State in those days remembers this condition.

This pioneer fact influenced the establishment of roads generally averaging four rods, or sixty-six feet wide. When this was done the land was worth little. Few farmers cared for a few acres. The fields were not fenced, and cultivation was carried on regardless of the road lines; but the wide strip of prairie sod was useful for avoiding mireholes in the swales where the land was undrained and uncultivated. The pioneer plan worked very well.

Now much of this land is worse than wasted. It makes an unsightly road. It is always infested with weeds and foul growths, and a source of similar infestation to the adjoining fields. It no longer fulfills its original function of a convenient turn-out. A well-constructed

roadway twenty-two feet wide is better than the wider way. If we were obliged to keep in the straight and narrow way all the time, perhaps we should feel more like improving it.

The land which could be restored to cultivation by confining the road to proper limits would be worth to each of the roadside farms, at the present prices of corn-belt lands, from \$500 to \$1,600 a mile. The interest on this sum expended on systematic and timely dragging, after the way itself has been properly drained and shaped, would make of a 22-foot way a better road than the present ones, save in exceptional cases.

What is true in the corn-belt States is true to a less degree elsewhere. Our roads are too wide. Intensive road-making should be the new policy.

Hairy Woodpecker

By H. W. Weisgerber



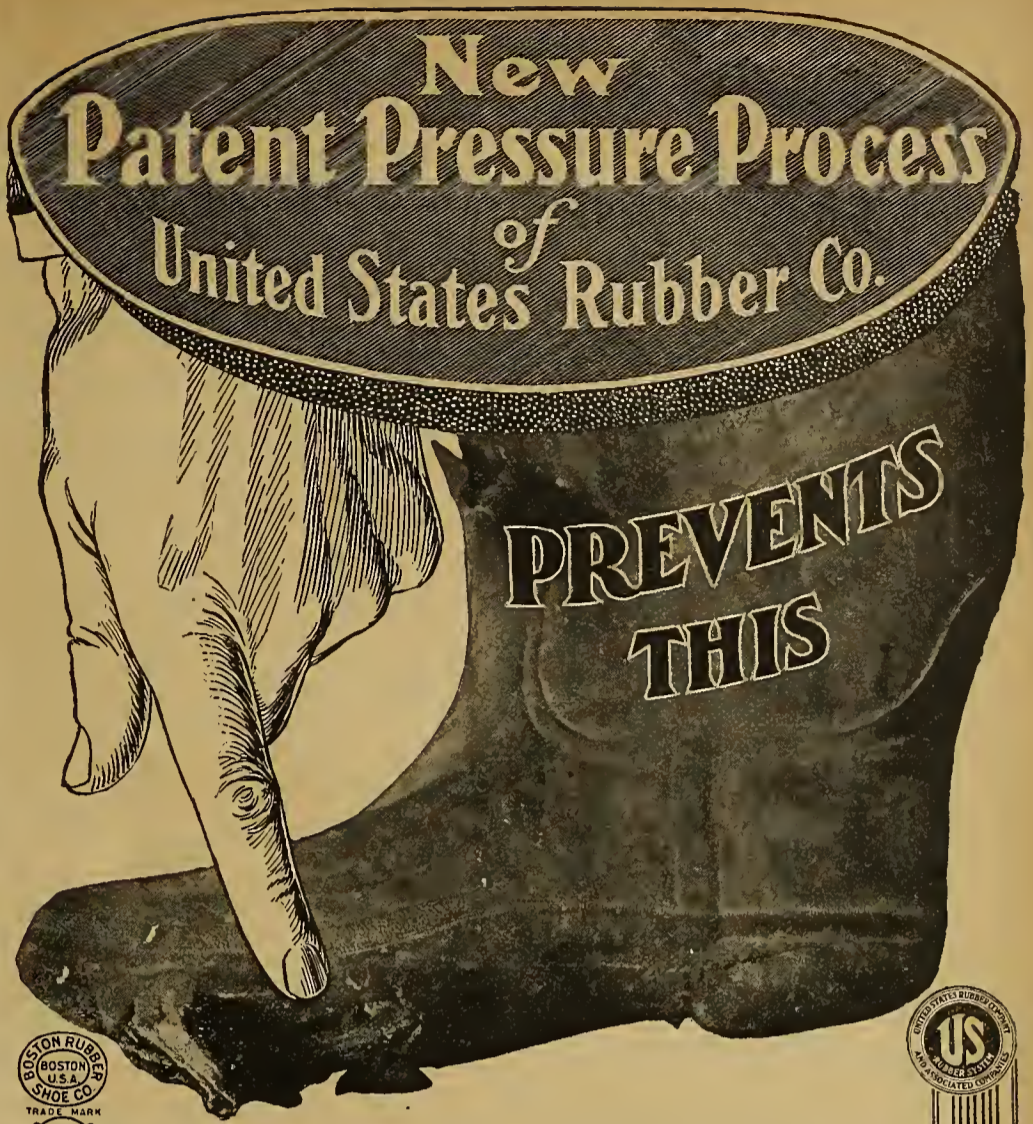
THIS is the larger of the two woodpeckers that, as far as markings are concerned, are nearly identical. The smaller one is downy. The hairy is the rarer bird.

Several years ago I woke up one May-day morning to find the earth covered with a foot of snow. That evening after getting home from work I trudged to the "park" a quarter of a mile away, to observe how the birds were going to manage "going to bed."

I saw one incident that, to me at least, was amusing. A hairy woodpecker had "drilled" his winter "sleeping porch" on the north side of a dead hole, from whence the snow had come. The snow had plastered shut his only door after his getting out in the morning. This was serious. He carried on dreadfully, but finally flew away, and no doubt had to spend the night on the lee side of the tree.

But It Takes Work

THE Wisconsin Experiment Association is a farmers' organization devoted chiefly to the growing, exchange, and selling of pedigreed grain. The association is not a part of the experiment station, though it works in harmony with it. The value of the association is shown by the average yield of pedigreed barley for a period of six years, which was 34 bushels per acre as compared with 29.3 bushels for other varieties. The average barley crop for the State during the same period was 27.7 bushels. Doing a thing well always pays, and many heads working on the same problem are better than a few.



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EDITORIAL COMMENT

FARM AND FIRESIDE

The National Farm Paper

Published every other Saturday by
The Crowell Publishing Company, Springfield, Ohio

YOU'RE on the jury. Ever realize how many decisions of different kinds you make even in a day? And we know you like fair play.

So when you see any opinion advanced or statement made in FARM AND FIRESIDE that seems to you unfair or biased, speak up and say "Fair Play!" This issue, and every other issue, is open to criticism or approval in more than half a million homes besides your own. It's so easy to condemn on appearances. Give us your views and reasons on the other side if you think only one side has been given. Even if you have only something nice to say, send it along.

HERBERT QUICK, - - - - - Editor

November 21, 1914

Wanted

A Motor Corn Cultivator

AN EXCHANGE publishes the picture of a team of horses pulling a corn cultivator, over the legend, "Work on a Coru-Belt Farm That the Tractor Can Never Do." We are not so sure about that. We remember when it was confidently stated on almost every farm that no machine could ever be made to bind grain. Inventors are actually at work on the motor-driven coru cultivator. Actual models have been made. Just how effective they are is another matter. The important point is that the thing is seething in the brains of inventors.

Everything is impossible at first. Elias Howe had to think of putting the eye in the point of the needle before a machine could sew.

The motor-driven corn cultivator is needed by the tractor people. Thousands of farmers would buy tractor plows if it were not for the fact that they are obliged to keep horses to cultivate their corn, and they feel that they may as well use them for plowing as to let them stand idle.

What the manufacturers must do if they cover the field fully, is to produce a system of motor-driven machines which will completely, or at least nearly, eliminate the horse. This is an agricultural problem of the greatest importance. It may never be solved, but he would be a bold man who would say so in view of what has been done by the ingenuity of our inventors.

Belgian Immigrants

THE Belgians are among the best farmers in the world. Actually millions of them have been ruined by the ruthless occupation of their country. The Acadians, whose sufferings have been immortalized by Longfellow in "Evangeline," were a mere handful of slightly mistreated people compared with the Belgians of 1914. Cannot something be done in an organized way to establish in America those of the Belgian farmers who desire to make homes in a new land, under a new flag, and a flag that stands for peace?

Get-Together Meetings

IN MANY parts of the country we are having "get-together meetings" attended by town people and rural people for mutual acquaintance and better understanding. At such a meeting at Pleasant Valley, Allen County, Kansas, forty-five automobiles were parked near the meeting place, and eight hundred guests were in attendance. These are good things, and are quite possible in communities of smallish towns and interests predominantly agricultural. When the town people and rural people can get together often on a basis of doing things with each other,

instead of to each other, better conditions will result. If the town were not useful to the farms it could not exist. Town and country must work together, in spite of themselves, in the great task of carrying on the feeding and clothing of the world. That we of the farms do our part of the work rather badly at times we very well know. If the merchants will make as free an admission of their own inefficiency, and counsel with us as to the best way of remedying defects on both sides, some interesting meetings may be predicted. Anyhow, we shall find ourselves forming some mighty pleasant friendships.

When the Hogs—

REFUSE to eat, or fail to come to the feeding; Huddle together in nests or pens; Are stiff, gummy-eyed, and red-skinned; Are constipated, and then have scours; Have a temperature of above 104 degrees; And die after ailing a few days—

They have cholera, and all hogs on the place which are in health should be sold. All carcasses should be burned, with all rubbish about the lots and sties. The pens should be cleaned and disinfected. The hogs should be given clean, dry sleeping quarters, and kept out of mud and filth. They should be quarantined to prevent the spread of the disease to other farms. A competent veterinarian should be called in at once to give the serum treatment. The above is recommended by the Veterinary Department of the Wisconsin Experiment Station.

THERE is no need of weeds in walks or paths. Either salt or blue vitriol, boiled in water a pound to the gallon and sprayed on boiling hot with a watering pot, will kill them. About a gallon to the square yard will cure the most stubborn case—and the cure lasts for years.

Making Cheap Corn

TEN ALABAMA boys won a trophy offered by the business men of Louisville, Kentucky, for the best record of a ten-boy team in any State in the South. The yields are wonderful, averaging 171.83 bushels per acre, and ranging from a low yield of 127 bushels to a high yield of 232.50 made on his acre by Walker Duiston of Tallapoosa County.

But the thing of most significance to all corn growers, north and south, is the average low cost of production made by these boys. W. Roy Holly of Elmore County made his corn at a cost of 12 cents a bushel, and reaped a profit of \$142.53 on a yield of 162.53 bushels. The average production cost of the 1,718 bushels grown on the ten one-acre patches was a fraction over 18 cents a bushel.

Corn-belt farmers may well take some notice of this germ of competition in the South. For cheap corn means cheap meat—when the South once takes hold of meat.

Meat of the Future

WE HAVE learned to speak of the breeding of rabbits with some contempt. The Belgian hare craze seemed to have no economic basis. But in Germany rabbit-growing is an increasing business, and the demand for rabbit meat has tripled the price in five years.

Doctor Raebiger, an eminent scientist associated with the German Agricultural Association, has published an analysis which shows the flesh of the rabbit to be the most nourishing of all meats. The rabbit resembles the sheep in the fact that his coat is a considerable element in his value. Rabbit fur is very extensively used as a substitute for the rarer wild furs, and is sold under such names as ermine, cony, and the like.

It took the Angora goat several years to acquire an economic status as to both flesh and fell, but it has now become established. We may expect the rabbit to do likewise in time.

What Is a Hero?

ISN'T a hero a person who possesses and exercises the qualities of bravery, self-sacrifice, and fortitude in a degree which lifts him above the mass of mankind?

If that is a true definition, are the soldiers who are dying so unfalteringly in the battles of the great European war heroes, just because they die?

Does it take much of a man to give up his life in war? It certainly does not take the exceptional man. Willingness to go to death in battle is about the cheapest of all human qualities.

It must require something more than just this to make a real hero. Nations boast of their bravery in war, but why boast? All men are brave. The Germans are no braver than the French or Belgians or British. The Russians are just as brave as any men on earth. The despised "chocolate soldiers" of the Balkans fought in the Balkan wars with that intrepidity which seems to be the common weakness of all men.

The Africans in the French army are without fear. Negroes are as good soldiers as any in the world, but they are no better than are our own North American Indians, or the Indian Sikhs and Gurkas of the British army in India, now proving their bravery in the war alongside the whites of Europe.

The fighting qualities of General Villa's army in Mexico are so high that nobody can doubt that if Mexico had the governmental character of Germany she could put in the field a million men as good as the soldiery of the Kaiser.

We used to regard the willingness of such races as the Japanese and the Mohammedans to throw away their lives as due to "fanaticism," and attributed it to their mistaken religious views; but Protestants and Catholics, who profess to believe in the religion of the Prince of Peace, sweep into the shambles of modern war as wildly and recklessly as do the "Turcos" whose faith promises them paradise as a reward for death in battle. The Chinese are agnostics, but "Chinese" Gordon made of them an invincible army.

The fact is that mere bravery is so common, so universal among the nations, so inherent in humanity, that it alone is not a thing to be proud of. It is to be assumed, like the possession of two legs, two eyes, and one mouth.

Why brag about it?

"All that a man hath," says the Adversary in the Book of Job, "will he give for his life." Nothing could be more untrue. A man will give his life for the merest trifles—for a favorite vice, an extra degree of speed, to show off before a crowd of strangers.

Let us cease our glorification of those who give up their lives in battle with no thought of the cause for which they fight. Such soldiers go merely as sheep to the shambles. They go simply because their rulers tell them to go. There is no real heroism in that.

Real heroism lies in dying, if need be, and living, if need be, for a cause which is worthy of the death or the life of a man or woman. Therefore it cannot be attained by mere military bravery. It may be a far braver thing to stay at home than to go to war.

It is a wonderful thing for a man to analyze the cause which asks for his life, and give it or withhold it as that cause is good or bad.

Had the peoples of Europe possessed this sort of heroism, there would have been no war.

The Farmers' Lobby

Co-operation is Seeking for Greater Freedom

By Judson C. Welliver

“WHEN is a trust not a trust?”
“When it's composed of farmers and they don't make any profits out of it.”

That definition was handed out the other day by a very serious-minded gentleman who had been trying to understand the present-day antitrust legislation.

You will remember the old classic which ran thus: “What is a trust?”

“A trust is a small body of men entirely surrounded by water.”

Which is all right, except that in applying it to the new rule for farmers' trusts it will be necessary to make sure that no sea water is used.

Let me try my hand on another definition. What is co-operation?

“Co-operation is a good and desirable method of doing business, prohibited by forty-nine different varieties of laws.”

One for each State, and one for the whole country!

But at last they've passed the Clayton antitrust bill, which aims, among other things, to give the farmer a chance to do the things everybody wants him to do. Now we will see what happens to the farmer if he actually goes to doing 'em.

For a decade past all the economists have been insisting that the farmer co-operate, and between times passing laws or handing down court decisions making it impossible for him to do it. Now at length Congress has passed an amendment to the antitrust code, which is going to clear away one forty-ninth of the difficulty, provided it doesn't make the difficulty greater than ever.

For the real question is whether the new and supplementary law will serve to clear up misunderstandings and make things plain or, on the other hand, will muss up a lot of definitions pretty definitely settled by the courts, and start us on another long voyage of discovery to find out what the law was intended to mean and what the courts are willing to let it mean.

Going back to the beginnings, the original antitrust act of 1890 prohibited every “contract, combination, or conspiracy in restraint of trade.” That was pretty broad, for “restraint of trade” is perpetrated by pretty nearly every form of competition if you want to be technical about it.

This is What Happened

Of course that law was not intended to apply to labor unions and to farmers' co-operative associations for mutual benefit. How do we know it wasn't? Because the discussions in Congress, incident to its passage, agree on that point. It was not intended to apply to railroad combinations either. It was aimed simply at the big industrial combines that looked toward unfair suppression of competition and monopolization of business.

But now see what happened.

A case was brought against one of the big combinations, the so-called Sugar Trust, some twenty years ago. The Supreme Court decided in favor of the trust, and the decision was commonly looked upon as pulling all the teeth out of the law. It remained on the books, regarded as a dead letter.

Along came the Northern Securities combination, through which three of the greatest railroad systems were brought under a common control by the device of a holding company.

The law was not supposed to deal with railroad combinations, but Roosevelt guessed he'd see whether it was or not. So he sued the Northern Securities Company, and the outcome was that the court held that the law *did* apply to railroad combinations, and ordered the Northern Securities dissolved.

So the law now applied to railroads, which its makers didn't intend; but it didn't apply to industrial combinations, which its makers did intend!

After that came the Danbury Hatters' case, involving the question of applying the law to a labor union. In that case the court finally reached the decision that the law *did* apply to labor unions.

The tangle was getting intricate.

About this time came the big era of trust-smashing, and it was presently demonstrated that after all, the law did apply to the industrial combinations. The old decision in the Sugar case was calmly shelved, and in the Tobacco and Standard Oil cases the law was applied to this class of combinations.

Meanwhile folks had been getting their attention attracted to the high cost of living; and small wonder! They couldn't turn around, sit up in bed, get a haircut, or talk politics without having it bat them over the pocketbook with a stuffed club, to the hopeless decimation of said pocketbook's contents.

After much consideration of the problem somebody came forward with the explanation that the high cost of living was caused by the farmer's extravagant methods of getting his stuff to market, and the consumer's wasteful ways of getting it to his home.

If only the farmers would co-operate in selling, and the consumers would co-operate in buying, and farmers and consumers would co-operate in one bigger

co-operation to cover both processes, the problem would be solved! Nothing could be easier. We'd do it at once.

And so we began doing it—in our conversation.

Everybody conversed about it. A few even went to doing it in their business.

And these few shortly discovered the very fact just pointed out; namely, that almost any sort of a co-operative arrangement that will work is a “contract, combination, or conspiracy in restraint of trade.”

What is a Bad Trust Anyway?

Meanwhile the States had been going in strong for antitrust laws. If there was anything the national law didn't reach, the States went after it. The chance of co-operators was getting mighty slim.

But all this time, while state and federal legislatures were passing new laws and strengthening old ones, while state and federal courts were getting more vigorous in their antitrust decisions, the community was clamoring for co-operation.

So at last came the day when people began to see the incongruity of the thing. The clamor for more and more rigor against all forms of combinations began to be modified by a disposition to ask whether some kinds of combinations might be useful and help-

take the broad view, and give the advantage to the associations. That is the spirit of the times.

More than that, other countries have authorized the formation of co-operative, and in some cases of profit-earning, corporations to buy and sell goods for the members, and have permitted rigid contracts binding members to do all their business with the association under penalties. In actual experience, as in Denmark, these have been found decidedly useful to both producer and consumer.

The Europeans are more concerned about substance than about form: they want to make the processes cheap, and that interests them more than the possibility of perhaps destroying a little competition. They take the rather logical view that if competition on a small scale is wasteful, competition on a larger scale is wasteful also; and if the waste should be cut off in one direction it might very well be in another.

An illustration will indicate the new direction our law is trying to give to development in these matters. A company of Iowa farmers entered into an association to market certain live stock in common. Each member was bound, in consideration of the advantages he would derive, to do his marketing exclusively through the organization, and some penalties were provided. If he took business elsewhere he was to forfeit a part of the profits that would have come to him; in short, to be fined.

An outsider, getting color of interest in some stock that had been the subject matter of a transaction through the society, started a suit, and the State's antitrust law was invoked. The attorney-general was drawn into the case, and the end was that the state supreme court knocked out the fine-and-forfeiture provision, which was essential to the working of the whole system.

Now, the modification of the federal antitrust law doesn't help in that Iowa case. The very provision that the Iowa court held illegal is enforced in co-operative societies in Saxony, in Ireland, in Italy.

Now the States Can Get Busy

Again, there is the Cantaloupe case. A group of dealers in large cities were indicted last summer for controlling the cantaloupe trade. Their particular offense against the antitrust law was that they interfered with the normal adjustments of traffic by making assignment of certain quantities of their goods to different markets. A given town or territory could get so many; no more. That seems, considering the perishable character of the product, to be a very sensible regulation, at least for some cases and within reason. Certain it is that there are some very big and powerful co-operative societies in the country that employ the same general plan. They keep strict track of market conditions and demands, and a carload, or even a trainload, of fruit after being billed to a given market center may later be switched off on orders by wire and sent to another place. It may at times seem an imposition on the town that is deprived for the moment of expected supplies, but an extended experience has proved that this strict and businesslike control has enabled the producers to get better prices, has saved vast quantities of produce from being wasted through glutting particular markets, and has in the end made prices cheaper to the consumer.

Recently the case arose of a group of farmers wanting to build a co-operative mill. A “farmers' mill” owned by an ordinary stock company had been a failure in the same community because a few wealthier members had cornered the stock, wrecked the business, and finally got the property by freezing out the minority.

So it was proposed that the new concern should permit no member to own more than a single share. Every shareholder should be bound to sell all his wheat to the society's mill. Profits should be distributed (after 6 per cent on all the stock) in the proportion of every man's patronage of the establishment. No man could sell his share of stock to anybody else without the consent of the society; and in no case could one person have more than one share.

These and other conditions were carefully framed up to provide a co-operative organization that couldn't be stolen from the members. When the plan was perfected a lawyer was put at work to write articles.

He reported that the State's laws permitted no such organization, and that the effort to form it would be a violation of the antitrust law of the State.

Proper codes of state law to permit such organizations are needed. The people are getting ready to use them. The National Government has taken a step in the right direction, but the States must follow. One notable example of constructive accomplishment in this direction has recently been provided by Wisconsin. Its laws might well be studied and imitated by other States.

The legislatures of most of the States will be in session the coming winter. And let me whisper to you, they will have nothing to do but legislate. For the first time in their history they will not be distracted with the business of electing senators.



This legislative-judicial war is to end. Now let us dig up the producer and consumer, that they may get acquainted

ful. The question arose, whether after all good trusts and bad trusts might not be herded off from each other, and some set of definitions adopted that would make it possible to preserve the good and destroy the bad.

That's just what the Clayton amendments to the antitrust law are intended to do. They deal with the big trusts and the little ones; but they don't attempt to treat them all alike. For the big trusts it prohibits or greatly restricts interlocking directorates for financial institutions, and imposes difficult conditions on holding corporations. It looks to ending that species of unfair competition which consists in giving price concessions to a customer in consideration of his agreeing to buy nothing from a rival.

To Check the Waste is Essential

Agricultural and horticultural associations—here's where the farmers' co-operative concerns come in—not organized for profit, or not having capital stock, are excepted from the operations of the antitrust law. This is the effort to give co-operation a chance. There is a good deal of variety in opinion as to what the courts will find it means, however. Of course a co-operative association is commonly organized for profit in some fashion; perhaps not for profits to be paid to the members through dividends, but to provide the members with advantages or facilities that will increase their profits on their business in general. Will that constitute a corporation for profit?

It is going to be a question at last for the courts to decide. But it is a good guess that the courts will



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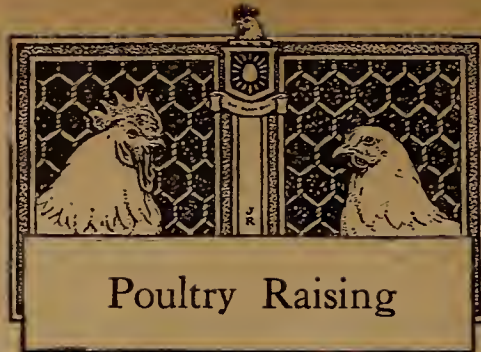
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How I Didn't Caponize

By Leon H. Virgil

ON AUGUST 1, 1914, I purchased four pure-bred Barred Plymouth Rock cockerels, Cornell strain. These were May hatched, and the four weighed 12 1/4 pounds, and cost 18 cents a pound. The birds showed the rapid growth and strong vitality needed for an amateur's efforts at caponizing.

As soon as they became accustomed to their new quarters I kept their rations from them for thirty-six hours, and proceeded to attempt to caponize, following directions closely as to position of bird, position of weights, use of instruments, etc. I also had an antiseptic solution and sponge in easy reach.

I made the incision properly on the left side of No. 1, located the desired organs, and removed the left organ successfully. Then, following directions for amateurs, I made an incision on the right side, but owing to the accumulation of blood from the tissues I failed to obtain the remaining organ. Result, a "slip." Upon releasing the bird he showed weakness, but soon began to eat of a soft mash, and in a few hours was as active as before the operation and is yet alive (at this writing), and is increasing in size and weight very rapidly.

Upon No. 2 a mistake was made in making the incision, the lobe of the lung being punctured, and the bird was immediately killed and prepared for table use.

Upon No. 3 one incision only was made, and the operation was performed successfully as far as I can now determine. The comb and wattles have ceased growing and are pale, there is no attempt at crowing, and the bird shows the retiring temperament of a capon. His appetite is excellent, and he seems to be "making good."

No. 4 was what is termed a "bleeder," and as soon as the incision was made the rapid accumulation of blood prevented the locating of the organs sought, and in the attempt the intestines were ruptured, and this one followed the trail of No. 2.

Two cockerels of mongrel stock, Rock breed, lighter in weight and not as near maturity as the four above, were next prepared for caponizing. The incisions were properly made and organs located, but in both cases the seeming firmness of the surrounding tissues caused a ruptured artery in one and a "slip" in the other, so both birds were killed for family use.

I am making frequent observations of the capon and the slip. They have gained an equal weight of one pound each in the last two weeks and are equal in size. The capon has not consumed as much food as the slip.

Though my percentage of loss is great, as far as the resultant live birds are considered, I have gained much needed experience, and shall continue my efforts to become a successful producer of capons.

EDITORIAL NOTE—It is refreshing to get the actual first experience of this young man who is philosopher enough to believe that continuation of study, observation, and practice will reward him with success.

Don't Dose the Chickens

By M. Russell James

JUST as soon as a fowl requires something more to build her up than the tonic of good food and good care, just so soon it is time to dispose of that fowl. The only way to build up a vigorous flock of poultry—which is but another name for a profitable flock—is to weed out all such birds as soon as discovered.

We often hear of the "molting sickness." There is no such thing with the sort of hens worth keeping through the molt. Molting is a natural function, and the vigorous and healthy fowl kept under proper conditions will go through the molt as frisky as a pullet. The successful poultryman is the one who watches the natural instincts of his fowls and is guided thereby. At the beginning of the molt or when somewhat off in condition fowls evince a distaste for starchy foods and even for much grain. Such a poultryman will not try to starve them to the regular rations, but will furnish what their appetites crave, which is plenty of tender fresh greens—the best poultry tonic and alterative known.

At this time or at any time when the fowls seem a bit off their feed it is well to give them a bran mash made by boiling plucks and such fresh lean meat in salted water till tender, then micing the meat and together with the broth mixing with bran, to which has been added powdered charcoal and sulphur in the proportion of one teacupful of each to every fifty fowls.

This mash fed occasionally and a constant supply of tender green food, hard grain, pure water, and sharp grit will put any hen on her legs if she has a leg worth standing on.

Where there is a tendency to colds in the flock, or during raw wet weather, it may be well to add a small amount of chopped red peppers to the daily mash. This is one of Nature's bird tonics. In the hot Southwest where the chili grows wild among the rocks and woody glens, looking like small cranberries but veritable coals of fire to the taste, the mocking birds, wild turkeys, and other birds eat the peppercorns, not as a regular diet but to tone up. Undoubtedly an occasional seasoning of red peppers as already indicated is beneficial for fowls, but used regularly or even frequently cayenne pepper not only loses its tonic qualities but is injurious to the reproductive organs of hens, especially of the egg breeds.

Antiseptics and Tonics Can Never Take the Place of Cleanliness

The practice of keeping some sort of antiseptic or tonic in the fowls' drinking water largely obtains and has some very good authority behind it. The novice or near-poultryman gets the impression that such things not only kill "germs" but do away with the necessity for absolute cleanliness and purity in drinking water. This is one of the biggest mistakes among poultry keepers. Few of us realize how close the relation is between poultry profits and poultry drinking water. Of the finished product, the fresh egg, 65 per cent consists of water. The poultryman must water his hens well to get eggs, which means that he must keep before them an abundance of pure palatable water. If the water is rendered distasteful to the hens either through flavor or color they will drink as little of it as possible, and there naturally follows a drop in egg production. During times of epidemic it may be well to keep some mild antiseptic, such as potassium permanganate, in the drinking water, but as a rule keep all sorts of dope out of the drink. Keep the vessels clean; keep them brimming over with pure cool water, and watch the fowls drink.

Incidentally it may be said in regard to drinking vessels that the very best kind, except for young chicks, are straight-edged granite pans set up some four inches from the ground on blocks the size of the bottom of the pan. The fowls neither stand on the edge nor scratch dirt into these pans, and unless the sun shines directly into them the free circulation of air keeps the water fresh and cool. The granite is very sanitary and easily cleaned. Just rinse the pans out daily and let drain, then wipe inside and outside with a clean cloth dampened in kerosene. This will thoroughly disinfect the vessels even in epidemics and without rendering the water unpalatable.



Weak and Strong Egg Shells

MOST of us know that plenty of oyster shell is necessary for our hens if the egg shells are to stand the jolts of transportation. But lime is not the only shell-making material needed. The chemist has found that phosphorus and magnesia are both necessary for tough, solid egg shells.

Ground or granulated kiln-dried bone supplies phosphorus, and grains as a rule give sufficient magnesia. Ground bone is also important in furnishing the phosphorus that is found abundantly in the yolk.

In short, the hen needs a balanced ration for shell-making as well as for the contents of the shells.



Garden and Orchard

Snow-Produced Fruit

By R. S. Purter

ONE of the high ventures in fruit-growing is proving satisfactorily successful in the fastnesses of the Rockies, located west of the Continental Divide at the foot of Mount Gunnison, Delta County, Colorado.

This orchard of pears and apples covers an area of approximately 200 acres. This land was located by Mr. George Stewart in the early 80's, who constructed a canal to water it, bringing the water from the North Fork of the Gunnison River. This river is fed by the melting snows which can be seen on the Gunnison Mountains in the background of the pictures, twenty miles away.



A gang of pruners at work in the Stewart orchard



After pruning. Note the carpet of small brush covering the ground. Systematic annual pruning prevents the need of cutting large branches

Where Grass is Harmful

ABOUT the only good reason for having sod in an apple orchard is to keep your shoes from getting muddy in wet weather. In nearly all other respects grass is a bad thing for the orchard. In the first place, it uses and evaporates three times its own weight of water, thus reducing the water supply for the trees. This applies especially to orchards where the trees need all the rain that falls during the growing season. Secondly, the grass uses plant food that the trees need.

The grass also lowers the temperature of the soil. A warm soil hastens the diffusion of fertility through the soil water, aids in ventilation, and is a good thing all around. Furthermore, grass sod cuts off the supply of air and lessens the activity of the beneficial bacteria in the soil. There is an old saying that sod poisons apple trees. While it does not really poison them, the effect is much the same for the reason just given.

Here's a Practical Experiment

F. H. Hall of the New York Station in discussing a ten-year experiment says that the average yield of apples on one orchard in sod for ten years was 69.16 barrels per acre. In an orchard of the

same size that was tilled and from which the sod was kept off, the yield was 116.8 barrels. Taking the cost of tillage, the selling price of the apples, and everything else into consideration, Mr. Hall found that for every dollar profit given by the trees in the orchard with sod, the trees in the orchard that had been tilled gave \$1.89 profit. The net returns per acre were \$74.31 for the sodded orchard, and \$140.67 for the orchard without sod. The trees on the tilled orchard also grew faster, the foliage was more abundant and had a better color, and the difference in the two orchards could be recognized more than a half a mile away.

The only place where sod could perhaps be justified would be on a deep slope where there is danger of soil-washing, or under special conditions like those in the celebrated Hitchings orchard in Onondaga County, New York.

A New Grapefruit

FOR many years horticultural explorers have heard of seedless grapefruit supposed to be grown in Siam. In 1902 a plant was established in the orange house of the Department of Agriculture, but when it bore, the fruits were found to be full of seeds, which were encased in a skin an inch thick, in numerous tough segments of bitter pulp. The Siamese "seedless pomelo" was a

poor thing in every way. It has since been decided that the tree might have been a perfectly good seedless grapefruit, with its fruit ruined by cross-pollination from the other citrus trees in the greenhouse.

Mr. H. J. Boyle of the U. S. D. A. was familiar with this episode, and on learning in the Philippines that the seedless grapefruit is actually grown in Siam, he was commissioned by the Department to go to Siam and make a study of the matter. He did so, and through his efforts the fruit is now established in the Philippines and introduced into the United States.

Now that the grapefruit business is so active in Florida, this fact is of a good deal of importance. Mr. Boyle states that the best variety introduced is "the best citrus fruit of the decumana type in existence, both in shape and flavor, and excellent for market purposes."

The navel orange has to a large extent driven out of the market the orange containing seeds. The seedless grapefruit will do the same thing in the pomelo business unless Mr. Boyle is greatly mistaken—and he has had a fine chance to inform himself in the premises.

Incidentally, such things as this show the value of agricultural explorations, and of institutions empowered to have such tasks performed.

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Secrets

How They Were Made, Served and Eaten for Thanksgiving Dinner

By Helen Peck

SUSANNAH PERKINS sat down in the splint-bottomed chair in the kitchen and took her glasses out of her petticoat pocket. Her husband was coming up the hill, and this was the day for James's weekly letter. Something vaguely elusive in the tone of her son's recent epistles made her particularly anxious to have this one in her hand. That was not by any means a distinct idea in her mind—she just wished that "Father" would hurry as fast as his rheumatism would possibly let him.

She set the spectacle bows behind her ears as he opened the door, and held out her hand. It was a great thing to have a boy so regular with his letters as their Jimmy. Sarah Dows now, why, she hardly knew where Joseph was from one year to the next. That must be hard.

"Well, Mother, here it is. Jimmy's a good boy. He don't forget the old folks."

The gaunt, stoop-shouldered man with the twinkle at the back of his deep-set, gray-thatched eyes handed her the envelope whose upper left-hand corner bore the legend "James F. Perkins, Attorney and Counselor at Law." That majestic title always sent a little thrill through the hearts of these two, though neither would have confessed to such a sentiment for the value of all the farms in Berkshire County.

The woman tore open the envelope, looked with disapproval and disappointment upon the length of the enclosure, and peered at the waiting man over the top of her glasses.

"It's dreadful short this time," she complained disappointedly.

"Well, Mother, 'short and sweet,' you know. Read it out, do. Let's see whether he came out on top in that last case. I've been some— For pity sake, Mother! What's up? An'thing wrong with th' lad? Speak! What's th' matter? You're white as a sheet! Do you want a drink or an'thing?"

"N-n-o, Father. It's—it isn't—it's news, Jonas. It just kind of—"

"Bad news? 'Bout Jimmy's case? Well, there. Don't you care. It isn't good for him to win ev'ry one. He'll be getting a head too big for his hat. Don't you mind, Mother. Next time—"

"It isn't anything about cases, Jonas. He—he's got a—a—girl!"

"A girl, Mother! D'you mean a sweetheart? He's goin' to get married, our Jimmy?"

"Yes. That's all there is to the letter except that he wants to bring her home for Thanksgiving. If they don't hear to the contrary they'll be here to-morrow."

"Well, I declare t' gracious! Well, now! Ain't that just kind of fittin'! To meet your new daughter at Thanksgiving time. Well, well! Our little towheaded Jimmy! Why, Mother! It don't seem more'n about ten days since th' last time I thrashed him for lettin' the cows get into the rye. Well, now! That's just nice. What's her name?"

"He doesn't say. Nothing as sensible as names," she finished dryly.

"What train they comin' on?"

"Doesn't say that either. About th' only thing it says besides how awful lucky he is to get her, is that she works in his office."

"O-o-o-h! Now I see through his last letters! It's that terrible smart girl he's been talkin' about so much lately. Well, Mother, of course we ain't used to girls doing things like that round here, but— Well, Jimmy's a pretty sharp boy. He wouldn't be likely to pick out anybody but the right kind. You know that, don't you, Mother?"

"Why, yes, Jonas, if he did the pickin'. I believe it's the thing nowadays for the lady to 'tend to that herself."

"Now, Mother. Don't you get sarcastic. Ain't you just glad to have a daughter? You've always wanted one. You know you have."

"Yes, Father. Yes, I know. Now you run 'long. I've got a heap of things to 'tend to now, with company coming and all."

"'Company,' Susannah! Your own family ain't company, are they?"

"No, but she isn't that yet. There now. Do go 'long! I've got to go to work for that terrible smart girl."

Susannah Perkins put away the letter

and the glasses. She set her lips tight and turned with swift efficiency from one task to another. The words of the letter ran back and forth, back and forth, as though traveling a deepening groove. Her Jimmy with a girl! And he was bringing her to them just to-morrow. She would have to plan the dinner all over again. Their kind of a Thanksgiving dinner was not the least bit like those city ones she read about in her magazines. Jimmy's girl being a city-bred one would scorn turkey and onions and yellow turnip and baked squash served together on one plate, with giblet gravy delectably binding all into one toothsome whole. Oyster stew would never do to begin with. She would have to set to work that very minute to start a clear soup. City folks didn't have chicken pie nor baked ham with their turkey either. Instead she would make a tomato jelly for salad. Jonas would

feel weak and want I should get you a little dose of spirits or something first?"

"No, Jonas. Anyhow it's all in the mince-meat. Go on now. It don't hurt much." She fibbed bravely with white cheeks and bitten lips.

An hour later when she lay in the bed dragged hastily down-stairs to the sitting-room, when the doctor from the village had bound the wrenched ankle with a comforting tightness, when the neighbor women had come with ministering cups of broth and words of commiseration, when the turkey had been sequestered in the cold pantry and Jonas Perkins had caught his breath, she spoke the words which had flashed into her mind there in her first agonized recognition of real injury to some part of her poor tortured body.

"Father! You've got to do something."

He came to the side of the bed and looked down upon her with face almost as white as her own. Hours like that last take it out of a man.

"Well, Mother, what is it? Want I should get you an'thing?"

"No, Jonas. They won't be able to come now, Jimmy and that girl. You'll have to send a telegram. You better do it right off to be sure it gets there in time."

"All right. How do you feel now, Mother? Hurt you much?"

"No, no. Don't you worry. It's too bad you won't get much Thanksgiving dinner. I'm afraid it'll be mush and milk for us this time unless the neighbors take pity on you. I'm awful sorry, Jonas."

"Sho, now! What's a dinner, I'd like t' know? You might 'a' been killed, Susannah. It makes me cold to think of it."

"Well, don't think then, Jonas. The Lord looked after me even if I was clumsy. You go send the dispatch and we'll have a little Thanksgiving to-morrow all by ourselves. Go on now. I'm all right."

All through the evening the two stared silently into the coals that gleamed in the grate. The man sat by the bedside holding a work-worn hand in awkward fingers. He had given brief assent to her question as to whether the message had gone crackling down the wires, had brought a bowl and fed her spoonfuls of crackers and cream, and eaten his own supper off the pantry shelf. Susannah Perkins had no means of reading the thoughts behind the deep eyes which had lost their twinkle; at any rate, she was too busy with her own.

Of course, she told herself, she wanted to see Jimmy's girl some time. Of course she would have to meet her, and she was going to love her. Certainly. But—but— Well, perhaps it was just as well to put it off a while. She would have time to get a little more used to the idea of it in her own mind first. But how she would miss her lad on Thanksgiving Day. He had never once missed coming home for it. This would be the beginning. She would have to give him up now. Of course she had expected it. All mothers had to sooner or later. This might help as a little taste of what was to come. She wasn't going to be foolish about it, not the least bit.

With that a great, slow, surprising tear slid down her cheek and bounced on the counterpane. She hid it with a swift motion of her free hand and swallowed hard. Then she told Jonas gently that he'd better be going to bed. It was getting late.

Thanksgiving Day dawned as crisp and clear and sparkling as any November day could be. Susannah Perkins had slept a little, and she smiled as brightly as possible to hide the loneliness in her heart, which hurt far more than the diminishing twinges in her ankle. She lay with as much patience as she could muster while Jonas made the coffee according to her careful directions, and burned up the toast. Burnt toast was a fit ushering in of this queer festival, she told herself grimly as she reassured her perturbed husband by telling him that she preferred just plain bread and butter, she really did.

She watched listlessly as the man stumbled awkwardly about the cheery room trying to water her plants and



"Here's my Mary, and yours too"

hate it, but she wasn't going to have any city girl think they didn't know what was what, not she! The dessert would be all right. Even girls who dined in big hotels couldn't help liking her pumpkin and apple-custard pies, and baked Indian pudding smothered in cream and maple sugar. She probably never tasted anything but baker's stuff. She would make the pie crust that minute while Jonas finished picking the turkey. She would bring up a can of tomatoes for the hatefully stylish salad, too, when she went to get the lard pail in the cellar.

Whether it was the haste of preparation, dread of a stranger, or just a turned ankle, nobody knows to this minute. But whatever the cause, the journey cellarward ended with Susannah Perkins in a queer, twisted heap at the foot of the steep stairs. It was all finished in so incredibly short a time that her first sensation was one of vast astonishment. She seemed to be so mixed up as to limbs. She couldn't sort herself out at all at first. Then, when with infinite patience and attendant stabs of pain she managed to straighten herself out a bit and tried to rise she could not. One terrific thrust of agony through an ankle snatched away her senses for a moment and, strangely enough, her last conscious thought before things turned over and grew black was almost one of relief. "Now they can't come!"

"Mother!" The call came from far, far off. "Where are you, Mother?"

"Here, Jonas." Even though faintly, she answered his summons as she had every time he had called for thirty years.

"Where's 'here'? The turkey's done. It's a dandy, if I did raise it. Come and see."

"I—I can't, Jonas. I'm on the cellar floor."

"My Godfrey!" She heard the thud of the dropped bird and his startled exclamation together. Then his heavy boots came clumping down the stairs.

"What's happened? You hurt yourself?" questioned the man breathlessly.

"I fell down somehow. I can't get up. Something's the matter with my ankle. Careful—careful, Jonas. I can't—O-o-o-h!"

"What'll I do? I can't hurt you. I can't do it, Mother. I'm a fool. I do know what to do."

"There, there! You didn't mean to hurt me. You couldn't help it. You'll have to get somebody to help lift me. I'll have to just wait. Marvin Dow'll come. He's home. There, there, Father! Don't you fret. I'm going to be all right soon. Don't amount to nothing."

"I'll go right along. But don't you

"I regard the money spent in caring for my children's teeth as an assurance of their future happiness" said a mother, indicating her little boy and girl.

"Good health is so dependent upon good teeth," she continued "and personal appearance is so much improved by firm white teeth, that I teach the little ones to brush their teeth twice every day; and I take them to the dentist twice a year."

Every wise mother realizes the importance of teaching her children to properly care for their teeth and her best aid is Colgate's Ribbon Dental Cream with its delicious flavor, which children like.

Colgate's Ribbon Dental Cream insures sound, clean teeth. Sound teeth insure better health and better looks.

You too should use COLGATE'S RIBBON DENTAL CREAM

Delivered TO YOU FREE on Approval and 30 days Trial



SEND NO MONEY but write today for our big 1915 catalog of "Ranger" Bicycles, Tires and Sundries at prices so low they will astonish you. Also particulars of our great new offer to deliver you a Ranger Bicycle on one month's free trial without a cent expense to you. **BOYS' fires, lamps, sundries, etc.** from our big handsome catalog, it's free. It contains "combination offers" for re-fitting your old bicycle like new at very low cost. Also much useful bicycle information. Send for it. **LOW FACTORY PRICES** direct to you. No one else can offer such values and such terms. You cannot afford to buy a bicycle, tires or sundries without first learning what we can offer you. **Write now. MEAD CYCLE CO., Dept. T-83, CHICAGO, ILL.**

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A Bad Dual Purpose

If We Are to Work for Two Qualities, Both Should be Worth While

MR. NORMAN O. EDDINGTON, an Illinois breeder of Holstein-Friesian cattle, favors us with the pictures of two calves of that breed, one of which, a grade out of a pure-bred sire, is perfectly marked according to the standards adopted in this country. The other picture shows a pure-bred calf having markings which are supposed to betray the grade. This pure-bred is ineligible for registry, no matter how excellent it may be in dairy qualities. Here we have what seems to us a bad dual-purpose system of breeding.

Is This Not True?

The breeder must keep his eye on two qualities—dairy excellence and coat pat-



No. 1—Grade Holstein bull calf strongly stamped with Holstein markings by pure-bred sire

of them valueless—milk and color of hair? In Europe the Holstein-Friesian Association admits pure-breds of any color, even red. Utility breeding should not be required to pay any attention to so useless a thing as the distribution of black and white—or so it seems to us.

Mr. Eddington, the owner of these calves, has his own views on the subject and here they are.

Calf No. 1 is a grade Holstein bull, the offspring of an ordinary cow and a pure-bred Holstein bull. The calf's markings are those of a pure-bred, and being of large type he shows his Holstein blood well. This plainly lays before us the necessity of a pure-bred sire for herd improvement, and most dairymen are fast coming to realize this important point of culling out the hoarder cows, keeping the best ones, and using a pure-bred sire.

But the value of a good sire does not stop here. My neighbors deem it a great accommodation to have the privilege of the use of the bull. Many farmers do not keep enough cows so that it would pay them sufficiently to keep a bull. I charge a service fee of \$2 per calf, providing, of course, the calf is dropped alive. This enables my neighbors to get better stock for a very small outlay.

Good Grade Cows Bring High Prices

One neighbor bred a cow to our bull. The cow was red except a partly white underline and white face. The calf, which was a heifer, proved to be as well marked as the one shown in the photograph. When it was six months old the owner was offered \$40 for her, but refused, owing to the fact that she was from one of his high-producing grade cows and from my registered Holstein bull of Korndyke breeding. This heifer at the present prices would bring about \$25 for beef. In other words, \$15 had been added to her value just because she had a pure-bred sire instead of an ordinary one. This made her a grade Holstein instead of a scrub.

As breeders we must be careful of the criticisms we make of grade herds, lest we harm the source that has helped to build up our own businesses. Such herds have

helped many a man to get on his feet, and at the same time good grade cows are nothing to be ashamed of. The best ones sell at public auction for from \$100 upward. Only a year ago I saw a two-year-old grade Holstein heifer coming fresh sell for \$106.

Furthermore, I have found it a hard proposition to buy first-class registered cows. No one wants to sell his best ones, consequently a man has a hard time finding the pick of a herd for sale. Last winter I was talking with a Holstein breeder who keeps the best-bred cows he can get. He remarked: "There is a Holstein heifer calf eight months old. Her mother died when she was a week old. I was offered \$250 for her a short time before she died, but refused because she was my best cow. Her great grandam was admitted to the advanced registry, and her grandam at twenty months of age, six months after calving, gave 206.2 pounds of milk and 9.5 pounds of butter in seven days."

The heifer is now sixteen months old, and her owner has been offered \$150 for her, but she is too valuable to be for sale. Personally, I have found that the least expensive way is to buy registered calves and raise them. You then know what you have, and they will always grow into money.

When I started with pure-bred stock, I purchased a small registered cow due to freshen in four months. She was not first-class. Her udder and teats were small in size. I paid \$50 for her, but she dropped a heifer calf sired by a registered bull of splendid breeding. This calf I sold at eight months of age for \$100, netting me \$50 clear above the cost of the cow.

Cull Pure-Breds as Foundation Stock

Such opportunities sometimes come to the one who starts in with pure-bred stock. A cull pure-bred cow from high-producing ancestors will often give a valuable calf.

Picture No. 2 shows a calf that is a pure-bred but was rejected for register on account of objectionable color markings. This is rare among Holsteins, but in a few individual cases the markings bar registration, as they should. The Holstein-Friesian Association of America is doing a great work along herd improvements, for if such animals were recorded it would surely degenerate the breed instead of improving it.

Mr. Eddington's last statements we believe are not fair to his own efforts in breeding, or to the calf that happens to be marked in such a way as to displease the association. The demands of utility will sooner or later force such breeds to abandon the coat requirements which are foolish and wrong. But his good words for grade cows are worth heeding. Never under any circumstances use a grade bull.

The Use of a Grade Bull

On this subject Mr. Eddington says:

The pure-bred sire is not only half the herd but eventually is the making of all the herd, as he is able to influence all the offspring of the herd bred each year, while



No. 2—Pure-bred Holstein calf refused registry because of color markings

a cow is able to show her influence only in a limited way. This is a very important matter in a grade herd, as the ordinary sire has little, if any, influence on the offspring, owing to the fact that many a cow's breeding is superior to his. The calves from such a sire do not improve the herd.

Crops and Soils

In Regard to These Things We Must Always be Alert

Silage, Yea and Nay

THE feeding of silage to sheep has been a debated question. Last year 31 out of 37 Kansas feeders strongly recommended good silage, free from mold, for ewes carrying lambs, and also as a maintenance ration and as a part of the fattening ration for lambs and sheep. Among the seven who did not entirely favor silage as a sheep feed, one acknowledged that his silage was moldy, one considered it good for breeding ewes but not adapted to range lambs that were being fed. Three were uncertain, having fed but little; one recommended feeding only in small quantity; and one unreservedly condemned silage for feed.

The truth appears to be that silage made of well-matured corn and free from mold is an excellent economical feed for breeding sheep and for lambs and sheep being fattened.

Sugar Prospects

SEPTEMBER 1st the condition of sugar beets in the United States was 92.5 per cent of normal. This will mean, according to the Bureau of Crop Estimates at Washington, that the sugar-beet crop will be about 800,000 tons short of the 1913 crop. The chances are that sugar will be one of the last food products to come down in price.

Sweet Clover the Subsoiler

SWEET CLOVER is one of the best miners we have. Few plants develop root systems equal to those of this plant. Judge Quarton said so when pointing in FARM AND FIRESIDE to the growth of sweet clover on his farm. But sometimes we need to see for ourselves. Grantham of Delaware has made a comparison which is shown in the picture accompanying this statement. He says:

A year ago sweet clover, alfalfa, and Mammoth red clover were sown side by side in oats. Owing to the lateness of the season and wet condition of the ground the oats were not seeded until April. When the oats were harvested the sweet clover had made a growth of 18 inches, the alfalfa 10 inches, and the Mammoth red clover about 5 inches. On August 1st a number of plants of each of the legumes was dug up, care being taken to remove the roots with as little damage as possible. The dry, hard condition of the soil prevented the removal of the roots of the alfalfa and sweet clover to their full length. The photograph shows

the relative root development of the three legumes. No. 1 is sweet clover; No. 2, alfalfa; No. 3, Mammoth red clover. The tops of the sweet clover were clipped at the cutting of the oats, consequently the photograph does not show the entire top growth. The sweet clover roots were fully twice the length and size of the alfalfa roots. The root development of sweet clover during a period of ninety days, when grown with a nurse crop of oats, indicates the value of the plant as a subsoiler and its bearing on soil improvement.

The soil on which the legumes were grown is a clay loam and produced 50 bushels of oats per acre this year.



Sweet clover, alfalfa, and red clover are close relatives, but they do not eat at the same table

Besides this evidence in favor of sweet clover we must remember that the sweet-clover roots, quick in growth as they are, are likewise quick to rot. Consequently they do not make the trouble that alfalfa roots do at plowing time, and some say they equal alfalfa roots as soil enrichers. And yet sweet clover is not esteemed as is alfalfa. Why? Perhaps we have used neither of them as much as we should, and so do not fully appreciate either of these crops.

Look Out for Fake Crops

By Harry B. Potter

JUST recently there came to our attention an advertisement in a daily newspaper for a wheat called "Marvelous." The ad said:

This new wheat is really marvelous. Nothing like it was ever in the country. It marks the beginning of a new era in wheat culture because it will not only save five sixths of the seed to sow the winter wheat crop but when the new Marvelous wheat is generally sown it will raise the average

as easily as ordinary wheat seeds up a few. Thus 15 pounds (1 peck) of Marvelous wheat will make more stalks than 1½ bushels of any other wheat. Five sixths of the seed can be saved. The secret is in the vigor and stooling properties of the new wheat. The Marvelous wheat can be of enormous benefit to agriculture.

The Marvelous is a native American wheat. The original plant from which all the present stock sprung had 142 heads. Think of this—142 heads from one grain! The straw averages about four feet high. It is strong and hard. The heads are very large. Bearded. Grains are red, large and hard. It is hardy. That it grows vigorously you must know from what we have already said. This wheat is of such a pronounced type as to stamp it distinct, separate, and apart from all others. There is as much difference between this wheat and others as between the large-growing and heavy-yielding varieties of field corn and pop corn.

Sow only 15 pounds (1 peck) of Marvelous wheat to the acre. Sow two weeks earlier than you would sow other kinds, if possible. Set drill to sow one-half bushel per acre and stop up every other drill tube, putting only a peck to the acre. If sown late or on poor ground, sow at rate of 20 pounds to 30 pounds per acre. A peck of Marvelous wheat will produce more stalks, heads, and grain than a bushel and a half or two bushels of other wheat on the same ground. This new wheat has proved its adaptability from North Dakota to South Carolina, and we want to introduce it in every community. We then want our customers of this year to help us put it on every farm. If you don't start this year you will miss the benefits a year on your own farm and the extra money you can make by selling it to your neighbors. Don't crowd it. Follow instructions.

This ad, published in this instance by an Indiana seed house, sounded peculiar to us, so we addressed a letter to A. T. Wiancko, chief in soils and crops of the Indiana Experiment Farms. This is what he says:

As to the "Marvelous" wheat, I may say that we have been growing this variety the last two or three years, and have also tried it with different rates and different methods of seeding as has been recommended by its advocates, but it has proved neither harder nor a better yielder under any method of treatment than our most common varieties; in fact, it will hardly rank up to average. We sowed it at 3 pecks per acre, using every alternate hole, and at 6 pecks, as usual, plot for plot with Michigan Amber. The Michigan Amber yielded 10.1 bushels and the "Marvelous," or "Stoner," which is the same thing, yielded 4.7 bushels per acre. In the regular variety test plots which were

duplicated the "Marvelous" averaged 18.1 and the Michigan Amber, which is our check variety, averaged 26.5 bushels per acre, while Red Wave averaged 25.6 and Velvet Chaff about 23 bushels per acre.

We have heard a great deal about this variety, and have had more or less correspondence with some of the people who are advocating this wheat, but our experience with it certainly does not justify us in recommending it.

There seem to be fake crops as well as fake cures. The experiment stations certainly render a valuable service for us in finding them out. The stations are the guardians of our interests. We could lean upon them much more than we do.

He Asked the Soil

MR. IRA PLETCHER of Fayette County, Pennsylvania, is not far wrong in saying, "I believe it is often practical to have an experiment station right on the farm." But all men who believe this have not the initiative necessary to put it into effect. Mr. Pletcher had. He wanted to know more about potatoes and the fertilizers he should use to grow them. Here is the story of what he did and the results he secured.

I wanted to find the results of the single fertilizing elements, the two combined elements, and the complete fertilizers. This experiment was made by planting Early Bureka potatoes May 15th, in rows side by side, each row being four rods long and containing 60 hills drilled about 13 inches apart in the row. They were dug and weighed August 3d. They were cultivated and hilled the same way.

As we had a very dry season, about one third of the tubers (by weight) were not marketable and not counted in the gain or loss in the list.

The yield of marketable potatoes was as follows:

Unfertilized	.49	bu. per acre
Raw bone meal	.60 1/2	bu.—gain 1 1/2 bu. or 24 %
Sulphate of potash	.60 1/2	bu.—gain 1 1/2 bu. or 24
Dried blood	.35	bu.—loss 14 bu. or 28
Nitrate of soda	.21	bu.—loss 28 bu. or 57
Bone and potash combined	.70	bu.—gain 21 bu. or 43
Bone and blood combined	.51 1/2	bu.—gain 2 1/2 bu. or 5
Blood and potash	.56	bu.—gain 7 bu. or 14
4-8-4 home-mixed	.65 1/2	bu.—gain 16 1/2 bu. or 33
Fish guano	.74 1/2	bu.—gain 25 1/2 bu. or 52
Mape's Potato Manure	.79 1/2	bu.—gain 30 1/2 bu. or 62
Mape's Economical Manure	.65 1/2	bu.—gain 16 1/2 bu. or 33

One of the most important results shows that nitrate of soda was the most expensive element used, and reduced the yield over one half. It reduced the yield 8 per cent last year in a similar experiment.

Mr. Pletcher asked the soil what it wanted, and got an answer which will be valuable not because it points to what will be true every year but because it shows what was true one year. One year's test is never conclusive, but it is of use when placed alongside of years of field experience or years of other experiments. If Mr. Pletcher continues his work he will in the course of six or eight years have results that, when combined and compared, will guide him pretty close to the most profitable line of farming.

In such tests as these, too, the value of the fertilizer and of the crop gain should not be forgotten. Perhaps, in this experiment, if local fertilizer prices had been reckoned in and market prices on potatoes considered, Mr. Pletcher would have found that he actually lost money where his table shows gain.

As we look over these figures again it is difficult for us to reconcile some of the gains and losses, but probably Mr. Pletcher can as he looks at the work of past years. He knows his soils, too.

All experiments must be looked at broadly and without haste, but that does not argue against experimenting on the farm.

How Nitrate of Soda Boosts Plant Growth

OBSERVANT farmers, fruit growers, and gardeners are frequently astonished at the extraordinary growth and vigor of plants following an application of nitrate of soda. Such swift transforming of run-out grass fields and unthrifty fruit trees from near death into luxuriant life has led many to believe that nitrogen was the one important element of fertility needed for their soil.

Listen to Mr. H. D. Hall's explanation of the effects of nitrate of soda on plant growth: "Experiments carried on at the Rothamstead Experiment Station show that in addition to the influence of nitrogen in the nitrate of soda the soda base acts on the insoluble potash compound in

the soil and sets free the potash for the plants' immediate use. This double result from the use of nitrate of soda will be of special importance next spring when commercial potash will be so difficult to get."

Potash at Home

IT HAS been but a few years since the possibility of making potash from the kelp beds in the Pacific Ocean on our Pacific coast was first brought to the attention of the nation. If we are not mistaken the suggestion came from the Department of Agriculture at Washington.

A small plant has been established at San Diego, California, for the purpose of utilizing this great natural resource which yields other products in addition to potash. Under the stimulus due to cutting off the European supply of potash salts during the great war, these enterprises will no doubt grow rapidly in number and size.

The Dupont Powder Company is reported to have applied to the State of Washington for terms under which it may use the Washington kelp beds as a source of potash to use in the manufacture of high explosives. Land Commissioner Savidge will ask the legislature for authority to lease the beds.

Whether or not potash derived from this giant seaweed can be made so cheaply as to compete with the Strassfurt salts is a question. But if it can, a great new national resource will have been developed.

The Farm Garbage Question

By Clifford E. Davis

ON SOME farms the refuse at hog-killing time, the winter's coal ashes, old cans, and other trash make loud-smelling piles near the house, that are an offense to the eye and an insult to the nose. Careful thought and a little time will transform this waste into actual benefits.

Spread the waste ashes on the orchard or a poor field. Use the cans to fill up a gully. Burn old egg shells, dirty paper, and rotten boards. The intestines, paunch, hair, and other waste left from butchering should be buried about as deep as you would plow.

Old bones, rags, and metal should go to the junk barrel for the junk man. Soapy water should go on poor soil, which it will enrich. Old bottles and broken glass should be buried in a deep hole. Bury old nails near the roots of peach trees.

Bury or burn old feathers, but the best should be dried and made into cushions. Also bury decayed fruit, rotten potatoes, cabbages, dead hens, and all dead animals.

A farm "crematory" is a splendid thing to have for burning garbage and trash. Build one of stone, making it at least 4 feet square and 4 feet high. Have it open at the top for convenience in burning brush; also provide a door at the bottom for kindling and for raking out ashes later to be used on the field.

If farm garbage is not allowed to accumulate, and if stagnant pools are filled up, flies and mosquitoes will never be serious pests.

Stone should go to make the road better, and old broken barrels, berry crates, fruit baskets, and paper boxes may go to the fuel pile. Put corn cobs in a tin-can oil bath and they will make ideal winter fire kindlers.

New Books

RURAL IMPROVEMENTS, by Frank A. Waugh, deals with phases of our country life that now sensibly or insensibly are stirring the minds of most thoughtful citizens. The need and advantage of blending beauty with utility is convincingly shown by the interesting statement of facts and beautiful illustrations. Mr. Waugh has the horticulturist's appreciation of the place the picturesque and beautiful are to fill in our country life in the future. 265 pages. Orange Judd Company, New York City. Price, \$1.25.

The Russell Sage Foundation has published a pamphlet which should be in the hands of every leader in the formation of co-operative loan associations, and of every member of such associations. It is entitled, A CREDIT UNION PRIMER, and bears the name of Arthur H. Ham, a director of the Remedial Loan Division of the Foundation, and Leonard G. Robinson, who has won a high place in rural finance by his successful management of the Jewish Agricultural and Industrial Aid Society. This primer contains in the form of questions and answers just the information needed by the man who is interested in rural co-operative loan associations and feels the need of information. It also contains many useful forms to be used in effecting such organizations. Published by the Russell Sage Foundation, 130 East Twenty-second Street, New York City. Price, 25 cents.

Another excellent pamphlet, the price of which is 15 cents, is THE CO-OPERATIVE PEOPLE'S BANK, by Alphonse Desjardins. It tells of the successful history of co-operative loan associations in Canada, and may be had of the Russell Sage Foundation.

He Was Surprised

Not long ago we received a letter from a member of our FARM AND FIRESIDE family expressing much surprise at his recent treatment by one of our advertisers. An article which he had purchased was found upon its arrival to be defective.

Upon notifying the manufacturer of this fact he received a prompt request to return the article at once, charges collect, and the statement that another was being forwarded to him.

This is the kind of treatment our readers receive from FARM AND FIRESIDE advertisers. They are members of our big family also, and we are personally acquainted with almost all of them. They are a fine lot.

That's why we guarantee you against fraudulent treatment in dealing with them. We stand ready to make good to you any such loss.

KEEP a good, deep, dry bed under the horse while he is in the stable, day or night, on Sundays especially. The more he lies down the longer his legs and feet will last.

TOWER'S FISH BRAND REFLEX SLICKER



helps you run the farm on rainy days. Day in, day out, it's on the job to keep you dry and comfortable at your work. Patented Reflex Edges stop every drop from running in where the fronts overlap and button.

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Last year Farm and Fireside saved 50 cents, on the average, for each one of its readers who ordered their favorite magazines through its Magazine Bureau. Farm and Fireside can do this because its long affiliation with the foremost publishers enables it to purchase subscriptions at greatly reduced rates.

Farm and Fireside takes particular pride in the service we are able to offer old subscribers this year. To test this yourself look at the clubs that are presented below. Select your favorite magazines and your renewal to Farm and Fireside and send the club with your remittance before December 12th.

Remember these rates are for a limited time only. Better mail your order within the next ten days or you may be too late. Even though your subscription is not due to expire for several months, now is the time to renew, because we can save you money.

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Smut

It is Doing for the Northwest What the Boll Weevil Did for the South

By E. F. Gaines

THE "one-crop system" is gradually giving way to rotation and diversification as our Northwestern country becomes more thickly populated and progressive farmers take the place of the early ranchers.

Smut is one of the factors that is helping bring about this change. The smut problem is a serious one. The winter wheat this year, through large areas, will average 15 to 25 per cent of stinking smut. And this in spite of the fact that the majority of the farmers treat their seed with copper sulphate or formaldehyde by the most approved methods. When this is not done, as much as 75 per cent of the crop may be taken.

Evidently the smut remains virile in the soil from year to year and infects the clean seed after planting.

Besides the great reduction in yield caused by this stinking smut it lowers the market value of the rest of the crop; many carloads every year being discounted from 2 to 10 cents per bushel, or condemned entirely and thrown out for feed on account of the smut.

Nor is this all. The smut when dry contains 77 per cent of volatile, combustible material. This makes it a dangerous factor in threshing. The smut, dust, and smut-laden chaff around a threshing machine, once ignited, burn with such violence that it is seldom possible to save the machinery or grain.

Explosions Do Occur

True spontaneous combustions or "smut explosions" are probably comparatively rare. The origin of the fire can usually be traced to a spark from the engine, a "hot boxing" on the separator, or matches in the unthreshed grain, carelessly or maliciously dropped by some one.

The dry season and great prevalence of smut this year have greatly increased the damage done by fire. There have been about one hundred threshing outfits burned in this (Whitman) county of Washington this season during the month of August.

About 50 per cent of these burn-outs are believed to be of incendiary origin. Bunches of matches have been found in the unthreshed grain, and three men have actually been caught in the act of placing matches in the bundles of wheat. Some of the more violent explosions are directly traceable to explosives other than smut, which have been maliciously placed to destroy the machine.

Many of the threshing men have connected the exhaust from the engine so that steam can be forced through the separator under pressure in case of fire. This has met with pretty uniform success. Several fires have been quenched in this manner before any material damage was done.

There are two possible solutions to the smut problem, as I see it: One is to breed a smut-resistant wheat; the other is to break up the big wheat districts into diversified farming.

At present the Turkey Red wheat presents the highest degree of smut resistance of any of the commercial winter wheats.

The Washington State Experiment Station is trying by plant-breeding methods to increase this quality of resistance and at the same time retain the stiff straw, non-shattering heads, and other qualities so important to the wheat raiser of the Pacific Northwest.

I Like the Crows

By Ernest Chamberlain

MY NEIGHBOR does not at all agree with me about the usefulness of the crow. Ridiculing my policy of protection, he sent his man down to shoot or drive them all from his crops. He advised me to follow the same plan as the persecuted birds now took refuge in my fields.

"They will rob you and ruin your corn," he predicted, but I doubted this and told him so.

"If the crows are working around the corn it is because they find something to feed upon," I insisted, "something that will do the corn no good, I fancy," and my neighbor went away quite offended that I would not take his advice.

Later he came to me with complaints that his corn was firing. The lower leaves had yellowed, he said, and as the ears were only just beginning to shoot there was little likelihood of their filling or making any crop at all.

"That's queer!" I reflected—as the season was not at all dry. "Is my corn in that condition?"

"I could not be sure from across the line," he answered, "but I suppose so. You have the same soil."

We went together down to see, and found no trace whatever of the yellowing of the lower leaves. What we did find here and there around the stalks of corn was a great number of small round holes.

"It's those rascally crows," declared my neighbor when I pointed them out.

"Let us go over and see what has caused that firing," I suggested in reply to this sentiment, and we climbed the fence and crossed over.

Picking out the driest, yellowest stalk, I pulled it up, and we examined the roots to find, what I expected, the several large white grubs feeding on its juices.

"That's why my corn has not fired, John Turner!" I said, pointing to a bevy of crows that flew cawing from one part of my field to another.

My neighbor looked disconsolately up and down the length of his yellowing fields.

"Wish there was some way to fetch them all back again," he said regretfully, but that was one of the things easier wished for than realized.

Why Does Soil Get "Sick"?

One Answer

WHY do not all crops yield in abundance? What is the matter with the soil, that on one field a crop does well and on another it does not?

Three years ago FARM AND FIRESIDE gave one slaut to this situation by pointing to the work which the Bureau of Soils was doing. Dr. Milton Whitney and his associates had pointed to the fact that when a soil does not produce crops it may be sick, not necessarily deficient in nitrogeu, potassium, or phosphorus. They found that in many soils the presence of dihydroxystearic acid caused plant growth to do poorly. It was pointed out then that this acid was associated with certain physical and chemical qualities of the soil. To quote our own statement: "Certain it is that the soil conditions under which the acid is found are generally poor drainage, poor aeration, too great compactness, deficiency in lime, lack of good oxidation, lack of adequate supply of nitrates, and tendency to fungus development, along with exceptional poorness of crops. No single one of these factors can be said at the present time to explain its origin, wholly. The remedies are found in liming, drainage, and the introduction of good organic manures and fertilizers, along with soil cultivation."

And now the Bureau of Soils points to another characteristic of poorly cared for soils which causes decreased crop yields. These chemists tell us that many soils contain an aldehyde, a chemical compound which in all of their tests deeply affects the growth of plants in the field. It decreases the yield of crops, and persists in soils several months. There is some evidence, they continue, that lime and phosphate will overcome the effects of this aldehyde. In other words, these scientists are finding out for us why it is that lime and phosphorus do such good work for us when placed on our fields. One by one the facts are made known. After all of them are put together we will probably see that no one cause reduces plant growth, and no one remedy will cure all of the soil sicknesses.



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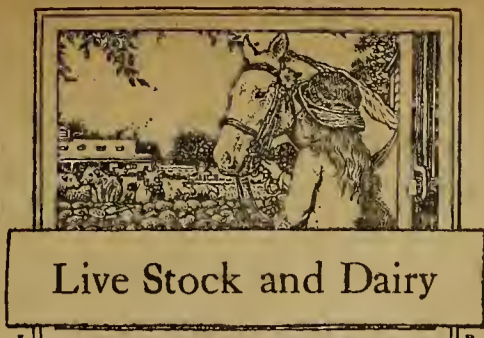
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Egypt Had Goats
By W. S. Bull

YOU might go farther back than Biblical times to prove that the ancients both knew and appreciated the goat. The original of the enclosed cut was drawn by an artist on the walls of an



Egyptian tomb several thousand years ago. It looks to me as if he was better posted regarding the short-haired common or garden variety nanny than are many of our present-day writers on the milch goat.

"Feeder" Foxes

CATTLE for feeding, grown on cheap orange and finished in the more densely populated regions, have been a feature of the American cattle business. The same or a similar phenomenon seems to be taking place in the growing of foxes for their fur.

According to "The Canadian" 500 foxes were shipped from Saskatchewan points to the eastern provinces during 1913. Over 100 of these animals were shipped from the city of Prince Albert. It is probable that most of these "feeder" foxes went from the fox ranges in the West to the fur farms of Prince Edward Island to be "finished."

Fabulous profits are being made by the people who originated the business, and it is probable that it will be reasonably profitable for a long time to come, and perhaps permanently profitable. It is much the same sort of thing that has happened to the ostrich-feather business. Once a matter of hunting and trapping, it will become a stock-raising proposition.

The United Consular Service warns us that the boom in fox-farming will probably bring losses to investors—like other booms—although the industry has some merit at bottom.

Cause and Cure of Corns
By Dr. A. S. Alexander

THE hoofs of a young unshod colt fit properly. Nature made them so; but man soon mars Nature's work. He does it by trimming, cutting, rasping, and burning the hoof to make it fit the shoe instead of making the shoe fit the hoof. Then he uses large nails, drives them high and clinches them tightly. The colt now has to lie in a stable on a dry board floor, and once a month or so the injurious work of the shoeing smith is repeated.

In time the hoofs shrink by drying out, and in so doing they pinch down upon the fleshy leaves and fingers (papillae) from which the horn tubes and leaves of the hoof grow and derive their nourishment. The heels now contract and the space between the bars and frogs lessens in size. The entire hoof becomes feverish and unhealthy. It is now easily bruised, and bruising, pinching, and contracting cause corns. A corn appears in the sole at the angle between the bar and wall at the heel. It may be red in color from staining by blood which has escaped from the sensitive underlying sole (pododerm) and saturated the

porous horn tissues, or it may be dry and composed of white powdered horn. The red corn is new and acute; the white, dry one, old and not necessarily the cause of pain.

The worst form of corn is that in which pus is present, burrowing under the sole and wall and seeking vent at the juncture of the horn and hair at the coronet (hoof head) near the heel. Corns cause acute pain and lameness when forming or suppurating, and give the horse a stilty, stiff, "groggy," tender-footed gait when chronic. When pus is burrowing, the pain may be so acute that the horse blows, sweats, has fever, lacks appetite, and can scarcely put pressure upon the affected hoof. The latter form of corn usually is caused by an ill-fitting shoe, or one that has not been reset in time and consequently gets out of place and bruises the sole at the seat of the corn.

To prevent formation of corns the sole bars and frog should not be mutilated when fitting on the shoes. The shoes should be made to fit properly, and should be reset at least once a month. The walls of the hoof should not be rasped. Small, fine quality nails should be used and properly placed and driven. Hoofs should not be allowed to dry out on board floors. Plenty of bedding should be used. Hoof packing should not be needed, but wet clay is not objectionable.

Cow-manure poultices should never be used. A run, barefoot, on low, damp pasture is useful when corns have started. The hoof heads may be blistered once a month with cerate of cantharides to stimulate quick growth of new, sound horn.

Corns should be pared down at least once a month, and flat bar shoes put on; or three-quarter shoes may be used. The

object should be to keep the shoe from pressing upon the seat of corns, or contracting the hoof at the heels.

Suppurating corns require the immediate attention of the skilled veterinary graduate who will operate by cutting away all loose and under-run horn of sole, frog and wall, removing all diseased tissues thus exposed, swab wound with a cauterizing disinfectant, and treat with dry antiseptic dressings until cured.

KNOWLEDGE is power if at work. It won't even make fertilizer if allowed to decay.

TAKE off the harness, collar, and all when the horse comes in to feed. He will rest better without it.

Exercise is Needed
By Dr. A. S. Alexander

LYMPHANGITIS is brought on by allowing a horse to stand idle one or more days when receiving the usual amount of feed given when at work. One can prevent the attacks by allowing the animal a roomy box stall in the stable, never letting him stand a single day idle in the stable, and always stopping all grain feed when there is no work for him to do. During idleness turn him out in yard or field for exercise, and feed lightly on roots, bran, hay, and grass. At all times try to keep the bowels active. Roots or a little silage will do this.

The horse will be likely to do better if you have his teeth attended to by a veterinarian, and also have him clipped in the spring.

Bandage the legs from feet to hocks each time he comes into stable, and they will be less likely to swell. If swelling starts, or you are afraid that lymphangitis is coming on, give a pint of raw linseed oil, cut down the feed, and in the drinking water twice daily dissolve two teaspoonfuls of saltpeter. Give exercise and bandage legs.

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The Market Place

What Experience Says About the Sale of Farm Products

Side Crop Becomes Money Crop

By G. A. Randall

I HAVE grown rutabagas, or Swedish turnips, for years as root crops for cows and sheep, but did not until this season realize that they were a profitable market crop.

They have a ready local sale (Gladwin County, Michigan) at from 45 to 50 cents per bushel of 60 pounds, and a commercial sale by the ton at \$7, when properly topped and cleaned.

From one-fourth acre planted this season and thinned early, I sold \$38 worth locally to my neighbors and my market. The main crop was sold, when matured, at \$7 per ton.

Nearly 7 tons of salable roots were sold, bringing \$47.75. This is a total of \$85.75 from this quarter acre.

The seed cost 20 cents. They were drilled or seeded with a garden drill in rows 24 inches apart and thinned to about 6 inches apart in the rows. They were cultivated often with the horse cultivator and kept free from weeds.

We could have sold a much larger amount had we grown more, and at this rate nearly \$400 would have been realized from an acre, an amount comparing favorably with a good onion or other truck crop.

For a small louse which infested only the leaves, we dusted on hydrated lime. (Lime plaster or perhaps ordinary forms of slaked lime would prove as satisfactory.) To this was added Paris green at the rate of one ounce to four pounds of lime. One application was sufficient.

The general order of farm crops seems to be changing with the times, and crops heretofore but little grown by farmers and truckers are coming more and more in demand. The present European war is perhaps stimulating the demand along these lines.

Getting Together to Sell Eggs

By William H. Hamby

THERE are a hundred farmers around Salem, Missouri, in the Dent County Co-operative Egg and Poultry-Marketing Association. The movement was started by the State Poultry Experiment Station at Mountain Grove, which is assisting it in every way possible.

The association employs an expert egg man to handle the grading and marketing. This does not require all of his time. He is engaged in other business. The expense involved is not heavy.

The association works along these lines: To get good eggs; to market them right; and then get good prices.

In order to get good eggs, simple rules are sent to each member. Such, for instance, as:

1. After hatching time sell off all the roosters. Infertile eggs keep much better than fertile eggs.
2. Have clean nests. Never wash eggs.
3. Handle eggs as little as possible.
4. Gather the eggs every day. Keep them in a cool place. In hot weather market them at least every other day; every day when possible.

The eggs are very carefully candled and rigidly graded. The association's "strictly fresh" eggs have already established a reputation, and are bringing a fancy price on the St. Louis market.

While it is still an experiment, a pretty good indication that it is proving profitable is found in the membership roll. During eight months only two of the hundred names have withdrawn, and they were merely "miffed" because of the rejection of inferior eggs.

The president of this marketing association, L. D. Vandivort, has this to say about the present prospects of their undertaking:

It will pay any community to get together and form an association similar to ours. But be sure and pick out those who are willing to stick together. We have found out that it is not a question of finding a market, but of getting enough of the right kind of eggs to supply that market.

Sweets That Top the Market

By Harris T. Kille

THE sweet potatoes shown in this photo were grown in the sandy soil of southern Jersey.

The seed potatoes were laid in a furnace-heated bed about the middle of March. While the young plants were starting and forming roots in the bed, the field was being prepared. The rye cover crop was plowed early. In the winter this had been top-dressed with horse manure at the rate of 8 to 12 tons per acre. After plowing and harrowing, the field was marked out in rows 3 feet apart. A 2-8-10 brand of fertilizer was

drilled in the rows at the rate of 700 pounds per acre.

The sweet-potato plants were removed from the forcing bed and set in the field in May. Throughout May, June, and the first half of July frequent horse cultivations and hand-hoeings were given.

Digging began the middle of September.

In preparation for market three grades were made, first size, second size, and "feed." The feed consisted of the small, cut, and diseased potatoes valuable for fattening hogs.

"Jersey Gilt Edge Sweets" are quoted



The crop, showing first and second size, and "feed"

from 25 to 50 cents per barrel higher than sweet potatoes from other States. They are chunky, free from hairy roots, bright in color, and have a nutty flavor.

Farmers Who Got Together

By E. Brightwell

THIS is the story of a farmers' organization that "worked." And the fact that it is now dormant detracts not the least from the value of the experience it carried to its members during the period of its greatest activity, or from the ultimate lesson its history will convey to other farmers in different states who may contemplate forming a similar association.

This association was first organized in 1906 as a local branch of the Farmers' Union in Oklahoma. The parent organization never became very well established in this State, and after wobbling along for a few years it finally ceased to go at all.

The local organization of which I write did not wobble, but continued serenely on after connection with the parent organization expired. It merely changed its name to the Cross Township Co-operative Association, and adopted a new set of by-laws. The name, of course, was drawn from its locality, being in Grady, one of the southwestern counties of Oklahoma. I became a member in 1909. At this time the body consisted of about sixty-five members, all of whom, with one or two exceptions, were farmers. Our activities had mainly to do with buying and selling.

Corn and Watermelons Were the Chief Crops Handled

With the exception of cotton, which we could not handle co-operatively, our most important products were corn and watermelons. These formed the big items of the association's marketing department. Melons, however, were often sold independently, especially when the local market was particularly good. Each season our community produced from thirty to forty cars of melons, and sometimes the yield reached as high as sixty cars. Adjacent communities generally produced at least three times as many more, a large part of which our agent usually handled.

Just previous to shipping time it was the work of the business agent, who was particularly well qualified for the position, to take a general survey of the Northern markets, and locate the most likely centers of demand. When shipping began this official went with the first cars to the market region selected.

All succeeding cars were billed to him, being deflected as he saw fit. The location of this region varied greatly. Minneapolis would be headquarters one week, and Chicago or some other point the next, maybe. The agent received a commission from each car sold.

Corn was handled slightly differently. A fairly dependable market had been established for this commodity in Texas under the old Farmers' Union régime. From ten to forty cars of corn were shipped each year for members and, usually, nearly as many more for non-members. These latter were those who

doubt due to the constantly humid conditions of the growing season along the Gulf coast. Here, as with potatoes, we saved considerable; we paid 2½ cents per pound while the local grocers asked 4 cents for identically the same kind and grade of vegetable.

We Did Some Experimenting

We secured these staple vegetables in the fall, which is the time of year the average farmer feels most able to lay in a considerable supply of necessities. But we bought flour at any season, for after the first wave of antagonism had passed we could often get one of our local dealers to take part of a car off our hands.

We experimented with buying other commodities besides those mentioned. On one occasion we made up a considerable order for rice. This was placed directly with a grower in the irrigated section of Texas. The cost to us amounted to \$5.50 per hundred for the broken grain, and \$8 for whole rice. We could get the broken article at home for \$7, hence we did not repeat the order. We could have done better, no doubt, if our membership had been sufficiently extensive to take care of a car.

We also conducted a campaign against a peculiar situation that existed in connection with the local cotton market. The cotton-oil interests had come to dominate almost completely the entire routine of handling the cotton crop. This condition had been brought about by these interests acquiring control of practically all the gins. This control had become so complete at the time of which I write that there were only five independent gins in the State.

All Farmers Were Hampered

The raw material of the oil mills is of course cotton seed. In the days of custom ginning, when every farmer controlled his own seed, the cattle feeders bid the price of cotton seed so high that the mills were forced to pay much more than they wished to in order to keep their crushers going. They therefore found it desirable to gain control of the seed.

After obtaining a domination of the ginning industry they found this control an easy matter. They adopted the simple expedient of doing custom work only under a kind of protest. They wanted to buy the staple before ginning. That of course let the feeder out, as the mill people preferred to crush out the oil and sell him cake at a higher price. Farmers who wished their cotton ginned, so they might sell in the lint and keep their seed, or sell it as they pleased, were discouraged as follows:

The lint saws of the gin stand may be set to cut the seed very close or not, just as the operator pleases. Cutting too close "naps" the cotton, and therefore damages its quality to a slight extent. Cutting loosely improves the "sample," but leaves much lint on the seed. This gives a lower yield of lint to the amount of seed cotton, constituting a bad "turn-out." Before the oil is pressed from the seed, practically all the lint is cleaned from them by machinery more efficient than is practicable for a gin to be equipped with. The seed handled by an ordinary eight-press-unit mill in twenty-four hours will yield from six to eight bales of this "linters," weighing 500 pounds each. This cotton is worth about two thirds as much as ordinarily good cotton.

We Were Bound to Have an Independent Gin

So, to discourage custom ginning, the controlled gins insisted on not napping the lint, thus giving the farmer a bad turn-out, and at the same time getting a higher percentage of linters.

When such conditions became almost unbearable in our home town our association decided we should have an independent gin, whatever the cost. Since it was impracticable to finance it ourselves, a committee was appointed to take the matter up, and a firm was finally secured to establish a plant upon a pledge of patronage from our members. They got both the pledge and the patronage.

But we had a pretty fight of it before we were through. For three months during the new gin's first season we found it desirable to keep a man on the streets of our local center daily to solicit additional patronage for it. We won the battle, and the gin still exists, doing a thriving business each season. It is still independent. The association to-day is not as active as it was during the first five years of its existence. The decline in activity is due to the loss of the business agent, previously mentioned, who was really the mainspring of the organization.

For Thanksgiving

Oh, Dear Me! What Shall I Have That is Different?

By Estelle Cavender and Others



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Banana cornucopias

BANANA CORNUCOPIAS—Make a rich pie crust, roll it out, and cut it in four or five inch squares. With a piece of dampened muslin moisten one edge of the squares. Then take up one corner of the dampened edge and lay it diagonally against the other side. Press edges together down to the point. Place a wad of crushed oil paper inside down to the point, to hold the cornucopia in shape. Lay them on greased tins and prick the bottoms with a fork. Bake until a delicate brown. When done remove the paper carefully so as not to break the shape. Lay on flat surface to cool.

For the filling mash a half-dozen bananas with a silver fork. Add one cup of rolled almonds, the juice of one lemon, and sweeten according to taste.

Just before serving fill in the cornucopias and add a spoonful of whipped cream on top. Sprinkle nuts on top of cream, and garnish with white grapes.

CHEESE SANDWICHES AND CRANBERRY JELLY—Slice brown bread very thin and cut it in long strips. Cut strips of cheese the same in dimensions as the bread. Place a strip of cheese between two strips of bread and fasten them with toothpicks.

For the jelly, boil and strain cranberries. Add one third of sugar to the amount and cook it like other jelly. Pour it into small individual molds. Children's doll-house glasses are good for the purpose.

STEAMED CRANBERRY PUDDING—Two teaspoonfuls of baking powder in two cupfuls of flour. Add a pinch of salt and three-fourths cupful of water. Roll it out in a long thin strip and sprinkle a little flour over it. Then spread a layer of uncooked cranberries, a half cupful of sugar, and another sprinkle of flour. Moisten the edges with a damp piece of muslin, and roll up. Press down the edges firmly, place in a buttered dish, and steam one hour.

For the sauce take one cupful of water, one-third cupful of sugar, two tablespoonfuls of butter, and when it comes to a boil add a thickening made of one tablespoonful of flour rubbed smooth in six tablespoonfuls of water.

Serve this pudding steaming hot.

THANKSGIVING SPICE CAKE—Cream together till the mixture is very smooth

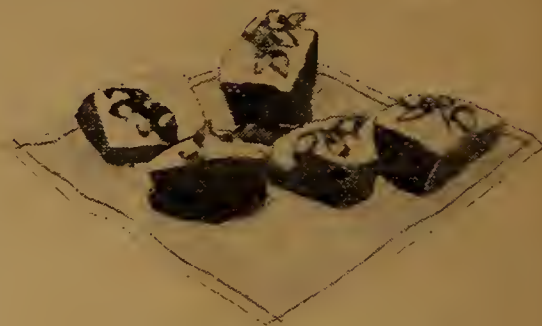
two cupfuls of granulated sugar and one-half cupful of butter. Add the yolks of four eggs, one cupful of sour milk with one teaspoonful of soda dissolved in it, one-fourth cake of melted chocolate, one teaspoonful of cinnamon, one-fourth teaspoonful of cloves, allspice and nutmeg, and two cupfuls of flour. Beat it hard and then fold in the whites of two eggs well beaten.

For the frosting beat stiff the whites of the other two eggs. Boil one and one-half cupfuls of sugar with two-thirds cupful of water until it is past the soft ball. Take off two minutes and cool. Then pour this slowly over the beaten eggs and beat hard all the time. When thick, spread on the cake. Drop some of the frosting on in lumps. When the cake is cut, run frosted mint leaves through these lumps.

NOVEMBER SNOWBALLS—Cook a quantity of rice and let cool. Cut small squares of clean muslin. Mold the rice into balls around a peeled peach which

THANKSGIVING

would not be the really truly feast we love without the old things we've eaten on this merry day ever since we were children. But it's fun all the same to dress them up in a new way. Why, half the fun of giving a dinner is to invent surprises for it!

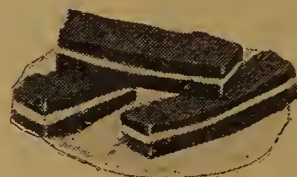


Thanksgiving spice cake

has been well rolled in sugar. Tie up each ball separately in the squares of muslin, and steam them for twenty minutes.

Serve with maple cream made from one cupful of grated maple sugar melted in one pint of thick sweet cream.

POTATO NESTS—Boil potatoes, put through a potato ricer, add two tablespoonfuls of butter, one-half cupful of milk, and one-half teaspoonful of salt. Beat until light and put in a buttered baking dish. Form as many nests as there are persons to be served, and carefully drop an egg in each nest. Cover potato with buttered crumbs. Bake in

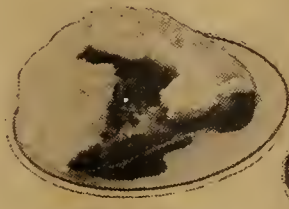


Cheese sandwiches and cranberry jelly

oven twenty minutes, and as soon as eggs begin to set sprinkle with grated cheese.

POP-CORN BALLS—Put three-fourths cupful of coffee sugar, three-fourths cupful of New Orleans molasses, one-half cupful of vinegar together into a buttered saucepan. Cook without stirring to the hard-ball stage, adding one-fourth cupful of butter when it spins a thread. When done, add one-fourth teaspoonful of soda, and pour over four quarts of fresh, perfectly popped corn. When the syrup is evenly mixed with the corn, dip the hands in cold water, take up a portion and press into balls. Dip the hands in water before forming each ball and work quickly before the mass becomes cold and hardens. Keep the balls in a cold place, as they soften and get tough in a warm room.

APPLE BUTTER WITHOUT CIDER—Prepare three times as many gallons of apples as you wish to have butter. Put half of them to cook as for sauce. As they cook down feed in the remainder. Cook down three to one in quantity. It should be so thick and smooth that when



Cranberry pudding



November snowballs

a small quantity is put on a plate the juice will not separate from the apples.

Always choose apples that will cook well; Grimes Golden are nice, but any good cooking apple will answer. Sweeten to taste, and spice if desired. Use a granite or porcelain-lined pan, and if cooked on top of the stove stir often to prevent sticking and burning. A good plan is to cook it in the oven on washing or ironing day, or use a part of both days.

CORN FRITTERS—One-half can of corn, one egg beaten light, one-third cupful of milk, one-half teaspoonful baking powder sifted with one-half teaspoonful salt and one-half cupful of flour. Mix thoroughly, and fry as griddle cakes. Serve with butter, or with apricot or maple syrup.

FRUIT SALAD—Cut oranges in halves and remove the pulp. Fill each orange shell with sliced bananas, apples, orange pulp, and seeded grapes. Arrange on lettuce leaves, and heap with thick mayonnaise dressing.

ESCALLOPED EGGPLANT—Peel, parboil, and cut into dice three medium-sized eggplants. A sauce is made by melting one-fourth pound of butter and stirring it smooth with two tablespoonfuls of flour. Add slowly a pint of milk, stirring constantly. Put through a sieve the yolks of three hard-boiled eggs, reserving two spoonfuls of milk to moisten the powdered yolks before stirring into the sauce. Season with a teaspoonful of salt and half a teaspoonful of pepper and take from the fire. In a baking dish put the diced eggplant and sauce in alternate layers, with sauce on top. Cover with cracker crumbs, moisten with melted butter, and brown in oven.

CREAM OF LETTUCE SOUP—Wash a head of lettuce, put on to boil gently for half an hour as many leaves as you can cover with a pint of water. Then press the leaves through a colander. Put one quart of milk into a double boiler and add to it the water in which the lettuce was boiled and also the leaves that were pressed through the colander. Rub together a tablespoonful of butter and two tablespoonfuls of flour, and stir constantly into the boiling soup till it thickens. Add salt, pepper, and if you like it a small piece of onion.

READY-TO-USE FRUIT CAKE—A fruit cake that keeps well, is inexpensive, and always rises is made as follows: One cupful apple sauce, one cupful brown sugar, and two tablespoonfuls shortening mixed thoroughly together. Add a heaping teaspoonful of baking powder, a half teaspoonful of ground cinnamon, a pinch of cloves and allspice, and cupful of raisins cut in half. Bake in a moderate oven. It is better after being kept five or six days.

PUMPKIN BAKED WHOLE—A pumpkin or squash baked whole seldom appears on any table, but when it does it is the central motif in the entire scheme of table decoration. Though our prim Puritan grandmothers baked their pumpkins in immense brick ovens, the modern range will serve us as well.

Cut out a hole in the stem end of a medium-sized, well-shaped pumpkin

large enough to permit the hand to enter to remove the inside seed and pulp. After removing the sliced-off portion and put the pumpkin in a deep pan which is two thirds full of boiling water.

The oven into which the pumpkin is now placed should have a steady, even temperature. Usually, if the pumpkin is put into the oven in the morning, it will be done by evening. When it is soft pour off all the water, then put inside the pumpkin one-half cupful of butter, three cupfuls of brown sugar, and three tablespoonfuls of mixed spices. Let it remain in the oven one-half hour longer.

PUMPKIN PUDDING—Cut the baked pumpkin into one-inch dice, and after putting into a pudding dish pour over them: One pint of milk into which has been stirred two well-beaten eggs, a generous lump of butter, two tablespoonfuls of sugar, and spices to taste. Bake twelve minutes, then set away to cool before serving.

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The Irish Crochet Book contains pictures and complete working directions for lace-trimmed table sets, luncheon cloths, centerpieces, towels, handkerchiefs, lingerie, bags, baby caps and booties, collars, yokes, medallions, insertions, buttons, pins, and an entire blouse of Irish crochet. Price, 25 cents.

Order from

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Woman's Home Companion
381 Fourth Avenue
New York City

The Tree of a Hundred Pennies

By Anne Guilbert Mahon

"YOU said we couldn't dress a Christmas tree for one dollar," said the children's aunt, depositing an armful of bundles on the table before the little mother. "Now, I'll show you!"

She gave an apprehensive glance up the stairway.

"The children are in bed and asleep, so we are safe," reassured the mother. "Now, let me see. I am consumed with curiosity."

"This sheet of crêpe paper cost fifteen cents and will make ever so many Santa Clauses to dangle buoyantly from the branches," whispered the auntie, unwrapping one bundle, "and these rolls of silver and gilt and colored paper were two for five. I bought ten rolls, for we can make stars and bells and chains and ever so many things out of them. Then I got two bottles of mucilage at five cents apiece. We will need lots of that, and I bought two rolls of this pretty holly paper to make baskets and cornucopias of. It was five cents a roll, but there is a quantity of it, and it will go a long way."

"That makes sixty cents," computed the mother.

"This box of scrap pictures was only ten cents. The figures and heads of Santa Claus and children's figures will make really pretty ornaments surrounded by tinsel, and here is five cents' worth for the purpose. In the store they cost five and ten cents apiece. We can make them just as pretty."

"Seventy-five cents altogether," counted the mother.

"A spool of wire for hanging, which is cheaper than the tree hooks and only cost five cents;" announced the aunt, "a bottle of gilt paint, which also cost ten cents; a half pound of walnuts, for ten. I have some narrow red ribbon left over from my purchases to tie the nuts on with. That makes up the dollar!" She looked triumphant.

"You certainly have lots of material, and I think you have spent the dollar to good advantage, but—" the mother's face expressed doubt.

"Wait!" announced the aunt gaily.

How It Was Done

No handsome tree loaded down with expensive ornaments ever gave more pleasure in the preparation than did that little tree with its homemade adornments.

Evening after evening before Christmas two happy women sat at the table in the dining room fashioning the simple ornaments for the tree which was to bring such joy to the youngsters.

The crêpe paper, which was plentifully sprinkled with large figures of Santa Claus, was used to good advantage, the figures being first cut out, then pasted onto a sheet of cardboard, with backing of colored paper, cut out and wired for hanging on the tree.

The gilt, silver, red and yellow paper was also pasted on cardboard, with backing of another color, then stars of varying sizes, bells, butterflies and other objects were drawn on it and cut out.

The children were allowed to participate in the preparations to the extent of cutting out half-inch-wide strips of colored paper, about five inches long, pasting the ends together and forming paper chains, some gilt, some silver, some red and some varicolored. This delighted the little ones and helped their elders. Every scrap of the paper was utilized for some purpose.

The holly-sprinkled paper was then fashioned into cornucopias of varying sizes, and kindergarden baskets also were made from it by the children, making them of squares, respectively, eight inches, six inches and four inches, in order to have baskets of different sizes.

Next the scrap pictures were prepared. A narrow strip of cardboard backing for each was cut. To this the tinsel was sewed to surround the picture, with a short loop at the top for hanging. Cardboard backing and tinsel were then pasted on to the scrap pictures, and they were, as the aunt said, as good as the ten-cent ones in the stores.

Gilding the walnuts was done last, and each walnut tied with gay red ribbon. On the tree they were as effective as small gilt balls.

The preparations were then complete, and the night before Christmas several big boxes stood ready, filled with the ornaments waiting to be hung on the little tree.

In all, the trimmings cost only one dollar, but it would have been hard to find happier children anywhere than the little ones who surrounded that tree on Christmas morning, and it would have been hard to find two people who surveyed their work with more pride and satisfaction than did the little mother and aunt as they stood before the really pretty and artistic tree, simple as it was, and exclaimed, "I wouldn't have believed it! To think one dollar did it all!"



Miniature of Real Picture

Each picture is 11x17 inches in size and in ten colors

Your Copy of This Art Calendar is Wrapped Up

—and the coupon at the bottom of this page will bring it. This is *Farm and Fireside's* way of saying to you: "I appreciate your support and your renewal, and I want to give you something that will be a beautiful addition to your home through the whole year." The calendar consists of reproductions of four famous paintings mounted on heavy art board 11x17 inches in size, suitable and ready for framing and ready to hang on your wall. Similar pictures are sold at the art stores at \$1.00 apiece.

Four Art Proofs by Famous Artists

If you had thousands of dollars to spend and could buy original art paintings, you would not have any more perfect color work than will be shown on your calendar. These are what are called "artist's proofs": instead of being reproduced in three or four colors they are shown in ten—just as the original paintings come from the artist's hands. The four paintings are known as:

1. The Winter Girl
2. June Lovers
3. Black-Eyed Susans
4. Dolly's Share

These four paintings were reproduced as a calendar especially for *Farm and Fireside*. The calendar will not be for sale in the stores: it will be sent only to those readers of *Farm and Fireside* who accept the special renewal offer on the attached coupon—26 copies of *Farm and Fireside* for only 50c (less than 2c a copy) and the calendar, postpaid, with our compliments.

To Get Your Calendar Clip This Coupon

To renew your subscription to *Farm and Fireside* for a whole year (26 numbers) and to receive the calendar with our compliments, send 50c to *Farm and Fireside*, with this coupon, before **December 21st**.

Every *Farm and Fireside* reader is entitled to only one calendar, without cost. We can supply extra copies for 50c each, postpaid.

No matter when your present subscription expires, whether now or later, your copy of the calendar is wrapped up and ready for you—merely waiting your request. All you need to do is to have your renewal in the mails by **December 21st**. Clip this coupon and mail it to-day.

Calendar Coupon

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For the 50c enclosed renew my subscription to *Farm and Fireside* for one year (26 numbers). It is a condition of this order that I am to receive a copy of the Art Calendar, postpaid, free, and that I may purchase as many other copies as I desire at the special low rate of only 50c.

Name

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Christmas Presents for All the Family

Inexpensive Gifts You Can Make at Home



No. 2419

TO HELP you in making the Christmas presents shown on this page there are Woman's Home Companion paper patterns which can be ordered by mail from any of the three pattern depots, the addresses of which are as follows: Pattern Department, Farm and Fireside, 381 Fourth Avenue, New York City; Pattern Department, Farm and Fireside, Springfield, Ohio; Pattern Department, Farm and Fireside, Room 320, 1554 California St., Denver, Colorado.



An attractive dressing sacque like this No. 2668 will make an acceptable present for any woman



A young girl will be very glad to have a smart waistcoat and collar for a Christmas present. They may be made of striped or flowered silk from pattern No. 2547



In velvet or silk an auto bonnet (pattern No. 2589) will be a good present for both young and older women



A corset cover of batiste or fine muslin with a bit of embroidery like No. 2299 is a dainty as well as useful gift



In silk or velvet with fur or marabou trimming, a shoulder wrap like No. 2498 will make an unusual present



It is hard to find a gift for a tiny baby that isn't a rattle or a doll. The wrapper No. 2455 offers a good suggestion



Clothes for the dear doll will please the little girl. They can be made from No. 1654



Some little girls will like to have a dress and apron like No. 1669 for the lady doll

Mother or Big Sister can easily make a rag doll from No. 2426 for the little sister. This pattern also provides for a costume and a transfer pattern for the face



No. 2419—Santa Claus Coat and Hood. Cut in one size only. Price of pattern, ten cents

No. 2547—Waistcoat and Collar with Yoke. Cut in one size only. Pattern, ten cents

No. 2589—Automobile Bonnet. Cut in one size only. Price of this pattern is ten cents

No. 2668—Kimono Dressing Sacque. 32 to 44 bust. Price of this pattern is ten cents

No. 1654—Dearest Dolly's Christmas Clothes. Cut for dolls 14, 18, and 22 inches. The price of this pattern is ten cents

No. 2455—Baby's Wrapper Perforated for Sacque. One size only. Pattern, ten cents

No. 2426—Rag Doll and Dress, Including Transfer Pattern for Face. Cut in one size only. Price of this pattern is ten cents

No. 1647—Jointed Pig. Cut in one size only. The price of this pig pattern is ten cents

No. 1652—B'er Rabbit. Cut in one size only. Price of this rabbit pattern is ten cents

No. 2671—Stuffed Horse. Cut in one size only. The price of this pattern is ten cents

No. 2669—Stuffed Bug. Cut in one size only. The price of this pattern is ten cents

No. 2673—Stuffed Seal. Cut in one size only. The price of this pattern is ten cents

No. 2299—One-Piece Corset Cover: Buttoned on Shoulders. 32 to 48 bust. Pattern, ten cents

No. 2498—Pointed Shoulder Wrap. Cut in one size only. Price of this pattern, ten cents

No. 1669—Lady Doll's Housework Dress and Apron. Cut for dolls 14, 18, and 22 inches. The price of this pattern is ten cents

No. 2552—Child's Coat. 6 months to 8 years. The price of this pattern is ten cents

No. 2443—Set of Sashes with Girdles. 24, 28, and 32 waist. Price of this pattern, ten cents

No. 1246—Woolly Lamb. Cut in one size only. The price of this pattern is ten cents

No. 2670—Stuffed Cat. Cut in one size only. The price of this pattern is ten cents

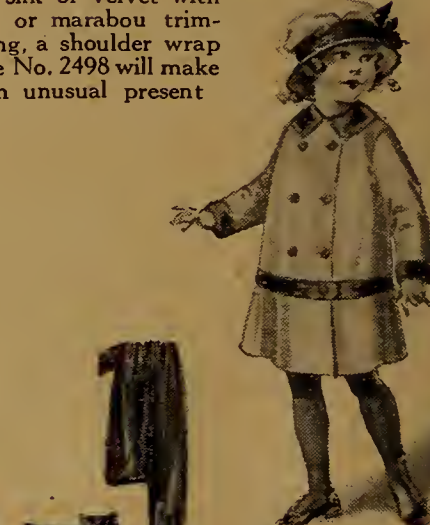
No. 2672—Clown Doll and Costume. Cut in one size only. The price of this clown doll and costume pattern is ten cents

No. 1244—Jointed Elephant. Cut in one size only. The price of this pattern is ten cents

No. 1648—Red Fox. Cut in one size only. The price of this fox pattern is ten cents

No. 1667—Rag Doll and Middy Suit. Cut in one size only. Price of pattern, ten cents

Directions for ordering the patterns shown on this page are given at the top of the page.



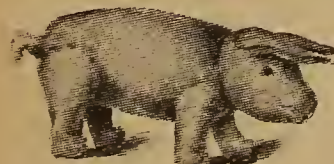
Made of heavy wool with imitation fur trimmings, a coat like No. 2552 will please the little girl as well as her mother



Two sashes of ribbon or silk can be made from No. 2443 for the young girl's Christmas gift



A woolly lamb is always a good toy for the little children. One can be made like the illustration from No. 1246



A toy pig can be made from pattern No. 1647



A bug like No. 2669 will amuse the small children



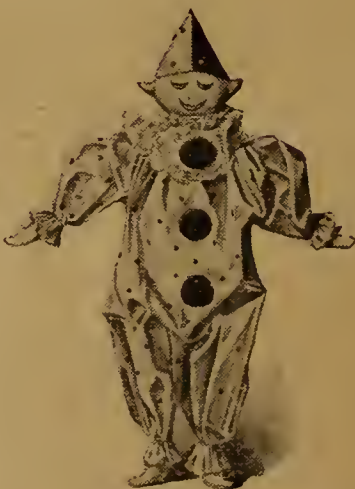
A rabbit will please any tiny boy or girl and can be made from pattern No. 1652



Not big enough to ride on, but small enough to carry about, is the horse made from No. 2671



A cat that sits up will entertain both little girls and boys and can be made from No. 2670



A clown is an amusing toy to please any small child. He can be made from No. 2672



No boy can resist an elephant for a toy. This elephant can be made from No. 1244



A fox is a toy Mother or Sister can make from No. 1648



A rag doll and middy suit can be made from No. 1667 for the little child's Christmas present

Farm Wit and Wisdom

Condensed and Modified from Various Sources

DO NOT allow straw, especially oat straw, to accumulate around the bottom of straw stacks until it becomes moist and rots. This condition is largely responsible for the outbreak of the stable-fly pest. Keep manure piles and loose straw well cleaned up so the flies cannot breed.

Iowa has more pure-bred stallions in proportion to the total number of horses, and more to the total number of farms, than any other State in the Union. This fact is made clear in reports of the stallion registration boards of the ten leading States in the number of stallions enrolled, viz., Illinois, Iowa, Minnesota, Nebraska, Wisconsin, South Dakota, North Dakota, Pennsylvania, California, and Oregon.

All of the States show a decrease in the percentage of grade sires. Wisconsin and Pennsylvania rank first in improvement, showing a decrease of 11 per cent in the past two years.

A WISCONSIN man kills Canada thistles thus: When the thistles begin to blossom he plows them down deeply. Then he plants over them a smothering crop of some kind—sorghum, millet, or sowed corn. He says that this scheme works.

WHAT kind of nail holds best? Government tests show that two cut nails have about the same holding power as three wire nails. In places where the use of the structure tends to loosen the nailing it may be advisable to take some pains to get the cut nails.

"THE New Zealand Dairyman" calls attention to the increased consumption of nut butter in England. Nearly 50,000 tons of peanut and coconut butter, mostly the former, are produced in England each year. This does not supply the demand.

THE Nebraska Station recommends as a cure for Hessian fly in wheat that the stubble be plowed down deeply, so that the stubble is thrown down on the bottom of the furrow, and then that the plowed ground be cultivated often enough to maintain a fine weed-free mulch. And, it will be noted, this is exactly the treatment which conserves moisture for the next season, utilizes the plant food in the soil, and is, in short, good farming, fly or no fly.

IT USED to be believed by everybody that water is purified by freezing. Then came the bacteriologists and told us that this was a mistake. Now science is moving back to the old position. The "Journal of the American Medical Association" tells us that when ice crystals form, most of the impurities are expelled into the body of the stream. If the pond freezes to the bottom the germs are caught in it and the ice is polluted, but not otherwise. If the whole mass of water is frozen in making artificial ice, this will be only as pure as the water from which it is made; but if open water is maintained into which the impurities can be forced, the ice will be purified in freezing. Natural ice is safer than artificial ice in most cases. Of course any ice may be polluted in storage or handling. Fortunately, ice is easily washed, and washing readily takes off all the bad effects of its careless handling.

TROOP of Indiana is sending out a warning to the farmers of that State, in which he says that all signs point to a maximum crop of Hessian flies during the coming year.

The annual loss in Indiana due to the flies is accurately estimated at \$2,625,000. In waging warfare against the flies the following things are recommended:

Thorough preparation of the soil, so as to form the best possible condition for sprouting; heavy fertilizing, if the soil is not already in good condition, to insure a quick and rapid growth; and late sowing, so as to compel the flies to go elsewhere to lay their eggs.

These are points worth considering. The adult fly is very seldom seen, but is described as being like a miniature mosquito, one tenth of an inch in length, dark color, slender legs, and with only one pair of wings. All States recommend the late sowing of winter wheat in order to avoid devastation from the fly.

WE ARE told by the "Literary Digest" that "the use of the silo in feeding beef cattle is responsible not only for the multiplication of the device but for the reported increase in the average size." If this were true the beef problem would be well on its way to a solution.

PLATS of ground used for experimental purposes should be square, according to the work of C. W. Barber of the Maine Station. Long narrow plats cause more plants to be affected by the pathways and borders of the field. Square plats are usually harder to plant and cultivate, but the results from them are the most reliable. This is well worth remembering by persons who are conducting tests on their farms.

HE WHO takes everything easy gets most things hard.

G. R. INGALLS states that the best cows in many Wisconsin herds are returning a profit of \$500 each per year. A herd of ten such animals would beat the average dairy herd of fifty. One tenth of the work, one tenth of the feed, one tenth the barn room, and a profit of \$5,000. "It is possible to have every cow kept do as well," says Mr. Ingalls. But you can't tell how well they're doing unless you test them.

A STALLION or jack may be a pure-bred, a grade, or a scrub. Few of the state license laws force their owners to call them scrubs, and the scrubs go in as "grades." This is not fair to the owners of mares, nor to the owners of real grades. A report of the Board of Horse Commissioners of Utah shows improvement in this branch of breeding in that State. Of 439 licensed animals all but 92 are pure-breds. The pure-breds, therefore, are 79 per cent of the whole. The rest are called grades in the report, but it may be presumed that many of them are pure scrubs.

TO SAFEGUARD public health against bubonic plague, Manila, P. I., has passed an ordinance requiring that all buildings hereafter erected in the city must be rat-proof. Hollow walls and partitions are forbidden. Walls must be of concrete, brick, stone, or other material that will keep out rats. Wooden walls are tolerated only when they are solid. Persons violating this ordinance are subject to both fine and imprisonment.

Secrets

[CONTINUED FROM PAGE 13]

"Talk about your secrets, dinners and telegrams, and so on, what do you say to a wedding one?"

"A wedding, James!" gasped his mother. "Do you mean here?"

"No. That I don't, Ma'am. I mean we had one yesterday. We thought we could hustle 'round and get here quicker and take care of you better if we belonged, you know. Just got to the license place before they shut up shop. So it's not a going-to-be daughter you have, but a sure-nough-is. You don't mind, Mommy dear?"

The man set the little girl carefully on the floor and led her to the bedside where the elder two watched in stupefied silence.

"Please," whispered the girl with scarlet cheeks and bright eyes, "please don't mind if we had a secret too. It is such a dear secret to help me be a truly daughter while you need me. And there's another great big secret too. Jimmy's got that big railroad case. I'm so proud! And he's got to be working on it quite near here. So I can stay a long, long time, till you get quite sick of me, and Melia Bassett can't come near you, so there!"

The huggings and exclamations were finished in a little while, and the new general marshaled her forces to the clearing away of debris. Susannah lay in her bed and listened to the merry little giggles, and to the deep-toned laughter of the men, with which the task was begun. Then with a mighty effort she spoke.

"You all stop a minute," she commanded, "and hear what I've got to say. I've got a secret, too. Yesterday I lay there on the cellar floor and was glad I'd hurt myself so you couldn't come. I thought—I didn't know—There! Now I feel better. I'm just ashamed."

Some men are like horses—won't work until "broke."

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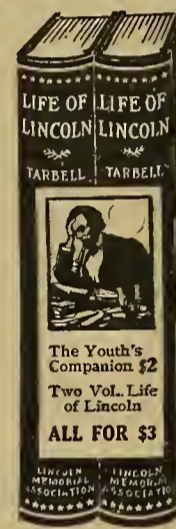
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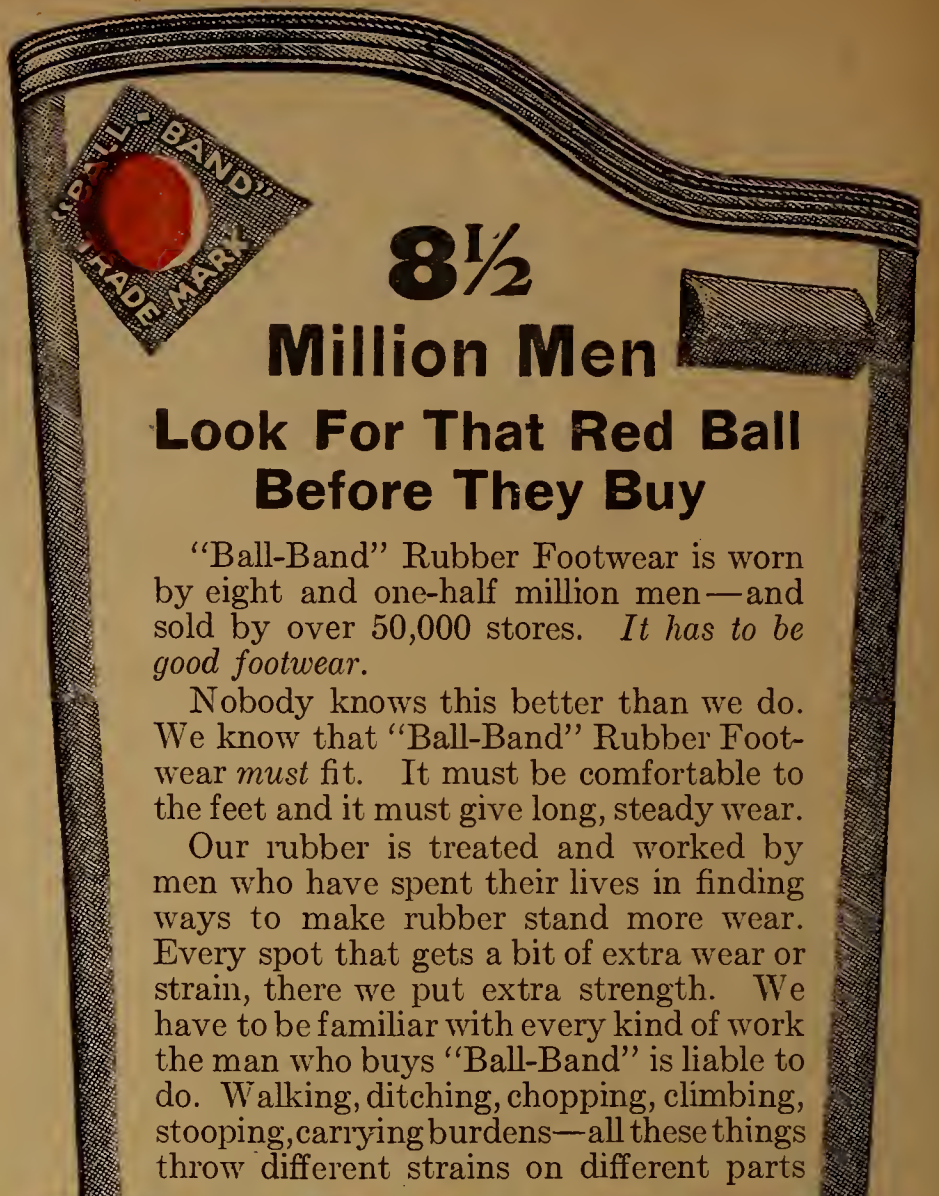
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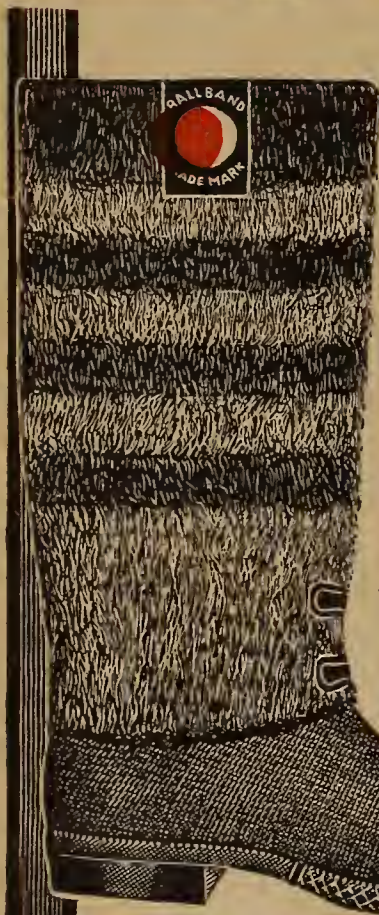
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ESTABLISHED 1877



Sir, I haven't had any silage yet!

WITH THE EDITOR



I AM always glad to get a letter from Mr. C. P. Church of Portland, Oregon. His address is in an office building in Portland, but he seems to feel things from the farmers' point of view for all that. Just now he seems to have been reading carelessly, for he says:

I see frequent intimations in your editorials that "money inflation," or its possibility, constrains you to look askance at the legislation that has been suggested (but apparently held up by the Administration) in the way of relief, of a farm-mortgage character, for the farmers whom you represent.

Now how did he get that idea? Perhaps he read with his elbows. The subject of farm credits has about as much to do with money inflation as Mr. Church's thoughts with the Ptolemaic hypothesis. Nobody proposes to make farm mortgages a basis for currency issues—and if we have said anything in opposition to a thing which is out of the region of consideration in this country I am not aware of the fact.

From long observance I have found this matter of "money redundancy," which is a boggy of alarming proportions to the bankers' guild, to be the quantity of legal tender in circulation of sufficient volume, so that a borrower need not be sweated at a bank for needed accommodation in extortionate demand for interest, with short due rates in order to keep up an incessant grind with commensurate perquisites attached.

I think that Mr. Church is talking in terms of the dark ages of American finance. There was a time—and not so very long ago—when "money redundancy" was a "bogy" to the bankers, but I think that time is past. I was a Greenbacker before I could vote, and by the time I could vote the party had no ticket in the field. But Mr. Church uses the same sort of language we used in those days. In my opinion the Greenbackers and Populists had more insight into finance than their opponents; and does not Mr. Church recognize that in the Glass-Over currency law which is now in process of going into effect the country is adopting the basic principle of some of the old People's Party platforms? The thing we were fighting was the national bank currency system. We had some crude notions as to the power of the government fiat, but when we demanded that farm produce be made the basis of money issues, we asked exactly, in principle, what is embodied in our new currency law. The Oregon wheat or apple grower can next year, if the American bankers are not too slow in putting into effect the system provided, and if it is found necessary, use money issued on apples and wheat in warehouses and in transit.

To be sure, the bankers were ignorant of finance, but so were we all. They were afraid of inflation. We were afraid of contraction. Both were right, and both wrong. What was needed was a system of business which would secrete money out of business activities as the stomach secretes digestive juices according to the food under digestion. I believe that under our new currency system money will expand and contract according to the needs of business, as the old national bank currency never

did, and never can as long as it is in circulation. Our new currency system is not perfect, I suspect, but it puts out of date the inflation boggy of the bankers and the contraction boggy of the Populists, at least for the present. We'll see how it works before we revert to the shibboleths of 1884, as Mr. Church seems to do.

Speaking of money and its volume, the per capita so often flouted for the delectation of groundlings—that it now amounts to \$37 for our total population—will you figure with me how much per capita there actually is for circulation, taking into consideration one item only that diminishes it? There are at this date over twenty and one-half billions of deposits in the banks of this country. The national banks are required by law to retain an average of twenty per cent of their deposits locked up to protect their depositors. For prudential reasons all other depositories should retain as much as first guarantee of their solvency.

I'll tell Mr. Church how much per capita there is in circulation over and above the requirements of bank reserves if he will tell me what proportion of the business of the country is done with a form of currency growing all the time in use, and now doing perhaps a hundred times as much work as the actual money—I mean checks and drafts.

If we used money for all our transactions, either business would have to shrink to the limits determined by the volume of currency, or we should be obliged to issue a larger volume, or go on a basis of barter and trade. The scarcity of money in moving the crops every year is caused by the fact that this business is done with hired men, farmers, and other classes of men who are obliged to have real cash instead of using checks. You can't pay a casual hand with a check, nor draw a check for a small debt when five miles from town. The banks ship millions and millions to the small towns, and it takes ninety days or so for it to get back into the hands of the check and draft using people. Then, although there is just the same per-capita circulation as before, the money stringency disappears. Checks and drafts have taken the place of money to the normal extent.

As long as we look to per-capita circulation as a barometer of money conditions we shall continue to err. What is needed is a volume of currency based on the real needs of business—based on money transactions. Money per capita is a foolish conjunction—money per transaction is the correct one, and even that is not arbitrary or fixed. If the new currency system fosters the habit in commerce of issuing money on paper based upon produce and merchandise in process of passage from producer to consumer it will give us all the money per transaction we need, and this money will go out of existence, as it should, when these transactions are completed. Isn't it about time to shelve the per-capita talk?

Another matter. Looking to the farmers' interests, you must be well aware of the fulsome promises in which the President made pre-election acclaim—as to long-time farm loans at reasonable rates of interest—which have been wantonly disregarded and are now in complete submergence. Do you think the vast farming interests you are supposed to represent will meekly acquiesce in this recusancy?

Now it is true, as Mr. Church states, that the President and the Administration made promises of laws to meet the needs of the farmers in the matter of rural credits, but is it quite fair to speak of their failure to do so in the last session of Congress as "recusancy"?

I don't see the fairness of it. I believe that the President and Congress, without reference to party, are anxious to pass good rural-credit legislation. In fact, the least anxious for haste in the matter of all parties concerned are the farmers themselves, if we may believe the utterances of their conferences, congresses, and meetings. At Fargo, Minneapolis, Lincoln, and other places, gatherings of farmers last year urged Congress to go slow, and study the matter longer before passing laws. It was good advice, too. We want no half-baked legislation shoved through under the pressure of the demand that we "do something, for the love of heaven!" Nothing is so badly needed in this country as rural-credit legislation, and nothing needs more care and deliberation. And in the meantime, if the citizens of any State become impatient for action the way is open for state legislation which will be just as beneficial, if properly framed, as any law of Congress can be.

We old money cranks may as well make up our minds that the period of agitation has been passed. We shall get rural-credit legislation in addition to what we have, and with that, I think, the tinkering with banking and currency laws should cease. We have a new system passed after much deliberation, and with a purpose, I am confident, of curing the old defects. The people of the country have made up their minds now to accept the system and give it a few years of practical working.

In the meantime we should have a great system of night schools in which our bankers may learn how the splendid banking organizations of other countries use systems quite similar to the one they have been given to work with.

Herbert Quick

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The Brown Mouse

The Romance of a Farm Hand Who Upset a School District

By Herbert Quick

Part Three

WE HAVE learned to know Jim Irwin, a student and farm-hand, who is thrust by a joke into the office of district-school teacher. Before school opens he wins the interest of his boys and shows through a corn-testing party that he is planning a school which will put greater efficiency into farm work. His former employer, Colonel Woodruff, promises to stand by Jim in the new venture, but Jennie Woodruff, his daughter, warns the eccentric ex-farm-hand against experiments and originality. Jim, however, is no weathervane.

VI

Jim is a Genius Without Knowing It

I SUPPOSE every reader will say that genius consists very largely in seeing opportunity in the set of circumstances or thoughts or impressions that constitute opportunity, and making the best use of them.

Jim Irwin would have said so, anyhow. He was full of his Emerson's "Representative Men," and his Carlyle's "French Revolution," and the other old-fashioned, excellent good literature which did not cost over twenty-five cents a volume; and he had pored long and with many thrills over the pages of Matthews' "Getting On in the World," which is the best book of purely conventional helpfulness in the language. And his view of efficiency was that it is the capacity to see opportunity where others overlook it, and make the most of it.

All through his life he had had his own plans for becoming great. He was to be a general, hurling back the foes of his country. He was to be the nation's master in literature. A successful drawing on his slate had filled him with the ambition, confidently entertained, of becoming a Rubens, and the story of Benjamin West in his school reader fanned this spark to a flame. Science, too, had at times been his chosen field; and when he had built a mouse trap which actually caught mice he saw himself a millionaire inventor. As for being President, that was a commonplace in his dreams. And all the time he was barefooted, ill-clad, and dreamed his dreams to the accompaniment of the growl of the plow cutting the roots under the brown furrow slice, or the wooshing of the milk in the pail. At twenty-eight he considered these dreams over.

As for this new job, he saw no great opportunity in it. Of any spark of genius he was to show in it, of anything he was to suffer in it of those pains and penalties wherewith the world pays its geniuses, Jim Irwin anticipated nothing. He went into the small, mean, ill-paid task as a part of the day's work, with no knowledge of the stirring of the nation for a different sort of rural school and no suspicion that there lay in it any highway to success in life. He was not a college man, nor even a high-school man. All his other dreams had found rude awakening in the fact that he had not been able to secure the schooling which geniuses need in these days. He was unfitted for the work geniuses do. All he was to be was a rural teacher, accidentally elected by a stupid school board, and with a hard tussle before him to stay on the job for the term of his contract. He could have accepted positions quite as good years ago, save for the fact that they would have taken him away from his mother, their cheap little home, their garden and their fowls. He rather wondered why he had allowed Jennie's sneer to sting him into the course of action which put him in this new relation to his neighbors.

But, true to his belief in honest, thorough work, like a general preparing for battle, he examined his field of operations. His manner of doing this seemed to prove to Colonel Woodruff, who watched it with keen interest as something new in the world, that Jim Irwin was possibly a brown mouse. But the Colonel knew only a part of Jim's performances. He saw Jim clothed in slickers, walking through rainstorms to the houses in the Woodruff District, as greedy for every moment of rain as a haymaker for shine; and he knew that Jim made a great many evening calls. But he did not know that Jim was making what our sociologists call a survey. For that matter, neither did Jim; for books on sociology cost more than twenty-five cents a volume, and Jim had never seen one. However, it was a survey.

To be sure, he had long known everybody in the district, save the Simmses—and he was now a friend of all that exotic race—but there is knowing and knowing. He now had notebooks full of facts about people and their farms. He knew how many acres each farmer possessed, and what sort of farming he was

doing—live stock, grain, or mixed. He knew about the mortgages and the debts. He knew whether the family atmosphere was happy and contented or the reverse. He knew which boys and girls were wayward and insubordinate. He made a record of the advancement in their studies of all the children and what they liked to read. He knew their favorite amusements. He talked with their mothers and sisters—not about the school, to any extent, but on the weather, the horses, the automobiles, the silo-filling machinery, and the profits of farming.

I suppose that no person who has undertaken the management of the young people of any school in all the history of education ever did so much work of this sort before his school opened. Really, though Jennie Woodruff did not see how such doings related to school work, Jim Irwin's school was running full blast in the homes of the district and the minds of many of the pupils weeks and weeks before that day when he called them to order on the Monday specified in his contract as the first day of school.

Con Bonner, who came to see the opening, voiced the sentiments of the older people when he condemned

a hog pen. It ain't a school at all to my thinkin'." "Oh, I don't suppose he can get away with it," assented Bronson disgustedly, "but that boy of mine is as tickled as a colt with the whole thing. Says he's goin' reg'lar this winter."

"That's because Jim don't keep no order," said Bonner. "He lets Newt do as he damn pleases."

"First time he's ever pleased to do anything but deviltry," protested Bronson. "Oh, I s'pose Jim'll fall down, and we'll have to fire him, but I wish we could git a good teacher that would git hold of Newt the way he seems to!"

VII

Jennie Woodruff Enters Politics

IF JENNIE WOODRUFF was the cause of Jim Irwin's sudden irruption into the educational field by her scoffing "Humph!" at the idea of a farm hand's ever being able to marry, she also gave him the opportunity to knock down the driver of the big motor car, and thus perceptibly elevate himself in the opinion of the neighborhood while filling his own heart with something like shame.

The fat man who had said, "Cut it out!" to his driver was Mr. Charles J. Dilly, a business man in a village at the extreme opposite corner of the county.

His choice of the Woodruff District as a place for motoring had a secret explanation. I am under no obligation to preserve the secret. He came to see Colonel Woodruff and Jennie. Mr. Dilly was a candidate for county treasurer, and wished to be nominated at the approaching county convention. In his part of the county lived the county superintendent, a candidate for renomination. He was just a plain garden or field county superintendent of schools, no better and no worse than the general political run of them, but he had local pride enlisted in his cause and was a good politician.

Mr. Dilly was in the Woodruff District to build a back fire against this conflagration of the county superintendent. He expected to use Jennie Woodruff to light it withal. That is, while denying that he wished to make any deal or trade—every candidate in every convention always says that—he wished to say to Miss Woodruff and her father, that if Miss Woodruff would permit her name to be used for the office of county superintendent of schools a goodly group of delegates could be selected in the other corner of the county who would be glad to reciprocate any favors Mr. Charles J. Dilly might receive in the way of votes for county treasurer, with ballots for Miss Jennie Woodruff for superintendent of schools.

Mr. Dilly never inquired as to Miss Woodruff's abilities as an educator. That would have been eccentric. Miss Woodruff never asked herself if she knew anything about rural education which especially fitted her for the task, for was she not a popular and successful teacher, and was not that enough? Mr. Dilly merely asked himself if Miss Woodruff's name could command strength enough to eliminate the embarrassing candidate in his part of the county and leave the field to himself. Miss Woodruff asked herself whether the work would not give her a pleasanter life than did teaching, a better salary, and more chances to settle herself in life.

So are the officials chosen who supervise and control the education of the farm children of America!

This secret mission to effect a political trade accounted for Mr. Dilly's desire that his driver should "cut out" the controversy with Newton Bronson and the personal encounter with Jim Irwin—and it may account for Jim's easy victory in his first and only physical encounter. An office seeker could scarcely afford to let his friend or employee lick a member of a farmer's road gang. It certainly explains the fact that when Jim Irwin started home from putting out his team the day after his first call on the Simms family Jennie was waiting at the gate to be congratulated on her nomination.

"I congratulate you," said Jim.

"Thanks," said Jennie, extending her hand.

"I hope you're elected," Jim went on, holding the hand, "but there's no doubt of that."

"They say not," replied Jennie, "but Father says I must go about and let the people see me. He believes in working just as if we didn't have a big majority for the ticket."

"A woman has an advantage of a man in such a contest," said Jim; "she can work just as hard as he can and at the same time profit by the fact that it's supposed she can't."

[CONTINUED ON PAGE 16]



Jennie was waiting at the gate to be congratulated

the school as disorderly. To be sure, there were more pupils enrolled than had ever entered on a first day in the whole history of the school, and it was hard to accommodate them all. But the director's criticism was leveled against the free-and-easy air of the children. Most of them had brought seed corn, and a good-sized corn show was on view. There was much argument as to the merits of the various entries. Instead of a language lesson from the textbook, Jim had given them an exercise based on an examination of the ears of corn.

The number exercises of the little chaps had been worked out with ears and kernels of corn. One class in arithmetic calculated the percentage of inferior kernels at tip and butt to the full-sized grains in the middle of the ear.

All the time Jim Irwin, awkward and uncouth, clad in his none-too-good Sunday suit and trying to hide behind his Lincolnian smile the fact that he was pretty badly frightened and much embarrassed, passed among them, getting them enrolled, setting them at work, wasting much time, and laboring like a heavily-laden barge in a seaway.

"That feller'll never do," said Bonner to Bronson next day. "Looks like a tramp in the schoolroom."

"Wearin' his best, I guess," said Bronson.

"Half the kids call him 'Jim'," said Bonner.

"That's all right with me," replied Bronson.

"The room was as noisy as a caucus," was Bonner's next indictment, "and the flure was all over corn like

The Farmer and War

In the Path of Armies the Producer Becomes Helpless

By David Starr Jordan

THE two demands of the farmer on his Government are security and justice. In war both are taken from him.

If one will start out on the road in any direction from anywhere in the United States, let us say, for example, from Springfield, Ohio, he will find ample evidence that the farmer has security. He will find handsome, well-shaded towns, good roads, neat farmhouses scattered along the road, one for each farm, with its barns and other belongings without the slightest attempt at defense from any outside foe and with no fear that danger lurks in isolation. This represents one extreme of the world. The center of the population of the great Republic is not far from Springfield, Ohio, and the center of the Republic is also the center of peace.

Under the flag where hatred dies away the farmer feels absolutely certain to care for his crops in security and in the evening of the day or the year or the lifetime to be able to toast his toes by the fireside in perfect serenity.

For the other extreme we may go to another land, as richly endowed by nature as southern Ohio, and not unlike it in physical aspects except for its nearness to the sea.

This, Macedonia.

It has been civilized for more than two thousand years, nearly ten times as long as Ohio. It has been a Christian land since the days of Saint Paul, who wrote an epistle to the church of its capital city, the Thessalonians of his day, now the people of Thessalonike (Salonica).

Aristotle was born in Macedonia, and so, alas, was Alexander the Great. On its field of Philippi Roman freedom went down, with Brutus and Cassius, before the imperialism of Cæsar and Antony. And since the days of Alexander and Cæsar, Macedonia has not known security or justice.

It has known the march and the countermarch of war. Romans, Greeks, Turks; Turks, Greeks, Romans, Bulgarians, Servians, Italians; and now, at least the Greeks.

The soldier and the farmer, the two cannot occupy the same lands. The soldier stands for might and violence.

The farmer needs justice and security.

In the last month of May I took a long trip through Macedonia. I found good, honest farmers here and there, but not many. Their life was very different from farm life in Ohio.

There were no houses standing along the road. Everybody lived in the villages, even though the lands were ten miles away. And the villages were crowded just as closely as houses could stand.

Think of Farming at Night!

The streets paved with rough stones, edges upward, were just wide enough to let a camel or a cart drawn by a bullock or a buffalo pass. A Greek army had passed by a few months before, and half the houses, sometimes all of them, in every town had been burned. And the helpless farmers crouched where they could, and did their farming furtively, in the night sometimes, because nights may be safer than the day. And there were more women than men on the farms. The men were dead on the battlefields. They were drafted off to make new armies, or they had fled across the border for safety in Bulgaria. In one small town, Singelovo, not a man was left. With the women all breadwinning rested.

And the farming was not very good. The ground was barely scratched by the plow. The fields of wheat and rye and Indian corn would look stunted and shabby in Ohio. Often in good land one would see strips covered with blackberries and wild flowers, bits of virgin soil never yet touched by the plow, though the forests had been cleared away before the days of Saint Paul. Other tracts are overgrown with scrubby oaks and sometimes with wild lilacs, although not a big tree was left standing to make a forest. The Turks once held Macedonia, and it would seem that they hated trees. The Chinese have a proverb that "where armies quarter thorns and thistles grow," and armies have quartered in Macedonia for twenty centuries. And for this reason there can be no good farms. The cattle are dwarfish and give but little milk. They are used, with the primitive European buffalo, as beasts of burden. Horses are few and small and mostly vicious. The sheep, the same breed they had in Judea in Bible times, are handsome and active, but carrying very little wool; a couple of pounds a year would be a big average.

There would be no use in improving the stock when the soldiers may come any minute. And between bands of soldiers come the bands of brigands. A brigand in Macedonia, as in Mexico, Korea, and China, is a farmer who has quit. If he can't make a living on the farm, or if someone has seized his farm he becomes an armed tramp. And a million of people, Bulgarians, Turks, and Greeks, are refugees in and out of Macedonia. Armed or unarmed, mostly helpless,

DR. DAVID STARR JORDAN of Leland-Stanford University is a friend of all nations. He knows them. He is a friend to humanity, for he knows it. As a student of history and an advocate of peace he is held in honor the world over. In presenting Doctor Jordan's masterful analysis of war and peace, FARM AND FIRESIDE is fulfilling the promise made at the outbreak of the present war, which was that we should "guard the farmer's interests and spell out the meaning of this chaos."

And, indeed, at a time like this all of us need the guidance such minds as Doctor Jordan's can give.

You will also be interested in Doctor Jordan's latest book, "War's Aftermath," published by Houghton Mifflin Company, Boston. In this work Doctor Jordan shows the effect of our own Civil War on the manhood of the country. The results of the present conflict will stand as the fulfillment of the prophecy which this book has now become.

they have taken to the road. For all the people of one race or one church in these war-wasted lands drive out all the others and divide their property.

The farmer who is rich and prosperous to-day may have to leave the country to-morrow on two hours' notice, by the light of his blazing house, with whatever he can carry on his back.

Burdens Too Great to Bear

Europe is to-day suffering from the conditions of Macedonia, on the biggest possible scale. Everywhere the horrors of war, slaughter by machinery, siege guns, Zeppelin bombs, blood-drunk and wine-drunk soldiery, and the farmer has no recourse. Till the end of July the farmers of Belgium felt as secure as the farmers of Ohio. Belgium was the most industrious, the most prosperous, the most peace-loving part of Europe. Now its farms and villages are a blackened desolation. The farmers are crowding by the hundred thousand, penniless, hopeless, into the havens of Holland and England. Holland and England do their best, but they too must live.

The burdens on the farmer in Europe everywhere are already greater than he can bear. He is taxed

"THE war of to-day has its primal motive to keep the farmer down. It is, at bottom, the fight of pride and privilege against the the common man. It is the last stand of imperialism against democracy. It is the last supreme effort of those who believe that some men and some nations are good enough to rule other men and nations against their will. This is not the whole story of the war, but it is what the war has come to mean. All wars have their origin in wicked passions of men, mostly in these two—arrogance and greed."

beyond endurance to pay the interest on the old war debts, which for all of Europe amounted to \$30,000,000,000, "the endless caravan of ciphers" before this war began.

All wars are fought on borrowed money, and no war ever fought has ever yet been paid for by any nation. Only Great Britain and the United States, with some of the smaller nations, have ever tried to pay.

On the top of all this comes the burden of the costliest and most horrible war that was ever fought. Even to the farmer who lives away from the battle line the burden is crushing. His sons are called to the slaughter on the pay of a cent or two a day, 30 cents a month in the French army, 20 cents a month in the Greek, the others in proportion. And if he is near the firing line everything else goes. He may be thankful to be even a refugee.

Only two years ago the Bulgarians, with the Servians and the Greeks, rushed to the liberation of Macedonia.

"WHAT the farmer wants, what every good citizen most wants, is security. The 'armed peace,' the truce among half-bankrupt nations armed to the teeth, is not peace. It is not security. As security, armies and navies have proved the ghastliest and costliest failure in history."

And when the war was over the Macedonian farmers swarmed up in Bulgaria.

The Bulgarian farmer said to him: "Why don't you stay in Macedonia? We went there to set you free. Now you come here to crowd our houses, to take our jobs, to die in our beds. My brother died in Macedonia. We cannot support you. Oh, go back."

And the Macedonian answers: "Who told you to come down to trample our vines, to destroy our fields, to kill our cattle and sheep, to leave our houses for the Greeks to burn? I don't care if your brother is dead. Mine is dead too, and we are all dying."

Why Food is Cheap in England

The farmer of America gains nothing through the losses of the farmers of Europe. We are all in the same boat, and whatever harms the prosperity of one part of the world injures us all. For some of his products the American farmer may get a little more. For other articles, as cotton, in wartime, he may have no market at all. Whoever buys of him must have money to buy with. Food is cheap to-day in England because so many go without their usual food, buying only the cheapest articles. In London a month ago the finest fruit was sold for next to nothing. No one would eat Sussex peaches or Devon grapes while the continent was burning. So it is everywhere.

In war there is no demand for luxuries, no care for comfort, no continuity of industry, no demand to buy, and among millions of people nothing to buy with. The interest of one nation is the interest of all so far as farmers and workmen are concerned.

The farmer has no greater enemy than war. He has no greater need than peace. And peace is the mission and the duty of a republic. A republic is a form of government fitted for minding its own business. Its business is mainly justice, sanitation, education and peace. With fair play, good schools and security, the farmer can do all the rest for himself.

The war of to-day has its primal motive to keep the farmer down. It is, at bottom, the fight of pride and privilege against the common man. It is the last stand of imperialism against democracy. It is the last supreme effort of those who believe that some men and some nations are good enough to rule other men and nations against their will. This is not the whole story of the war, but it is what the war has come to mean. All wars have their origin in wicked passions of men, mostly in these two—arrogance and greed. No nation can make money out of any war, and no nation that begins a war can tell how it will end. But in every war there are some few men, contractors, gunmakers, iron-plate makers, who make a good deal of money. And so long as the Krupps, the Vickers, and the Schneiders of Europe, the "armor-plate patriots" of Germany, England, and France, have their way there will always be war, and the farmers of the world will pay for it. The farmer is the foundation of prosperity, and it is bad for the whole world when it goes ill with the farmer.

"Fall to each whate'er befall,
The farmer he must pay for all."

And the farmer must help us look after the politics of the world as well as that of his county, state, or nation. The conquests of science have made the whole world our neighbors. Our neighbor's Government concerns us closely. We must learn to watch it. Whatever we do not keep watch of soon falls into bad hands.

"Eternal vigilance is the price of liberty."

Eternal publicity is the only safeguard against graft. Because world politics grants more secrecy and pays bigger dividends than local politics, it is in a worse condition than any others.

The emperors play at the ape and tiger game, using armies and ships as recklessly as boys playing with fireworks.

The trade prostration of the last three years had its source in the recklessness of Europe. Our Congress and our President had no part whatsoever in creating it. It is part of the uncertainty of all business, in the face of the crimes and the horrors which have actually come.

Security is Essential to Prosperity

What the farmer wants, what every good citizen most wants, is security. The "armed peace," the truce among half-bankrupt nations armed to the teeth, is not peace. It is not security. As security, armies and navies have proved the ghastliest and costliest failure in history.

The Balance of Power, another form of the same Great Illusion, now breaking up in measureless disaster, has failed over and over before. Each trial and each failure is more terribly ruinous.

The war system, the system of saber rattlers, war traders, war scares, war robberies, and war corruption, has risen through our neglect. The people who pay for it must learn to put it aside, and they will.

The war system must go. No reform is secure while this system lasts. We must find some system of national defense less hideously dangerous to the interest it pretends to protect.

"Law is for the weak; force is for the strong; law is a makeshift; war is a reality." This dictum of the group of men called Pan-Germanists is the doctrine of all war. The incident of Zabern, the military murders of men who dare to speak, the seizure of Belgium, slap our law in the face.

All Europe is to-day under martial law. Martial law is the law of war. It is the paralysis of all civil law. In war all laws are silent. Thus barbarism takes its revenge. It will take it over and over again so long as civilization rests its defense on barbarism. Even a "holy war," if such an anomaly ever existed, could be carried on only by methods most unholy.

Those who rule by force and fear have their fits of madness when their power begins to wane. Dread of the loss of power is the mainspring of the bloodiest follies in history. This war is the more wicked because it is unfair. Our cannon are as fatal to our friends as to our enemies. For our friends are not all in one camp, nor our enemies in another. Courage, virtue, and patriotism are not the gift of any one race. All the people of Europe and [CONTINUED ON PAGE 6]

At Home and Abroad

But Wherever the Scene, Peace Spells Greater Happiness Than War



PHOTO, UNDERWOOD & UNDERWOOD

In times of war, peaceful farming sections become theaters of conflict. This picture shows French Infantry overrunning the wheat fields in the Vosges Mountain country. Harvesting machines lay idle while men marched on



PHOTO, W. H. BALLOU

In times of peace, wheatfields are allowed to ripen. Men, women, and children are fed thereby. Here we see five large combined harvesters at work. Each harvester is pulled by thirty to thirty-five head of mules



PHOTO, AMERICAN PRESS ASSOCIATION

IN times of war, animals are made subservient to the needs of the army. Warfare is not constructive, so horses and cattle that should be helping to build up a country are made to tear it down. The picture to the left shows some British troops commandeering a horse from a coal wagon for use in the army—and winter is now pressing down upon the people, too!



PHOTO, W. H. BALLOU

IN times of peace, live stock are made to serve a useful purpose. In the picture to the right we have shown an American double-disk plow pulled by white oxen. The scene is in southern Russia. Does it not suggest a better use for our own cattle? Could they not serve for draft purposes as well as for beef and milk? Can you answer?



PHOTO, UNDERWOOD & UNDERWOOD

In times of war, homes are broken and the families—those that are left—flee for refuge to places they think are safe. Here a number of the Belgians are moving to Brussels, but the safety these Belgians sought they did not find



In times of peace, the family circle is prosperous and happy. The five individuals shown in this picture were raised by J. W. Cahill of Oregon. The cow is three-fourths Jersey, and supplies the Cahill family with two pounds of butter each day

IN times of war, bridges are broken. Transportation is often at an absolute standstill, except of course the transportation of troops and war supplies. Here a German military auto was on its way across the Trilfort Bridge when the bridge was wrecked by the Allies. The auto lies on its back in the River Marne where it went with the bridge



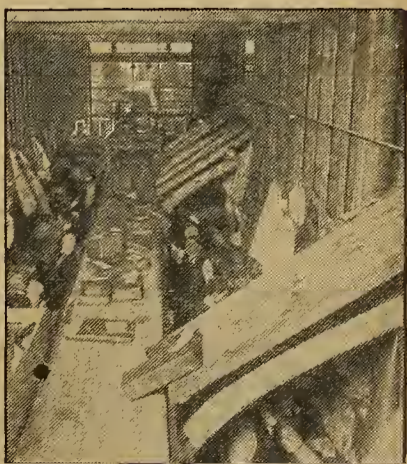
PHOTO, UNDERWOOD & UNDERWOOD



PHOTO, W. D. MORVADAY

IN times of peace, ships are free to ply their trade coast to coast. Here are ships standing at Australia's docks and being loaded with apples. Australia is our competitor in apples. We take her apples while ours are out of season, and she takes ours vice versa. This is really shipping in storage, and is a good thing for both sides. But war, wherever and whenever it comes, corrupts and retards business, and blockades the channels of prosperity for every one of us

IN times of peace, transportation is encouraged, not hindered, and so the nation prospers. In this large New York department store thousands of packages are annually sent out by parcel post. Note the moving belt which receives packages from departments through chutes and then carries them to the wagons waiting outside the building



PHOTO, BROWN BROS.



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America a Department Store

By J. Pickering Ross

THE war, which threatens to extend over the whole Eastern Hemisphere, has now developed sufficiently to enable us to form some idea as to its probable effect on our commerce and industries, among which agriculture holds the lead.

Our exports of cereals, canned meats, vegetables, and fruits already are in excess of all former experiences, and thousands of horses are contracted for and being shipped to England, France, and Belgium. Most of these are for use of the armies, but a considerable amount of the food supplies are for the use of the starving people of the latter country, and are the gift of sympathizing Americans.

It is impossible to form any idea as to the probable duration of this mad waste of human life; but whether it ceases quickly through general exhaustion, or whether the ambitions, jealousies, and hatreds it engenders prolong it for years, America will have to fill the rôle of the world's great department store.

That the free and uninterrupted export of cotton should be assured is of vital importance to our Southern farmers, and all dangers of transportation and most of the financial difficulties inherent in the disposal of our immense crop appear to be removed.

Readers of FARM AND FIRESIDE KNOW

that I am a firm believer in the value of sheep to the farmer. Now I hope to be allowed to tell why I think a really good time is coming for the sheepman.

England is the distributing point of the world's wool, especially for that of her great wool-producing colonies. She has now strictly prohibited its export. She will take in all she can get and keep it for her own manufacturers. The allied armies need enormous supplies of woollen clothing, far more than their own factories can turn out. Already many of our mills are running day and night to fill contracts made with England and France.

The coarse wools of the Down breed and their crosses are used altogether for that class of goods, and their prices have gone up 10 to 15 per cent, and are still rising. We may get a few bales from South America, but our farmers must find the bulk of what is needed. Fine wools are not in such good demand.

Our beef supply is certainly not in excess, and this sudden call for it canned and in other forms must tend to raise its cost. The vegetarian doctrine will have to be preached for a long time ere it overcomes the carnivorous instincts of the true American. Mutton and lamb are gaining in popularity; the Down breeds produce the best of them, as well as the wool now most in demand. It seems common sense to produce the Downs.

THIS year foot-and-mouth disease is in the war harness, and we get alarmed. But we sit idly by as hog cholera takes its toll, amounting (in 1913) to 40 pounds of meat for every family in the United States. In the commonplace things we are apt to exhibit no enthusiasm. There are some uncommon things, however, about the hog-cholera fight—things you have never seen discussed. These will be taken up by D. S. Burch, Associate Editor. The first article will appear in the December 19th Farm and Fireside

The Farmer and War

[CONTINUED FROM PAGE 4]

America really belong to one race—the race of men.

There can be no abiding civilization without security of property and life. There can be no abiding peace save in democracy. There can be no security in democracy while absolutism is its neighbor. Absolutism finds its main interest in some form of robbery of the people it holds in its chains. Europe has no room for both. This, Absolutism well knows. This, Democracy must realize.

If the peace which shall some time follow leaves any of the people of Europe helpless in their own affairs, it will be only a temporary truce. The same abuses will bring the same murderous and indiscriminating remedy. Thus it is that "history repeats itself," for in this unremembering world "history is made only to be immediately forgotten."

Here is the work for the statesman. It is his part to see that history does not repeat itself, that the old blunders and crimes shall not blast the future. And never had Europe more need of a statesman than to-day.

War is mere wreckage, with no power for good in itself. It destroys far more of good than evil. "War creates more scoundrels than it kills."

Militarism is again in the saddle. The blood of the nations is ebbing. Defeat means the evil ferment of rancor, the abiding spirit of revenge. Victory means vainglory, the growth of the uncanny bubble of national egotism. Victory and defeat of forty years ago have been the largest factor in the rule of the war system of to-day. The "nightmare of Europe" that rose from Gravelotte and Sedan overspread all the nations. Which ever side may win in the flaming Ardennes will find within itself a foe more wily and more dangerous than any encountered on the battlefield. If Germany is to be redeemed she must save herself. Not all the battalions of Europe can cure her of the war poison. The other infected nations, Great Britain, France, Russia, and the rest, must likewise work out their own salvation.

The hour for mediation must come sooner or later. The earnest men of Europe look to the United States for the final decisive action. Ours is the only great nation not sinking in the quicksands. America alone can reach out the hand of extrication. "The final help," says a London publicist, "is the mighty duty of America. It is the greatest opportunity to be had in history." Whatever form the efforts of President Wilson may take, the democrats of Europe will mobilize behind him and give him every support.

Our one ultimate hope is that instead of the Concert of Powers, ever out of time and tune, we may have a Concert of Peoples, a gathering not of soldiers, war agents, and diplomats, but an assembly of good men devoted to the common welfare of Europe.

Like the Seed is the Harvest

Whether the outlook be dark or bright, the duty of all good men is the same. "God tosses back our failures that we may begin again." So we may begin here and now. We may bind our wounds. We may strike off chains. We may comfort the widow and the fatherless. The peoples will be weaker, exhausted in money, in courage, in intelligence, in hope. The standards of life will all be lower.

Worse than this, war relaxes the stamina of coming generations. The man who is left determines what the future shall be. Like the seed is the harvest. The human harvest that war must yield is that of lessened human efficiency.

In time of peace as in time of war we shall strive for the more abundant life, for a saner, wiser, and more patriotic public opinion, and for a public conscience which will make another great war impossible. If Europe shall have better days she must deserve them. In this her brothers in America must help. Kinfolk to all the nations, we have a great privilege and a great duty.

No finer word has been spoken to-day than this of Professor Lowes Dickinson of the University of Cambridge:

"Let war be declared and every individual in a nation is ready to lay down his goods and his life. This is why, to some noble men, war appears as a noble thing. But what makes it appear so is the passion misled into its service. That passion is needed for the good things of life: for good instead of evil, for truth instead of lies, for love instead of hate. To turn it into these channels the friends of reason are always working. For the moment their voice will not be heard. But as the war pursues its dreadful course, as its fatal and unforeseen consequences unroll, the fact of what we are doing begins to penetrate from our senses to our imagination as the dreadful awakening succeeds to the stunning shock; it will be for the friends of reason to drive home the lesson, first and chiefest into their own heart and brain, then, if the strength be given them, into the conscience of mankind. That is our war, the eternal and holy war for those of us who believe in reason. In this dark hour of our defeat let us not forget it."

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Level Heads and Others

Why It is Some Mules and Some Men Don't "Get Along"

By G. Henry

"GET rid of every 'rattle-head' that bad luck brings to my farm," said a near neighbor of mine. "If it's a mule I trade him off to a railroad-construction contractor, where they know how to pound almost any mule into humble submission. If it's a horse I carefully work to smooth his ruffled feathers a while, and then I sell him or trade him to some man who says he wants a 'lively' horse. In my mind there is a big difference between being lively and crazy."

My neighbor is successful indeed. He has 452 acres not very far from Lake Erie in Ohio, and he makes money and has peace and happiness.

His farm should have a sign in front of the house—Peace Place. For that is what it typifies—peace—and, as we all know, plenty goes with peace usually.

You know and I know that there are rattle-heads in all families, from human beings to hogs, cattle, horses, mules, and sheep. We all have had experience with high-strung colts and frisky heifers, and even high-strung old mares and frisky old cows. The most of us have had hogs which couldn't live in peace and quiet with other hogs.

Man—lord of creation so called—has his individual unfortunates who go off at a tangent. And it makes no difference what line of endeavor they are in, they cause confusion and disorder; they disorganize everything they touch.

You cannot plow a straight furrow with a crazy-headed horse. You cannot operate a hay fork with a horse that goes by jerks and jumps, as rattle-heads go. You cannot drive to the village or the church in comfort behind a horse that goes like an automobile that has a faulty engine.

Since man himself carries the greatest amount of influence on the farm, as elsewhere, surely it is up to man to remedy this crazy-head, rattle-head bad influence which surrounds us and pesters us.

For an unsteady man will make an unsteady horse of an even-tempered, level-headed horse; and this kind of a man cannot get along at all with a mule. Wise old Ned has too much brains to allow himself to be driven crazy by anybody; a man who tries it is sure to have a war on his hands. When this sort of a cantankerous man approaches the hog pen the hogs become excited, for they know that he is excited. If it is a pen in which a mother is suckling a dozen little ones she is likely to trample upon one or more of her children—and the farmer loses.

Men of uneven temper break pump handles, snap plow points, wrench bails off pails and buckets; they break machinery, whether the mowing machine or the sulky plow; they cramp wagons too short.

They disrupt the household, for the women dread their coming; and that is a real calamity, for a farm on which the women-folk are in nervous dread perpetually, is an unhappy farm, an unsuccessful farm.

I myself bought an Ayrshire cow three years ago. She was what is called high-strung and a bit difficult to manage. But the farmer who owned her before me was a cantankerous old cuss, as was also his son-in-law who lived with him, and I calculated that at our place she would

quiet down. She did. My son John and I handled her, and in three weeks she would stand to be milked—and she did give milk that was worth getting! But I hired a man, and he was not even-tempered, and he had fights with that Ayrshire (as son John and I found out when it was too late), and she gave less and less milk, and she lost flesh although she pastured richly with the rest of our herd, and I had to sell her for \$25 less than I paid for her.

I discharged that hired man. Why, he had nearly ruined two teams of young Pinto horses—high-strung animals—by his bad temper; so I let the Pintos go too. He had three colts which had barnyarded it during the winter so afraid of him—although he did not actually abuse them; only hollered at them—that "you couldn't get within half a mile of them," to put it as son John tells it. And the women-folk—well, they were going on a strike.

Now this man was one of the most efficient workers it has ever been my pleasure to see work, except for his nervousness and bad temper. He knew how to work; he did. He was big and strong and willing. He was healthy physically, but his mind suffered from some kind of a disease that made him sort of jump at things. He was not stable. It was as if he were continually yelling "Boo!" at every living thing on the place. He hollered at son John one day, and John hit him in the mouth and loosened one of his teeth. He came back at John like a lion and, being bigger and stronger and heavier than John, John stood to get an awful licking if I hadn't happened along to pry them apart.

I did not discharge him for that; John would have been ashamed if I had. But I discharged him for his bull-headedness, and after I had paid him off and he was ready to start for the suburban trolley to look for another job, he wanted to say good-by to our shepherd dog Billy—but, do you know, Billy showed his teeth! And I had never seen Billy show any nastiness of temper before. So this man had incurred the enmity of a cow dog who was so gentle that I have been offered \$100 for him. This man had earned the dog's hatred by his ugly, nervous disposition. He went away with tears in his eyes, and he said to me:

"Mr. Henry, I don't blame you for firing me. I'm a pesky nuisance, and I am going to conquer this bad temper of mine. John won't speak to me, so I can't say good-by to him. You tell him I am sorry, will you?"

Don't you see that he was a fine fellow at heart?

He went around to the kitchen and lifted his hat to the women. The women were polite, but they sighed with relief. I watched his broad shoulders and straight back as he swung down the road. I had a great deal of pity in my heart for him. He was a cracking good worker, but I simply could not have him around.

Perhaps after the war in Europe is over, and the Germans and Frenchmen have satisfied their blood lust, one of their scientists (of which they have so many) will take time to discover a serum for nervous crankiness. It would be a great discovery.



This Pacific Coast log raft is modern and novel; in fact, some maintain that it is the most unique method of timber transportation ever devised. A raft of the largest size, built in the form of a cigar, is made up of from 12,000 to 15,000 logs or piles, each more than sixty feet in length, and held together by huge chains, some of the links of which have the diameter of a man's body



An Invention of Tremendous Importance 50% Added to the Life of Rubber Footwear

A new patent pressure process of vulcanizing rubber footwear has been invented. It is owned and will be used exclusively on brands of the United States Rubber Company.

The average rubber boot has thirty-four pieces. Wear usually begins and breaks come where two or more of these pieces join.

The United States Rubber Company's new process welds all the pieces of the boot into one composite whole, and in addition it adds greatly to the toughness of the rubber compound.

Think what this means. You can now have boots that wear half again as long as the most durable boots ever made in the past.

The extra cost of United States Patent Pressure Process Boots is a matter of a few cents.

Nearly all reliable dealers sell "U. S." Patent Pressure Process Heavy Service Rubber Footwear. If your dealer has none, write us, telling what kind of boots you wear. We'll see that you are supplied. Look for the seal—insist upon it.

United States Rubber Co., N. Y. City

Look for this Seal



EDITORIAL COMMENT

FARM AND FIRESIDE The National Farm Paper

Published every other Saturday by
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HERBERT QUICK, - - - - Editor

December 5, 1914

Coming!

A REAL Christmas number the next issue! This means that *besides* the regular features we shall publish some splendid Christmas facts and fiction.

That is just the way Christmas comes in life—after we have enjoyed the whole year we still want it to play *its* part. And the crowning feature of our next issue will be the story, "The Christmas That Wasn't Skipped," by Annie Hamilton Donnell.

Who Produces Wealth?

THE people of Belgium are often said not to be self-supporting, since they do not produce from their own acres more than a fraction of the food they consume. Yet up to the time when the Germans invaded the kingdom they lived in much comfort, consuming as much food as most people.

As a matter of fact, they were just as truly self-supporting as are the farmers of America. They were engaged in taking coal and iron and other minerals from the earth, and producing from them and from the products of the farms and forests articles just as essential to civilized life as food.

They are now reduced to poverty merely because they are not allowed to work and dispose of the fruits of their labors.

We are sending them food in the name of charity instead of in the way of trade, because the Belgians, instead of being productively employed making things we need, are under the blight prophesied against another people by Isaiah when he said, "For it shall be that as wandering birds, as a scattered nest, so shall the daughters of Moab be at the fords of Arnon."

In this scattered nest, before the German tempest struck it, work went on in which we as Americans were being served in a thousand productive ways. The tempest struck, and the Belgians ceased to work for us and with us.

This shows the intimate way in which all of us are interested in the prosperity of each of us. This is a war, not of the nations actually engaged in it, but against every producer in the world.

Take Off the Handcuffs

CONGRESS has attempted to take off the handcuffs of the Sherman Law from farmers' organizations, and now it is time for the state legislatures to act.

For the first time in the history of the nation the legislatures are freed from the distracting problems of choosing United States Senators, and it may be hoped that they will be able to correct such abuses as are to be found in the application to farmers' organizations of the state anti-trust laws.

They rest like an incubus on the farmers, preventing them from doing what every competent economist urges them to do.

To those—if there be any still unenlightened—who fear that the farmers will ever be able to combine so as to build up a monopoly, let us cite the experience of the North Pacific Fruit Distributors this year. In this organization are some 8,000 fruit growers, mostly producers of apples. They control a tremendous production

of this fruit. But when they came to market they found not only that the growers of Colorado, Nebraska, Arkansas, Missouri, Michigan, New York, New England, and the whole eastern area as far south as the Carolinas were in keen competition with them, but that the unorganized growers in their own States were bidding against them. No such thing as a monopoly was possible. And yet the organization fulfilled its function of securing a good pack, honest fruit, and systematic delivery.

The only reason for a law against agricultural organizations must be that farmers will combine to boost prices and make the consumer of food products pay exorbitant sums for the necessities of life. Farmers can never do this. This is an economic fact, and the law dealing with it should recognize the economic fact rather than the legal theory. The apple growers competed with each other in spite of their great organization. They always will in spite of any system of organizations. This has been found true in Europe, where such organizations are doing so much good. Agricultural products come from the ends of the earth, and no combine can boost prices above the line determined by the law of supply and demand. They can cut out waste, dishonesty, and roundabout methods, however, and save money for producer and consumer.

Get after the state legislatures. Make them Claytonize the state antitrust laws.

The Foot-and-Mouth War

IT IS war.

Foot-and-mouth disease exploded in the neighborhood of Chicago like a seventeen-inch shell from a Krupp howitzer, and blew to pieces the live-stock business of Illinois, Michigan, Indiana, Pennsylvania, and Ohio. It shattered things in a dozen other States, for when the stock yards are closed in Chicago, Indianapolis, and Buffalo the whole live-stock business feels it.

Europe is the normal home of this disease, which is caused by a germ too small to be filtered out of a liquid, or to be seen in the microscope. It is violently contagious, but only moderately fatal to the cloven-hoofed animals subject to it; and it is incurable. It causes infected animals to waste to skeletons and a considerable proportion of them to die.

It is caught through the hides, hair, mouth secretions, or milk of infected animals.

It infects human beings, especially children. A child ill with foot-and-mouth disease is taken with fever and vomiting, and with small sores like fever blisters inside the cheeks and on the tongue. It is not a very severe disease for human beings except in exceptional cases. Milk may be made safe against this infection by Pasteurization to the temperature of 145 degrees for thirty minutes.

The live stock infected are incurable, and should all be killed and their carcasses buried.

This is the worst outbreak of foot-and-mouth disease in the history of the United States, and the control of it means a war in which many of us will be losers and most of us feel the inconvenience.

Carrying Corn North

THERE are now recognized varieties of corn suited to every part of the State of Wisconsin. R. A. Moore, her great corn breeder, advises that Silver King or Wisconsin No. 7 be planted in the southwestern part of the State, especially for silage. Murdock's Yellow Dent and Toole's North Star are also favored. North of this zone, Golden Glow and Wisconsin No. 12 are best, with Wisconsin No. 8 along the lake.

The plant breeders are working on dent varieties for the whole north region, and are near enough the goal so that Wisconsin will soon be won for dent corn. Minnesota is following close on her heels. Such work as this is as near eternal as any human effort can be, for all generations yet to come will be helped by it.

Veterinarians You Can Trust

FIVE states—Kentucky, Michigan, Pennsylvania, New York, and Ohio—recently formed an alliance to raise the standard of tuberculin-testing. The campaign to be waged is against quack veterinarians, some of whom are alleged to have faked health certificates for diseased cattle and caused innocent purchasers to suffer loss.

According to the agreement reached, the state veterinarian of each of the States mentioned is to prepare a list of approved veterinarians authorized to issue health-test certificates. Certificates from other veterinarians will not be accepted in any of the other States. Names may be dropped from the approved list for cause.

Has your State such a list, and is the name of your veterinarian on it? Write to your state veterinarian at the state house and find out.

Reading, Writing, and What?

A STATE ILLITERACY COMMISSION has been appointed in Kentucky for the purpose of getting rid of the reproach to the State that lies in the fact that 208,000 grown-up Kentuckians cannot read or write.

Illiteracy is to be fought in many ways, but the most interesting means is the "moonlight schools" in which volunteer teachers are conducting evening classes. It is stated that through the leadership of one woman, Mrs. Cora Wilson Stewart, county superintendent of Rowan county, illiteracy has been entirely wiped out in that county in three years. If this statement is correct it is only additional proof that the most wonderful opportunities for social service in these days lie in the position of county superintendent of schools.

When illiteracy is wiped out, what then? The mastery of the three R's is the basis of every sort of education, but there is no magic in reading, writing, and arithmetic to transform a man or woman. In themselves they are only tools.

What, let me ask, does the State of Kentucky propose to give these people to do with these tools? Train the girls for stenographers, clerks, and the wives of city men? Make over good, sturdy illiterate mountaineers into people who can sign their names no more intelligently than they now make their marks?

Let us hope that the Blue-Grass State will do something better than this, and better than any State now does.

The people of the mountains have been called America's greatest undeveloped asset. They are a fine, strong, rugged people, very much like the folk who made Scotland the most learned nation of Europe. They need education in better farming, better fruit-growing, better stock-raising, better use of the hills and valleys of their native land. Their soil is not an easy one to make profitable, but in the hands of Japanese or Swiss it would render its cultivators prosperous and happy. The Kentuckians of the hills are capable of doing just such wonders with their mountains as the Swiss and Japanese have done with theirs. All they need to that end is not so much schools as a new sort of schools.

For that matter, we need them all over the country. As the matter now stands, about the only good schools, save in a few favored localities, are those attended by the boys and girls in reformatories, the schools for the Indians, and the nipa-hut schools of the Philippines.

Let us hope that the new impulse in Kentucky will lead to a state of things under which children who have not committed any crime may have as good schooling as though they had.

The Farmers' Lobby

State Legislatures Have the Chance to Do Constructive Work

By Judson C. Welliver

ONE THIRD of the membership of the United States Senate was elected the other day—by the people.

It was the first general election since the adoption of the constitutional amendment taking the selection of Senators away from the state legislatures and turning it over directly to the people.

Some of the results have already become apparent. Others are not yet so plain.

Within three or four days after the election it was agreed by all the political authorities that the results were already decided in all the contests save perhaps two. Nevada and Wisconsin were involved in some doubts, but all the rest were pretty definitely settled.

Just consider how different would have been the situation if the election of Senators were still the affair of state legislatures!

Both sides would have been claiming a majority in the next Senate.

Democrats would have been insisting that they had carried Illinois; Republicans would have been insisting that they controlled the Wisconsin legislature. Nevada would have been "positively controlled" by both sides, and Indiana would almost certainly have confronted a long and dubious controversy in its legislature. So on through the list of the close States.

The first benefit to the public at large, then, from popular election of Senators is the satisfaction of knowing what has happened. In the present instance that is especially important. It has been pretty well understood that President Wilson was determined, in case he did not control both houses of the next Congress, to have a special session of the retiring Congress in order to complete his legislative program before the new Congress should come into power.

That would have meant a hurry-up session during November, followed by the regular short session beginning in December, for the purpose of rushing into the statutes a lot of measures that the party in power considered necessary to round out its work and give it a fair showing before the public. It would have been no fault of the Democratic party, for in like circumstances any party would have been likely to adopt the same course.

But there was no uncertainty about the politics of the next Congress, consequently no need for an extra session.

All because the people elected their Senators, and we knew the political complexion of the next Senate just as soon and certainly as we knew the status of the next House.

If that isn't worth while, then certainty has no advantage over uncertainty.

But even this is not the most important advantage that accrues to the country from having direct election of Senators.

A Legislature is Supposed to Legislate

If the legislatures of the coming winter were burdened with the task of electing the regular crop of Senators, as in the past, half of them would have no time to think of anything else until the middle of the winter. The real business for which a legislature is chosen—that is, legislating for the benefit of the State—would be forgotten. It always has been to a great extent, when the overshadowing business of choosing a Senator has commanded first attention.

Take Illinois as an illustration. There were three candidates for Senator. If it had been recognized that the legislature was going to elect the Senator, there would have been deals and combinations and trades in most of the districts; and when the returns were all in it would probably have been found that no party had a majority in the legislature. There would have been a number of groups, a long list of candidates, and a huge mess of trouble. The political manipulators would have got right into the thick of it, their sleeves rolled up, making confusion worse confounded, and all the time dealing away behind the scenes. The political future of Illinois for three or four years would have been pawned in exchange for votes for this, that, or the other candidate for the Senate. Perhaps there wouldn't have been anything quite so raw as another Lorimer session, with a national scandal, an investigation by the Senate at Washington, and a Senator to be expelled from his seat; but whether or not, there would have been many weeks, perhaps months, of utter distraction from the business of making laws for the State.

Just so long as legislatures had to choose Senators, legislatures were bound to be the playthings of the big national politicians, of national committees, of the Administration at Washington, the powers of big affairs, and all the elements that are concerned in choosing Senators. A post-office was traded here and a district-attorneyship there, and a good soft job as consul to Dahomey was passed out in another place, in purchase of a legislative vote for somebody's candidate for the Senate; and if nobody got caught with marked bills on his person it was a pretty lucky circumstance.

That was the demoralizing effect that the old system of electing Senators exerted on the legislatures of the



They are out, now, with the rest of the rubbish

States. In the case of a close and bitterly contested fight for the Senatorship, nothing else was worth while, nothing else was thought about.

Just think about this for a minute:

Outside your own State, how many times have you ever read of any proceedings of legislatures aside from their business of electing Senators?

Almost not at all. The country had grown to think of the state legislatures as chiefly important because of their function of naming Senators.

Well, that's all over.

The legislatures are not going to be bossed from Washington any more.

They aren't going to be the tail of the Senatorial kite.

It will not be necessary, if you want some legislation, to get the O. K. of some boss at Washington before you dare ask the legislature to consider it.

And that's the very reason why this inauguration of popular elections is going to prove immensely important to the States, especially to the rural section of the States.

Most of the legislatures organize during January, and they remain in session as a rule about three months. This year there will be sessions in about three fourths of the States, and already it is apparent that they will be a new sort of legislative sessions. For example:

Liquor legislation of various kinds will be at the front in many of the States. Under the old system the whole legislative program would be sacked up together and tied tight with the Senatorial string in advance even of the organization. The man who was destined to be elected Senator would be required to give proper assurances to the liquor interests, or the anti-liquor interests—whichever group affiliated with him and helped "put him over"—of the support of his crowd of legislators. Trades would be made long in advance to control the whole legislative business of the session. The innocent legislator who didn't understand the game but had an unsophisticated notion that he was going to do something for his constituents would wake up when it was too late, to learn that he hadn't been in the dickers and therefore couldn't expect to get his measure considered.

Why Washington Isn't Harrisburg

But there will be little of that this winter. The other day a politician from central Pennsylvania turned up in Washington, trying to learn what liquor legislation was to be passed at Harrisburg this winter. He knew that Washington had always been the place to come to learn about Harrisburg; why not now?

But he didn't find out.

Before he left town he confided to me that Harrisburg was going to have to paddle its own canoe pretty extensively this winter. It worried him too.

"It's the end of organization control in the legislature," he said, shaking his head dubiously. "There'll be nobody to keep the thing from getting the bit in its

own teeth and tearing loose to do whatever happens to suit its fancy."

I didn't share his misgivings.

Pennsylvania has been spending money in millions upon tens of millions of late years on building good roads. It hasn't been getting much more than half value for its money if the reports of investigators and experts are to be taken at par. There's going to be an overhauling of the whole business this winter; and there will be no need to worry about whether some pet contractor is a favorite or a protégé of somebody in power at Washington.

Harrisburg has got a decree of divorce from Washington.

Of course Harrisburg will not fully realize it at first. The old Senatorial bosses will try to keep their fingers on the triggers at the state capitols, but very shortly the States will realize that they are independent, and then there will be a new era in state management.

All the Eastern States are on the eve of more or less upturnings about their road-building methods. Almost everybody too seems to have come around to the short-ballot idea. Another reform that is coming in for attention in a number of state legislatures this winter has to do with country schools. For twenty years, within my own knowledge of legislatures and their programs, educators have been trying to get the States to give serious attention to bettering country schools. The program of consolidating them, bringing larger numbers of pupils into the individual school establishment, and thus making possible to grade the pupils and provide better teachers, has been pressed year in and year out; and it is discouraging to note how little progress has on the whole been made.

One reason has been that the legislatures didn't have time enough to learn—or, more properly, to be taught—the situation.

They're going to have time now.

National and state educational authorities are framing programs that they expect will at last produce some effective results.

There are no two propositions that mean more to the country community than better schools and better roads. It's a mighty trite remark, but it's just as true now as the first time it was uttered. The systematization of road laws is going to make much progress this winter, according to men who have been looking after the tendencies in the States. For one thing, the question of federal aid to state road-building is going to develop pretty much as the legislatures shall give direction to it. If the States would give some definite, understandable sign of their desire for the co-operation of the National Government in a national roads project, Congress would not very long delay extending that co-operation. Thus far, the subject of state and federal co-operation has had a vast deal of discussion in Congress, and little in the legislatures. Congress would like to know how the States feel about it. It wants to help them if only a practicable scheme can be devised that will be safeguarded against waste.

The Bourne plan has met more favor in Washington than any other of the really national schemes for getting good roads. It would have an excellent chance of adoption before the next three years if the States would indicate clearly that they want it.

Express Yourself; Expect Results

The Bourne plan has been described in detail in *The Lobby* heretofore. It was invented by Senator Bourne of Oregon, and in effect provides that if a State will issue its bonds for building roads, say at 5 per cent a year, and deposit them with the Federal Government, then the Federal Government will in turn issue federal bonds for a like amount, drawing say 4 per cent, and sell them. Both classes of bonds will run fifty years. The Federal Government can get money at lower rates than the States, and the difference in the interest rates would be accumulated as a sinking fund to retire the bonds when they mature. The Federal Government would hold the state bonds, and the State would pay its 5 per cent interest to the national treasury. The national treasury would apply 4 per cent to paying its own interest, on the national bonds it has sold, and keep the other 1 per cent, investing and compounding it. At the time of the maturity of the bonds the sinking fund would retire them, and nobody would ever feel that they had been a real burden.

The scheme was generally regarded as highly fantastic when Senator Bourne brought it forward, but as it has been considered it has gained in favor. A little urgency from the States would secure its passage before long. It may be set down, anyhow, as pretty certain that before many years some federal participation in road building will be accomplished. A good many people think it is utterly wrong, and I'm one of those who feel so. But it's useless kicking against the pricks. When the European war is over and the country gets feeling reasonably prosperous again, it will be up to its eyes in some plan of road-building, and the fact may as well be looked in the face.

Now is the time for the States to get their ideas formulated as to what they want on this and all other questions.



The Cost of a Telephone Call

DID you ever think how much it costs to give you the telephone right-of-way anywhere, at all times?

Your telephone instrument, which consists of 130 different parts, is only the entrance way to your share of the vast equipment necessary in making a call.

Your line is connected with the great Bell highways, reaching every state in the union—with its poles, copper wire, cross arms and insulators in the country; its underground conduits, manholes, cable vaults and cables in the cities.

You have the use of switchboards costing upwards of \$100,000,000. You enjoy the benefits of countless inventions which make possible universal telephone talk.

Your service is safeguarded by large forces of men building, testing and repairing lines. You command at all times the prompt attention of one or more operators.

How can such a costly service be provided at rates so low that all can afford it?

Only by its use upon a share-and-share-alike basis by millions of subscribers, and by the most careful economy in construction and operation. A plant so vast gives opportunity for ruinous extravagance; and judicious economy is as essential to its success as is the co-operative use of the facilities provided.

That the Bell System combines the maximum of usefulness and economy is proved by the fact that in no other land and under no other management has the telephone become such a servant of the masses.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY AND ASSOCIATED COMPANIES
One Policy One System Universal Service



Every Call means a Pair of Wires from Subscriber to Subscriber - however many Calls may be made or however far apart Subscribers may be.



Headwork Shop

Makes Nut Stay Tight

SOMETIMES you have a nut which is too large to draw up tight on a bolt (especially if the threads are worn) and is in danger of dropping off. In such cases take a few strands of binder twine and lay on the bolt and inside of the nut, and then proceed to draw up in the usual way. It will nearly always become tight and remain so. S. E. RHINE.

Trouble-Proof Flood Gap

MOST swinging floodgates are always getting out of order. Here is a stationary flood gap that fills the bill in every particular. Lay a strong pole across the stream or ditch and to this spike hoards or pieces of rail that have previously been driven into the ground in the bed of the stream at an angle of about forty-five degrees. The pole itself should be securely staked at each side.

When the stream is normal the water flows through between the slats, but of course catches some small drift. During a flood the water flows over the top of the gap, thereby clearing away the drift previously collected, as well as the larger drift that moves out during high water. R. A. GALLIHER.

Tie Up Front Leg

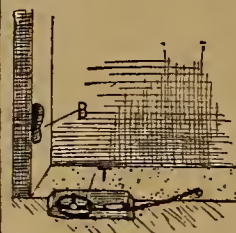
TIE the cow securely and then take a strap long enough to reach around her body just back of the shoulders. Slip a common snap on the strap and let it hang down below her belly. Buckle the strap closely. Then take a small strap with a ring on it and buckle around the cow's right front leg just above the hoof. Then draw her leg up, and snap to the ring.

She may jump around some the first time, but will soon stand still, and you can milk her without fear of being kicked. When she finds that the milking eases her and she is not whipped she will stand without the leg being raised. DEWEY WORKMAN.



The Chicken-Killing Skunk

WHEN the skunk makes a raid on the chicken coop he usually kills more poultry than he eats up clean. The next night fasten the coop securely, take a piece of the fowl the animal killed, nail it to a post or against the side of a building (B) in the immediate neighborhood of his depredations. Directly under this bait dig a shallow place and set a trap (T) so it will be even with the surface of the ground. Cover both chain and trap with leaves, grass and dirt, and nine times out of ten Mr. Skunk will try to get the bait—and you will capture him. M. COVERDELL.



Our Cats Killed the Rats

WE USED to see rats most any time making a bee line from grain stack to lumber pile or pig pen. They climbed stalks of corn to feast on the ears, they ate the grain in the feed boxes (the horses often standing back waiting), ate grain in the field, got into the corncribs and granaries, and into the house.

We shot them, trapped them with steel and wire traps, until we could catch only young ones. We were afraid to use poison on account of dogs, chickens, and stock. At last a neighbor showed me what a good cat she owned. This cat carried rats, mice, squirrels, and rabbits to her kittens. Our confab ended in my bringing home two kittens named Sambo and Peanut. They were fed at regular intervals, so had no excuse for stealing. Pretty soon they began tossing mice around out in the yard. They would catch seven or eight a day. Next it was young rats, and as the cats grew larger it was old rats also. Now our cats are full-grown and I don't know of a rat or mouse on the premises. CAROLINE A. MILLER.



MAKE YOUR HOME BRIGHT AND COSY

The American Parlor Lamp makes your home beautiful and comfortable. Lights the entire room with a soft white light, almost as light as day. Easy on the eyes—you can read or sew by the hour and not have the least inkling of tired eyes or headache.

The American gives a light of 400 candle power and does it for one-third of a cent an hour. Always pleasant to use—no wicks to trim or chimneys to wash—nor is there any smoke or disagreeable odors. Nickel-plated finish, plain white or fancy shades with fringe to match. Put an American in your home for Christmas. Makes a beautiful Christmas Gift. Ask your dealer about the American P67 Lamp or write for large circular. American Gas Machine Co. 516 Clark St., Albert Lea, Minn.



20 Reasons Why You Should Investigate the SANDOW Kerosene Stationary ENGINE

It runs on kerosene (coal oil), gasoline, distillate and alcohol without change in equipment—starts without cranking—runs in either direction—throttle governed—hopper and tank-cooled—speed controlled while running—no cams—no valves—no gears—no sprockets—only three moving parts—light weight—easily portable—great power—starts easily at forty degrees below zero—complete ready to run—children operate them—low factory prices based on enormous output—80 day money-back trial—10 years ironclad guarantee. Sizes, 1 1/2 to 18 horsepower. Send a postal today for free catalog which tells how Sandow will be useful to you. No go-between. Pocket agents and middlemen's commissions by dealing direct with factory. (692) Detroit Motor Car Supply Co. 88 Canton Ave., Detroit, Mich.

The BEST LIGHT

Positively the cheapest and strongest light on earth. Used in every country on the globe. Makes and burns its own gas. Casts no shadows. Clean and odorless. Absolutely safe. Over 200 styles. 100 to 2000 Candle Power Fully Guaranteed. Write for catalog. AGENTS WANTED EVERYWHERE. THE BEST LIGHT CO. 212 E. 5th St., Canton, O.

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With Rubber Tires, \$18.45. Your Wheel Rebuilt, \$10.50. 1 make wheels 3/4 to 4 in. tread. Tops, \$5.50. Shafts, \$2.10; Repair Wheels, \$5.95; Axles \$2.25; Wag-on Umbrella free. Buy direct. Ask for Catalog 7. SPLIT HICKORY WHEEL CO., 507 F St., Cincinnati, Ohio.

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MAKE LOTS OF TOYS

My book tells how boys have barrels of fun building big steel models with the Erector—battleships, torpedo boats, aeroplanes, elevators, bridges and 300 other models. Many of these you can run with the Mysto Electric Motor (free in all sets over \$3). It's great fun!

The Mysto ERECTOR

The Toy with Girders like Structural Steel I made the Erector girder with turned-over edges so you could build big strong models. You can build quickly and easily. Erector trains boys' mechanical skill. A splendid present. At toy dealers, or direct if no dealer in your town. Eight sizes, \$1 to \$25. Write now for my brightly colored Book, full of pictures, and my interesting boys' magazine (free).

A. C. Gilbert, Pres. The Mysto Mfg. Co., 87 Foote Street, New Haven, Conn.

30 DAYS FREE TRIAL

1915 Model with freight prepaid, on the new 1915 "RANGER" if you write at once for our big catalog and special offer. Marvelous improvements. Extraordinary values in our 1915 price offers. You cannot afford to buy without getting our latest propositions. TIRES, equipment, sundries and everything in the bicycle line half usual prices. Write to us. MEAD CYCLE CO., Dept. T 83, CHICAGO

Make 30 to 60 Weekly

selling our new unequalled gasoline table and hanging lamp for lighting city and rural homes, stores, halls, churches. Most powerful light known. ABSOLUTELY SAFE.

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More brilliant and many times cheaper than gas or electricity. Guaranteed five years. Everyone a possible customer. No experience necessary. Exclusive territory free. Write today. SUNSHINE SAFETY LAMP CO. 309 Factory Bldg., Kansas City, Mo.

9 1/2 CORDS IN 10 HOURS

BUYS KISS No Backache Weighs only 41 lbs. Family Carried SAWS DOWN TREES BY ONE MAN. Proven by sworn witnesses. It's KING OF THE WOODS. SAVES MONEY and BACKACHE. SPRING PRESSURE and GUIDE, on end of saw, a BIG 1915 IMPROVEMENT. Send for free catalog O12 showing LATEST IMPROVEMENTS. First order gets agency. Folding Sawing Mach. Co., 161 W. Harrison St., Chicago, Ill.

FARMERS WANTED

Industrious Farmers to go South and work some of our Farms on OUR CO-OPERATIVE PLAN—Located near the Gulf Coast where two and three crops are grown annually. We plow and prepare land for crops by Traction Power; advance all Seeds, Plants and Supplies and market the Crops; farmers care for crops and harvest them on a big, generous profit-sharing basis. Remarkable opportunity for ambitious farmers. Write for our Farm Book with full particulars. MILLS FARM CO. (Northern Agency) ROSE HILL, N. Y.

That Red Ball Means Longer Wear—Greater Comfort

"Ball-Band" Rubber Footwear, the kind that bears the Red Ball, is made over a natural last, to make a snug, easy fit more certain. Points that are weak on other footwear are reinforced and made the strong points of "Ball-Band."

Look for the Red Ball

"BALL BAND"

You can expect more days wear from "Ball-Band" Rubber Footwear. Our free booklet, "More Days Wear," will tell you how to get all this value out of the goods. Send for it. If no store in your vicinity sells "Ball-Band" write us, mentioning your dealer's name, and we will see that you are fitted.

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Get the Right Pump First

Then you won't spend money pulling out the one that failed. We make over 300 types of pumps—one for every purpose. Tell us what you need a pump for, and we will suggest the type that will serve you best. Write Mr. Gould, care of our Consultation Department. His advice is free. It may save you many dollars and days of wasted time.

GOULDS RELIABLE PUMPS

We specialize on pumps. Our big 70-acre factory turns out more pumps than any other concern in the country. And this multiplied output means greater efficiency and a lower cost to you. Before you buy any pump, look up the Goulds dealer in your town.

Write for Free Book

A little volume of pointers on "Water Supply for the Country Home," illustrated with pictures and diagrams. Tells how to have running water on the farm. Send for it.

THE GOULDS MFG. CO. 114 W. Fall Street SENECA FALLS, N. Y. The Largest Manufacturers of Pumps for Every Purpose

SAVE-THE-HORSE BOOK FREE

Note the Work this Horse Does Within Five Days

Mr. R. H. Williams, of Sykesville, Md., writes: "It is wonderful. The horse was unable to put heel to the ground. I gave first treatment Sunday. Puther in team Thursday, went for load of wood; got in place where they had to do their best or stay. She lifted as hard as ever I saw her. Expected to see her lame next morning, but she was not."

O.I.C. SOW WEIGHED 932 LBS. AT 23 MONTHS OLD. IONIA GIRL

YOU CAN'T CUT OUT A Bog Spavin, Puff or Thoroughpin, but ABSORBINE

MINERAL HEAVE CURES HEAVES

O.I.C. Boars and gilts, no kin, fall pigs, bred sows.

When Your Horse Is Shod

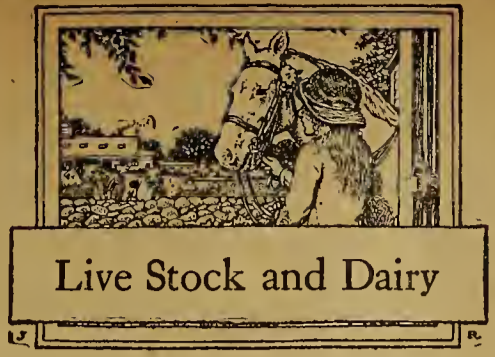
DOG ON Dog Diseases AND HOW TO FEED.

MEN WANTED

15 95 AMERICAN CREAM SEPARATOR

Keep the Profit!

As low as \$10 \$10,000.00



Home-Bred Animals Equal Imported Stock

By Don E. Mowry

A STORY which American stockmen may read with considerable just pride is a brief history of the origin and development of the Poland China breed

It tells of the long-continued effort of American breeders to perfect what has rightly become one of the most popular breeds of lard hogs raised in this country.

The Poland China Strictly an American Hog

In the garden spot of Ohio, the Miami Valley, fostered by pioneers who were live-stock men by nature, the Poland China originated.

The name "Poland China," however, is a misnomer, according to Mr. Bulkley. It is a distinctly American breed with a foreign name, absolutely meaningless as far as the history of the Poland China is concerned.

To Cure Sore Shoulder

By Dr. A. S. Alexander

Act Quickly if It's Colic

By Dr. A. S. Alexander

dose according to size of horse and severity of symptoms. The oil tends to move the mass of feed in the bowels, acting both as a lubricant and as a physic.

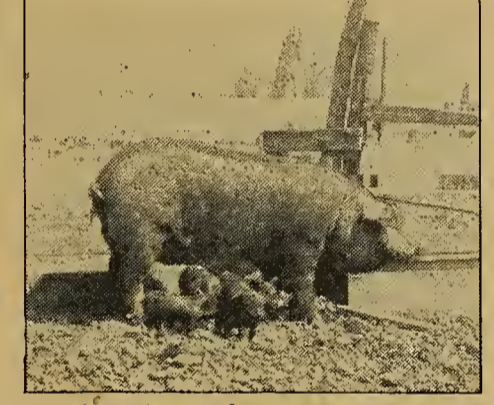
Tapping is done by means of a long sterilized trocar and conula high up on the right flank, close to the last rib, near the spine, and at the most distended part where the hairs run upward, forming a featherlike division on the skin.

The Runt-Pig Problem

By R. A. Galliber

QUITE often we see litters of newborn pigs with one or more runts, but this is not the kind of runts I wish to discuss.

Recently the writer's attention was called to a pair of pigs belonging to a neighbor. They were the same age, had been given the same care, and were al-



Any pig may become a runt pig

ways fed together. Both were thrifty pigs, but one was at least a third larger than the other.

Now the thing to do with a bunch of pigs is to test their eating capacity separately and then feed each kind by themselves.

THE Texas Business Men's Association reports 8,516 silos in Texas.

Don't Lose Calves with SCOURS



You Can Cure Them

No need to lose your calves by Scours! Can now be quickly and completely cured! Calves mean money—it pays to raise them. You can do it, if you use



Economy Calves

You can now feed a calf for the first five months of his life for less than half the cost of the milk he would consume in the old way.

Blatchford's Calf Meal

This meal has been known as the complete milk substitute since the year 1800. Very easily prepared. It prevents scouring, promotes a strong rapid growth and makes a better cow.

SKUNK We pay top prices for Skunk, Mink, Muskrat, and all raw Furs.

LET US TAN YOUR HIDE.

Cattle or Horse hide, Calf, Dog, Deer, or any kind of skin with hair or fur on.

Only \$1,000 Cash Required

Canada is Calling You to her Rich Wheat Lands

She extends to Americans a hearty invitation to settle on her FREE Homestead lands of 160 acres each or secure some of the low priced lands in Manitoba, Saskatchewan and Alberta.

160 ACRE FARMS IN WESTERN CANADA FREE

Lowest Prices Ever Made on World's Best Roofing

Once you have laid Edwards Tightcote Galvanized Steel Roofing your roofing expense for that building is at an end. Its cost per square is the lowest ever made. It has no upkeep cost. Always beautiful in appearance. Reduces cost of fire insurance.

EDWARDS Exclusive Tightcote Process
Makes Rust-Proof Roofing. Edwards Metal Shingle, Metal Spanish Tile, Edwards Reo Steel Shingle, Grip-Lock Roofing, Pressed Standing Seam or Roll Roofing, Ceiling, Siding, etc. Not the space of a pin-point on steel is exposed to weather.

How to Test Galvanizing
Take any other galvanized steel, bend it back and forth several times, hammer it down each time. You will be able to flake off great scales of galvanizing with your finger nail. Apply this test to a piece of Edwards Tightcote Galvanized Steel Roofing—you'll find no flaking.

EDWARDS Patent Interlocking Device
Prevents Warping, Buckling or Breaking. Protects Nail Holes—nails are driven through under layer not exposed to weather. No special tools or experience needed to lay—anyone can do the work—lay over old shingles if you wish.

Reo Steel Shingles
Cost Less; Outwear 3 Ordinary Roofs
No matter what kind of a building you have in mind there is a style of EDWARDS Tightcote Galvanized Roofing exactly suited to your need. Lightning-proof, Fire-proof, Rust-proof, Rot-proof. Lasts as long as Building Stands.

GARAGE \$49.50
Lowest price ever made on Ready-Made Fire-Proof Steel Garages. Set up any place. Postal brings illustrated 64-page catalog.

FREE Roofing Book
We simply ask the right to prove to you that our prices are lowest ever made for World's Best Roofing. Postal or coupon brings Free Samples, Prices and Roofing Book No. 1258.

We are the Largest Makers of Sheet Metal Products in the World

Xmas 1914



Shirley President Suspenders

50¢ For Christmas

A pair for every suit makes a man's whole year happy. Try it and see! In beautiful gift boxes—12 different pictures. At stores or post-paid, 50c.

"Satisfaction or money back"

Be sure "Shirley President" is on bushes. The C.A. Edgarton Mfg. Co., Shirley, Mass.

Wanted Travelling Salesmen

Experience unnecessary. Earn Big Pay while you learn. Write for big list of positions open and testimonials from hundreds of our students who earn \$100 to \$600 a month. Address our nearest office. Dept. 565 NATIONAL SALESMEN'S TRAINING ASSOCIATION Chicago, New York, Kansas City, San Francisco

It is to your advantage to mention Farm and Fireside in writing to advertisers. Farm and Fireside folks get the very best attention.

FREE BOOK ON MOTORING

Explains how we assist YOU in the Auto Business as Repairman, Chauffeur, Salesman or Auto Mechanician, with DYKE NEW IDEA WORKING MODELS.

Good salaries. Our employment plan tells how. Beware of imitators. Let us tell you the names of some of our students. Send for this book to-day.

Webb-Dyke Motor School, N-4632, Walnut St., Philadelphia, Pa.

RUN THIS ENGINE for 30 DAYS FREE

Detroit Kerosene and Gasoline engine sent YOU on THIRTY DAYS FREE TRIAL; guaranteed TEN years. Economical horse power at lowest prices; farmer agents wanted everywhere. Engine operates on gasoline, kerosene, alcohol, distillate or naphtha. Saws wood, grinds feed, churns, pumps, separates, makes light any job around the farm. Only 3 moving parts, no cams, gears, sprockets, etc. Send for "COMMON SENSE POWER BOOK."

Detroit Engine Works, 111 Concord Ave., Detroit, Mich.

26 18 HP 502



Here is Real Neighborhood Co-operation

By Mrs. L. F. Romans
A VISIT to a district in Iowa where I had an opportunity to observe the practical working of a farmers' organization has made me enthusiastic on the subject. This club consists of fourteen farmers, and their families, who live within a radius of a few miles. The membership fee is only a dollar a year, and includes the family as well as the farmer himself, though only the farmer and his wife are voting members.

They meet every two weeks, on Tuesday, from ten until four. These hours are rather unusual, but because this district is remote from town, with few social enjoyments, they emphasize the social side of the club, though by no means to the exclusion of the practical side. They meet at the homes of the members, the hostess and one other woman furnishing and serving the noon meal.

The time before dinner is taken up with informal discussions of crops and any other subjects interesting to the members.

At one o'clock the club is called to order and the formal meeting held. Business is transacted and a program given. This program consists of readings, music, debates, and talks. Letters are read from commission men and others interested in getting into connection with farmers. Sometimes they have a talk by the county agent or by some stock or commission man.

After the formal meeting is over more informal discussions are carried on. The women exchange fancy-work patterns, and talk about anything of interest. All are free to do whatever they like. Sometimes there will be more music, and games for the children.

The small sum raised from the membership fee is expended for secretary's book, stationery, and postage. The farmers are expected to use the club stationery for their business correspondence. The club, through the secretary, obtains bulletins, and corresponds with farm papers and commission men.

The club members pledge themselves to raise the same breed of hogs, cattle, and chickens as far as possible, and to raise the same crops, so that they may get better prices by shipping uniform products in car lots.

Profit From Waste

By M. A. Herold
SOMEONE suggests as a preventive of bursted heads of cabbage that some of the root be broken to stop growth. This is undoubtedly a good method and one that we shall try.

Our method heretofore has been to turn all bursted heads of cabbage into sauerkraut. Not only can the bursted heads be utilized in this way but we also use all small unsalable heads, and thus turn loss into profit.

We usually make the kraut in lard or butter firkins, and then sell by the firkin. We could get a much better price selling by the quart, but that method would take much longer. There is always a demand for sauerkraut, so there's no difficulty in disposing of it at prices ranging from \$1 to \$2 a firkin.

As the bursted and small heads would be wasted if we did not turn them into sauerkraut, we consider the kraut that is made and sold from these heads almost clear profit. We used to feed these heads, and all the leaves left after cutting the cabbage, to the cows, but had to feed very carefully, for if it was fed too heavily the milk betrayed it both by taste and odor.

Sixty heads of solid cabbage, such as we sell for 5 cents a head, will make a barrel of sauerkraut, which will always bring at the very least \$6, and often as high as \$8. When cabbage is scarce sauerkraut has brought as high as \$18 a barrel.

Last year cabbage was somewhat scarce, and we received from \$1.50 to as high as \$2 a firkin. When cabbage is cheap we get from \$1 to \$1.25.

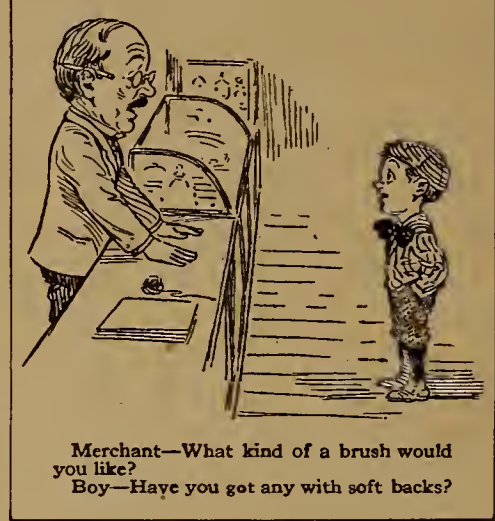
The returns from an acre of cabbage vary according to the rainfall and the price of cabbage. I would estimate from our experience that an acre of cabbage should bring at the very least \$100.

This is selling the cabbage direct.

First we sell to the storekeepers for \$1.25 a barrel, but as the season progresses the price drops to as low as 90 cents. Usually twenty heads fill a barrel, although it sometimes takes more, and again one or two less. Later in the season the cabbage is sold to people who want to make sauerkraut, and usually there are three grades of cabbage. The largest and heaviest heads bring \$5 a hundred heads. The second grade sells for \$4, while the third grade will bring \$3 or \$3.50 a hundred. This is the price of cabbage in the average year.

In making sauerkraut we first remove the outer leaves, and then cut in half and remove the heart. Some people leave the hearts in when making kraut to sell, but this is a big mistake, even if it does fill the barrel or firkin sooner. People don't want that kind of kraut. With an up-to-date kraut cutter it doesn't take long to slice the cabbage. We take a 14-quart pail of the sliced cabbage and, after placing it in the firkin, sprinkle two handfuls of salt over it, and then tamp thoroughly with a heavy sauerkraut "stomper" made of oak and weighing seven pounds.

We use plenty of salt, two handfuls (one-half cupful) is about right. Continue placing in fourteen quarts of cabbage and then salt. Finish by tamping until the firkin or barrel is full. Then place a clean cloth over it, next a lid made to fit inside the firkin or barrel, and finish by placing a weight on the lid. A heavy stone well scrubbed will serve here. If you want the kraut to ripen quickly put it in a warm place.



Merchant—What kind of a brush would you like?
Boy—Have you got any with soft backs?

Poison Weevils This Way

WHAT is the use of raising a large crop of corn if you let it spoil before you can feed or market it? That is really the text taken by W. E. Hinds of Alabama in discussing in a recent bulletin "Reducing Insect Injury to Stored Corn." Mr. Hinds says:

"It is probably conservative to estimate the loss to Alabama's corn crop at 5 cents per bushel per month, after November 1st, for about one half of our yield that continues in storage up to April, and for all corn stored after that time. On this basis the total loss last year amounted to about four million dollars."

The trouble down in Alabama is mostly weevils and beetles. These insects bore into the kernels and kill the germ. The larvae that hatch from the beetle eggs continue the damage, so that neither can the corn be sold nor will live stock eat it unless nearly starved. Poultry alone do not discriminate against weevilly corn.

MY RICHES

I AM a man of wealth, By Frank C. Pellett let in a flood of sunlight where we sit and look out upon our little field.

Trees there are which lift their naked limbs to the winter's blast in preparation for a season of verdure soon to come again. Here the saucy squirrel comes to share with us the harvest of nuts, where in the warm days of summer the gentle old cow who supplies us with milk lies quietly in their shade. A garden is there from which came vegetables to store our cellar. In a corner thereof an apple tree supplied its luscious fruits to grace our table, and underneath, a hive whose busy inhabitants are now quiet in their long winter sleep, enjoying the rest so richly earned by last summer's toil.

Flowers also there will be when spring shall come again and awaken them from their slumber. When I go forth at morn it is with joy to begin my day's work, for I have found my proper task. Happy indeed is he who finds joy in his day's work, and I find joy in mine.

Home, wife, children, trees, flowers, and work, what more can a man wish? Truly no man lives who can buy my great possessions.



Will a Tractor Pay?

THERE is a controversy on between the breeders of draft horses and the advocates of the farm tractor as to whether or not the tractor pays. Men who are engaged in trying to make farming pay will do well to study the matter, and determine whether or not under their individual conditions the horse can do the work, or a part of it, as cheaply as can the tractor. It will be found to be largely an individual problem. With the tractor under improvement all the time, and the horse getting dearer and dearer,—especially in these times of foreign war,—the tractor advocates should be able to make a better and better case for the steam or gasoline motor.

One of the tractor factories has prepared an analysis of the kinds of work and the best power for doing each, which is interesting.

The labor is divided into light belt work, heavy belt work, light hauling, heavy hauling, light field work, and heavy field work—six divisions of work.

For light belt work, like pumping, churning, cream-separating, washing, and the like, the stationary gas engine is recommended by the tractor makers.

For heavy belt work, such as grinding, silage-cutting, shredding, and threshing, the tractor is said to be best.

For light hauling—passengers, produce, and merchandise—the horse and automobile are admitted to be best. Just why the motorcycle is omitted does not appear.

For heavy hauling, such as carrying grain, building materials, etc., the tractor claims superiority.

The horse is acknowledged to be best for light field work, such as cultivating, mowing, raking, and the like; and the tractor is commended for heavy field work, such as plowing, disking, and harrowing.

Thus the tractor manufacturers claim that their machines are best for all sorts of heavy farm work, but for none of the light work.

The farmer's problem simmers down to this: Does my light work require me to keep enough horses so that I can do my heavy work with them also? In other words, in order to perform my heavy work properly with horses, am I obliged to keep such a surplus of horses that it would pay me to dispose of a part of them and put in a tractor?

One of our correspondents uses tractors on his Colorado ranch because the deep-tilling machines which he feels that he must use to produce the best results cannot be successfully operated at the depths to which he sets them except by so large a number of horses that their maintenance would be much more expensive than the tractors. This introduces the factor of efficiency. A tractor will do some things which a horse cannot. On these problems and how the average farmer works them out for his own farm depends the future of the tractor business.

Sensible Fire Precautions

By James A. King

IF WE will persist in roofing our buildings with wood shingles, we should be wise enough to have a ladder permanently placed so as to give quick access to any portion of the roof. If our taste in good looks prohibits keeping a can or barrel of water on the roof anywhere, then a barrel and bucket should be kept near the foot of the ladder.

When building a thick-walled silo you have an excellent opportunity to install a complete system of water works for the house and farm buildings. And with but little additional expense fire hydrants can be placed near or in each building of any considerable size or importance. The addition of a portable reel of hose makes a complete system for fighting fire. If the silo is built of brick, concrete, or tile, a water tank can be placed on top of it, with the supply pipe from the well leading up through the center of it. The silage will prevent the pipe from freezing in the winter. The silo is generally the tallest of all the farm buildings, so with a water tank on top of it you have sufficient pressure to throw a stream of water to the top of all other buildings.

When a man has much stock and many buildings of value, there is no way in which four or five hundred dollars

could be better spent than in building a silo with a water tank and putting in some such water supply and fire fighting system as that suggested.

Let's Be as Wise as the Filipino

When I was soldiering in the Philippines I noticed that a large proportion of the native shacks had 5-gallon cans hung over the peaks of the roofs, suspended from the ends of bamboo ladders. These shacks were built with bamboo poles for the framework, braided bamboo mats for walls, and thatched roofs of palm leaves. The long bamboo ladders led from the ground to a few feet above the very peak of the roof. From the top of the ladder hung this square-faced tin can. Seeing so many of these cans suspended over roofs I tried to connect them in my mind with some Oriental superstition or queer custom. It was some time before I realized that these tin cans were hung there for the same reason that our railway companies have a barrel sunk at each end of all wooden bridges. They were kept filled with water as a first aid in case of fire.

From the humble Filipino and the highly practical railway companies we should take a good lesson. Many a disastrous fire could have been prevented if one of these first aids had been handy. A few gallons of water sensibly applied when a fire starts will generally put it out. And if the first aid is not handy the fire is generally beyond control before you can hunt a bucket, run to the well and pump it full, then run to the fire and throw it on.

Would it not pay us to have a large barrel of water sitting handily inside the door of our barns, with a bucket hung to it always? A little care and an occasional inspection would keep these always in proper condition for instant use, even in winter. Where one has a group of hay or grain stacks it would be equally well to keep by it such a barrel and its bucket. These should be painted red with labels in white, "For fire use only." If the bucket and the water in the barrel are never used for anything else they will be there when needed. I have often noticed in cities where a job of construction is going on these red barrels filled with water and their accompanying pails, "For fire only," are always around until the job is completed and the permanent fire protection installed.

Cost of Advertising

Who pays the cost of advertising?

Five years ago a certain automobile manufacturer's output was a few thousand cars which he sold for about one thousand dollars each.

During the present season he is building more than two hundred thousand cars which are vastly better than the former output, and his price for them is less than five hundred dollars each.

Extensive advertising has brought this vast number of buyers, thus enabling him to equip an enormous factory where cars in such large numbers can be turned out much more cheaply.

The same condition is found in practically all lines of business. Advertising reduces the cost to the consumer and improves the quality because of the large volume of sales it brings.

In buying advertised goods you not only get the best value for the money, but a reliable manufacturer's guarantee of "satisfaction or money refunded."

Auto Upkeep the First Year

By W. B. Ellsworth

FOR the benefit of those who are thinking of buying an automobile, the following account of one year's run, kept out of curiosity on my part, may be of some help in determining whether you can afford one or not. The first cost of my machine was about \$950, including one extra casing and tube.

Chains (second-hand)	\$2.50
Cylinder oil used	8.00
Grease	3.90
Gasoline (269 gallons)	44.36
1 casing	18.00
2 Presto tanks	4.50
License (part of one year and full year and costs—Illinois)	7.68
Chain repairs	1.56
Cement	.65
2 tubes (1 not used, other has one puncture)	7.00
1 casing and cover	18.45
Batteries	1.25
Insurance	18.00
1 set snubbers, rear	18.00
Vulcanizing 2 casings	7.75
Electric horn	10.00
2 tire-saving jacks	1.90
1 voltmeter	1.50
1 socket wrench set	2.10
1 flash light	1.25
Express on supplies	3.00
Repairs	.15
Total	\$181.50

My tire expense was high owing to the fact that one casing was broken by a stone bruise in delivering the car. This was vulcanized free of charge, and I afterward had two casings vulcanized. The expenses given are cash; expenses do not include housing or depreciation.

As to insurance, horn, clock, and such things, they can be left off and cut down first-year costs considerably. For myself, I believe the expenditure paid.

I bought a barrel of lubricating oil to start with, at 32 cents, and my sponge grease cost me 8 cents a pound in a 50-pound can.

The car ran 4,200 miles and used 269 gallons of gasoline. Some of this was bought at wholesale and some at retail prices. I had one puncture and four blow-outs during the year.

BUSY DOCTOR

Sometimes Overlooks a Point.

The physician is such a busy man that he sometimes overlooks a valuable point to which his attention may be called by an intelligent patient who is a thinker.

"About a year ago my attention was called to Grape-Nuts by one of my patients," an Ohio physician writes.

"At the time my own health was bad and I was pretty well run down but I saw at once that the theories behind Grape-Nuts were sound and that if the food was all that was claimed, it was a perfect food.

"So I commenced to use Grape-Nuts with cream twice a day and in a short time I began to improve in every way and I am now much stronger, feel better and weigh more than ever before in my life.

"I know that all of this good is due to Grape-Nuts and I am firmly convinced that the claims made for the food are true.

"I have recommended, and still recommend, Grape-Nuts to a great many of my patients with splendid results, and in some cases the improvement of patients on this fine food has been wonderful.

"As a general food, Grape-Nuts stands alone." "There's a Reason."

Name given by Postum Co., Battle Creek, Mich.

Look in pkgs. for the famous little book, "The Road to Wellville."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.

FREE to Hunters and Trappers
 Fine Taxidermy Book Now Free.
 32p. with hundreds of photos of mounted birds and animals. Learn this profession. Save your trophies. Decorate your home and den.
Learn to Stuff Birds—tan furs, make rugs & robes. Quickly learned by men and boys. Big profits from spare time. Intensely interesting. Investigate. Write today for free book. Only a few free—so rush.
 NORTHWESTERN SCHOOL OF TAXIDERMY
 4039 Elwood Building Omaha, Nebraska

ELECTRIC Steel Wheels
 Save YOUR BACK
 Save draft—save repairs. Don't rut roads or fields. Send today for free illustrated catalog of wheels and wagons.
 Electric Wheel Co., 13 Elm St., Quincy, Ill.



A Good Habit

that makes your day a joy and adds a relish to your work—carry a plug of Piper Heidsieck with you, and as often as you get tobacco-hungry cut yourself a slice of "PIPER" to chew. This is the all-satisfying way to use tobacco and enjoy it.

PIPER Heidsieck
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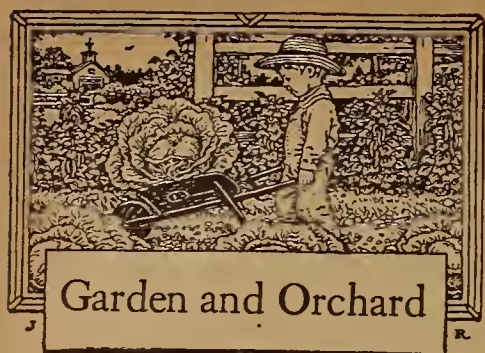
has solved for many a busy farmer the needs of a handy, ever-convenient, most delicious and healthful tobacco. Slips into your hip pocket and is ready in a twinkling.

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Garden and Orchard

Who Wants to Climb It?

By Albert Marple

A CACTUS fence is being used by a rancher in California to keep thieves out of his apricot orchard and orange grove. This fence ranges in height from 6 to 12 feet, and in thickness from 4 to 8 feet.

The leaves of this cactus, which in many instances are 1 foot in width and 2 feet long, bear spines from 1 to 2 inches in length. When a person is pricked by one of these spines it does not hurt a great deal at the time, but an hour or so afterward the pain starts and continues for several hours. Generally the flesh in the region of the wound swells to three or four times its natural size.

During the three or four years of the life of this cactus fence, the spiny leaves have grown so dense and have become so intermingled that you can hardly see through the hedge. After the first year of the fence's growth the rancher experienced no trouble from thieves.

Baldwin Apples!

By Cora A. Matson Dolson

"SO YOU didn't fill the cans with fruit?"

"Nothing with which to fill them now! Peaches, pears, grapes all gone, and sugar high."

It is the same story every year.

But there are the Baldwin apples—red, ripe, juicy. How delicious they are when baked! Draw a dish of them from the oven on a cold morning. The juice in the bottom of the dish is like wine, red and rich. Dip two of the steaming apples to the saucer, mash with a fork, and spread with butter. Father used to like them that way, and never tired of them, even though they were served every morning from November to March. No sugar needed on baked Baldwins either, with or without butter. Even invalids and little children can eat baked apples. And who is there that does not relish them?

But about those empty fruit cans: why not fill them with apples? We will appreciate them next spring before the strawberries begin to ripen. We can put up some simply stewed and sweetened, some cooked and pressed through a colander, then the pulp brought to a boil with sugar and various spices.

Cut up some with the red skin on, discarding the cores merely. Add to the sliced apple a small amount of sugar and cinnamon, cook in a dish in the oven. They will make their own juice without the addition of water. When done, pack tightly in the cans and seal while hot.

Some may be canned with sliced lemon added. One woman I knew used to soak the slices of pared apple in weak soda water overnight. In the morning she drained off the water, added the lemons and sugar and enough water to cook. The fruit when canned had a clear, transparent look like canned citron.

We might cut up some of the apples, cook, and strain the juice for jelly. It takes only one half as much sugar as grapes and currants require.

What a good thing that we all have so many apples this year, and that we were careful to put so many in our cellars!

A Profitable Potato Experiment

By C. R. Weidle

MY EXPERIENCE in planting several varieties of potatoes on the same field as a test has convinced me that it pays. I had grown a variety called Red Elephant exclusively for several seasons. This variety yields heavily on some soils and possesses excellent cooking qualities.

For the test I planted Dibbles Russet, Sir Walter Raleigh, and Green Mountain varieties. The Green Mountain variety won with a yield of a little over 200 bushels per acre. The Sir Walter Raleighs were a close second with a yield of about 200 bushels per acre. The Dibbles Russet and Red Elephant varieties yielded about 160 bushels per acre.

My Former Variety Gave Poor Results

From this statement it will be seen that the test was a profitable one. It would have been a great deal more profitable had I disposed of all my own seed and purchased Green Mountain and Sir Walter Raleigh seed for the entire 7-acre field. Had this test been made in

a different locality the results from the same varieties might have been decidedly different, as some varieties are more adapted to certain soils than others. The Dibbles Russet variety is claimed to be a heavy cropper. It failed to prove so in this test. To be fair, I will give it another test in a small way on a different field and different soil. The biggest share of my field, however, will be planted with Green Mountain and Sir Walter Raleigh seed.

The last two varieties mentioned are a roundish, slightly oblong, white-skinned potato with very shallow eyes. This sort of potato seems to take the lead in the potato markets. The Dibbles Russet potato is, as its name implies, a potato with a russet skin, yet not bad to look at as one might imagine. The flesh in this variety is very white. The Red Elephant is a longish potato with pink skin and is unsurpassed in cooking qualities, but has deeper eyes than some of the other varieties and is a little more inclined to rot during a very wet season.

Corn Insurance

KANSAS was hard hit in 1913 by the drought. This year considerable early corn was planted, with the thought in mind that it would mature ahead of the hot weather, or at least get along far enough to make a crop. It was a sort of corn insurance. An early dent corn propagated in Wisconsin—the Golden Glow—is reported to have been successful both as to early maturity and yield. The crop which takes the whole season to mature is subject to great risks. Short-season cotton is growing in popularity. The early potato has largely supplanted the old varieties of the Peachblow type. If a good yield can be secured with an early variety of corn there are good reasons for using such a variety, even in the States where the season is long.

Crown Gall Disease

By George F. Potter

HERE are two typical forms of crown gall disease on two-year-old apples. The tree on the left shows the ordinary large, warty gall, which is usually softer than healthy tissue. On the specimen to the right the great number of fine roots are characteristic of the hairy root form. Both troubles are caused by the same bacteria; and, moreover, these may cause the disease in many other cultivated plants, among which are pear, peach, cherry, rose, raspberry, and black-



The time to look for such diseases is before you buy. Look carefully, too

berry. A well-cared-for tree will not recover from even a slight attack of the disease. Therefore watch your nursery stock when you buy.

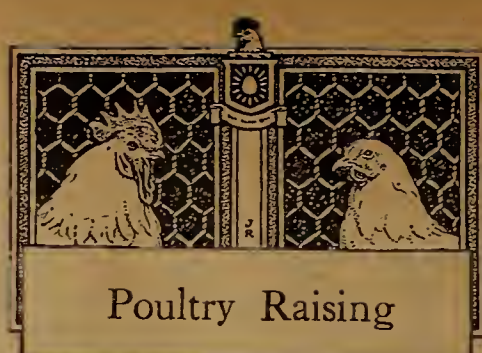
Try It!

SPREADING lime is a disagreeable task, but—If you will wear your oldest clothes, and enough of them to protect your skin, anoint your exposed skin with petrolatum (which is the name for vaseline when you don't pay for the name) or some other grease, coat the inside of your nose with the same, and wear a moist handkerchief or sponge over the nose and mouth, you may spread a lot of lime without being greatly distressed, especially if the work is done on a still day. Of course this means a lot of work and bother, but it will likewise avoid for you much inconvenience and discomfort.

Have a Phosphate

THE principal sources of phosphate rock used for fertilizer in the United States have been Florida, Tennessee, and North Carolina. The U. S. Geological Survey has just made public the fact that 2,500,000,000 tons of phosphate deposits are in prospect in Idaho, Utah, Wyoming, and Montana. The principal means of travel to the phosphate deposits at present are wagon roads: the country is only partly settled. The land containing the phosphate belongs to the Government.

THE American Consul-General in London telegraphs that the British authorities have prohibited the exportation of potash and potassium preparations.



Poultry Raising

A Beginner Shows His Hand

By J. W. Swan

THE first of November, 1913, I bought 24 White Leghorn hens and 22 of the larger breeds for mothers. The Leghorns are not pedigreed but are good laying stock.

The first eggs were sold December 5th. As I write, September 20, 1914, I have sold 176½ dozen eggs and received therefor \$41.

I set 35 dozen Leghorn eggs from which were hatched 300 chicks. No record was kept of the eggs eaten, but a close estimate shows that not far from 20 dozen were thus used, making a total of 231 dozen eggs produced. The large hens had but little time to lay, as we kept them busy hatching and brooding.

At the end of June I had 200 chicks started in good thriving condition. I then quit hatching. But "woe is me!" Three tramp cats and a skunk got busy, and when I got them exterminated I had only 65 chicks left. The loss left me pretty blue, but I told the goodwife we must not play cry-baby. I then began setting hens again and hatched 70 chicks and 3 dozen Runner ducks.

I'm Satisfied

My income from eggs and broilers sold and young stock on hand up to September 20, 1914, was \$111. The cash outlay to that date for feed was \$35, leaving a balance of \$76 for labor and interest on the investment in the hens at the start.

Wheat was purchased at 90 cents and oats at 50 cents per bushel. A good many carrots were fed for green feed. These cost \$5 per ton. The yards were never empty of green chopped grass or some other green stuff, for I have learned that grain is not the only feed necessary to produce results with laying hens. I keep all our chickens, young and old, in parks or yards of 50 by 100 feet, well littered with straw, and sow the grain fed in this straw in fair weather. One pint of oats is fed in the morning and a pint of wheat at night to each 12 hens. No other kind of feed is fed except the green stuff which was given once or twice daily, including the chopped carrots in the afternoon.

Crushed quartz rock is kept before the chickens all the time, also plenty of charcoal and lime. The hens had no oyster shell and no meat except now and then a jack rabbit which I had killed. I shall feed both oyster shell and meat scrap next season. I shall also try an incubator next spring, and dispose of the large hens, keeping only Leghorn hens and Runner ducks. I am in the business for eggs only, as broilers bring but 25 cents each.

The first 19 hens set in January last brought out 228 chicks, or an average of 12 to the hen. The first pullets laid at the age of four and one-half months, but the earliest hatched pullets have not laid steadily up to this time.

Grow Your Chicks Cheaply

By Fred Grundy

THE stock from which I obtain my best chicks is strong and vigorous. Breeding stock must not be crowded. It is not necessary that it have unlimited range, but not over 15 or 20 should be kept in one yard, and that yard should be of liberal size. Breeding stock confined in roomy yards will be as healthy and vigorous as that on range, if given proper food, exercise, and care, and will produce as strong chicks. In towns it is not often possible to have large yards, but they can easily be made roomy enough to give a few hens ample room for exercise.

A few of the best hens mated with high-class cocks will provide all the eggs needed for hatching a large flock of chickens on the farm, and one knows that he is hatching from the best of his flock instead of a miscellaneous lot, many of which are not fit for breeding purposes.

Do You Feed Trash?

In the right management and feeding of chicks lie success and profit. One can easily feed all prospect of profit away by feeding stuff put up in fancy bags and sold as "special" food at high prices, whereas it is composed chiefly of mill wastes, or by feeding the so-called medicated food sold at high prices in fancy boxes. If one prefers to use the com-

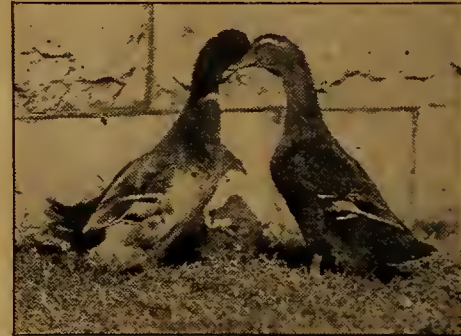
mercial chick foods instead of making his own he should know what he is feeding. Thousands of bushels of trash are foisted upon poultry raisers every year under fancy names, and highly praised by paid parties as remarkable foods. I prefer to buy my own foods and do my own mixing, though there are some honest chick foods on the market, sold at reasonable prices. By mixing my own foods I know what I am feeding and what results to expect from it—strong healthy growth instead of liver troubles and various destructive intestinal diseases.

By feeding good food, and feeding right, I start the young chick off well, and keep it going steadily up to market age. To make the most profitable growth a chick never must be hungry for a minute. A hungry chick makes no growth. Its food must be kept where it can help itself at any time. And water and grit must always be close by. Ninety per cent of all cases of crop-bound are caused by allowing the chicks to become ravenously hungry and then stuffing them full to the neck. A well-fed chick grows rapidly without check, and makes a profitable bird. A chick that is starved half the time and snuffed the other half makes neither an attractive nor a profitable bird, and it takes double the time to reach marketable size.

Sell When Profit is Greatest

I have fed thousands of Plymouth Rock chicks to two pounds in ten weeks, and quite often such chicks bring as much in the market as those fed a month longer and weighing three pounds. When such is the case it is foolish to waste a month's feed on them. I aim to sell when the profit is greatest. A chick can be grown to three or four pounds in a short time; and if it will bring a higher price per pound in market at that weight than a heavier bird, it should be sold because every pound over four requires much more time and more food than the first four. In some markets chicks weighing four pounds and over bring a much higher price per pound than those weighing less. In that case they may well be held until the most profitable weight is reached. In raising chicks on the farm they must be kept growing steadily from the start until marketed, the same as pigs. Any check they receive during growth is a sure loss of profit. These checks come from poor or insufficient food, exposure to wet weather, lice, and mites.

If the food supplied to chickens, yarded or on range, is sound, nourishing, and fairly well balanced, growth will be healthy and rapid.



Rouen ducks look like wild Mallards and they are fine for the table

A Quintet of Two-Eggers

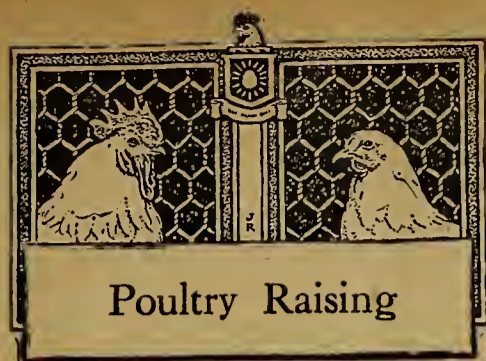
THE account of hens laying two eggs a day published some weeks ago in FARM AND FIRESIDE brought to light these unusual egg-laying stunts in the flock of H. S. Mathewson, a Barred Rock enthusiast of Massachusetts.

One of my pullets that laid two eggs in one day in May last, laid the five days preceding and two days succeeding, making 9 eggs in the eight days. I am still in a surprised attitude at her performance, for I had the pullet in my hands when she dropped the two eggs. She was not one of my best or most persistent layers.

There were four others that laid 2 eggs in one day in May, though not all on the same day. One laid eight days preceding and two days succeeding, making 12 eggs in eleven days. Another laid two days preceding and one day after, making 5 in four days. Another laid five days before and five days after the double egg-laying, making 12 eggs in eleven days.

I had a pullet that began to lay the 11th day of October and laid 54 eggs to the 27th of December, when she started to molt and did not lay another egg until March 8th. I never had a pullet molt before or since until they molted in October of the next year.

Our correspondent does not need to depend on guesswork in getting at the production of his hens. He trap-nests his hens regularly and is an excellent example of the occasional poultryman who is so situated as to be able to follow trap-nesting the year through. His flock of layers seldom exceeds two dozen hens, and his breeding operations conducted on an exact scientific basis affords an unflinching interest and a modest increase of profit during his declining years.



Poultry Raising

How I Manage My Flock

A fourteen-year-old boy's experience

By Jesse C. Stollar

BEFORE setting the hens I always clean out the nests and put in new straw. Then I dust the nest and hen with insect powder and put in two or three eggs for a day or two to make sure that the hen will not leave the nest. After this is done I put thirteen eggs under each hen. After the hen has set about a week and a half I dust her again with insect powder.

I always disinfect with lime and ashes the ground on which I put the chicks. I generally have two or more hens set at one time, and then put about twenty chicks with one hen. I dust the hen and chicks with insect powder, then put them in a coop about six feet square. Three fourths of the top is covered with fine-mesh netting wire and the rest covered with a wide board.

The first two days I do not feed the little chicks anything. I give whole corn to the hen, and am always sure that they have clean water.

As soon as I commence to feed the little chicks I give them a mixture of fine-ground shelled corn, charcoal, wheat, and tankage. I generally moisten this with a little water. Sometimes the gapes get started in the flock of little chicks, but I generally overcome this by giving them gape cure. This can be purchased at any drug store.

I keep the large chickens in houses covered with rubber roofing except one end, which is covered with canvas. I never shut them up except when there is snow on the ground. I always shut them up at night. In the morning I feed them wheat, at noon oil meal, tankage, or bran, and at night corn. In the summer time I do not feed them at noon.

the surety of an individual's breeding in this way one must spend several years at trap-nesting, which work will involve not only a great deal of extra manual labor but also considerable work on paper, for which many may not be prepared, for few understand the laws of breeding.

I believe that the craze for trap-nesting will, in time, pass away. It requires so much work and skill that I believe it should be used only by experiment stations, egg contests, private men of means who like to do it for the fun of it, and such.

I liked the article by Mr. Kazmeier, but I think that part, at least, of its good effects were taken away by its editorial footnote, and I should be greatly pleased, and I believe your readers greatly benefited, should you line up with Mr. Kazmeier and others on this question.

The argument and recommendations made by Mr. Marsh forcibly emphasize the idea that year-through trap-nesting of large flocks is out of reach of most farm poultry keepers. But nothing he says controverts the fact that there are a lot of poultry keepers on farms and elsewhere who can with advantage trap-nest a pen of a score or less of hens selected from the main flock as the best appearing individuals, showing more than ordinary indications of being good layers. Such pullets or hens and their progeny trap-nested during even the late fall and winter months from year to year will furnish a much surer criterion of productiveness or non-productiveness than any man's "hen sense" will afford, and trap-nesting is the best kind of schooling by which to acquire hen sense for children and others who do not possess it.



From a late novel—"She laid her fortune at his feet"

Shall Experts Alone Trap-Nest?

THE problem of sifting out the loafer hens is taking possession of tens of thousands of poultry keepers who a few years ago considered a hen a hen. The discussion of this problem some weeks ago, under the caption "Selecting the Layers," in our columns invited the following views from a Maine poultry enthusiast, Mr. Philip M. Marsh.

After reading your issue of July 18th, I was particularly interested and gratified by the poultry article by F. W. Kazmeier, in which he says that trap-nesting is too expensive for practical purposes and that good layers can be selected by careful watching and remembering certain desirable features.

I fully agree with Mr. Kazmeier in what he says, and I think his article is sensible reading. The Maine Experiment Station expert, Doctor Pearl, says that 400 to 500 trap nests require one man's whole time. You see, he must open the nest, feel to find out whether the hen has already laid and, if so, pull her out, take her number, make the recording mark, remove the egg, and reset the nest. This he must do every two or three hours in order that the hens have plenty of chance to lay. This sort of work, whether it be upon the general farm or upon the commercial plant, is too restrictive.

And again, the initial cost of trap nests is much greater than that of ordinary nests; they are much harder to clean; they take up more room; and they are often getting out of order. Whether a poultry keeper has a few or many hens, he cannot profitably set aside time for this work.

Mr. Kazmeier is right, that good layers can in general be picked from poor layers. All one needs to do this is to develop a "hen sense" so as to recognize the vigor and "busybodiness" of a hen. Probably there is no "egg shape." Nevertheless, there must be some worth in the facts that Judge Card presents, that all laying Wyandottes are long, deep-bodied individuals as compared with the short, chunky-bodied show Wyandottes who rarely lay well, that Tom Barron's White Leghorns are very long, deep-bodied hens, and that the 303 and 291 egg Leghorn scrubs at the Oregon Station were long, deep-bodied birds. I must conclude that there is a different shape in high producers from that in low producers, and I believe that there is a way to tell a layer; a general rule which will hold true enough to satisfy almost every breeder. This rule would be along the lines of Mr. Kazmeier's suggestions.

Trap-nesting, to produce results, must be a continuous work covering several years, according to the Maine Experiment Station's work. From the record of an individual one cannot know that her progeny will produce similarly. But if this individual possesses ancestors several generations back whose records were high the chances are good that her progeny will also be high producers. And in order to find out

How Early Should They Lay?

By A. R. Coggeshall

I WAS much interested in the article called "A Short Egg-to-Egg Cycle," inasmuch as I possess a White Wyandotte pullet that I thought was about as precocious as they grow. A comparison of figures show that I have a slight advantage over Friend Ballard of Pennsylvania.

My pullet was hatched April 20, 1914, and laid her first egg August 16th (118 days), making her cycle from shell to shell four days less than four months' time.

She has laid an egg every day (except one) up to present date (August 28th), and she is not alone in her precocity, as two of her sisters are now laying, and several of her brothers appear to be fully matured at fourteen weeks. In fact, the whole clutch (53) have grown remarkably fast since they first saw the light. They are very uniform in size.

Sour Milk Successful

By Ida M. Shepler

I NOTICED your request in an April FARM AND FIRESIDE, relative to feeding sour milk to turkeys as a preventive of blackhead. At present I raise no turkeys and could not make the experiment, but I put some of my turkey-raising friends on to the plan, urging a trial of the sour-milk treatment, and where the milk was fed as I directed, in vessels freshly scalded each day, the reports are that the turkeys did well, not one trouble arising that might be attributed to indigestion. Neither did the turkeys show the diarrhea that accompanies blackhead.

But if I have not personally given the sour-milk treatment a chance to save poults from enteric troubles, I have given it a two-year test with young chickens.

Last year and this, large broods of Buff Orpingtons, in my own yard, given the sour-milk treatment, responded by producing flocks free from any bowel ailments. The year before this trial I was a heavy loser from bowel troubles.

In a neighbor's yard of Black Orpingtons which I kept watch over I never saw better results follow the treatment. In this yard the sour milk was made often the sole feed for some of the meals. The chickens constantly stood about the pans of fresh sour milk or good buttermilk. After beginning the milk treatment, loss from digestive troubles was too small to notice.

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DR. HESS & CLARK
Ashland, Ohio

Experience Bazaar

IT IS with considerable pride that we publish these peace letters about the war. They show the earnest, calm thinking which is being done upon the American farm. And it is to the American farm that the starved and hollow eyes of Europe must presently turn for renewal. Are there not more letters about the war and peace for exchange in our Bazaar?

Let Us Have Peace at Home

DEAR FIRESIDE EDITOR: I was much pleased to find one of your cards which contained these words: "If you are a German please treat your Belgian neighbors now with extra kindness."

I was in Rotterdam in May, and when the war trouble began I took the next steamer for the United States. On board the ship the second-class quarters were almost exclusively occupied by Belgians who spoke nothing but French. Although I am a Prussian by birth I speak French fluently, and therefore was well treated, especially by the children. One day I offered a cake to a girl of eleven, who divided it generously with a little urchin. I became interested in the child, who with her mother was to join her father in Canada. By the time we reached Halifax we had become good friends, and the mother, whom we will call Mrs. B., invited me to make them a visit, an offer which I could not accept.

The Hand of Friendship

Some weeks after we had landed and gone our own ways I received a letter from Mrs. B., saying that they were not satisfied with conditions in Canada, and would move to the States as soon as circumstances permitted. I at once sent to her husband the prices of good land in Ohio, and I promised to get more information so that Mr. B. could consider seriously the purchase of a farm. I suggested that I should board with them and also give little Aimée music lessons, for she had considerable talent.

The family seemed pleased and wrote that they were making arrangements to join me. Then Liège fell, and I have heard nothing more.

Now you see, this Belgian who could not make a living at home carried his hatred here to America because he was trained to believe it an act of patriotism to distrust anyone speaking German,

even me, who offered him a brotherly hand to improve his condition and to enable him to support himself and his family.

How needlessly we hate our neighbors! The great lesson which Christ has given to us, that alone by deeds of brotherly love can we make God's kingdom come, is regarded as a pretty sentiment, not a law by which we should live.

Let all of us in this free country, of whatever birth we may be, join hands and hearts to serve one another and to make our farms the purveyors of the world. Europe will need us after this impoverishing war; a great duty and a great opportunity is with us which can be fulfilled only by the agency of brotherly love that casts out fear and distrust.

J. O. S., Ohio.

Builders of Prosperity

DEAR FIRESIDE EDITOR: The issue of FARM AND FIRESIDE for September 12, 1914, prompts me to say a few words by God's help.

I wish to thank you for the true-hearted and noble courage of your staff in behalf of the upbuilding of all nations and classes into one great body and brotherhood of love.

Love, trust, and neighborliness are the only powers which can regenerate this war-cursed world.

Old things will pass away and the new order will in due season freely be made manifest to every obedient heart. If we do not receive the message of mutual trust and affection we cannot enter into one of the greatest races that was ever run for the establishment of permanent peace.

Wishing you strength and success in promoting the spirit of peace and efficiency, I am,

J. V., Ohio.

Opportunity for Farm Women

DEAR FIRESIDE EDITOR: This is a great time for American farm women, I think. We can do much to help our husbands to use the opportunities the war has given our country. By economy and courage and patience we can induce them to intensify their farming; in some sections we can even encourage experiments in the raising of new crops for which the European war has opened a market.

We can also teach our children the lesson of the war. They can understand that ungathered harvests and unsown fields mean starvation. They can understand that uncontrolled tempers lead to warfare—both between people and between nations—and unemployed or badly employed hands are often the cause of those tempers, that industry is our great protection against bad tempers, and the greatest promoter both of neighborliness and of national peace. P. L., New York.

For the Children's Pleasure

By H. W. Pierce

TAKE an old wagon wheel and spindle. Set the spindle with the teud about two feet out of the ground, then place the wheel in place with dish side up. Bolt four 2x8 planks 10 feet long to the wheel. This makes a good merry-go-round for the children, and they will spend hours playing with it.



The Brown Mouse—Continued from Page 3

"I need all the advantage I possess," said Jennie, "and all the votes. Say a word for me when on your pastoral rounds."

"All right," said Jim. "What shall I say you'll do for the schools?"

"Why," said Jennie, rather perplexed, "I'll be fair in my examinations of teachers, try to keep the unfit teachers out of the schools, visit schools as often as I can, and—why what does any good superintendent do?"

"I never heard of a good county superintendent," said Jim.

"Never heard of one? Why, Jim Irwin!"

"I don't believe there is any such thing," persisted Jim, "and if you do no more than you say you'll be off the same piece as the rest. Your system won't give us any better schools than we have—of the old sort—and we need a new kind."

"Oh, Jim, Jim! Dreaming as of yore! Why can't you be practical? What do you mean by a new kind of rural school?"

"A truly rural rural school," said Jim. "I can't pronounce it," smiled Jennie, "to say nothing of understanding it. What would your tralalooal rural school do?"

"It would connect with life," said Jim.

"How?"

"It would teach the things the farmers and farmers' wives are interested in as a part of their lives."

"What, for instance?"

"Dairying, for instance, in this district; and soil management, and corn-growing, and farm manual training for boys, and sewing, cooking, and house-keeping for the girls—and caring for babies."

Jennie looked serious after smothering a laugh.

"Jim," said she, "you're going to have a hard enough time to succeed in the Woodruff school if you confine yourself to methods which have been tested and found good."

"But the old methods," urged Jim, "have been tested and found bad. Shall I keep to them?"

"They have made the American people what they are," said Jennie. "Don't be unpatriotic, Jim."

"They have educated our farm children for the cities," said Jim. "This county is losing population, and it's the best county in the world."

"Pessimism never wins," said Jennie. "Neither does blindness," answered Jim. "It is losing the farms their dwell-

ers and swelling the cities with a proletariat."

For some time now Jim had ceased to hold Jennie's hand, and their sweetheart days had never seemed farther away.

"Jim," said Jennie, "I may be elected to a position in which I shall be obliged to pass on your acts as teacher—in an official way, I mean. I hope they will be justifiable."

Jim smiled his slowest and saddest smile.

"If they're not I'll not ask you to condone them," said he. "But, first, they must be justifiable to me, Jennie."

"Good night," said Jennie curtly, and left him.

Jennie, I am obliged to admit, gave scant attention to the new career upon which her old sweetheart seemed to be entering. She was in politics, and was playing the game as became the daughter of a local politician. The reader must not by this term get the impression that Colonel Woodruff was a mau of the grafting, tricky sort we are prone to think of when the term is used. The West has been ruled by just such men as he, and the West has done rather well, all things considered. Colonel Albert Woodruff went South with the army as a corporal in 1861, and came back a lieutenant. His title of colonel was conferred by appointment as a member of the staff of the governor, long years ago, when he was county auditor. He was not a rich man, as I may have suggested, but a well-to-do farmer, whose wife did her own work much of the time, not because the Colonel could not afford to hire "help," but for the reason that "hired girls" were hard to get.

The Colonel, having seen the glory of the coming of the Lord in the triumph of his side in the great war, was inclined to think that all reform had ceased, and was a political standpatter—a very honest and sincere one. Moreover, he was influential enough so that when Mr. Cummins or Mr. Dolliver came into the county on political errands Colonel Woodruff was always called into conference. He was of the old New England type, believed very much in heredity, very much in the theory that whatever is right, in so far as it has secured power or money.

He had hated General Weaver and his forces, and had sometimes wondered how a man of Horace Boies's opinions had succeeded in being so good a governor. He broke with Governor Larrabee when that excellent man had turned against the great man who had devel-

oped Iowa by building railroads. He was always in the county convention, and preferred to serve on the committee on credentials and leave to others the more showy work of membership in the committee on resolutions. He believed in education, provided it did not unsettle things. He had a good deal of Latin and some Greek, and lived on a farm rather than in a fine house in the county seat because of his lack of financial ability. As a matter of fact, he had been too strictly scrupulous to do the things—such as dealing in lands belonging to Eastern speculators who were not advised as to their values, speculating in county warrants, buying up tax titles with county money, and the like—by which his fellow politicians who held office in the early years of the county had founded their fortunes. A very respectable, honest, American tory was the Colonel, fond of his political sway and rather soured by the fact that it was passing from him. He had now broken with Cummins and Dolliver as he had done years ago with Weaver and later with Larrabee, and this breach was very important to him, whether they were greatly concerned about it or not.

Such being her family history, Jennie was something of a politician herself. She was in no way surprised when approached by party managers on the subject of accepting the nomination for county superintendent of schools. Colonel Woodruff could deliver some delegates to his daughter, though he rather shied at the proposal at first, but on thinking it over, warmed somewhat to the notion of having a Woodruff on the county payroll once more.

VIII

Moonlight and a Falling Mercury

"GOING to the rally, James?"

GOING to the rally, James? Jim had finished his supper, and yearned for a long evening in his attic den with his cheap literature. But as the district schoolmaster he was to some extent responsible for the protection of the school property, and felt some sense of duty as to exhibiting an interest in public affairs.

"I guess I'll have to, Mother," he replied regretfully. "I want to see Mr. Woodruff about borrowing his Bahcock milk tester, and I'll go that way. I guess I'll go on to the meeting."

He kissed his mother when he went, a habit from which he never deviated, and another of those personal peculiarities which had marked him as different from

the other boys of the neighborhood. His mother urged his overcoat upon him in vain, for Jim's overcoat was distinctly a bad one, while his best suit, now worn every day as a concession to his scholastic position, still looked passably well after several weeks of schoolroom duty. She pressed him to wear a muffler about his neck, but he declined that also. He didn't need it, he said; but he was thinking of the incongruity of a muffler with no overcoat. It seemed more logical to assume that the weather was milder than it really was on that sharp October evening, and appear at his best, albeit rather aware of the cold. Jennie was at home, and he was likely to see and be seen of her.

"You can borrow that tester," said the Colonel, "and the cows that go with it if you can use 'em. They ain't earuing their keep here. But how does the milk tester fit into the curriculum of the school? A decoration?"

"We want to make a few tests of the cows in the neighborhood," answered Jim. "Just another of my fool notions."

"All right," said the Colonel. "Take it along. Going to the speakin'?"

"Certainly, he's going," said Jennie entering. "This is my meeting, Jim."

"Sure, I'm going," assented Jim. "And I think I'll run along."

"I wish we had room for you in the car," said the Colonel. "But I'm going around by Bronson's to pick up the speaker, and I'll have a chuck-up load."

"Not as much of a load as you think," said Jennie. "I'm going with Jim. The walk will do me good."

Any candidate warms to her voting population just before election, but Jennie had a special kindness for Jim. He was no longer a farm hand. The fact that he was coming to be a center of disturbance in the district, and that she quite failed to understand how his eccentric behavior could be harmonized with the principles of teaching she had imbibed at the State Normal School, in itself lifted him nearer to equality with her. A public nuisance is more respectable than a nonentity, sometimes.

She gave Jim a thrill as she passed through the gate which he opened for her. White moonlight on her white furs suggested purity, exaltation, the essence of womanhood—things far finer in the woman of twenty-seven than the glamour thrown over him by the schoolgirl of sixteen.

Jim gave her no thrill, for he looked gaunt and angular in his skimpy ready-made suit, too short in legs and sleeves,

Big Ben

Made in La Salle and Peru, Ill., by Westclox



A crackerjack of a Xmas present

Remember when you were a kid? The presents that were all shiny and bright, and that "worked!" Weren't they the ones that you were proudest of?

Something for *your room*—something you could use *all year*—something like *big* people had in *their* rooms. The *sensible* presents appealed to you best when you were a *kid*. Think back a bit and see. Then think of Big Ben for those boys and girls.

Toys, of course, should never be displaced. It wouldn't be Christmas without them. But mix in *useful* things—things that develop *pride* and that make little people feel responsible.

Let *one* thing that meets the eye of your little boy or girl on Christmas Morning be that triple nickel-plated, jolly, handsome, pleasant looking, *serv-*

icable, and inspiring clock—**BIG BEN**. See if you don't hear them say: "Why? Isn't that a crackerjack? Is that for me to use myself?"

Big Ben is a crackerjack-of-a-Christmas-present to give to any friend. Fact is, two presents in one—a dandy alarm to wake up with, a dandy clock to tell time *all day* by. He stands seven inches tall, has big, bold, black hands you can see at a glance in the dim morning light—large, comfy keys that almost wind themselves, and a deep, jolly ring that calls either way you want, *five straight minutes* or *every other half minute* for *ten minutes* unless you shut him off.

His price is \$2.50 in the States, \$3.00 in Canada. If not at your jeweler's, a money order mailed to his makers, Westclox, La Salle, Illinois, will send him wherever you say, your card enclosed, attractively boxed and express charges paid.

What Your Friends Want Christmas Suggestions for Many Kinds of People

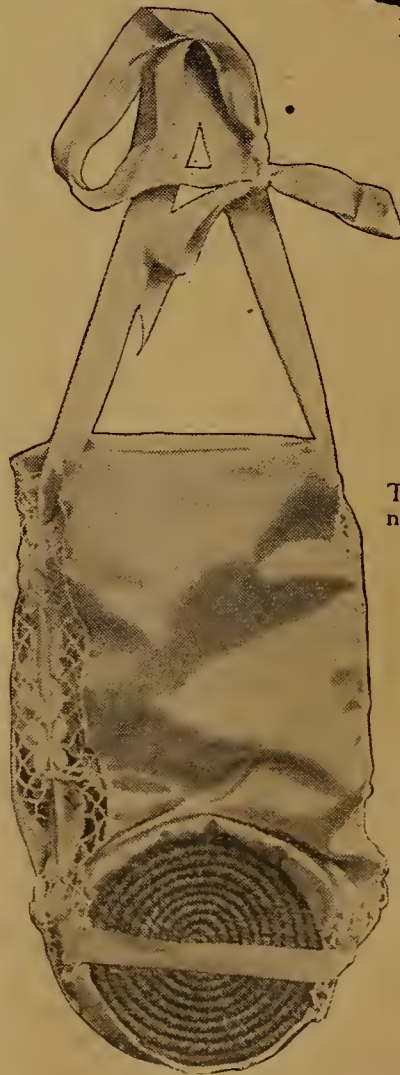
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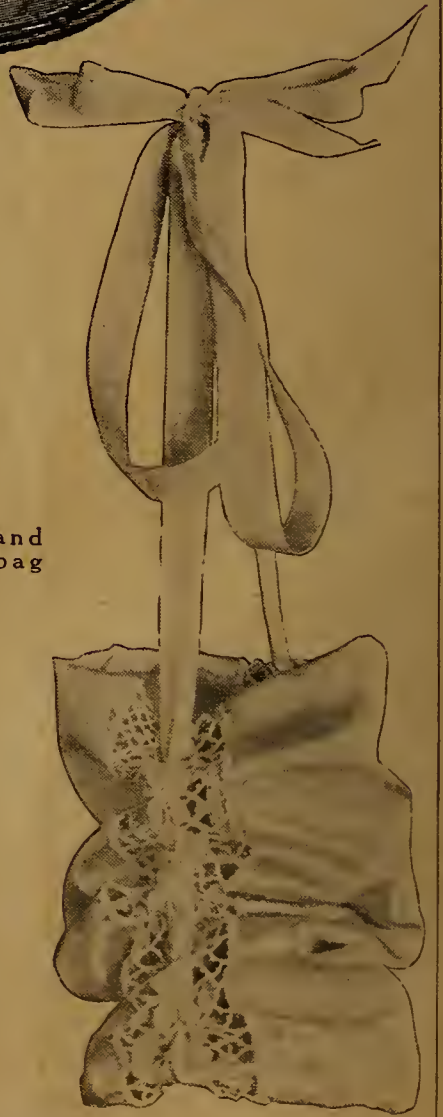
Grape design collar



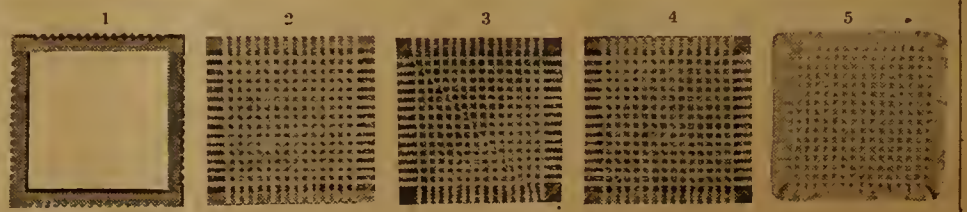
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What to Make for Little Sister

Take Ten Cigar Boxes and Cut Them Into Doll's Furniture

By A. E. Swoyer

AS DOLLY'S sleep is most important we should attend first to the furnishings of her bedroom. These consist of bed, dresser, and chair. For the bed, knock the ends from one of the shallower boxes used to hold twenty-five cigars, and saw the cover in two so that one piece is twice as high as the other. These serve as the head and footboard. Next remove every bit of paper or labels on the wood. This may be done by rubbing with coarse sandpaper or scraping with a knife or piece of glass. It is still easier to rub them off with a slightly moistened cloth, but this will warp the wood unless you thoroughly dry it out afterwards by leaving it behind the stove for several days, with a weighted board on top to hold it straight.

The box forms the body of the bed of course. The ends should be shaped in some manner, however, in order that the job may be workmanlike. The pattern shown is an easy one; it may be laid out with pencil and string as shown on the detail sheet, and cut out along these lines with the bracket saw. If you haven't the saw, a sharp knife will do, although it requires care not to split the wood. When the ends are shaped they are to be nailed into place as shown. The finest of nails should be used, and they should be so driven that they will not pierce through the crosspieces. Additional strength is given if the edges to be joined are touched with good glue before nailing together. The bed, as well as all of the other pieces to be described, is finished either by a coat of paint, of stain and varnish, or of varnish alone.

The dresser should be made of one of the boxes used to hold fifty cigars. The extra depth is necessary in order that it may stand upright. As with the bed, the body consists of the box with the cover removed. Saw the cover in half. One of these halves, when cut in two lengthwise, forms the two doors shown: the other, cut down a trifle, gives the wood for the swinging mirror. The doors are hinged to the box with bits of leather either glued or tacked on; are kept from closing too far inwards by means of a strip nailed to the inside of the box, and may be latched with the hook and catch shown. For the knobs, run small screws through from the inside of the door, then heat sealing wax and daub it upon the projecting points, molding it to form with the fingers while it is still warm.

The two uprights which support the mirror are little strips of cigar-box wood the same length as the width of the "glass," and are nailed to the back of the box. The mirror itself is simply a bit of wood upon which tinfoil has been smoothly pasted, and is suspended in a swinging position by means of a nail driven into it through the supporting posts on each side. In order that it may hang straight these nails should be driven into it a little above the center. Since they are to act as pivots, round wire nails should be used, and they should not be driven in too tightly. The upper shelves should now be nailed in.

The construction of the chair is sufficiently plain from the drawing. In this the box is not cut down, but separate

pieces of the wood are cut and fitted in. The first step in making the dining-room table is the joining and cutting out of the top, and consists in gluing two squares of cigar-box wood together, preferably with their grains running in opposite directions, drying them thoroughly under a weight, and then marking out and cutting the circular shape.

The dining-room chairs, of which there should be at least two, are made exactly like the one for the bedroom.

The basis of the construction of the davenport is the usual cigar box. This should have both ends and one side carefully removed. The two ends form the ends of the davenport, and should be shown. After shaping they are to be nailed back in such a position that their lower parts serve as legs. If one of the deep boxes is used this result will be obtained if the middle of the ends comes in line with the seat of the davenport. The back is then shaped as shown, and the davenport is complete except for stain and varnish.

The serving table too involves the use of a cigar box for the body. The secret is that the box is placed upside down. First, though, it should be taken to pieces and made about one-half inch narrower and shorter. This is easily done by sawing off sides, ends, and bottom by this amount and nailing them together again. The reduction is necessary because the box cover is to be the table top and it must be larger than the frame in order to provide a suitable overhang. The table legs are strips of cigar-box wood either tacked or glued to the inside of the box at the corners, while the top is glued accurately in position or nailed if necessary. If nails are used their heads should be set well below the surface and the holes filled with putty before staining.

The rocking-chair has its body cut from a cigar box, the deeper kind by preference. One end of this box is knocked out—the other end serves as a seat—and the sides are cut off about two thirds of the way down, the remainder providing arms for the chair. The rockers are to be sawed or cut from the wood of the top, and as there would be some difficulty in nailing them to the body of the chair—the arms being in the same line—they should be joined by a brace, for which the extra end of the box, which was previously removed, will prove admirable, and the nails set into this brace.

The little girl who receives this furniture is sure to have a merry Christmas.

Emergency Surgeon's Table

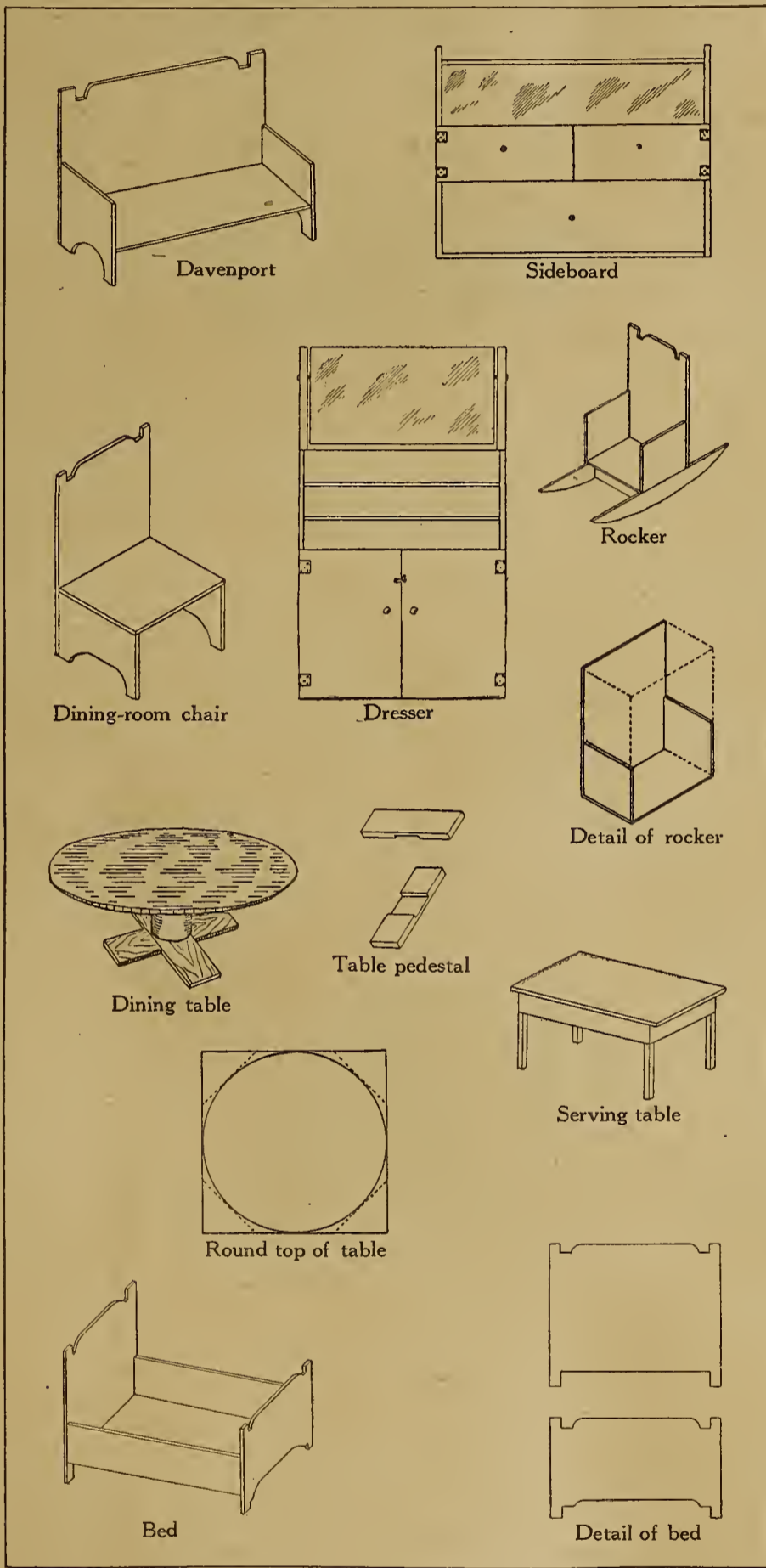
By Maude E. S. Hymers

SURGEONS are often hampered by Slack of a suitable operating table when the operation is performed at home.

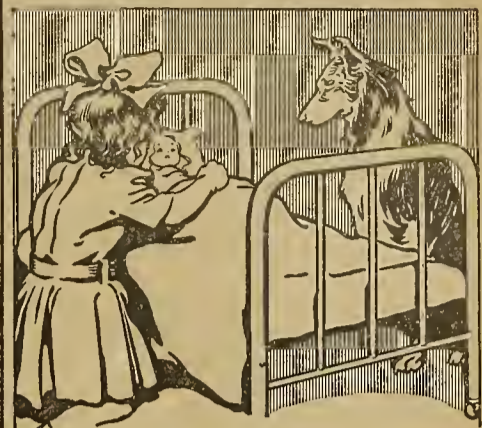
An ordinary extension dining table may be so arranged that it will prove an excellent makeshift.

First open the extension table and place two of the loose leaves lengthwise of the table, allowing their ends to rest on top of the table bed. Blankets and rubber sheeting may be strapped upon the two leaves to make all solid as well as comfortable for the patient. This leaves a narrow place on which the patient may lie, while the surgeon and assistant stand in the openings on either side, between the two portions of the table bed.

The ends of the table should be covered by pieces of sterilized sheeting upon which the instruments may be laid ready to the surgeon's hand.



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By Jessie V. K. Burchard

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You will find them delicious
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This recipe shows you how
easily and quickly you can
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2 envelopes Knox Acidulated Gelatine
4 cups granulated sugar
1½ cups boiling water
1 cup cold water

Soak the gelatine in the cold water five minutes. Add the boiling water. When dissolved add the sugar and boil slowly for fifteen minutes. Divide into two equal parts. When somewhat cooled add to one part one-half teaspoonful of the Lemon Flavor, found in separate envelope, dissolved in one tablespoonful water and one tablespoonful lemon extract. To the other part add one tablespoonful brandy, if desired, one-half teaspoonful extract of cloves, and color with the pink color. Pour into shallow tins that have been dipped in cold water. Let stand over night; cut into squares. Roll in fine granulated or powdered sugar and let stand to crystallize.

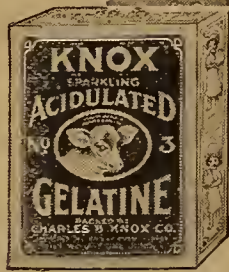
Vary this recipe by using different flavors and colors, and if desired, add chopped nuts, figs, dates, raisins or peanuts to the lemon mixture.

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The case was that of Frances Campbell, 13 years old, daughter of Mrs. J. A. Campbell, 3819 Western Parkway, Louisville, Kentucky. The upper photograph shows exactly how her feet looked July 7, 1913, when she came to us for treatment. Notice that they were twisted nearly completely backward. The lower photograph shows the feet as they now appear after treatment at this Sanitarium. This deformity was corrected without Chloroform, Ether or any General Anesthetic. Plaster Paris was not used. Write Mrs. Campbell. The

L. C. McLain Orthopedic Sanitarium

is a private institution, devoted exclusively to the treatment of crippled and deformed conditions, especially of children and young adults. Write us freely regarding Club Feet, Spinal Diseases or Deformities, Infantile Paralysis, Hip Disease, Bow Legs, Knock Knees, Wry Neck, etc. We will send you descriptive literature and advise you fully. Ex-patients as references everywhere.

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LAST year I saw a box sent from the country to a city relative which was so full of Christmas cheer that I shall never forget it. It was quite a large box and right in the middle of it was secured a twenty-five-pound can of lard. This was surrounded by apples, then a layer of paper, and above that yards of sausages were wound round the can. These were held in by a few strips of wood, and above were boxes of candy, sacks of nuts, a bag of real old-fashioned hominy, another of buckwheat, all packed in with paper, so nothing could be shaken about in transit. The whole top was covered with sprays of holly and arbor vitae, and the unpacking was a joy from start to finish.

The country housewife should consider herself a very fortunate person at Christmas time, for she has many resources at hand for her gifts, and such gifts! No fine sewing or embroidery are necessary, no paint brush nor crayon, no stenciling outfit. She leaves these to those less lucky and takes her Christmas remembrances right from the farm.

The men and women who are deep in the whirl of business will be carried back to their childhood days when they open the box and taste the flavor of home in the contents.

The schoolboy and college girl who are too far away to come back for Christmas will jump for joy when the hamper from the farm arrives.

The city housekeeper will hum a merry carol on receiving a plump, white roasting chicken, fed on good corn, wheat, oats, and barley until it was just right to kill, dress and truss, and which is all ready to pop into her oven. And wouldn't she love a quart of those fine dried Lima beans, Mrs. Farmer, that you saved so carefully? Soaked, boiled, and dressed with butter, they will be a delicious accompaniment to the chicken.

If you want to send chicken to your schoolboy or girl, or to somebody who lives in "furnished apartments," let it be roasted at home, cooled, then wrapped in wax paper and tied up with a cluster of holly on top. Or, in case the chicken is young and tender enough, it may be cut up and fried, and when cold packed into a small box lined with wax paper.

A small ham is a delectable present all by itself. If you want to send one to that boy so far away, it should be boiled slowly till it is tender, but not too tender, then skinned, scored crisscross all over the top, then peppered with black pepper, stuck with cloves, half an inch apart, basted with a mixture of weak vinegar and brown sugar, and baked slowly till it is brown and crisp, redolent of spice, and altogether almost too good to be true. When it is cold thin even slices may be carefully packed into an appropriate box, and the recipient will give three cheers when he opens it.

"Hog-killing time" is usually just



Being dressed for the city

before Christmas, and if you will remember, when you render your lard, to fill some little pails or jars, you will have something that any city woman will be glad to get. In these days very indifferent lard sells for very high prices.

A neat sparerib roast, a piece of pork tenderloin, a pan of head cheese—any of these would meet with a warm welcome.

Why not send country sausage to some city friend? Put it twice through the grinder, season it with salt and black pepper, sage and cayenne, then pack it into little crocks or stuff it into skins and link it. Add to this a little sack of home-grown buckwheat flour so that yeast-raised buckwheat cakes may accompany the sausage, and there will be no one late to breakfast in the family you send it to.

Winter apples, winter pears, hoarded carefully away beyond the reach of freezing weather, how good they look and taste when unpacked far from where they grew! They will be more than welcome to the school girls and boys, as will any and all kinds of nuts. Black wal-

nuts, rich and delicious, are among the best, and a boxful of them, already cracked, should go into the box.

I am sure some molasses and walnut taffy would be appreciated, and it would carry very well in cold weather. Put some molasses in an iron skillet, with a pint of molasses to a tablespoonful of butter. Boil it till it hardens in cold water. Have your black walnut meats carefully picked from the shells and reposing thickly on a buttered platter. Put a pinch of soda into the molasses, and as soon as it stops foaming pour it over the nut meats. Let it cool, and before it is too hard mark it off in squares.

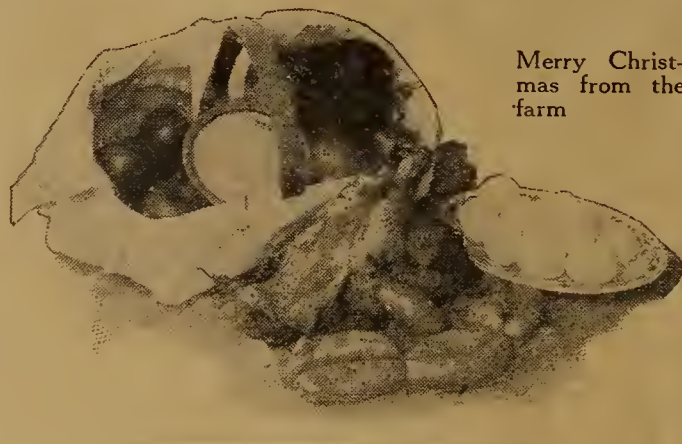
A toothsome candy is made of maple syrup, thick sweet cream, and hickory-nut meats. Another is a coffee hickory-nut caramel, made by boiling together one cupful of brown sugar, one-half a cupful of cream, and one-fourth cupful of strong coffee until it will form a soft ball in water. Take it off the fire, whip it until creamy, beating in a cupful of hickory-nut meats, and pour it into a buttered pan, cutting it into squares while it is warm.

Then how would somebody like a loaf of hickory-nut cake? It is easy to make and is exceptionally good. Cream together one and one-half cupfuls of sugar and one-half cupful of butter. Add three-fourths cupful of milk, two and one-half cupfuls of flour, two teaspoonfuls of baking powder, and one cupful of hickory-nut meats slightly dredged with flour. Then add the stiffly beaten whites of four eggs and one-half teaspoonful of vanilla. This could be baked in cookies by dropping the dough by teaspoonfuls on the buttered baking sheets and setting half a hickory-nut meat on each.

A little hamper might be packed with half a dozen jars of jellies, preserves, and pickles, all different. One combination could be sweet pickles, tiny and crisp, red raspberry and currant preserves, peach butter, grape conserve, sweet pickled pears, and chili sauce. Another might hold strawberry jam, chowchow, spiced peaches, preserved plums, green grape jelly, and ginger pears. The jars should all be of the same shape and size, and each might be tied up with a bit of red ribbon and packed among evergreens.

Since parcel post is used, the expense of shipping such parcels is much less than formerly. A peck basket, stout and strong, is an excellent receptacle for the goodies sent from the farm. Line it with heavy paper and sew on a cover of sacking or burlap. The handle will be a great convenience, and such a package will go through the mails in good condition.

Do not forget to put in plenty of holly, mistletoe, ground pine, or whatever evergreens grow anywhere near you. They bring with them the real fragrances and delight of a country Christmas.



Merry Christmas from the farm

Make a Trip to the Attic—By A. V. R. Morris

DON'T say that you haven't any heirlooms that are worth using until after you have carefully examined everything in the house that used to belong to Grandmother's mother.

In the attic are there not some shabby chairs with low backs whose tops curve outward, with slender round legs and with the remnants of splint seats? The wooden portion of these chairs is stained and scratched and the splint seats are wrecks, but if the legs are not shattered—and they're scarcely likely to be, for the olden-time cabinetmakers used well-seasoned woods—the chairs can be painted with white or black enameling and their seats may be replaced by the window draperies which Grandmother's mother left behind.

If the good woman fancied chintz curtains they have suffered only from mildew, and when washed and bleached much of the discoloration will disappear. But if her "best room" curtains were of damask and moths have made havoc of them, do not utterly despair. It is easy to mend damask for chair seats by mounting it upon a sheet of thin canvas and embroidering upon it a coarse design in darning stitch with floss of the same shade as the curtains. In these days of miracles in dyes you will be able to match accurately any shade of red, green, brown, or yellow, and it's safe to say Grandmother's mother's damask curtains were in one of those colors.

She had muslin draperies for her post bedsteads and for her chamber windows, and if you find any of these in her linen chest they will be of a lovely old ivory shade and of such fine texture that you will find them worth darning, laundering, and hanging at the living-room windows. Whatever signs of wear they show will be along the edges, which should be trimmed off and finished with ruffles of fine batiste or lawn, "yellowed" in a coffee bath to match the tone of the ancient muslin. Frequently an old-fashioned muslin curtain is long enough to be divided and made into a pair of sill-length window draperies, and these are more practical and more easily cared for than are the sort which sweep the floor and incidentally pick up dust.

Some of the so-called trunks in the attic are probably dower chests of oak or other hard wood, and if you clean their hinges and hasps you will discover that they are of brass instead of iron and are really ornamental.

In the attic hangs a shattered mirror. Glass still clings to the inside edges of its age-blackened frame and cobwebs make its outline dim and irregular. But the frame is likely to be of hand-carved wood or of brass, and at its top may be a spread eagle or an Empire wreath and bowknot. Below the upper edge is a vacant square which formerly framed a colored picture, and this can be filled by an inexpensive Colonial print when the

glass is replaced. Clean the frame carefully yourself with soap and water and sweet oil and don't scrape at it with a sharp instrument.

Any quaint frame or clock case that is in the house is worth cleaning and repairing, as it will be far handsomer and more substantial than the usual modern article.

Everybody who lives in a country neighborhood should have some safe means of lighting the porch or the entrance gates, and everyone who has fallen heir to the small possessions of Grandmother's mother will probably be able to unearth a Colonial lantern. These lanterns were usually of iron or brass, and some of them were made after classic models. But all were ornamental, and any of them may be fitted with oil safety lamps and suspended from the roof of a porch or from a pole near the gates. One farmer's wife who knocked her head against an iron lantern hanging from a barn beam found after cleaning it that it carried an exquisite design in grapes and leaves. So she filled its windows with colored isinglass, equipped the lamp place with a cluster of wax candles, and suspended it above her dining table.

Don't despise any heirloom because it is shabby, even broken. Carefully inspect it and study its possibilities. It may supply a practical or an ornamental household need or a Christmas present.

The Very New Fashions



No. 2656

No. 2663

Two costumes showing the new line from shoulder to bottom of tunic or skirt



No. 2656—Redingote Dress Belted at Sides
32 to 44 bust. Material for 36-inch bust, four and seven-eighths yards of thirty-six-inch material, one-half yard for flat collar and cuffs, three-eighths yard for flaring collar, and one-half yard for chemise. Width in 24-inch waist, two yards. Price of this pattern, ten cents



No. 2663—Redingote Dress with Sash
32 to 42 bust. Material for 36-inch bust, six and one-fourth yards of thirty-six-inch, or five and one-eighth yards of fifty-four-inch, with five-eighths yard of fifty-four-inch for sash and three-eighths yard for collar and cuffs. Width, two yards. Price of this pattern, ten cents



The new wide circular skirt which can be made from pattern No. 2675

THE new winter costumes have most becoming lines. They are long from shoulder to bottom of tunic or skirt and add much to the grace of every woman's figure. No. 2656 is in redingote style and may be developed in serge, gabardine, soft worsted, or broadcloth, with trimmings of plain satin or corded silk.

No. 2675—Circular Skirt with Yoke
22 to 28 waist. Quantity of material required for 24-inch waist, three and one-fourth yards of thirty-six-inch, or two yards of fifty-four-inch. Width in 24-inch waist, two and one-half yards. Pattern, ten cents



The new girdle is very deep, shirred, and made over a fitted foundation (pattern No. 2658)

NOT only is the redingote made with the skirt and waist in one, but it is also developed in coat style. The tunic portion flares and shows beneath it a straight skirt which may be of the dress material or of a contrasting fabric, such as plain cloth, satin, or silk. Such a model is shown in pattern No. 2663.

No. 2658—Shirred Basque Girdle
24 to 34 waist. Material required, one and three-eighths yards of forty-eight-inch material, five-eighths yard of forty-eight-inch contrasting material, and seven-eighths yard for the foundation. Price of pattern, ten cents

IMPORTANT NOTICE—Patterns Nos. 2656 and 2663 are special pattern bargains. A whole costume can be made from each pattern which costs just ten cents. You do not have to have two patterns—one for the waist and one for the skirt—in either case. The costumes made from these patterns show the latest New York winter style features.



No. 2675

It is a simple thing to order WOMAN'S HOME COMPANION patterns. Select your patterns, enclose ten cents in stamps for each one, and send to the nearest pattern depot: Pattern Department, FARM AND FIRESIDE, 381 Fourth Avenue, New York City; Pattern Department, FARM AND FIRESIDE, Springfield, Ohio; Pattern Department, FARM AND FIRESIDE, Room 320, 1554 California Street, Denver, Colo.

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POULTRY KEEPER, A Practical Poultry Guide, 1 year, 12 numbers	50c	

Standard Magazine Club

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WOMAN'S HOME COMPANION, The Leading Woman's Publication, 1 year, 12 numbers	\$1.50	
AMERICAN MAGAZINE, The Magazine Leader, 1 year, 12 numbers	\$1.50	

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<p>Club No. 3</p> <p>Farm and Fireside 50c Boys' Magazine \$1.00</p> <p>75c Save 75c</p>	<p>Club No. 9</p> <p>Farm and Fireside 50c Poultry Keeper 50c</p> <p>60c Save 40c</p>
<p>Club No. 4</p> <p>Farm and Fireside 50c Housewife 50c</p> <p>60c Save 40c</p>	<p>Club No. 10</p> <p>Farm and Fireside 50c Youth's Companion \$2.00</p> <p>\$2.00 Save 50c</p>
<p>Club No. 5</p> <p>Farm and Fireside 50c People's Home Journal 50c</p> <p>60c Save 40c</p>	<p>Club No. 11</p> <p>Farm and Fireside 50c Woman's Home Companion \$1.50</p> <p>\$1.60 Save 40c</p>
<p>Club No. 6</p> <p>Farm and Fireside 50c To-day's Magazine 50c</p> <p>60c Save 40c</p>	<p>Club No. 12</p> <p>Farm and Fireside 50c Fruit Grower and Farmer \$1.00</p> <p>75c Save 75c</p>

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Farm Wit and Wisdom

Condensed and Modified From Various Sources

IN A RECENT issue of the "American Journal of Pharmacy" C. E. Bessey relates some interesting experiences with poison ivy. He became poisoned while some distance away from the plants. He emphasizes the fact that this plant gives off a poison into the air which may infect persons even though they do not touch the ivy.

GOVERNOR VILLAREAL of the Mexican State of Nuevo Leon is adopting measures for getting the lands of the State into the hands of the workers. All arable lands not in crop by July 10th next will revert "provisionally" to the State. The State will then lease lots to farmers, but will not give them title to it. The rent money will be used in the work of the agricultural commission of the State. Any renter who does not put the land in crop will lose it, and it will be given to another. The crops harvested will be the absolute property of the farmers, and those who make the best records as farmers will be favored when the lands are permanently granted.

LISTED corn in Thurston County, Nebraska, yielded 4 bushels to the acre more than drilled or surface-planted corn. The surface-planted corn gave a return of 28 bushels per acre; rather shallow listing gave 32 bushels. These and other interesting matters are quite fully described in Nebraska Bulletin No. 27.

A TEST is being conducted in Hawaii on the durability of fence posts treated in different ways. The results thus far show the creosoted posts to be in the best state of preservation, the tarred posts second best, and posts set in concrete are showing the most rapid decay. All posts are of eucalyptus wood.

PERMANENT improvements simply mean building once and building right.

WARNING is being issued by the U. S. D. A. against Turkestan alfalfa seed. One fifth of our alfalfa seed is imported, and of this amount ninety-five per cent in the last twelve months has come from Russian Turkestan. The Government has found out, however, that this is not suited to the humid climate of the East. Therefore avoid it. There is plenty of home-grown seed which is satisfactory. Part of it goes under the name of Turkestan, but this should not be confused with the Turkestan which has been produced in foreign countries.

Luxuries

"I AM selling my produce for good prices, and the yield has been beautiful," says Brown. "I shall buy a motor car and feel the sense of triumph over distance."

"I am feeling pretty rich too," says Smith, "but open plumbing and a complete water supply, including a bath, is the luxury I'm going to indulge in."

"My wife will buy the luxuries for us," says Jones, "and she's studying pianos. I like music myself."

"When it comes to expensive luxuries," says Robinson, "I've got you all beat. I'm going on keeping scrub stock!"

INDIANA has a law forbidding commercial concerns to sell anti-hog-cholera serums and cures except after a test by the Veterinary Department. Every State should have such a law. In Indiana one may insist that each bottle of serum used must bear the state license with a serial number upon the label. But farmers in any State can follow the rest of the advice given in Indiana circular 44 just published: "No serum should be used if there is the least bad odor from the bottle when first uncorked."

SCOATES of Mississippi says that "the disk harrow's special duty is to take the soil after the plow has done its work and put on the finishing touches." It is pretty important that the "finishing touches" be given, too, and at the right time. Use the disk and any other "finishing" implement.

WHEN flocks of ewes and their lambs become intermingled it is often a problem to get the lambs separated and each lamb allotted to its dam. A writer in the "Breeders' Gazette" tells how a Western sheepman did it. He blackened the udders of one flock of ewes with lampblack, and the lambs marked themselves when they sucked. Any harmless bright-colored powder would do as well as lampblack.

WHEN fattening pigs on wheat grind it. It is more economical to do so. Nebraska finds that ground wheat at \$1 per bushel proved to be as economical as whole wheat at 75 cents per bushel. One hundred pounds' gain when soaked ground wheat was fed cost only \$5.83, while soaked whole wheat produced the hundred pounds at \$7.39. Tankage, 1 part in 20, when fed for twenty weeks in connection with wheat reduced the expense of only the whole-wheat method of feeding. However, the station recommends the use of tankage since it increases the rate of gain and gives the animals a better finish. This information will be valuable in sections where wheat grows easily and has no satisfactory market.

KANSAS had 135,800 acres of feterita in 1914, and yet it sprang into prominence in Kansas only last year. Besides its dry-weather-resisting qualities and early maturity, the feeding value of its grain is pronounced as practically the same, pound for pound, as that of Kafir and milo. Kansas certainly snaps up the good, new things.

Two or three years ago the great cabbage industry centering about Racine, Wisconsin, seemed to be doomed. The constant overmanning and lack of rotation had brought about a plague of the disease called "yellows." One of the professors of the Wisconsin Agricultural College found in the cabbage patches one or more plants which were free from the disease. From these a strain of cabbage was propagated which will produce fine crops in the diseased land. The college has saved the cabbage industry in that section of country.

DOCTOR HILL of Minnesota says that there are more than "57 varieties" of colds—by actual count. Only two of these are not "catching." All the rest are. A person with a cold coughs or sneezes and politely puts his hand—and handkerchief—over his mouth to lessen the explosion and keep the germs from flying about in the air. He gets germs on his hand. Then he shakes hands with a friend or acquaintance, the friend gets the germs on his hand, and finally he gets the cold. Cheerful prospect, isn't it?

IT MAKES a lot of difference how seed corn is cared for. And that means a lot of difference in next year's crop. The Nebraska State Farm people found that corn in a good seed-room was nine tenths good when planted, while the same corn in a crib was only seven tenths good. In Iowa seed corn properly stored was good enough so that ninety-five grains out of a hundred grew. In a tool shed the same corn sprouted ninety-two to the hundred. That left on the stalk was only about half good.

Two Nebraska cows looked very much alike and, for all one could tell by their looks, were equally good cows. It cost \$64.15 a year to feed one of them, and \$64.50 for the other. One of them in a year produced ten dollars more than her feed cost, the other fifty dollars more. In other words, the owner for all his work, keeping, and interest got ten dollars from one and fifty from the other. One made money, the other really lost it. With a herd like the one a dairyman might do well, while with a herd like the other he would become bankrupt. Not even a dairy expert could see anything like their difference between these cows except by weighing and testing the milk.

Do you know how to feed alfalfa to horses? Most people feed too much of it. Give the animal a pound of alfalfa to every hundred that he weighs, and no more, and about a pound and a quarter of grain for every hundredweight of horse. If you give them all they want they will eat too much. Horses like alfalfa stems and will eat the coarse stuff from the feed racks of the cattle. Why not let them eat it? Don't wet the alfalfa hay for horses, and don't feed it if it is dusty. The Nebraska Experiment Station says: "Horses accustomed to alfalfa as a regular part of their ration are seldom troubled from its use."

Lost People

MRS. A. J. WEATHERS is a lost relative to Mrs. Ella Puckett. Mrs. Weathers was formerly Miss Elize Puckett, and after her marriage moved to Daisy, Mississippi, where she was last heard from. Information concerning her will be greatly appreciated.

New Books

POULTRY HUSBANDRY, by W. A. Lippincott, is another important poultry book just added to poultry literature. Nearly five hundred pages are filled with information profusely illustrated. Mr. Lippincott concentrates his discussion on commercial poultry problems, particularly on requirements for profitable production of poultry products. Lea & Febiger, Philadelphia. Cloth, \$2 net.

FORAGE PLANTS AND THEIR CULTURE, by C. V. Piper of the United States Department of Agriculture, is the most complete and the most thorough work dealing with that theme that we have yet seen. It does not avoid technical terms in an attempt to be popular, nor does it bring in the scientific to appear learned. Serviceable either on the farm or in the class-room. Well illustrated. 618 pages. Price, \$1.75. The Macmillan Company, New York.

FARM ANIMALS, by Hunt and Burkett, is a new book covering the entire field of farm live stock. It deals with the development of the principal breeds, animal diseases, feeding, breeding. It also discusses poultry and fish for the farm. The book is so planned as to be suitable for a textbook. Well illustrated, 500 pages. Published by the Orange Judd Company, New York City. Price, \$1.50.

LETTERS OF AN OLD FARMER TO HIS SON, by W. R. Lighton, is an interesting new book containing 212 pages devoted largely to happenings on the farm of the writer. The book is written in conversational style and contains numerous anecdotes as well as valuable and practical information. The George H. Doran Company, publishers, New York City. Price, \$1.

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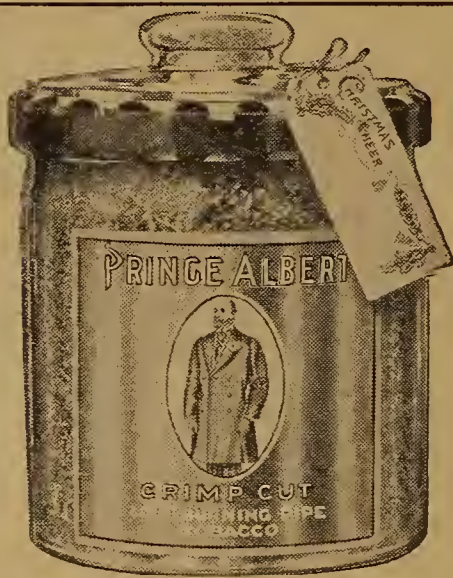
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He Is!

That man is more sinned against than sinning
Who trades and is more skinned against than skinning.

The Curse of the Mortgage

How It May Become a Blessing—A Farmer's Belief

By James B. Morman

CONGRESS will undoubtedly do something definite to help the credit of farmers. The most pressing need seems to be to relieve farms and real estate of some of their burdens.

What is called "amortization" seems to be a very practical method of enabling the farmer to rid himself and his farm of that intolerable mortgage burden. This plan is quite common in Europe, and it will undoubtedly be tried in the United States before long. For that reason a brief explanation and illustration as to what amortization really means and how it will benefit the farmer who has a mortgage on his farm may serve to prepare him for the good times that are surely coming.

Amortization Reduces a Debt Gradually

Amortization as applied to farm mortgages means the extinction of the debt by its gradual reduction. Many farm mortgages call for a 6 or 7 per cent rate of interest payable every six months. The time comes around regularly and the interest must be paid. Most of us know that from experience. But the principal—that is, the amount of the mortgage indebtedness—is not lessened by the payment of interest. The debt remains the same. All our surplus energy is expended in paying just the interest on the debt.

Under our present system a mortgage is a millstone hung on our necks. Perhaps this would not be so bad if it were all. But this is not the whole case.

Mortgages are written for short periods—for 3, 5, or 7 years. Then come the renewal of the mortgage, new papers to be drawn, perhaps a higher rate of interest, commission charges, attorney's and registration fees.

These numerous and expensive items the borrower must meet every few years. They tie the farmer's hands so that he is unable to remove the mortgage millstone from around his neck. The farmer takes it with him to the grave or bequeaths it as a burdensome heritage to his heirs. Thus the mortgage not only grinds the farmer, but it keeps him grinding and toiling with it to his life-journey's end.

The amortization mortgage aims to stop all this. In the first place it leaves the farmer's hands free. An amortization mortgage is written for long periods—for 25, 50, or 75 years. The only expense is the initial charges, and these are made as light as possible.

The rate of interest is moderate and not subject to change. In Europe interest rates on amortization mortgages range from 3½ to 5 per cent—seldom, if ever, higher. This gives the farmer a chance to save a little out of his net profits to pay on the mortgage debt. The amortization plan helps in two ways: (1) You pay a little on the debt every six months; (2) the amount of interest at every payment is gradually being reduced.

Mortgage Cannot be Called in Before Due

A genuine amortization mortgage cannot be called in by the banker or private lender—that is, the mortgage must run the length of time called for in the document, no matter how anxious the creditor may be to embarrass the farmer by calling in the loan. But, on the other hand, the farmer has the privilege of paying any amount on the debt over and above the regular percentage called for in the amortization mortgage. This places every advantage where it ought to be—on the side of the debtor, and not with the creditor. In other words, the amortization mortgage is a benefit and a protection to the debtor class—something which is sadly needed in the United States and other so-called "advanced" nations.

The advantages of this kind of mortgage over a straight 6-per-cent mortgage may be shown by a simple illustration.

Suppose two farmers each placed a mortgage of \$1,000 on their farms on January 1, 1915, one of which is on the

mortgage plan and the other on the plan of amortization. The straight 6-per-cent mortgage is to run five years, with interest payable semiannually; the amortization mortgage is written for fifty years with interest at 5 per cent and amortization at 1 per cent, both payable semiannually. In both instances the rate is 6 per cent, but 1 per cent of the amortization interest is applied in reducing the amount of the debt. The principal, amount of interest, and difference in the two methods are shown by the table at the bottom of the page.

The table shows that a farmer having a 5-year regular mortgage of \$1,000 on his farm pays during that time \$300 in interest charges and that the entire debt is then due without any reduction.

What is the farmer going to do about it? In all probability he will be unable to pay his debt. Then the mortgage can be foreclosed; but that, probably, would not happen, though the farmer has no guaranty against it. And, lastly, the mortgage would undoubtedly be renewed, and this would mean the usual charges already mentioned. The latter has become one of the worst features of our present mortgage system. It is equivalent to an additional interest on the debt ranging from 2½ to 6 per cent in different parts of the country. This is a modern financial abomination.

Renewal Charges Are Avoided

But, on the other hand, the table shows that a farmer having a 50-year amortization mortgage on his farm pays in interest during the first 5 years \$243.98 and reduction on the mortgage \$56.02—a total of \$300. Both farmers have paid in the same amounts of cash, namely \$300. But the farmer with a regular mortgage has not reduced his debt one cent, it remaining as originally at \$1,000; whereas amortization has reduced the other farmer's debt to \$943.98. Moreover, the farmer with this kind of mortgage has no renewal charges to pay, because his mortgage has 45 years longer to run.

During these 45 years, however, the amount of interest paid semiannually on the amortization plan is diminishing proportionately to the reduction indicated in the table, because of the gradual sinking of the mortgage debt. This plan would mean something practical for us.

Non-Freezing Liquids For Radiators

By James A. King

THE subject of radiators is a good one for the owner or driver of a car to think of at this time of the year. More and more winter driving is being done each year. A frozen and broken radiator which will not hold cooling water will put a motor out of commission in mighty short order.

One of the best non-freezing liquids for the radiator in winter months is a combination of water and wood alcohol. The mixture generally used for the coldest months in the Middle West is one-third alcohol and two-thirds water. When refilling the radiator use the same mixture instead of clear water.

I would not advise the use of denatured alcohol except when the denaturing agent was wood alcohol. Many of the compounds used to make grain alcohol undrinkable will corrode and eat the metal of the radiator when used in the cooling water. This is apt to cause trouble in two ways: the corrosion may clog up the small passages of the radiator and so prevent proper circulation and cooling of the liquid, or the corrosion may in time eat clear through the walls of the radiator and cause leakage.

I have known of some people using one part water, one part glycerin, and one part wood alcohol. But in general this mixture has not proven as successful, and so not as popular as one part alcohol to two parts water.

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REGULAR MORTGAGE			AMORTIZATION MORTGAGE		
Date	Interest	Debt	Interest	Amortization	Debt
Jan. 1, 1915.	.....	\$1,000	.....	.....	\$1,000.00
July 1, 1915.	\$30.00	.....	\$25.00	\$5.00	995.00
Jan. 1, 1916.	30.00	.....	24.87	5.13	989.87
July 1, 1916.	30.00	.....	24.75	5.25	984.62
Jan. 1, 1917.	30.00	.....	24.61	5.39	979.23
July 1, 1917.	30.00	.....	24.48	5.52	973.71
Jan. 1, 1918.	30.00	.....	24.34	5.66	968.05
July 1, 1918.	30.00	.....	24.20	5.80	962.25
Jan. 1, 1919.	30.00	.....	24.06	5.94	956.31
July 1, 1919.	30.00	23.91	6.09	950.22
Jan. 1, 1920.	30.00	23.76	6.24	943.98
	\$300.00	\$1,000	\$243.98	\$56.02	\$943.98

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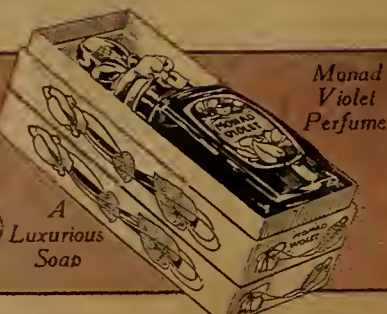
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ESTABLISHED 1877



WITH THE EDITOR

THE capacity of the sheep to follow its leader is wonderful. Let a sheep get frightened at its shadow, and away it will go, followed by every other sheep. The rest are frightened, not because they have seen anything, but because they think the foolish thing which saw its shadow is running away from something terrific. So on they go, over cliffs, against the barbed wire—anywhere.

But really, when one thinks of it, we are no better than sheep. We follow our leaders just as blindly. A long time ago every gentleman wore a sword. When sword-bearing became so absurd that even those who were used to the custom saw the silliness of it, gentlemen began to carry sticks instead of swords. That is why so many young men, and middle-aged men who really no more need a stick than a sword, still feel sort of undressed and under-equipped without a stick. It is the badge of gentility. The sword showed that its wearer was not obliged to work, being a warrior; and the stick is a shadow of the shade of military caste. It is carried in imitation of the man who imitated the man who lived off the people who worked, because he had possession of the sword, and through the sword of the government—a privileged class. It doesn't mean anything at all now, except that we are two-legged sheep.

Our sword-bearing ancestors once wore short tunics which reached just below the waist and were buckled down by the sword belt. They were working men, and wore the working man's jacket—only, as the sword was the tool with which they worked, they buckled it on over the short skirt of a "wamumus," which was more elaborately ornamented than the jacket of the common man, who wore a dirk instead. After a while the sword was so little used that it really made little difference whether the skirt of the coat was short or long—and long-tailed coats came into fashion. However, in order that a man might be able to draw his vortal blade on occasion, buttons were sewed on the back of the coat, and the skirts were buttoned back in case of battle, murder, or sudden death. And there the buttons are yet—look on your own Sunday-go-to-meetin' coat and see. Not that they have the slightest use, but tailors and manufacturers are like the rest of us—sheep.

When men began to make wagons they made the wheels of wood. In some parts of the world such wagons may be seen still, the wheels of which are made of sections of logs sawed off, and kept from splitting by strips fastened crisscross on them. Some genius invented the tire made of iron, and



was able to make a much lighter wheel, and a better and stronger one. I suppose that the sheep-like instinct to follow his leader inspired him with the desire to make the wheel as wide as the old wooden wheel; but iron was too expensive, so he constructed a wheel with just as narrow a tire as could be if the wheel was to have strength enough. If he made it less than about two inches wide it would break on account of the weakness of the felloe. He had no thought of the effect of the tire on the road, or of anything except to make a good strong wheel with as little iron in it as possible.

We still make our wagon tires of that exact width. Sheep-like we follow our leaders. If any one of us had to keep the roads in order for our own wagons we would at once adopt broader tires—tires which would smooth the roads instead of cutting them all to bits. The expense of iron would make little difference to us, for iron has steadily grown cheaper since the first wheelwright economized on it in making the first wheel. The thing is out of the individual's power now, just like the buttons on the back of your coat. To change the foolish custom of wasting buttons, one would have to produce an effect on the whole tailoring trade, which is too much of a job for any one man. We prefer to wear the old sword buttons, in view of the fact that it does no harm.

But the narrow wagon tires do actual harm. They cost us all money in the upkeep of roads. In following our leaders we are doing ourselves harm. To be sure, my tires do very little of it, and if I should put on broad tires it wouldn't affect the

problem appreciably. Everybody's got to do it; or, at least, things must be so changed as to make it probable that everybody will in the course of time. I would put on broad tires to-morrow if everybody else would do it—and so would you—but the start having been made on a basis which we all now see is wrong, we can't get out of the rut. It's the same with the sheep. If there is one which makes up its mind that the whole flock is headed for destruction at the top of the cliff, he can't get out unless the whole flock changes its course.

We need somebody to head us off. Now, I'm opposed as a general thing to the taxing of anything produced by individual human labor, but I make an exception of the thing we want to get rid of; and I have made up my mind that taxation is the only thing which will ever change us from the narrow tire with the cutting edge to the broad tire with the rolling, packing surface.

And I don't favor any sudden or drastic act either. It seems to me that we might make a start this winter, however, and give the wagon makers and the wagon owners a chance to adjust themselves to the new arrangement.

I would suggest that an internal-revenue tax of five dollars be levied on every wagon sold with a tire less than, say, three and a half or four inches wide. I don't know the proper width, and so I'd take counsel with the road engineers about that phase of the matter. In other words, I would so levy the tax that a narrow-tired vehicle would cost more than a wide-tired one. This would at once start a new style in new wagons. The sheep would begin to be headed off.

Then I would levy a very small tax—say a dollar—on all narrow-tired wagons. I would make it the duty of the assessor to levy this tax and make it payable to the county road fund. But I shouldn't be in a hurry about it. I would make the law take effect in one, two, or three years, so that everybody could get ready for it. In other words, I shouldn't care much about time. I should make it easy for people. I should give a lot of old wagons a chance to wear out, and a lot of human slow-coaches a chance to get under way, but finally I should fix a date—three, four, five, even ten years—beyond which the narrow-tired wagon should not be used.

Is there anything wrong with this idea?

Are you with me?

Well, then, why aren't you?

Herbert Quirk

BEGINNING IN THIS ISSUE—

The story of how hog cholera is being fought. ¶Not all attempts to defeat it are successful. In fact, there are so many losses and so many reasons given for those losses that we become bewildered as we listen to them. Corporations that sell serum dispute with each other as to the essentials in the fight against cholera. Experiment stations do not agree with the commercial concerns, nor among themselves. What, then, shall we do? ¶FARM AND FIRESIDE asked

this for its readers, and did not stop until it got an answer. We have been investigating the hog-cholera business from every possible source. A series of articles will tell the story and point the way to better health insurance for our hogs. No point of the subject will be overlooked. Everything will be discussed with candor and frankness. First-hand facts that will interest you will be given. ¶On the opposite page of this issue the series begins

—AND OTHERS ARE TO FOLLOW

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Fixing the Blame for Cholera Losses

If You Want to Protect Your Hogs First Find the Man Who "Knows How"

By D. S. Burch, Associate Editor

DURING the past few years Farm and Fireside has looked into the matter of hog cholera pretty fully, and everything that we are going to say about it is based on actual observation in the field, in serum factories, and in packing houses. Personal interviews with people who have had experience with it for a number of years will, we hope, make our statements both convincing and entertaining.—Editors.

THE year 1914 has not been as bad a cholera year as 1913, and 1913 was not as bad as 1897, which was probably the worst we ever had or ever shall have.

For the man who takes the time to study the disease and its prevention, all future years will be alike, for he will not lose through cholera one per cent of all the hogs he attempts to raise. Of course you want proof of this, and here it is.

With all due respect to the government and state authorities, and to patriotic Congressmen who so freely vote public money to be used for fighting hog cholera, I want to tell you about a man in Indiana and what he is doing.

His name is Otis Crane, which sounds a little like the names of some of our motion-picture heroes. But even so, when it comes to acting Mr. Crane can hold his own with the best, only he acts in a different way. He lives in Marion, Indiana, has his office in the Grant County courthouse, and is the county agent.

Last year he noticed that a good many hogs in his county were dying of cholera. He wasn't enough of a politician to get some money voted and have someone else do the work, so he tackled the proposition in his own way.

An Auto Bought on Prospects

First he sent word to all the veterinarians in the county (also those living out of the county but doing business in it) that he wanted them to send him a report of all the cholera work they did for Grant County farmers. He sent the veterinarians cards with blanks to be filled in so he would get the exact information he wanted. About a month later Mr. Crane would either visit or write each of the farmers who had had hogs vaccinated against cholera and ask him how his hogs were doing.

Please bear in mind that Mr. Crane was after only one thing—results. He wasn't especially concerned about the make of serum used, or the veterinarian who did the work, or the way he conducted his inoculations, or any of those things. But incidentally he got those facts too. Neither was he just making a survey of conditions with the object of getting up a printed report. What he wanted to know was how many hogs were treated, how many lived and how many died, and, if possible, why.

He wanted to make his work of immediate practical value.

Any Grant County farmer can now go into Mr. Crane's office and find out whether a certain veterinarian is losing most of the pigs he treats or whether he is saving them.

He can also find out whether he can best afford to run the risk of not vaccinating or having them vaccinated and made immune to the disease.

Here is the best answer to the last subject:

- One man had 108 hogs, did NOT vaccinate them, and lost 98 from cholera.
- Another had 165 hogs, did NOT vaccinate them, and lost 150 from cholera.
- Another had 37 hogs, did NOT vaccinate them, and lost 31 from cholera.

Here is a companion piece to the foregoing list. Note how these lists compare:

- One man had 186 hogs, had them VACCINATED and lost 2 from cholera.
- Another had 111 hogs, had them VACCINATED and lost 0 from cholera.
- Another had 92 hogs, had them VACCINATED and lost 2 from cholera.

These figures are for 1913. Notice that in the unvaccinated herds, only one tenth of the hogs were saved, while in the vaccinated herds the results were nearly perfect. To Mr. Crane's knowledge only two of the farmers in Grant County who had lost hogs in 1913 failed to have their hogs vaccinated in 1914.

E.W

and before the year closed one of these two was won over and was pleased with the results of the work.

How did the veterinarians take to the plan? Well, there are seven veterinarians who do work in the county. Five of them took kindly to making out the reports and have been prompt in sending them in.

"But how about the other two?" I asked Mr. Crane. At first he didn't want to express himself, but on the assurance that their names would not be published he gave the significant answer, "Well, they don't get much to do."

The farmers are only too glad to tell how their hogs are doing after vaccination. In one bundle of forty letters the trend of comment was, "All the hogs are doing fine," "All doing fine and didn't miss a feed," "One sick, one died, all the others O. K.," or words to that effect, some snappy and to the point, others full of praise for the treatment and hope for a good market.

But all were satisfied. Thirty-eight of them boasted that they hadn't lost a hog, and everyone seems to be happy over the situation compared to what it had been in former years.

At Converse, Indiana, I talked with Dr. George M.

clear. But—before the bloom had worn off his car sixty of the hogs had died of cholera, and he was obliged to sell his auto, getting but half price for it, and now he is not very enthusiastic over either the hog or the automobile business.

The Doctor Reynolds I was telling you about had a record of the cost of vaccinating hogs. It runs a little less than a cent per pound of hog on ordinary-sized herds, or if you have large hogs weighing about 140 pounds each the cost is about a dollar apiece. This includes the cost of the materials and charges of the veterinarian. The best time to vaccinate is when the hogs weigh about 50 pounds, and no matter how big they get they will rarely take the disease if the work has been properly done. Whether you can do the work yourself depends on your understanding of it and your experience with similar work. The veterinarian gets his serum for the treatment for about 10 per cent less than one not in the "profession" would have to pay. In the double treatment, which is the only one permanently effective, virus (cholera blood) is used, and the unskilled use of this virus may do untold damage in spreading the disease. Besides, you have to understand antiseptics and know how to judge the right amount of serum and virus. A certain amount of experience and practice is also necessary for perfect results.

Some veterinarians have frankly admitted to me that the first few herds they treated were really practice work for them, and almost without exception they reported better results the second year than the first.

If you are able to secure the services of a veterinarian who has had several years' experience in cholera work, and whose results have been satisfactory, you will best serve your own welfare by hiring him to vaccinate your hogs. If you can't get such a man you might as well do it yourself, at the time bracing yourself for the losses that usually follow amateur work.

Vaccination Under Guarantee

Unfortunately some who have attempted to render hogs immune from cholera have done the work in a bungling way and killed all their hogs. Some veterinarians also have in some cases vaccinated hogs in such a bull-headed way that heavy losses followed, and even in the hogs that lived abscesses in the hams gave evidence of either poor serum or unclean inoculation.

A still more common fault is the use of too little serum. By cutting down the amount of serum they either hope to make more money on the job or try to comply with a customer's desire for a cheap job.

When insufficient serum is used the immunity to the disease will run out and you might as well not have tried to vaccinate at all.

For these reasons, as well as for others that will appear later, no hog owner can afford to be too trustful in the matter of turning his hogs over to the average veterinarian or in using serums of unknown reliability.

Some hog owners who want to be on the safe side have tried to get veterinarians to guarantee the work and pay an indemnity for every hog that dies. Doc Reynolds had a number of such cases. In one case where there was quite a large herd and the owner was skeptical the vaccination was done under the agreement that an indemnity of \$10 was to be paid for every hog that died. One hog died and the indemnity was paid. In another case, for the sake of demonstrating the treatment, he vaccinated a herd under the agreement that payment need not be made until ninety days had elapsed, and then only if the hogs lived.

All of them lived and the job was paid for, both parties to the contract congratulating themselves over the outcome. Others who had had hogs vaccinated before and desired similar guarantees were courteously refused. A guarantee is not professional, and when it is resorted to for any other purpose than to overcome doubt the transaction is a pretty low form of gambling. I am not trying to free the veterinary profession from responsibility for good results. If all the hogs that have died from incompetent vaccination could be put on the witness stand, I suspect there would be enough evidence of malpractice to put a goodly number of "vets" out of business; but, as the saying goes, "that is another story."

How to find the man who knows how is the difficult part of the work. This article and other articles coming in later issues will help you to do the difficult.



To vaccinate your hogs get a man who has done such work successfully. It never pays to trust anyone without experience and skill, whether he is a veterinarian or not

Reynolds, also with Mr. J. B. Snyder, who has charge of the serum plant there. Doctor Reynolds is one of the veterinarians who makes reports to the county agent, and as I learned later he had apparently received quite a little new business on the strength of his successes. He had vaccinated 5,268 hogs between the first of March and the end of October and lost only 3 per cent, including the exposed and some sick hogs.

An interesting thing about hog-cholera work which also applies to most other lines is this: If you want to know the scientific or theoretical side you had best go to a scientist; but if you want to see the commercial side of the thing, talk to a well-versed business man, who in most cases knows the scientific side too.

At the Union Stock Yards in Chicago I met a stock raiser who had come down with several carloads of hogs. He said that no hog raiser can afford to take chances with hog cholera if he is living in a district where losses from cholera have been sustained. A neighbor of his had bought an automobile which he could scarcely afford, but having eighty hogs rapidly coming to market size he thought he saw his way

Post Card

SWEETSEY'S
JUL 28 21PM 1914
IND.

OTIS CRANE,
County Agent
Marion, Ind.

HOG IMMUNING REPORT

Name N. H. Brown

Address Marion, Ind. R.F. #10 Phone No. 572-B

Hogs Imm. _____ Hogs Treated _____

Shoats Imm. 49 Shoats Treated _____

Number thrown out 2 Figs Treated 16

Serum used Sammy Serum

Work done by D. M. Reynolds

Remarks Sick

Each veterinarian sends in to the county agent a card like this for every lot of hogs he treats. "Number thrown out" indicates sick hogs. They usually die anyhow. Serum is a prevention, not a cure. Reliable veterinarians are glad to give this information

The Race of Two Thousand Layers

Blue Bloods, Ragtags, and Bobtails in Three American Egg-Laying Contests

By B. F. W. Thorpe, Associate Editor

POULTRYMEN are indebted to the honey-bee for the origin of the slogan, "Get rid of the drones." Only the queens and the workers have a permanent place in the economy of the bee colony. Fortunately this slogan is being adopted by dairymen, fruit growers, and others, as well as poultrymen. Catchy phrases compel attention and help to direct thought. So in this instance we may say the honey-bees' practice of killing off the drones has become a material help in weeding out the loafing hens, the loafing cows, and loafing fruit trees, as well as setting much loafing land to work.

It is a mighty interesting and stimulating experience to observe and study one or two thousand hens competing in a year's contest for laying supremacy. The two days I spent in August last at the Storrs, Connecticut, and Thorndale, Pennsylvania, contests made me a stronger believer than ever in the value of these egg-laying competitions as a means of showing up the drone and worker hens.

The hen that has the heavy egg-production blood in her veins is bound to show it before a year's contest closes. She can't help laying if she has plenty of food suitable for making eggs along with a comfortable existence.

Breeds Don't Count—It's Breeding

While making the rounds of the 180 pens at the two contests named, the fact was borne in upon me that there is absolutely no relation between breeds and heavy production of eggs. As I moved around among the pens, here I would find pens of Leghorns, Rocks, Wyandottes, Reds, Orpingtons, and Anconas that had been laying a clip of twenty eggs or better a month for six or eight months. On either side of the yard fences these same breeds under absolutely the same conditions and equally thrifty physically had been loafing half the time since the contest opened, or were merely laying a paltry two or three eggs a week.

Now that the contest year has closed we find 20-dozen-egg hens in the ranks of all the breeds named, and one or two others as well. But the records show that the 10- and 12-dozen-egg hens are far too numerous. Examination of the records of all three of our American contests show that from one fourth to one half of all the hens entered are 12-dozen-egg hens or less. These return the poultry keeper but a small margin of profit above the cost of keep, labor, and other necessary expenses.

The purpose of this discussion is to furnish an impartial showing of our contest work for the past year, and to note some opinions of "the men behind the hens" in these contests.

Pedigreed Cows, Horses, and Dogs—Why Not Hens?

William F. Kirkpatrick, in charge of the Connecticut Experiment Station poultry work and the Egg Competition, says:

It seems to me that perhaps the greatest good accomplished by the competition lies in the fact that we have caused a large number of interested poultry people to stop and think, to reflect upon the fact that some hens are better than other hens. We have for a long time insisted upon elaborate pedigrees for our dairy cows and for our race horses, for our hunting dogs, etc., but we have not asked for anything in regard to our poultry except for their show record. We have asked nothing about their productivity, which after all is the fundamental reason for keeping hens.

It has been more or less thoroughly demonstrated that we can breed egg production into several varieties of hens. The question continues to arise, What is the best breed for layers?

There is no best breed.

Take our first laying contest for example, in which the Leghorns won (5 birds to a pen) with 1,071 eggs, followed by Wyandottes with 1,069. In the contest just closed, Lincoln's hens (10 birds to a pen) have produced 2,088 eggs and Barron's Wyandottes 2,085. Now there is of course no real difference between the egg-producing qualities of the leading pen of Leghorns and Wyandottes in either the first contest or the present one. Two eggs on nearly 1,100, or three eggs on nearly 2,100, means nothing. It is the man after all that is the power behind the hen. I do not think I should maintain that it would be a perfectly easy proposition to breed heavy egg production into absolutely every variety. There might be a few of the Game Bantams and other odd lots that I should want to exempt, but in general I believe that high fecundity can be superimposed upon almost any breed.

Furthermore, we feel that it has been a good thing to provide for the utility breeder, the man who claims to have produced hens that will lay eggs, an opportunity to demonstrate his skill and ability. We feel that such a breeder ought of right to enjoy the privilege of competing with his fellow breeders in exactly the same way as the fancy breeder has been competing with his fellow fanciers in the show room.

Barron's Breeding Proves Pearl's Contention

Referring particularly to the performance of Barron's birds I want to say very frankly that in the first laying competition, three years ago, we gave hardly a thought to the production of Barron's pen.

We merely surmised that Barron was "lucky," but when he sends a total of ten or a dozen pens of birds to four different laying contests running over a period of three years, and when these birds in all cases stand right up to the top, it seems to me that we cannot but admit that he has delivered the goods. He has been able to breed Wyandottes that will lay eggs as well as to breed Leghorns that will lay eggs; and, furthermore, Mr. Barron has said to the writer that he is now breeding Buff Rocks

which he will have in the laying contests within the next year or two. Barron has of course all along selected his breeders by the trap nest. He has applied in advance the very principles that have been worked out by one of our foremost biologists: namely, Pearl of the Maine Experiment Station, who has demonstrated experimentally that fecundity in hens is an inherited characteristic.

Milk Competes with Meat as Feed

When we come to consider the experimental pens in the contest we find by examination of the records that with both the Leghorns and the Plymouth Rocks we have got higher egg yields by the use of sour milk, except where we substituted the milk for both green food and beef scrap. The milk is apparently able to take the place of either of these two things, but not both.

In the Leghorns we find the best yield where the milk was substituted for meat, but with the Plymouth Rocks we find the highest yield where the milk was substituted for green food. It is exceedingly interesting to note that all the milk pens are better than the control pens or the pens without milk.

Perhaps it might not be amiss to tell you in this connection just a word about our plans for the experimental pens the coming year. We propose, instead of putting in five pens each of two breeds, to put in two pens each of five breeds and try out on the five different breeds the plan of substituting sour milk for the meat part of the ration.

Thus you will note that we have come to conclude from the year's work with these experimental pens that perhaps the important thing is to justify the use of milk for hens, a product which on many farms has little value, and thus avoid the buying outright of an expensive meat food for hens.

There is just one other minor point I want to mention. A good deal has been said and written about the possibility or feasibility of combining utility and fancy, or of having fairly good show birds make a reasonable egg record. I am aware that one isolated case does not prove anything, and yet I want to tell you about a pen of Rhode Island

I believe that it is possible to have a high egg-laying strain and still have the birds look reasonably well.

I don't believe we ought to carry it to an extreme and try for extra fancy show stuff, or anything of that nature; yet if I had two birds, both of the same breeding, and one was well-marked and of good shape and the other was poorly marked and of poor shape, I would certainly recommend the use of the former instead of the latter.

I think the great trouble is that the people who stick strictly to the fancy-breeding work for fancy points to the detriment of egg production, and I fear that some who breed for egg production disregard markings entirely. My contention is that both of these things are important and ought to be given the consideration that they deserve in selecting our stock for breeding purposes.

Our contest records show that there is a positive egg type. Medium-sized birds of each variety outlay the large, beefy hens. Strain means more than variety. Every pen's success in a laying competition depends upon its breeding, barring accident or sickness.

Barron's practice of breeding from males descended from 200-egg parentage has established in his flock uniform high production, which is strikingly evident in all competitions in which his hens are entered.

How Mortality Was Reduced

The contest recently closed at Thorndale, Pennsylvania, under the direction of the Philadelphia "North American," enjoyed unusual freedom from disease among the hens. A. M. Pollard, superintendent directly in charge of the contesting birds, gives the following explanation of the exceptionally low death rate among the hens throughout the year:

During the first two competitions carried on under the joint management of the "North American" and the Connecticut Experiment Station we had a great deal of intestinal trouble, also liver trouble. I have seen birds in the first contests pass a solid ball of worms as large in diameter as a 25-cent piece. At the beginning of the third competition we decided to see if we could not correct this one bad feature. The low mortality during the contest just closed, I believe, is proof that we succeeded.

The intestinal "cleanser" employed was in powder form. We mixed one pint of the powder with a 12-quart pailful of dry mash. After thoroughly mixing we moistened the mash with water just so it was crumbly. We fed a pint measure of this mixture to each pen of 5 hens.

This powder is absolutely not a tonic or a stimulant, but just an intestinal cleanser. We spent months in working out this formula before we had it right, just the same as we did compounding our feed formulas.

I believe the use of this intestinal cleanser is the whole secret of the low mortality in our last contest.

For persistency in laying, Barron's stock has everything thus far beaten to a frazzle. His birds always start in slowly—not with a rush—and when they reach 25 eggs per pen (of 5 hens) a week, they usually keep that pace for the greater part of the year. They are just like any other high-class business proposition—success is insured only by keeping everlastingly at it.

A noticeable thing with all of Barron's birds is that they have great capacity. The pelvic bones are very thin and pliable. The thin pelvic bones have been very noticeable in all of Barron's hens in all of our contests.

Among the competing pens in each contest we usually have had one pen, or perhaps two, that would be considered exhibition pens. They were really bred for show birds. These pens have invariably been our poorest layers. Last year our lowest producing pen was a very fine show pen.

Hens Deserve a Halo

The Thorndale Contest hens covered themselves with glory by laying a greater number of eggs per hen than have been laid in any previous contest in this country. The average for the 500 hens in the contest was 170 eggs. Three pens of 5 hens each averaged over 225 eggs per hen. Thirteen pens averaged over 200 eggs per hen. Over 30 individuals out of the 500 laid above the 225-egg mark. The highest individual score was 286 eggs, made by a New Jersey Columbian Plymouth Rock, exactly the same record made by a Nebraska White Leghorn in the Missouri Contest just closed, and is 4 eggs above any previous American record. Sixteen pens laid over 1,000 eggs per pen, and 131 hens laid over 200 eggs each.

The hens of Barron's pen of White Wyandottes laid 282, 252, 183, 189, and 274 eggs respectively. This pen took first place in the contest by laying 1,180 eggs, an average of 236 eggs per hen.

A Pennsylvania pen of White Leghorns secured second place with 1,139 eggs, and Barron's White Leghorns third place with 1,136 eggs.

In the Thorndale Contest only 8 hens died out of the 500, during the year, or but 1.6 per cent.

Eight Hundred Connecticut Layers

The unusually severe winter in Connecticut with frequent periods when the mercury was far below zero gave the contesting hens a serious setback in their winter production. Many excellent records were made, but the aggregate of eggs laid was considerably less than otherwise would have been the case. The average production for the 820 hens (10 hens to the pen) was 144 eggs. Three pens laid over 2,000 eggs to the pen, to wit: An American pen owned by F. F. Lincoln laid 2,088 eggs; an English pen (Barron's) of White Wyandottes laid 2,085 eggs; and Barron's pen of White Leghorns, 2,010 eggs.

Three pens of mixed breeds entered as "scrubs" in this contest laid 1,287, 1,194, and 1,152 eggs respectively, making an average of [CONTINUED ON PAGE 7]

E-W

THE AVERAGE PRODUCTION OF THE POPULAR BREEDS IN THE THREE CONTESTS

Breeds	Connecticut One Year		Thorndale One Year		Missouri Eleven Months	
	No. of Birds	Eggs	No. of Birds	Eggs	No. of Birds	Eggs
Leghorns	300	154.3	235	176.2	370	157.9
Wyandottes	100	151.5	60	180.2	130	151.7
Plymouth Rocks	130	138.7	65	163.0	130	156.1
Rhode Island Reds	150	134.7	65	162.3	100	152.1
Orpingtons	20	106.0	45	144.8	130	128.6
Mixed Breed Hens	30	121.1	No Entry	.....	No Entry	.....
Anconas	No Entry	.....	15	177.1	30	160.8
Langshans	No Entry	.....	No Entry	.....	30	151.9
Minorcas	No Entry	.....	No Entry	.....	60	141.6

These figures show just how the different breeds laid. It is plain that the seeker after heavy egg production can select: Leghorns, Rocks, Reds, 'Dottes, Anconas, Langshans, or Orpingtons, and get the eggs. But he has to do a careful job of selecting with any breed

Reds that have just finished the year. The major number of birds in this pen were exhibited at the Danbury (Connecticut) Fair before coming here to the contest, and won first prize as a display pen. The poultry exhibit at this fair ranges around 2,000 birds.

This pen of Reds comes nearer being show birds than any other pen entered on the plant. Not only that, but they laid larger eggs than any other pen of Reds on the plant; and, perhaps most remarkable of all, six birds out of the ten were not broody during the year. They finished the year with an average production of 188 eggs each. This particular pen, owned by A. B. Brundage, seemed to us to be such a pleasing combination that we sought to buy these birds, but could not.

I have mentioned this case, as I said in the beginning, merely to show that it was possible in this case at least to produce good layers and yet have them fairly representative of the breed they stand for.

Keep the Pendulum Swinging Even

T. E. Quisenberry, director of the Missouri Poultry Experiment Station, takes the "middle-of-the-road" position on breeding for eggs and feathers. He writes to FARM AND FIRESIDE:

Eggs are what the average poultryman keeps hens for, but I still contend there is no reason why we should entirely disregard either show points or egg production in selecting our breeding stock. Lady Showyou, the best White Plymouth Rock hen we have ever had, was bred from first prize-winners in different shows, and she was in good show condition when she arrived here for the first contest.

Some Buff Leghorns which we had at the beginning of our last contest won first prizes in a very good poultry show, and they have also made splendid egg records. We have some Buff Leghorn pullets hatched from this pen of Buff Leghorns. These pullets were hatched in February of this year, and one of them matured and laid 85 eggs to date (October 31st). Another had laid 82 when about nine months old. They were hatched from show stock, as well as stock which was bred for egg production.

There were a number of other breeders in the contest just concluded who tried to combine egg production and good shape and good color, and they succeeded reasonably well. My contention is that there is no reason for a man to allow the pendulum to swing too far either way. If I had to disregard egg production or show points, of course I would much prefer to have a high egg-laying strain than a bunch of prize-winners that would lay but few if any eggs. Show points don't pay bills.

The Brown Mouse

The Romance of a Farm Hand Who Upset a School District

By Herbert Quick

Part Four

JIM IRWIN is a good farm hand who is also a good reader and thinker. He possesses a somewhat comical personality and is the butt of many jokes. One of these jokes becomes serious, for by it he is unintentionally made district-school teacher. He studies his community before school opens, and knows thoroughly his children and their homes. The result is the largest enrollment the school has ever had. The neighborhood, however, dislikes the corn-testing contest, the farm arithmetic, and the agricultural reading which under Jim Irwin supplant the old textbooks. Even Jennie Woodruff, a sweetheart of his boyhood, when she is nominated county superintendent, warns him of her displeasure.

X

Eight-O'Clock Scholars

IT WAS still an hour before nine—when the rural school traditionally "takes up"—when the boys had stored their traps in a shed at the Bronson home and walked on to the schoolhouse. That rather scabby and weathered edifice was already humming with industry of a sort.

In spite of the hostility of the school board and the aloofness of most of the patrons of the school, the pupils were clearly interested in Jim Irwin's system of rural education. Never had the attendance been so large or so regular, and one of the reasons for sessions before nine and after four was the inability of the teacher to attend to the needs of his charges in the five and a half hours called "school hours."

This, however, was not the sole reason. It was the new sort of work which commanded the attention of Raymond and Newton as they entered.

This morning Jim had arranged in various sorts of dishes specimens of grain and grass seeds. By each was a card bearing the name of the farm from which one of the older boys or girls had brought it. "Wheat, Scotch Fife, from the farm of Columbus Brown." "Timothy, or Herd's Grass, from the farm of A. B. Talcott." "Alsike Clover, from the farm of B. B. Hamm." Each lot was in a little cloth bag which had been made by one of the little girls as a sewing exercise, and each card had been written as an exercise in penmanship by one of the younger pupils, and contained, in addition to the data above mentioned, heads under which to enter the number of grains of the seed examined, the number which grew, the number which failed to grow, the percentage of viability, the number of alien seeds of weeds and other sorts, the names of these adulterants, the weight of true and vitalized and of fowl and alien and dead seeds, the value per bushel in the local market of the seeds under test, and the real market values of the samples after dead seeds and alien matter had been subtracted.

"Now get busy, here!" cried Jim Irwin. "We're late! Raymond, you've a quick eye, you count seeds, and you, Calista and Mary Smith—and mind, next year's crop may depend on making no mistakes!"

"Mistakes!" scoffed Mary Smith, a dumpy girl of fourteen. "We don't make mistakes any more, Teacher."

It was a frolic rather than a task. All had come with a perfect understanding that this early attendance was quite illegal, and not to be required of them—but they came.

"Newt," suggested Jim, "get busy on the percentage problems for that second class in arithmetic."

"Sure," said Newt. "Let's see . . . good seed is the base, and bad seed and dead seed the percentages—find the rate. . . ."

"Oh, you know!" said Jim. "Make them easy and plain and as many as you can get out, and be sure that you name the farm every pop."

"Got you!" answered Newton, and in a fine frenzy went at the job of creating a textbook in arithmetic.

"Buddy," said Jim, patting the youngest Simms on the head, "you and Virginia can print the reading lessons this morning, can't you?"

"Yes, Mr. Jim," answered both McGeehee Simms and his sister cheerily. "Where's the copy?"

"Here," answered the teacher, handing each a typewritten sheet for use as the original from which the young mountaineers were to make hectograph copies, "and mind you make good copies. Bettina Hansen pretty nearly cried last night because she had to write them over so many times on the typewriter before she got them all right."

The reading lesson was an article on corn condensed from a farm paper and a selection from "Hiawatha"—the Indian corn myth.

"We'll be careful, Mr. Jim," said Buddy.

Half-past eight, and only half an hour until school would officially be "called."

Newton Bronson was writing in aniline ink for the hectographs such problems as these:

"If Mr. Ezra Bronson's seed wheat carries in each 250 grains, 10 cockle grains, 15 rye grains, 20 fox-tail seeds, 3 iron-weed seeds, 2 wild oats grains, 27 wild buckwheat seeds, 1 wild morning-glory seed, and 18 lamb's-quarter seeds, what percentage of the seeds sown is wheat, and what fowl seed?"

"If in each 250 grains of wheat in Mr. Bronson's bins, 30 are cracked, dead or otherwise not capable of sprouting, what per cent of the seed sown will grow?"

"If the fowl seed and dead wheat amount to one eighth by weight of the mass, what did Mr. Bronson pay per bushel for the good wheat, if it cost him \$1.10 in the bin, and what per cent did he lose by the adulterations and the poor wheat?"

Jim ran over these rapidly. "Your mathematics is good, Newton," said the schoolmaster, "but if you expect to pass in penmanship you'll have to take more pains."

"How about the grammar?" asked Newton. "The writing is pretty bad, I'll own up."

"The grammar is good this morning. You're gradually mastering the art of stating a problem in arith-

metic in English—and that's improvement, certainly."

The hands of Jim Irwin's dollar watch gradually approached the position indicating nine o'clock, at which time the schoolmaster rapped on his desk and the school came to order. Then, for a while, it became like other schools. A glance over the room enabled him to enter the names of the absentees and those tardy. There was a song by the school, the recitation in concert of "Little Brown Hands," some general remarks and directions by the teacher, and the primary pupils came forward for their reading exercises. A few classes began poring over their textbooks, but most of the pupils had their work passed out to them in the form of hectograph copies of exercises prepared in the school itself.

As the little ones finished their recitations they passed to the dishes of wheat, and began aiding Raymond's squad in the counting and classifying of the various seeds. They counted to five, and they counted the fives. They laughed in a subdued way, and whispered constantly, but nobody seemed disturbed.

"Do they help much, Calista?" asked the teacher as the oldest Simms girl came to his desk for more wheat.

"No, seh, not much," replied Calista, heaving, "but they don't hold us back any, and maybe they do he'p a little."

"That's good," said Jim, "and they enjoy it, don't they?"

"Oh, yes, Mr. Jim," assented Calista, "and the way Buddy is learnin' to count is fine. They-all will soon know all the addition they is, and a lot of multiplication. An' Angie Talcott knows the kinds of seeds better'n what I do."

XI

A Delegation for Higher Things

THE day passed. Four o'clock came. In order that all might reach home for supper there was no staying, except that Newt Bronson and Raymond Simms remained to sweep and dust the schoolroom, and prepare kindling for the next morning's fire—a work which they had taken upon themselves so as to enable the teacher to put on the blackboards such outlines for the morrow's class work as might be required. Jim was writing on the board a list of words constituting a spelling exercise. They were not from the textbook but grew naturally out of the study of the seed wheat: cockle, morning-glory, convolvulus, viable, viability, sprouting, iron-weed, and the like. A tap was heard at the door, and Raymond Simms opened it.

In filed three women; and Jim Irwin knew as he looked at them that he was greeting a deputation, and felt that it meant a struggle. For they were the wives of the members of the school board. He placed for them three available chairs, and in the absence of any for himself remained standing before them, a gaunt, shabby-looking revolutionist at the bar of settled usage and fixed public opinion.

Mrs. Haakon Peterson was a tall, blond woman who when she spoke betrayed her Scandinavian origin by the Northern burr to her r's, and a slight difficulty with her j's and long a's. She was slow-spoken and dignified, and Jim felt an instinctive respect for her striking personality.

Mrs. Bronson was a good motherly woman—noted for her house-keeping and for her church activities. She looked oftener at her son and his friend Raymond than at the schoolmaster. Mrs. Bonner was the most voluble of the three, and was the only one who shook hands with Jim; but in spite of her rather off-hand manner Jim sensed in the little, black-eyed Irishwoman the real commander of the expedition against him—for such he knew it to be.

"You may think strange of us coming after hours," said she, "but we wanted to speak to you, Teacher, without the childer here."

"I wish more of the parents would call," said Jim: "at any hour of the day."

"Or night either, I dare say," suggested Mrs. Bonner. "I hear you've the scholars here at all hours, Jim."

Jim smiled, his slow, patient smile.

"We do break the union rules, I guess, Mrs. Bonner," said he; "there seems to be more to do than we can get done in school hours."

"What right have ye," struck in Mrs. Bonner.

"to be burning the district's fuel and wearing out the school's property out of hours like that—not that it's any of my business," she interposed hastily, as if she had been diverted from her chosen point of attack. "I just thought of it, that's all. What we came for, Mr. Irwin, is to object to the way the teachin's being done—corn, and wheat, and hogs, and the like, instead of the learnin' schools was made to teach."

"Schools were made to prepare childer for life, weren't they, Mrs. Bonner?"

"To be sure," went on Mrs. Bonner, "I can see an' the whole district can see that it's easier for a man that's been a farm hand to teach farm-hand knowledge than the learnin' schools was set up to teach; but if so he he hasn't the hook education to do the right thing, we think he should get out and give a real teacher a chance."

"What am I neglecting?" asked Jim mildly.

Mrs. Bonner seemed unprepared for the question, and sat for an instant mute. Mrs. Peterson interposed her attack while Mrs. Bonner might be recovering her wind.

"We people that have had a hard time," she said in a precise way which seemed to show that she knew exactly what she wanted, "want to give our boys and girls a chance to live easier lives than we lived. We don't want our children taught about nothing but work. We want higher things."

"Mrs. Peterson," said Jim earnestly, "we must have first things first. Making a living is the first thing—and the highest."

"Haakon and I will look after making a living for our family," said she. "We want our children to learn nice things, and go to high school, and after a while to the university."

"And I," declared Jim, "will send out from this school, if you will let me, pupils better prepared for higher schools than have ever gone from it, because they will be trained to think in terms of action. They will go knowing that thoughts must always be linked with things. Aren't your childer happy in school, Mrs. Peterson?"

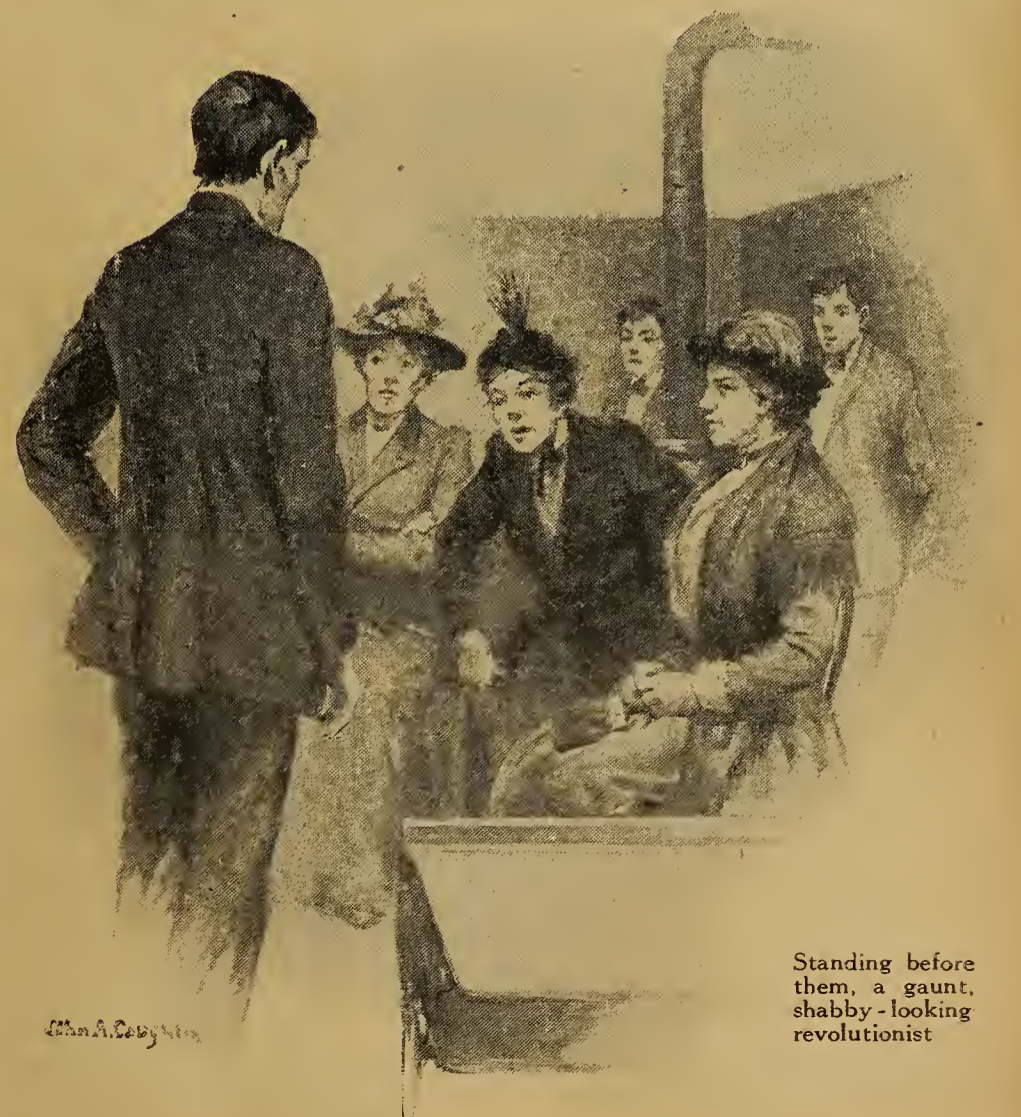
"I don't send them to school to be happy, Yim," replied Mrs. Peterson, calling him by the name known most familiarly to all of them; "I send 'em to learn to be higher people than their father and mother. That's what America means."

"They'll be higher people—higher than their parents, higher than their teachers—they'll be efficient farmers and efficient farmers' wives. They'll be happy because they will know how to use more brains in farming than any lawyer or doctor or merchant can possibly use in his business. I'm educating them to find an outlet for genius in farming."

"It's a fine thing," said Mrs. Bonner, coming to the aid of her fellow soldier, "to work hard for a lifetime an' raise nothing but a family of farmers! A fine thing!"

"They will be farmers anyhow," cried Jim, "in spite of your efforts—ninety out of every hundred of them. And of the other ten, nine will be wage-earners in the cities, and wish to God they were back on the farm; and the hundredth one will succeed in the city. Shall we educate the ninety and nine to fail, that the hundredth, instead of enriching the rural life with his talents, may steal them away to make the city stronger? It is already too strong for us farmers. Shall we drive our best away to make it stronger?"

The guns of Mrs. Bonner and Mrs. Peterson were silenced for a moment, and Mrs. Bronson, after gazing about at the typewriter, the hectographs, the exhibits of weed seeds, the Babcock milk [CONTINUED ON PAGE 17]



Standing before them, a gaunt, shabby-looking revolutionist



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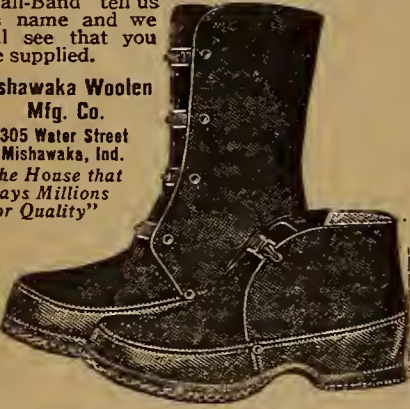
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Comfort on the Farm

Ways to Get the Water, Light, and Power That You Need

By Alice Preston Mills

THE farm is conceded to be the most healthful place in the world to live. It is time now to take serious thought as to our resources and see if we can't make our farm homes the pleasantest and most convenient spots also. There is no longer excuse for homes which are totally lacking in modern conveniences and labor-saving devices. The man who to-day remarks that "what was good enough for my grandfather is good enough for me" is not considered conservative: he is set down either as a lazy good-for-nothing or a lunatic. Nor does he speak the truth: the grain on his farm is not cut with a sickle nor tied by hand.

The homes which lack comforts are becoming rarer each day, but there are many cases where more might be done to bring the house equipment up to the standard of town houses—cases where natural resources close at hand are neglected and the owner fails to perceive his opportunities for introducing new conveniences.

The back-breaking drudgery of carrying water from the spring or well to the house should not be tolerated on any farm which holds the least pretension of progressiveness. The gasoline engine or electric motor, the hydraulic ram, or even a windmill will raise the water from its source, and you have only to provide a tank to receive it.

In mild climates this tank may be built out of doors and pipes laid in shallow ditches to the house. If the winters are severe, however, care must be taken to render it frost-proof, and even then the storage tank, if it be a large one, is not as satisfactory as it might be, for the water it contains is apt to grow stale. The newer compressed-air tanks are most satisfactory, since the tank may be smaller, the water is kept fresh, and there is no danger of freezing. A smaller tank is sometimes placed above the kitchen rafters and the water pumped into it. In such a case, or if the ordinary tank is desired elsewhere, the water may be kept fresher if an overflow pipe is connected with the stable watering troughs. This is especially adaptable to hydraulic pumping, as the overflow is easily regulated.

Whatever method of pumping is employed to get the water into the house, attach a hot-water tank to the range and have hot water for kitchen use as well as for the bathroom.

Really, if you have never had a bathroom in the farmhouse you can have no idea how the entire family will revel in it. The farm laborer is bound to be grimed and dirt-covered, and although it is clean dirt—paradoxically speaking—he will feel like a new man after emerging from a hot tub.

The fittings need not be expensive, but if you are contemplating the installation of a bathroom, by all means make an exhaustive study of plans and furnishings. In the first place buy nothing but guaranteed fixtures, for if the manufacturer cannot stand back of his goods with a guarantee you can't afford to pay

out money for installing them. Don't get a wash-down closet. Instead see that it is a siphon-acting one and has a low-down tank with noiseless action.

If it is possible, get a tub which will set into a recess in the wall. This does away with the spaces beneath and back of the tub which are so hard to clean. Have the lavatory the correct height—thirty or thirty-two inches from the floor. This is convenient for grown-ups and a box can be furnished for the children to stand on. Insist on the spigots which may be turned on and left running—not the sort which must be clamped with the fingers all the time the water runs.

Most important of all, employ a plumber who has a reputation for first-class work—not anyone who applies for the contract—for upon the proper installation hinges the satisfaction of the entire room.

If it is not properly attended to, sewer gases will enter the house the joints will leak, and the fixtures become loose and wobbly.

Upon request I am sure FARM AND FIRESIDE will be glad to furnish such information concerning the technical selection and installation of bath fixtures as you need. It is possible to treat these subjects thoroughly and yet in such a manner as to make it very clear even to the uninitiated.

The floor of the bathroom should be covered with linoleum. Cover the walls with oilcloth, sanitas, or tiled paper, with a wainscoting below, or paint the entire walls and cover paint with a coat of spar varnish. This makes it impervious to hot water and steam.

Have a bath mat before the tub, curtains at the window that are easily washed, and on the walls have bars for towels, holders for toothbrush, tumblers, and a good mirror over the lavatory. Have a built-in medicine closet, or make or buy one of white enameled wood, and here also may be kept brushes and combs and the shaving outfits.

If you have a large family the disposal of the toilet effects is often a problem, but if you will secure a large, shallow wire basket, enamel it white, and secure it to the wall, toothbrushes, pastes, nail brushes, soaps, etc., may all be accommodated with no danger of contact with each other.

Now turn your attention to lighting the house. Oil lamps are not to be despised, especially if they are well chosen and cared for, but electricity is to be preferred, as it means less work and many conveniences in addition to lighting. If you can secure electric current from some near-by town at a flat rate it is often well to do so, but it is still better to install a little power plant of your own. If you have on your place a stream with sufficient fall, by all means consult an engineer and have him estimate the cost of installing a dynamo. If you have no such stream but know of one which perhaps cuts down into some almost inaccessible gully, why not call a meeting of your neighbors, pool your resources, and install a dynamo for com-

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mon use? The wiring will cost very little, and think of the practical results! A small motor will operate your separator, corn sheller, and grindstone, and in the house simple attachments will clean and sharpen knives, run the vacuum cleaner and the washing machine and wringer. This machine will be found a genuine economy since the busy mother can put the clothes into it, cover them with hot water, turn on the current, and get the children off to school, put away the cream, or bake the pies for dinner while the machine runs steadily on and the clothes grow white.

Be sure that the house and stables are generously supplied with lighting sockets. Place a low hanging lamp over the dining table, wall brackets beside book-cases and piano, and a library lamp on the living-room table. Have a light on each side of the dressers in the bedrooms, and one in each closet, as well as in the attic and cellar.

Also insist on two lights at least in the kitchen—one above the sink and work table, the other above the range. It is also a pleasing idea to have a wall socket put in where it will be most convenient for ironing, and if you will place one on the back porch too, it will offer a delightfully cool place for ironing during the summer months.

Place a lamp on the front veranda to light the steps for departing guests, and operate it from a switch in the hall. Plan for switches over the entire house, to save steps and electricity. After lighting the stables well you will have no dread of hitching up or returning late from a drive.

Truly, this isn't an extract from some fairy yarn, but it is a true statement of what may be easily accomplished if you have the natural resources at hand, and the energy to make use of them, and that, too, with no great expenditure of money.

The Race of Two Thousand Layers

[CONTINUED FROM PAGE 4]

121 eggs per hen compared with 148 eggs per hen for the average production of the other 79 pens.

The highest individual score in the Connecticut Contest was 265 eggs, by a Connecticut White Wyandotte; the second best, 246, by a Connecticut Buff Wyandotte; and third place was won by a Rhode Island White Wyandotte.

The contesting hens at Mountain Grove, Missouri, numbered 1,040, hailing from England, Australia, New Zealand, Ontario, Vancouver, South Africa, British Columbia, and seventeen different States in this country.

Wyandottes took second place with 2,085 eggs to their credit, and his Leghorns third place with 2,010 eggs, 10 hens to a pen.

In the Thorndale Contest Barron's Wyandottes (5 birds to a pen) stood first with 1,180 eggs, his Leghorns third with 1,136 eggs. Charles Ream's pen of White Leghorns from Pennsylvania laid only 3 eggs above Barron's 1,139 eggs.

In the Missouri Contest Barron's Wyandottes stood sixth with 2,047 eggs, 10 hens to the pen.

All of the Barron hens in the three American contests were sold before the



Pen No. 59, Barred Rocks in Missouri Contest, photographed when five months old. This pen outlaid all the Rocks in the Missouri and Connecticut contests, and 31 of the 37 pens of Leghorns in the Missouri Contest. Owned by B. F. W. Thorpe

The average production of all hens was 156.2, a gain of 13 eggs per hen over last year's average production. Barron's White Leghorn hens carried off first honors with 2,296 eggs to their credit. Two other pens of White Leghorns out-

contest year closed. His 25 Wyandottes in the three contests are reported to have sold for \$1,250, or \$50 per hen, and his 25 Leghorns for \$1,200, or \$48 per hen. These figures, even if padded, will cause exhibition-stock fanciers to sit up and



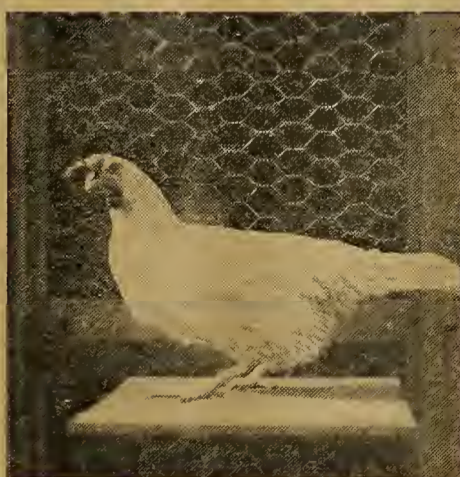
This pen of Barron's English Wyandottes in an American competition which closed October 31st averaged 236 eggs each in 365 days. A pen of Leghorns owned by the same Englishman in the same contest averaged 225 eggs per hen



Pen No. 6, White Plymouth Rocks owned by E. O. Gerhardt, made a clean score by laying 5 eggs a day for 14 consecutive days in May 1914. This is the only official record of a pen of 5 hens laying an egg apiece each day for two weeks



Hen No. 1, pen No. 1, owned by H. B. Cooper in the Thorndale, Pennsylvania, competition recently closed, is quite an ordinary-looking Barred Rock, but she laid 253 eggs during the year. Fifty of the eggs were laid in fifty consecutive days



Sixty-nine eggs in sixty-nine consecutive days is the egg output of this Pennsylvania bred Leghorn, owned by R. M. Smith. Other Thorndale star records were 94 eggs in 98 days by a Red, and 102 eggs in 105 days by a Leghorn

laid Barron's White Wyandottes. Still this Englishman's six pens of hens at the three American laying contests proved their egg-breeding by the following showing:

In the Connecticut Contest, Barron's

take notice. The average production for the various breeds in the Missouri Contest could not be secured in time, so averages for eleven months are shown in the table on page 4. Other figures given are for the full year.

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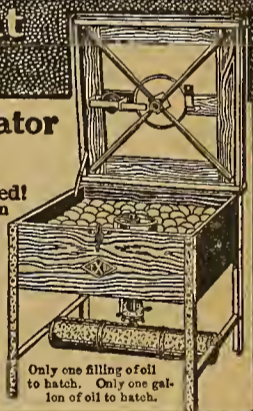
Irvin S. Cobb

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EDITORIAL COMMENT

FARM AND FIRESIDE The National Farm Paper

Published every other Saturday by
The Crowell Publishing Company, Springfield, Ohio

HERBERT QUICK, - - - - Editor

December 19, 1914

Farming for the Canal

THE apple and other fruit growers of the East have now to meet the competition of the Western growers not only in the matter of quality and packing of fruit, but in freight rates also. The Panama Canal is putting it within the power of the Western orchards to reach Atlantic ports with very low freight charges.

On the other hand, canned goods are going from the Atlantic and Gulf ports to the Pacific slope from our Eastern States and, in fact, from as far west as Ohio and Indiana. The journey from New York to San Francisco by water now takes very little more time than does a freight car. This free interchange of goods will be of immense benefit, as free commerce always is, to both sides. It may cause some necessity for readjustments, but they will be beneficial because they will allow us to do the things we find it profitable to do with no barrier of mountains and desert to hinder.

The transcontinental railways are already asking permission to lower their transcontinental rates to meet the competition mentioned. In view of the fact that railways naturally seek to destroy water competition by rates made lower than they should be, it is to be hoped that the authorities will confine such reductions to proper limits. In Germany, railways are not allowed to make rates as low as the competing water lines.

Canada's Hard Times

WHEN hard times come very few legislatures have the statesmanship to hunt for the cause of them. They are laid by the opposition to the party in power, and to Providence by the party in power. According to a bulletin of the American Economic League the legislators of Alberta, Canada, are of a different breed. They have hunted for the cause of such hard times as prevail there, and find it in the lands held out of their best use by speculators. So a bill has been introduced levying a special tax on unused lands.

As long as "millions of hands want acres and millions of acres want hands" there can be no such thing as real prosperity.

Why Smile?

THE greatest single purchase of apples ever known was made by Steinhardt & Kelly of New York this fall when they bought of the Northwestern Organized Fruit Growers 650 carloads for \$1,000,000. The crop in the Northwestern apple region this year amounted to 13,650 cars. A Spokane correspondent of the Philadelphia "Public Ledger" states that the area now set out to apples in those States is 505,000 acres. These trees, counting that half of them only will be so cared for that they will succeed, will produce not less than 125,000 carloads in 1919, or about ten times the 1914 crop. "And apple men," he continues, "merely smile at the suggestion that the market will be flooded, even then."

Why smile? An Irishman, the old story tells us, once laughed and chuckled to himself at the trick he was about to play on an unsuspecting bull. He would scare the animal over a steep bank into a mill pond by leaping from behind the hedge and saying "Boo!" After he had

crawled from the pond where the bull tossed him, he is said to have remarked: "Faith, it's well I had me laugh first!"

It is just possible that now is the time for the apple men to smile.

The Greater School-Teacher

THE county agricultural agent is making good. There is a more important lesson than better farming to be learned from the work of the successful county agent.

It is this: That there is a great deal of farm work which cannot be done by the individual farmer on his own farm, but which must be done if at all by some person working for all the farmers of the community. The county agent does this work, where he is successful.

It is profitable work. It makes the farmers money. Take one instance: A county agent introduced the growing of peanuts into a neighborhood to which it was adapted as a forage crop for hogs, and thus started the hog business on a new basis. Every farmer there now sees how he can make more money. Another instance: A county agent went about vaccinating the hogs of the county for hog cholera. Result—more money in the bank to the farmers' credit, and a feeling of safety where there was a sense of danger. These labors of the county agent were actually productive on every farm in the county the owner of which had the gumption to make the additional money.

But the county agent is not a permanent thing. He is in either too big or too small a place. He cannot adequately serve a whole county. He must either rise, in the course of time, to the position of a superintendent of such work in the hands of district agents or he must sink to a township or neighborhood agent instead of a county agent. The work he does is the work of a teacher, and it is work which the schools need. Many county agents are already active in work with the rural schools.

There is a hint in this for the future. When the rural schools become really ruralized the county superintendent of schools will be very largely occupied with exactly the sort of work now done by the county agent.

Why not merge the two jobs? Why not develop a variety of agricultural expert who is a competent rural school superintendent as well as a competent county agricultural agent? Why not let him combine the salaries payable under the Smith-Lever Act with the pay of the county or division superintendent of rural schools?

Then, under him, the rural teachers will be trained for really rural work. Gradually the rural teacher will become the school-district's hired man, doing, as the county agent is now doing, work which will make him such a producer of wealth that the people will be able to see the money advantage of paying him such a salary as will attract the strong men and women of the country. The county agent is in many parts of the country receiving from five to fifteen times the average salary of the rural teacher, and from twice to three times the average salary of the county superintendent of schools. He receives it because his work is worth the money; and when the teachers and superintendents take over the same sort of teaching they will receive adequate salaries.

The tendency is to make the rural teacher's job big enough job so that the stronger men and women will enter the profession and stay in it. The rural teachers of the future will be married couples living on the school farm, and teaching the young people of the neighborhood by enlisting their powers in the service of the people. The children will receive better educations while doing this practical and pleasant work than they do now while for the most part engaged in fooling away their time preparing for high schools and colleges which they never enter.

These suggestions may seem utopian to many, but those who so regard them need wait only a few years to see them in actual operation.

Mail-Order Public Library

THE Wisconsin Free Library Commission will send its books to citizens of the State by parcel post. This will make it possible to carry out the principles of the commission the members of which believe that "the books belonging to the State are as much the property of the farmers living on the far north peninsula as of the frequenter of a state library."

A good thing but not the best possible thing. The Post-Office Department itself is the agency which is best equipped to operate free mail-order libraries. There is no good reason, except the initial expense, why the United States Government, through the post-offices, should not carry to anyone, anywhere, any ordinary book in the English language. It would not be necessary for it to maintain reading-rooms, or the force of librarians and assistants required by the public libraries of the cities and towns, but only to keep books in stock at convenient places from which holders of cards could obtain them by handing their applications therefor to the postman.

Such a system is easily within the ability of the United States Government to establish, and would bring the blessing of books to millions of hungry minds. There is an organization in Canada devoted to the work of securing this boon to the people of our sister nation.

If education is one of the first duties of Government, the postal circulating library cannot be said to be outside proper governmental activities.

Flower Shows

NOTHING lends itself better to neighborhood shows than the flower.

This is written at a time when the cities are taking great pleasure in chrysanthemum exhibitions. This beautiful flower may be grown in the living-room of many a farmhouse, and actually is. Five hundred varieties were shown at the greenhouse of the University of Illinois the third week in November—"from the tiniest buttons to shaggy balls of the diameter of a dinner plate."

Why not have neighborhood "mum" shows? They would serve as excellent occasions for getting together, incidentally eating good things and having a good time. The colts, calves, pigs, and other live stock could be brought in and judged by the men-folks, thus combining several shows in one. Neighborhood shows can be made to do much more good than the big exhibitions.

And returning to flowers, there are enough of them to enable us to have a flower festival every month in the year from May to November, not to mention the exceptional advantages of our friends on the coast, and in the Gulf States.

Country Chances

"COUNTRY people," said Secretary Houston to the convention of Experiment Station men at Washington, "are not going to be satisfied to live in the country districts unless they are afforded the advantages not only of adequate elementary schools but the high schools also."

And, whether the Secretary is aware of it or not, in spite of the fact that the most of us who live in the country do not suspect it, the country people will demand and build up elementary schools and high schools far better than the corresponding city schools—not in buildings perhaps, but in everything that truly educates or "leads forth" the possibilities of the young mind.

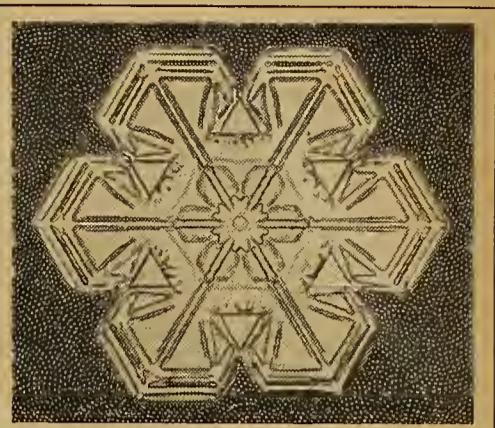
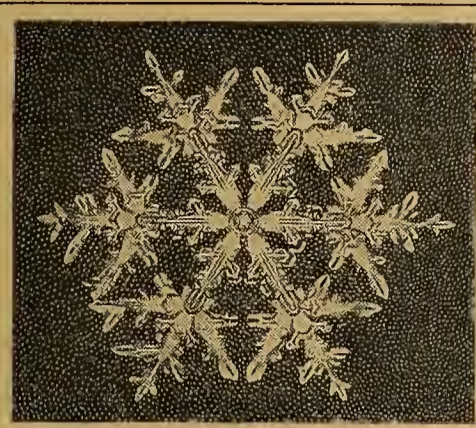
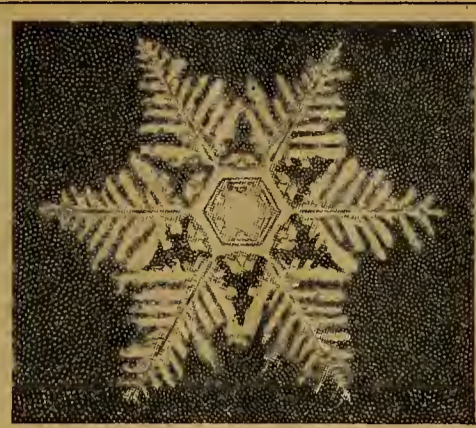
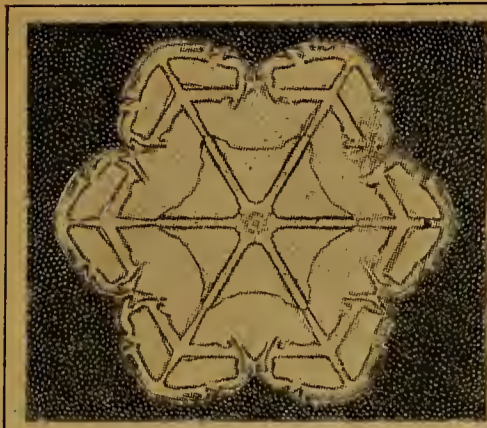
The new kind of rural school is coming. It will be so good a school that city people will flock to the country to give their children "country chances."

The farm itself is a better educational plant than money will buy in the city—if we only develop a school system which will make use of it.

Snow Flakes Under the Microscope

Thousands of These Wonderful Forms Have Been Photographed and No Two Found Alike

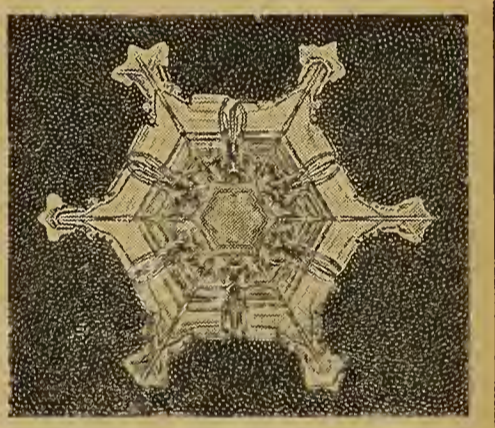
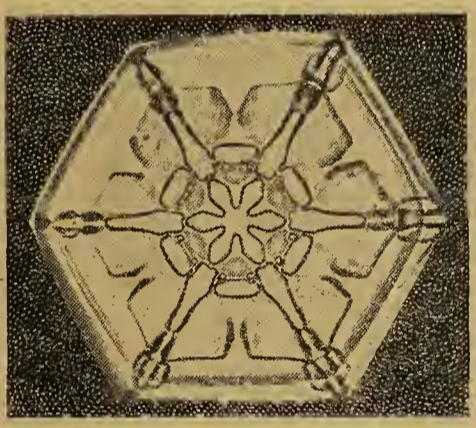
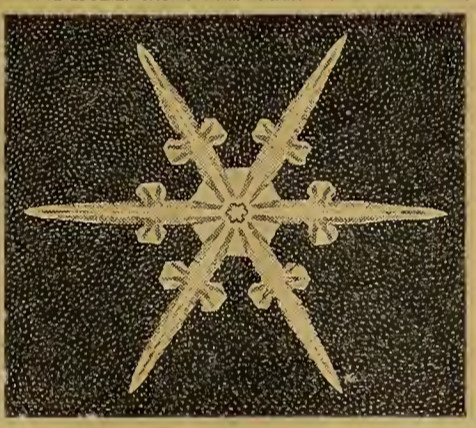
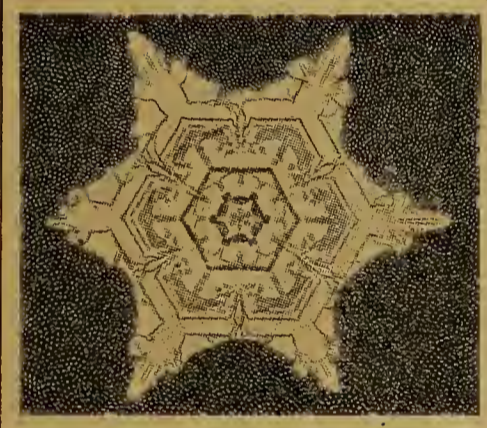
By W. A. Bentley



WATER is nature's most precious gift to earth, next to life itself. Hence it is peculiarly fitting that this most beneficent substance should assume such beautiful and varied forms. Of all the water forms snow is the most remarkable. Snow crystals (snow flakes) form at various heights from a few thousand feet to miles high. Their size is ordinarily between one fourth and one twentieth of an inch in diameter.

All have six points and six sides, and the mysterious laws that govern in cloud land seem to decree that the rate of growth shall determine the structure. Those that grow rapidly assume open branching forms, while those that form slowly are more solid.

Perhaps the most marvelous thing about snow crystals is their infinite diversity of form. I have made over two thousand photographs, no two alike, and yet each winter, here in Vermont, seems to bring as many new forms as when I began to photograph them thirty years ago. I use a combination of camera and microscope to do this work, which must be performed at outdoor temperatures varying from zero to 28 degrees Fahrenheit. As soon as a snow flake is separated from its companions, it begins to evaporate (not melt), and the utmost haste is necessary to secure perfect pictures.



Your Sales Depend Upon How You Advertise

WE ARE best able to grasp ideas when they are presented singly. Moreover, action is inspired more when information is centered on one point. It is a universal rule that effort distributed to a number of different objects accomplishes less than when it is concentrated upon one.

This rule is carried into advertising, and several prominent live-stock breeders have found that by centering the attention of the reader upon the merits of a single animal offered for sale their sales will be increased and the cost of selling reduced.

One Jersey breeder went so far as to publish a photograph of the animal offered for sale. He also gave the records of the sire and the dam and a very brief description of the animal, together with the price. Three or four inquiries for the animal came within a few days after the paper reached subscribers.

Of course the first man who sent the check received the animal, but the others were not disappointed, for these active inquiries were answered promptly and definite suggestions were made as to filling the orders with other stock.

The number of sales produced by an advertisement is dependent also upon the number of persons who read it. Those advertisements are more largely read that have attractive head lines. It is possible to give the gist of the entire advertisement in the heading. In fact, sometimes by studying over the matter for a while you can express even more in the head line than is expressed in the average advertisement.

Headlines Must be Definite

The headline, in order to be attractive and convincing, must contain some definite information about your herd which is so outstanding and so unusual that your advertisement will stand out from all the rest and will convince the prospective buyer.

If you wish to sell Holsteins and have one or more cows in your herd that have made the remarkable record of 16,000 pounds of milk in a year's test, this information could be given in the head line of your advertisement to very good advantage. Such a head line as "Holsteins from 16,000-pound cows" would certainly attract those interested in dairy cattle.

Again, a triangle seems to have more attraction for the human eye than most any other geometrical figure. Scientific experiments have shown that the advertisement with a prominent triangle as a part of its make-up attracts more readers than the one without it.

About two years ago I made a test with three advertisements in order to see what form would attract most attention. These advertisements were prepared

A Plain Talk

By John Y. Beaty

exactly alike, except that one had the words printed inside of a large triangle made of heavy black lines, another was printed inside of a circle of similar dimensions and with similar heavy black lines, and

the third was printed inside of a similar square. I believe that all of these advertisements were read by many more persons than if the heavy black lines had not been used, but the result which interested me most was that the triangle attracted more attention than any of the other forms.

In order to have an advertisement prepared in any unusual form all that you need to do is to indicate plainly by rough sketch and by description, the form of "ad" you desire. When this is sent to the advertising department of the paper the special drawing requested will be made. The bill of course will be submitted to you, but unless the drawing is rather elaborate it will not cost very much. Furthermore, when the cut is once made you can use it again and again.

There are many ways in which the triangle may be used. For example, it might be made large enough so that the advertisement could be printed within it, or it might be made small so that it could be placed in the center or in one corner of the ad, merely to attract attention. Another way is to use a hollow triangle that contains four or five significant words which serve as a heading for the advertisement. If you use a larger space you might use a triangle containing a photograph. The idea is to get something that will make your advertisement distinctive and attractive.

Photographs Clinch Your Arguments

Photographs, too, have a wonderful value when used in advertising. They are not only the means of attracting the reader to the advertisement, but also carry much of conviction with them. Generally speaking it is impossible to use a photograph with an advertisement to good effect unless the advertisement is at least two columns wide and two inches high. A good picture of a good animal gives the reader an accurate idea of the quality of the animal.

Another splendid use of photographs is to place them in letters which are answering inquiries. For example, if you are answering perhaps half a dozen inquiries from men who are apparently in the market for Poland China sows, send each of them a photograph of one of your sows, either one that is offered for sale or one that shows the dam of those that are for sale.

If you do this in addition to giving a description of the stock you wish to sell, you will find that orders will come in much more readily than otherwise.

And what I have said here I have said with the hope that your sales will increase as mine and those of my friends have while following these rules.



Snow Flakes as Mortgage Raisers

SNOW to some folks is a nuisance that blocks the road, stops the grazing, and spoils the skating. But Mr. Bentley who took the beautiful pictures shown on this page is making nearly every snowfall help to buy his farm.

The picture shows Mr. Bentley and the machine which he uses to photograph snow flakes. He sells most of the photographs and the lantern slides made from them to scientific institutions. "Possibly your readers will be interested to know," says Mr. Bentley, "that I am a farmer. Also that I have carried on my beautiful studies while struggling to pay 'the all too common mortgage' on my home"

The Farmers' Lobby

THAT foot-and-mouth disease has not been for many years a more serious menace to the American live-stock industry is largely due to our superior organization for fighting just such epidemics.

Not in generations has Russia been without it. Ignorance, lack of organization, superstition, governmental incapacity, have made it impossible of eradication. It is always a present danger in Germany. Even Great Britain has been less successful in fighting it than has the United States.

It is quite within reason that this disease and hog cholera will one day be looked upon as bulwarks of American supremacy in the world's meat business.

Strange?

Yes, but simple enough.

We have the most capable and intelligent agriculturists, and also the most efficient agricultural supervision.

There is, consequently, better chance to stamp out these diseases here than elsewhere.

With this country rid of them and other countries still suffering continual losses through them, our live-stock industry would be the soundest, safest, least speculative, most persistently profitable on earth.

And that's our chance.

We can only realize on it by co-operating to suppress the diseases. We must understand that when state and federal authority orders quarantine, and slaughters infected herds, and urges owners to report all suspicious cases instantly, it is a positive duty to submit and co-operate.

Symptoms of Foot-and-Mouth Disease

It is more than a duty: it is positive service to self-interest.

If you watch your stock carefully it will not be hard to note the symptoms of foot-and-mouth disease. Cattle, sheep, goats, hogs, are liable to it.

Watch an animal that slobbers or drools.

If that animal begins smacking the lips, loses appetite and flesh, and presently perhaps develops sores between the toes, don't wait an hour. Get a skilled veterinarian.

Also report your suspicions to the nearest agent of the Agricultural Department.

Cattle with this disease don't commonly die of it. Commonly it would be to the farmer's profit if they did. Let alone they will linger through a useless existence. The milk falls off in quantity; gets blue. Even after external symptoms disappear, the animal is probably infected with the disease and may develop a new case or transmit it to others. Nothing is more contagious. Animals once infected often become regular "Typhoid Marys;" that is, they are full of the germs, though themselves immune to their effects; they can communicate the disease very widely, though themselves not suffering, apparently, from it.

The cause of foot-and-mouth disease is a filterable virus so small that it has never been isolated. Which is to say, in simple language, that it's a bug in the blood, so small no microscope can reveal it and no filter can catch it.

But it's there. The hog-cholera bug is of the same sort: it has never been isolated, but the scientists know it's there beyond uncertainty. It's like the discovery of the planet Neptune. Two astronomers, working independently, decided just about the same time, from studying the operations of the solar system, that there was another planet far outside those already known. Neither had a telescope powerful enough to see it, but each made mathematical calculations proving just where it ought to be. Then each wrote to an observatory that had a very powerful instrument, asking that the instrument be pointed at a certain spot in the sky. It was done—and both observatories found Neptune!

Neptune is about 2,760,000,000 miles from the sun. Nobody has ever seen it except with a high-power telescope. But it's there; nobody doubts that. Before it was seen at all, two astronomers, one English and one French, had proved that it had to be there.

It's just that way with these invisible and unfindable germs of foot-and-mouth disease and hog cholera. If we can believe the Neptune story, why not the one about these germs?

The other day a live-stock farmer said to me: "I don't take any stock in this notion that a bug that nobody ever saw causes this disease. In fact, I don't believe in the disease. These here inspector chaps from the Agricultural Department have a million dollars to spend killin' stock, an' when it's spent there'll be no more heard of the disease. They've got to spend that money so they can get more to spend next year an' so they can hold their jobs."

That man's ignorance seemed monumental, yet he controls a big farm in a dangerously infected district, only a few miles from a serious outbreak of the disease.

That man thinks his neighbors who have their dairy herds tested regularly for tuberculosis are fools. "They'll always kill about so many of 'em for you, because that's their game," he says.

Fortunately there aren't very many farmers nowa-



Make the Live Stock Business Safe

By Judson C. Welliver

days with such views. If there were, the chance of eradicating disease and making the American live-stock industry the safest and most profitable in the world would be mighty bad.

One infected animal in a herd makes it necessary to kill the rest, for one will infect the whole herd in an incredibly short time. There is no known cure. The germ is transmitted by the slightest contagion. Don't go near the disease. Keep off places where it has been. Don't let people who have been exposed to it get near your stock. Above all else, don't try to be foxy and "beat the law." You can't do it: you may beat yourself. You're pretty certain to, in fact.

If the disease is in your neighborhood, kill every pigeon on the place.

And also, so far as possible, every rat.

Both pigeons and rats are great carriers of the disease.

The present epidemic started in southwest Michigan, and the story illustrates how very easily the germ is transmitted. Milk from diseased cows was separated, and the skim fed to hogs. They got the disease and were shipped to the Chicago stock yards. They infected the yards. Other stock, using the same runways and pens, got it. Stockers and feeders coming there were reshipped to various parts of the country,

milk. Pasteurization is declared a complete protection. That is when the milk is raised to a temperature of 145 degrees, kept there thirty minutes, and then cooled.

Stock yards all over the country have been thoroughly cleaned and disinfected. Cattle cars in which stock has moved from infected areas have been hunted up by number, wherever they were, and disinfected. The most minute pains have been taken to clean up premises once infected. No stock may be placed on such premises within sixty days after the destruction of infected herds and thorough disinfection, and only with proper permit.

No mercy is shown when it is decided to kill animals for the disease. The whole herd must go. Animals, when slaughtered, are first slashed with knives in order to destroy the hides and remove any possible incentive to dig them up for these, also in order to permit quicklime, with which the carcasses are covered, to penetrate. The carcasses are thrown into deep trenches, covered with the lime, and buried.

Persons who handle infected cattle are directed to use rubber gloves, boots, and coats, and to clean these thoroughly immediately afterward with a strong disinfecting fluid.

Humans not infrequently get the disease, but it is generally mild and passes away soon. Annoying sores will be seen between the fingers, little eruptions about the mouth. In children the results may be more serious.

Why a Fortune is Needed to Fight It

During the present epidemic the state authorities have all joined hands with the federal to make the fight effective. The last previous outbreak in this country was in 1908. At that time the same methods as now were employed. The Government then paid two thirds of the appraised value of stock condemned and killed for the disease, and required that the State pay the other third. Before that, in the outbreak of 1902, the Government paid 70 per cent and demanded that the State pay 30. This time the Government has insisted that the State shall pay half, and Uncle Sam has put up the other half.

Not a single State has refused to carry its share of the burden thus far. But some of them are already dangerously near exhaustion of available funds. For that matter, the federal fund melted away like snow in July after the situation became serious and widespread. There is an appropriation of \$625,000 for the current year for fighting contagious diseases of stock, and this was about all gone before the end of November. The Department of Agriculture, however, had figured out that it had discretion, in emergency, to use some other funds not specifically set aside for this purpose. Meanwhile, Congress' session being set for early December, and most of the state legislatures a little later in the winter, it has been expected that money would be provided in time.

Just one State demurred a bit at the notion of paying one half the appraised value of cattle killed. That was Indiana. It wasn't sure whether it could be compelled to pay for stock that the federal authorities condemned.

"All right," retorted the national authorities, "you put up or we shut up your whole State against receiving or shipping live stock; shut it up tight as a drum."

Needless to say that settled it. The dubious Indiana authorities, like Crockett's coon, "came down."

It costs big money to fight a disease in this fashion. But it is absolutely the only way. It is necessary for some government purse, state or national, to pay for stock destroyed.

Why?

Human nature.

Let a man know that he will be paid full value, and he will not try to conceal the disease and wait till he is sure: he will report as soon as he has suspicions. Under any other system, instead of reporting he would be apt to conceal his fears, rush his stock to market—and spread the disease everywhere. Yet he couldn't be caught; it couldn't be proved, one case in a hundred, that he knew or ever suspected the presence of the disease.

In Brooklyn \$17,000 was paid out of government funds for killing one bunch of stock. At Chicago twenty-five bunches were killed and \$43,000 paid for them; at the same time there were thirty-six bunches appraised at \$49,000 waiting to be killed, and 76 other bunches condemned but not yet appraised. These figures represent only the Federal Government's one half of the expense. It's pretty easy to figure how soon a million dollars would go at that rate.

The danger to our live-stock industry has been great, but the precautions already taken have been mastering the situation. What the wide-spread dissemination of such a scourge might mean, however, may be estimated from the statistics which show that there are 58,000,000 cattle, 50,000,000 sheep, 60,000,000 hogs, and 2,000,000 goats in this country. It is one of the very greatest interests of the nation, and it is quite within the possibilities that this disease, once out of control and widely spread, might ruin the whole stock business. It is our mission to make the business a safe one.

EW

To Welliver From Texas

ONE might imagine from what you say that the South is composed of a few large plantations, planted with cotton, adorned with fine mansions and all the comforts for the landlord, and dotted with huts for the colored workers. This would sound romantic, but let me give you a sketch of true Texas life. . . .

Yes, cotton is raised on a large scale, not on a few large plantations, but on farms of 50 to 200 acres, here in middle Texas. These farms are owned by the thrifty people. Very seldom you come to a colony of negroes. They generally live on the outskirts of town and loaf about until engaged for work. . . .

Cotton is planted in February, and if the weather is warm it grows rapidly, and when shooting the third and fourth leaf there is a hurry to have it thinned. Now that's the time every available hand is secured, and here comes the mite for which every negro is waiting; but there are not sufficient colored hands, and too, they are rather high to hire unless agreement is made per acre, for they are lazy as a rule and work slowly when hired per day. . . .

The latter part of July the cotton begins to open, and in August the picking is begun, giving work again for colored hands, but most of the cotton is picked by white hands. . . .

There are no negro plantations, at least none that I know of. There are some that do work, but a whole lot that don't, and as they are rather dangerous to harbor about the house everybody gets along best without them. There is a great demand for servant girls, but blacks are hired only in great necessity.

As to putting the negroes to land-clearing, that would be all right, but they don't like to work so hard. Almost all the clearing is done by Mexicans. Their work is cheaper, and they are professional land clearers. They stick to their business, and they live under camp and board themselves, and do not trouble the neighborhood.

and carried the disease with them. In an unbelievably short time it has appeared in Massachusetts and in Montana, and in both cases was traceable to the Chicago infection.

Instantaneous stoppage of shipments that might spread infection in this way is the object of quarantine. The federal authorities, to the time of writing, have quarantined sixteen States: Massachusetts, Connecticut, Rhode Island, New York, New Jersey, Delaware, Maryland, Pennsylvania, Illinois, Ohio, Indiana, Michigan, Wisconsin, Iowa, Kentucky, Montana; also Canada. The federal quarantine stops interstate shipments without special permission, and the federal has always been supplemented by a local quarantine by state authority, which prohibits shipments to and from infected areas. Stock may be sent from uninfected areas into infected ones, for immediate slaughter, under federal inspection. Thus the interference with meat supplies is reduced to the minimum.

How the Carcasses are Buried

Interference with milk supplies is reduced by permitting milk to be sent after proper inspection of herds and premises within quarantined areas, of course permitting no milk to be shipped from infected stock. In order to safeguard against infection through



Live Stock and Dairy

The Big Steer Still Demanded

By F. G. King

THE cattle business reveals some interesting changes in the kind of stock most in demand on the market. More than a generation ago a steer weighing a ton or more was in demand. A two-year-old steer weighing twelve to fourteen hundred pounds was then spoken of as "light cattle."

The popular weight of cattle gradually decreased until, during the last decade, the most popular weight has been twelve to fourteen hundred pounds.

A demand has developed for even lighter cattle than these.

The market and show-yard are constantly pointing to the popularity of the well-finished yearling steer. In fact, this grade of cattle, if well finished, can be said to be as popular as the heavier weights.

I Believe in the Big Steer

So common have these well-finished cattle become that the twelve to fourteen hundred pounders, which formerly were medium-weight grades, I am considering as big steers to distinguish them from the fat yearlings or baby beefs.

Market quotations have favored the production of fat yearlings. This has increased their popularity to such an extent that in many quarters it is asked whether or not the big steer has a place in the feed yard.

I believe that the big steer still has a place.

Two factors have operated in making the young steer in some sections more popular than the larger steer.

First, the cost of producing gains is less with young than with older cattle. Trials at the Indiana Experiment Station have shown that the gain on calves being made ready for market as yearlings can be made on approximately twenty-five per cent less feed than on two-year-old cattle. Therefore, when the gain on the latter costs ten to eleven cents a pound, gains on the former can be made for about eight cents a pound.

With cost of gain higher than the selling price of the cattle, the increase in the value of the animal by fattening is depended upon to return the profit to the feeder. This increase in value per pound of fat cattle above cost of feeding steers is known as "margin."

When a margin is required to overcome the high cost of gain, it is evident that heavier cattle would be popular because, for example, an increase of one cent per pound on one thousand pounds is much greater than the same increase on four hundred pounds.

With the extremely high market for fat cattle in recent years the cost of gain has been less than the selling value of fat yearlings, thus removing the necessity of a margin. This puts baby beef on a basis of production, not speculation.

Gain on Two-Year-Olds is Expensive

The cost of gain on two-year-olds is higher than the selling price, which fact demands a margin if profit is expected. As long as cattle are very high, calves of high quality will be very popular in the feed yard. Should the price of fat cattle fall below, for any length of time, the cost of producing gains on youngsters, stockmen would again demand cattle with more weight for feeding purposes. Fat yearlings are specialties.

In order to sell to the best advantage they must be fat. Only calves of high quality will fatten at an early age.

Calves lacking in quality grow rather than fatten.

Such animals may be fed for a long period and be so lacking in finish that they sell for very little above feeding cattle. Therefore, if calves of high quality are not obtainable older cattle that have the major part of their growth are more desirable than lighter stock. Also, calves of high quality must be fed a long time in order to get them ready for market. Short-fed calves are usually not profitable. Hence, for short feeding, older cattle are better than young ones.

Calves must have excellent conditions for good results. Mature cattle are adapted to more unfavorable conditions. If large quantities of rough feed or feed of inferior quality must be consumed, as is the case in many instances where it must be fed or allowed to waste, larger cattle are superior to young ones.

In districts where the main object is the conversion of rough feed into manure, or the marketing of inferior or damaged feed, or the consumption of distillery waste, only cattle with age are suitable.

Inexperienced feeders may usually look for better results with older cattle than with the tenderer young animals.

Only the best quarters should be filled with calves, but older animals that are more able to withstand hardship may be placed in poorer surroundings.

The more mature steer, two years or more in age, has much to commend it, such as quicker fattening, suitability for short feeding, capacity for coarser and poorer feed, and greater hardiness. Should the price of cattle again become low the greater weight of the older cattle on which to secure a margin will increase their popularity.

AN HONEST man stands accused of fraud in the federal courts of Kansas because he advertised an eye wash as able to cure "bowlegs, ingrowing nails, and flat feet." Why imprison the poor fellow and let the sellers of hog-cholera and foot-and-mouth disease remedies go free?

Buttermilk Cheese

By D. S. Burch

THE food value of buttermilk has been known for many years, but unfortunately buttermilk is bulky, spoils quickly, and is therefore hard to sell. Mr. J. L. Sammis of the Wisconsin Station has for over ten years been working on the problem of making cheese out of buttermilk. He discovered a method which has now been thoroughly tested, and these are his directions:

Heat a quantity of buttermilk to 130 or 140 degrees (about scalding hot), and then let stand for half an hour. Most of the curd will rise to the top and the whey may be drawn off. The curd is collected in a cheesecloth bag, and left to drain for from one to four hours.

When dry enough the curd should be evenly salted, one ounce of salt being about the right amount for five pounds of curd. The cheese is then ready for immediate use. It may be kept in a refrigerator for a week or more without losing in quality.

Buttermilk cheese may be eaten alone or, like cottage cheese, mixed with cream. For use in sandwiches or salads it may be mixed with butter, Spanish pimiento, chopped pickles, olives, or nuts.

Two creameries report the sale of 28,000 pounds of buttermilk cheese during the past season.

Most of the buttermilk cheese has thus far been made in creameries, but considering the ease of manufacture and the superior quality of farm buttermilk, there is an opportunity in it for the farm dairy. The buttermilk cheese I have eaten has been of finer grain than cottage cheese, and in every way its equal.



Attacked by Vicious Hogs Barefoot Man in Race for Life With Hungry Animals

Muncie, Ind., Sept. 17.—Emory J. Niday, postmaster here, is still being asked about his recent thrilling escape from a drove of hunger-crazed hogs. He might not now be alive to tell the story, he says, had the vicious porkers been able to get at him.

The hogs, which had been acting queerly, charged him as he lay in his hammock on his farm, on a recent hot and sultry afternoon. Niday crawled into the higher part of the hammock and sat huddled there as he called for help, the animals, in the meantime, standing on their hind feet in an effort to reach him.

Finally the hogs noticed Niday's shoes and socks, which were on the ground, and devoured them. While the attention of the hogs was thus distracted Niday leaped from the hammock and raced at top speed for the nearest fence, pursued by the animals. He fell over the fence in safety, and barefooted hurried to town in his automobile.—Chicago Blade.

A Bovine Oil Witch

NEWSPAPERS say that a farmer named John Davidson will be wealthy for life because his cow gave bad milk. Mr. Davidson tasted oil in the milk and found that water in the pasture had an oily taste. Further examination showed that oil flowed from a spring. An oil boom is now on. A horned oil witch has some advantages over a peach-twig water witch.

Give the Horse a Cup

COMMON drinking cups for individuals of the human race have been under a ban for a number of years. In the meantime horses have been drinking from the community trough at the road crossing.

Missouri, through its state board of agriculture, is now taking the stand that horses should have individual buckets. They maintain that open water fountains are insanitary and greatly facilitate the spread of glanders and other contagious diseases among live stock.

Glanders is an awful disease, and if it is impossible to control it when the common trough is used, then individual buckets should be insisted upon.

Says the Missouri State Board: "The wrong kind of apparatus caused approximately 500 cases of glanders in the limits of Kansas City each year for eight years. The right kind has resulted in reducing the number of cases to ten or twelve each year."

If this be true, the common drinking trough must be a great danger to horses when disease of any sort is prevalent. The cautious owner will carry his own bucket.

This warning along with the epidemics which are plaguing us now will demand of us increased vigilance in sanitation about the farm.

This Seems to Solve It



LONG after we are dead the people who come after us will keep on talking about pure milk and how to secure it. Much discussion has been and will be devoted to the subject of separate milk-rooms. The dairy requirements of several States now specify that milk must not be aerated, separated, or bottled in the stables. Everyone appreciates the wisdom and reasonableness of such regulations, but when a dairyman looks forward to the prospect of lugging all the milk from his barn to another building in order to satisfy some "upstart inspector," he is likely to find a good many reasons for not doing it.

First he thinks of the disagreeable job of wading through mud or snow with a lantern in one hand and a pail of milk in the other, or perhaps he remembers how during severe windstorms the air is filled with dust and bits of trash. There is no getting around the fact that milk can be contaminated much more quickly by that sort of treatment than by staying right in the barn.

The sketch shows a plan that seems to solve the problem. The milk-room is in a corner of the barn. A door opens from outdoors into a corridor. Opening from the corridor into the milk-room, and also into the stable, are swinging self-closing doors. The three windows in the milk-room are screened during warm weather, and may be provided with awnings.

Saves Work and Expense

This plan has the approval of Mr. C. J. Steffen, formerly chief milk inspector of Milwaukee, and also president of the International Association of Dairy Inspectors. The writer has personally used this plan except for the swinging door between the corridor and the stable. This door, I believe, would be a little inconvenient, but if it helps in securing better milk let's have it anyway.

Such a milk-room and corridor can be built in the corner of any fair-sized barn, and does away with the necessity of a separate milkhouse, and much extra expense and work connected with it.

HORSE COLLAR PADS TAPATCO REGISTERED BRAND TRADE MARK

Means Greater Horse Power

You can't walk as far with a shoe that chafes as you can with one that fits.

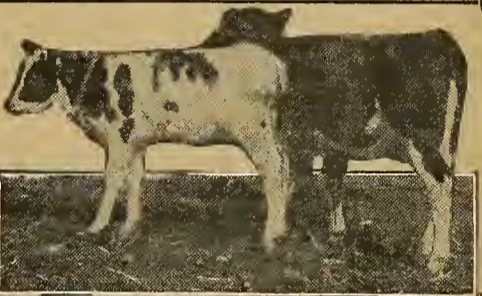
Your horse can't do as much work with an ill-fitting collar that galls the neck and shoulders, as it can with one that has been TAPATCO padded to fit properly.

These porous pads afford ample ventilation. Absorb all sweat. Keep horse comfortable.

Ask Your Dealer

PADS FOR HORSES

The American Pad & Textile Co.
Greenfield, Ohio



Economy Calves

You can now feed a calf for the first five months of his life for less than half the cost of the milk he would consume in the old way. Do this with

Blatchford's Calf Meal

This meal has been known as the complete milk substitute since the year 1800. Very easily prepared. It prevents scouring, promotes a strong rapid growth and makes a better cow.

Write for Actual Figures based on results, that show you how to increase your calf profits. The new data will be sent for the asking. Write today. Blatchford Calf Meal Factory, Dept. 4039 Waukegan, Ill.

ABSORBINE TRADE MARK REG. U.S. PAT. OFF.

Reduces Strained, Puffy Ankles, Lymphangitis, Poll Evil, Fistula, Boils, Swellings; Stops Lameness and allays pain. Heals Sores, Cuts, Bruises, Boot Chafes. It is an

ANTISEPTIC AND GERMICIDE (NON-POISONOUS)

Does not blister or remove the hair and horse can be worked. Pleasant to use. \$2.00 a bottle, delivered. Describe your case for special instructions and Book 5 K free.

W. F. YOUNG, P. D. F., 23 Temple St., Springfield, Mass.

"No Talk Scheme" Post Card Envelope 15 cards 12c. Daily Expense Record 35c. Big Repeat Orders. Agents Wanted. Hustlers only. Particulars free. State Co-operative Company, Beaver, Pennsylvania.

101 Acres, \$4700, Easy Terms Stock, Tools and Crops Included

Twelve cows, 3 calves, pair horses, poultry, wagon machinery, tools, dairy utensils and harvested crops go with this splendid farm if taken at once; in leading dairy section; cuts 40 tons hay, produces fine general crops, pasture for 20 cows; 15 acres wood, 50 fruit trees, 100 sugar maples; 2-story, 8-room dwelling, big cellar, telephone, running spring water house and barn, basement, arm. 40x60; only one mile to town; quick buyer gets everything for \$4700, easy terms. Full details and traveling directions, page 1, "Strout's Winter Farm Bargains," copy free. E. A. Strout Farm Agency, Station 2898, 47 West 34th St., New York.

DEATH TO HEAVES! NEWTON'S STANDARD REMEDY

HEAVE, COUGH, DISTEMPERS AND INDIGESTION CURE. Cures Heaves by correcting the cause—Indigestion. Prevents Colic, Staggers, etc. Best Conditioner and Worm Expeller. Used by Veterinarians for 30 years. The first or second \$1.00 can cures heaves. The third can is guaranteed to cure or money refunded. \$1.00 per can at dealers' or sent direct prepaid. Booklet free. THE NEWTON REMEDY COMPANY, Toledo, Ohio.

BOOK ON Dog Diseases AND HOW TO FEED

Mailed free to any address by the Author H. CLAY GLOVER, D. V. S. 118 West 31st Street New York

Save Your Calves!

A FULLY GUARANTEED CURE FOR SCOURS!

Absolutely Guaranteed to cure scours in calves, or any other animals, quickly, surely and without any bad after effects whatever—or your money back.

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When Lost In the Woods

By Clyde E. Tuck

FOLLOWING are some things I have learned from Indians, and if you have occasion to do much traveling away from beaten roads, especially in the woods, you may profit by these helps.

When passing through a wooded country for the first time, if you intend returning the same way or practically the same way, blaze the trees by snipping the bark at the height of your own head every few hundred yards. This will give you your direction when returning. Or, to prevent getting into the circle habit, break off branches of the bushes or low-hung limbs of the trees you pass. But if you do get lost keep cool, do not run around, but give signals of distress. Start a fire if your match case is with you, as it always should be whether you smoke or not. But if you have no matches take a dry handkerchief or cotton lining of your coat, scrape out a very fine lint, as much as you can.

Get some fine dead fiber from the inner portion of bark or small dry twigs or grass. By using the crystal of your watch, compass, or spectacles a sun-glass can be made that will ignite the lint (if the sun is shining) that can be blown into a fire. Pile damp wood on your fire and a dense smoke will arise far above the tree tops and quickly attract attention. Two fires should be built, one removed a few yards from the other. This constitutes a well-known signal of distress among woodsmen. If it is in the night time select a high hill or ridge on which but little timber is growing so that the blaze from the two fires may be seen a long distance.

Signals of Distress

If you have firearms with you the firing of three shots in succession—two at first, then a pause, and a third shot—is another signal of distress that is, in a measure, universally recognized.

Go back in your mind, as nearly as possible, over the trail you have left since starting out from camp or home. You will always decide that the place from which you started lies in a certain direction. Upon reaching this decision consult your compass if you have one, and if it agrees with your judgment it is practically safe to start out in that direction, going slowly and carefully. You may be wrong, but it is better to go in one direction if you are sure you are going straight or nearly so, for you will in time very likely reach some stream which can be followed with every assurance that you will finally reach a human habitation of some kind.

If clouds obscure the sun, place the

point of your knife blade on the nail of your thumb, turn slowly until the full shadow of the blade has entirely covered the nail. You will thus discover in what part of the sky the sun is located.

If the sun is shining, that is always a sure guide, for you can usually tell whether it is morning, noon, or evening. In fact, everyone reared in the country has been trained to guess fairly accurately the exact time of day by "sighting" the sun. And there are few who cannot pick out the faithful, steady, constant North Star at night. The two stars that form the farthest end of the "cup" of the "dipper" always point directly to the North Star.

Some Valuable Tree Signs

Examine the moss on the trunks of trees. It is always much heavier on the north side. The tops of trees, especially the older, taller ones, always incline to the north if they grow fairly straight from the ground. Their branches are much fuller and more regular on the south side than on the north side, and the leaves of trees are generally closer to the south side of the tree trunk.

Winds, as a rule, are subject to somewhat sudden changes and may vary considerably without being noticed, but when the wind changes from say south to northwest there is usually a lull before it springs up from the last direction. So the wind, while variable, may

be used as a guide in some countries. At certain times of the year it blows for often a protracted period from one direction.

If you remember from which direction the wind was blowing when you started out, and if general conditions of the weather are constant, you may thus discover the proper directions. To find out correctly how it blows, place your finger in your mouth and let it remain until it becomes thoroughly moist; then hold it in the air—the coolest side will indicate the direction from which the wind is blowing.

Never give up hope or yield to despair for a moment, for while there is life something is likely to happen to get you out of your distressful situation.

But there is really little excuse for anyone ever becoming lost if he is prudent and not inclined to become "rattled." Of course a sudden "norther" or other storm often leads to confusion even in the case of the experienced woodsman, and the newspapers every winter record instances of someone's perishing in a blizzard when only a few yards from his home.

You Need Your Wits Always

It is easier to become bewildered in such circumstances than the average person might naturally suppose. Weather conditions have much to do in changing the general aspects of the face of nature.

Great Horned Owl

By H. W. Weisgerber



IHAVE often seen this owl caged, for he will enter chicken houses and so get captured.

But I shall never forget the first one I saw in its wild state. I was attracted to a mass of wild grapevines that hung from a tall beech tree by the loud clamoring of a few crows. I looked up and there sat Mr.

Owl, eyeing me, to be sure, and whenever I changed my position his large, yellow eyes would follow me. The crows, however, retreated to a safe distance. But neither could the owl stand a human gazing at him very long. He soon flew away, and then the crows took up the chase and

compelled him to seek refuge in another tree.

I followed; the crows again retreated. The owl flew again and gained the open, and the crows followed and clamored and pecked poor Mr. Owl. The last I heard of them they must have been nearly a mile away.

This owl is a large bird, and as such requires an abundant supply of food. Where rabbits, mice, or other small nocturnal animals are not to be had, it must find its food from among game and song birds or the farmer's chickens. It is this owl, more than others, that visits the chicken house. But rabbits furnish most of his food.

Farm Wit and Wisdom—Condensed and Modified from Various Sources

PEOPLE troubled with backache often think the pain a sign of kidney disease. The patent medicine fakery sell a good deal of "kidney medicine" by playing on this fear. Doctor Hill of the University of Minnesota cautions us against this error. "Kidney trouble," says he, "almost never produces pain in the back. Of all the things that go to make up our bodies, almost the last and least to ache is the kidney."

KANSAS has just taken a silo census. The Sunflower State now boasts 7,137 silos having a total storing capacity of 900,000 tons. In 1909 there were only 60 silos in the State. The silos are all said to be grasshopper-proof, and as most of them are now full Kansas should have very little to worry about.

"THE hog is not an economist. If you feed him sugar he disregards the price." That statement comes from Evvard of Iowa. He is speaking to corn-belt farmers, but his advice may be adapted to any State. The one who doles out the feed is the one who must think of economy.

WHEN you sell a quart of milk for 7 cents you are giving more food for the money than the buyer can get in most other forms. It is twice as cheap as mutton or fresh fish, six times as cheap as dried beef, nearly three times as cheap as beef chuck, 40 per cent cheaper than pork loin, three times as cheap as beef sirloin, nearly three times as cheap as eggs. The staples that cost less in proportion to food value than milk are such things as potatoes, rice, dates, corn meal, prunes, cheese, wheat bread, and beans. The above figures will hold good in the average interior region of the nation.

CATTLE will not eat all the alfalfa stems, but the horses like them. And they are excellent hay.

SOMETIMES double-yolked eggs will hatch. One Illinois farmer had twin chicks from one grown together by the tips of a right wing and a left one. One chick lived to maturity. Usually the double-yolked egg fails to hatch.

THE potash people are putting up the price on account of the war. A ton of farm manure carries ten pounds of potash, but if it lies in the rain this element will be washed out and largely wasted. Steady the potash market by saving the home supply.

PUT soul into your business and both will grow.

BOOZE takes away what a man has and unfits him for getting more.

A SINGLE grove of 7,500 acres of oranges is being planted in southern Louisiana. The orange and grapefruit business is booming in Florida. It may possibly be a good time to get out of the business. As Shakespeare says, "Let go of a great wheel when it goeth downhill."

THE boll weevil has caused many a Southern cotton planter to discover that diversified farming pays best. And the repeal of the tariff has weeviled a number of sugar planters in Louisiana with the same result.

IT won't do any good to try again if you don't try harder.

INDUSTRY is one evidence of religion. He who never works never worships.

CORN-BELT farmers who think their part of the world has a monopoly of the swine-growing business should wake up. Five years ago eastern Canada shipped hogs to western Canada. During most

of the present year three trainloads of hogs a week have been arriving in Toronto and Montreal from the grain-growing regions of western Canada—mainly Alberta. As many more are thought to have entered the United States, besides the number slaughtered in the western Canadian packing houses, which are quite large and well equipped. These hogs are fed on various field crops which grow north of the corn belt.

THINK of the good done by the man who invented the device of making the bearings of machinery larger than the turning parts, and filling the space with a soft metal which could be melted and run in so as to be renewable. His name was Babbitt, and the metal is called Babbitt metal. One formula for this Babbitt metal is: tin, 89.6 per cent, copper, 3.6, and antimony 7.1 per cent. But the chief ingredient of most Babbitt metals is lead. Lead alone is too soft, however.

START at a walk and let your horse work very easily for the first half hour.

THE trouble with Limburger cheese is that its small assassinate its delicious taste. A Pennsylvania man states that the outside of the cheese is the part that smells objectionably, and that if this part is cut off in chunks, sliced, and given a few seconds of immersion in hot water the smell will be destroyed, leaving the taste unimpaired. The inside of the cheese, he says, needs no treatment.

New Books

AGRICULTURE FOR BEGINNERS, by Burkett, Stevens & Hill, is out in a revised edition. In the teaching of elementary agriculture this book will be of great use. It is complete and well illustrated—in fact, in the well-chosen pictures lies much of the strength of the work. Ginn & Company, Boston, are the publishers. Price, 80 cents.

We have all noticed how a certain stretch of woodland, plain, or valley has undergone strange and often rapid changes in general appearance under climatic conditions.

Getting Lost Comes Mostly From Carelessness

More people get lost from overconfidence and downright carelessness than from fear and lack of wisdom. It is very easy when stalking game, for instance, to become so absorbed in your quest that you almost lose sight of everything else, and consequently traverse a much larger territory than you are conscious of. You make turns to the right and left, go up a ravine, cross over a hill, and descend a slope, all the while keeping your mind and eyes on the vanishing game and perchance rarely noting "the lay of the land" until you suddenly realize that you don't know where you are.

Cautious has always been one of the strongest elements in my nature, and no doubt to the Cherokee blood that runs in my veins, and the only time I was ever lost in the woods was when, for some unaccountable reason, I laid aside my caution while absorbed in stalking a deer in the Ozark Mountains under conditions just enumerated. The buck, an exceptionally fine one, finally eluded me and I was doubly disgusted when I discovered that I was not familiar with a single object within the panorama from the ridge on which I stood as I began to take note of my surroundings.

I finally decided that I was headed due east, the direction I was going when I struck the trail of the deer, and continued in that direction; but I later realized that I had been traveling in the inevitable circle we hear so much about. By using all the tricks known to my ancestors of which I had heard, I finally determined the true direction and found that I was headed southwest instead of east. It seems to be a mystery why one travels in a circle when lost, rather than straight ahead.

A small pocket compass does not cost much, and everyone who spends much time in the wilds should have one, and not make the mistake that I did on this occasion and leave it behind. But whether you have a compass in your pocket or not, you should never strike out heedlessly through a vast forest, but always know where you are going. The Indian takes such careful mental notation of all points of importance and interest when traveling that even if he does not revisit the same locality until long afterwards he remembers its various peculiar and individual features.

It is the duty of every citizen to form some opinion on the subject of war and armaments. The world is full of the sound of arms and the preachings of those who demand that every nation, and especially the United States, shall maintain mighty navies and powerful armies. Therefore such a book as Norman Angell's **GREAT ILLUSION** (published by G. P. Putnam's Sons, New York, \$1.50) should be read by every man who seeks arguments on the peace side. Mr. Angell's book is a powerful brief proving the unprofitableness, the futility of war. Conquest, he says, does the conquerors no good. Victory no longer brings money profits even, as it did when the conquered were enslaved. The trade and financial relations of the nations are such that the victors are harmed by a war almost as much, and sometimes even more, than the vanquished. If war ever was a profitable thing to the triumphant nation it is so no longer, and surely can never be again.

The present world war, breaking out after the book was published, powerfully supports Mr. Angell's arguments. He does not argue that a nation can safely disarm while surrounded by armed neighbors, but he does claim, in a work of immense brilliancy and power, that when the peoples of the world are familiar with the arguments in the case they will see that they have nothing to gain by war, even from a selfish viewpoint, and will force the war lords to unbuckle their armor.

Lost People

MARY E. THOMPSON left her home in Highland Spring, Virginia, five years ago. The last letter received was in May, 1912, when she was in Houston, Texas. Her mother would greatly appreciate any information.

MRS. JESSIE MCKEE, formerly Miss Jessie Hitch, has been gone from her home for seven years. Her sister, Mrs. Fannie Howard, would like information concerning her.

Address all letters care of Editorial Department, Farm and Fireside, Springfield, Ohio

Christmas That Wasn't Skipped

By Annie Hamilton Donnell



All the world but she alone bought Christmas gifts

MARTHA Winterbourne dropped onto a counter stool to think her sudden funny thought. All about her surged a crowd of wild-eyed shoppers. Martha's own eyes were calm. Every-

one but herself was hurried and flurried, straining toward some common goal. That goal of course—Christmas.

That was Martha Winterbourne's funny thought. She alone of all the world bought corsets to-day, while all the world but she alone bought Christmas gifts. Of course she might call the corsets a Christmas gift to herself—Martha Winterbourne laughed.

It was not a very funny thought—just a little funny. The laugh began to fade out of the face of the woman on the counter stool; it was a lonely face. Someone crowded against her. A pair of tired eyes looked down at her.

"Excuse me; but I 'most wish I'd stumbled into your lap, for then I could've sat down a minute. I'm so dead-tired I can't hardly see. It's Christmas tired, though—that's one thing."

The speaker was not old, not young, not pretty nor homely. She was neither dressed in style nor wholly out of style. Indefiniteness marked her, save for the definite and valiant determination to do that shopping.

"Being Christmas shoppin' helps, don't it? Dead an' buried as I am, I'm happy. No; oh, no; I couldn't think of robbing you of your seat—oh, well, then, thank you and Merry Christmas!" She turned to the girl behind the counter. "Corsets, please—the embroidered kind, real showy. I can't pay but two dollars." To Martha Winterbourne she explained: "They're for Alwilda; she never had any but seventy-five-cent ones, and she has so wanted embroidered-y ones. Corsets are queer things to get for Christmas, aren't they? You getting yours for your daughter, too? Mercy, those must be five-dollar ones!"

"Eight," Martha answered briefly. She had been rather ashamed of the price tag.

"Oh, can you direct me to the perfumery?" a new and agitated voice said in her ear. Someone prodded her arm. "You're the only soul that looks as if you knew where anything was. I've forgotten Nellie's cologne, and it's 'most train time—I wouldn't disappoint Nellie for the world. Oh, can you, as well as not? You're a dear! Nothing else to do? You don't mean that's what you're here for? Then the proprietor of this store is a dear too, to furnish a floor walkeress!"

The mistake was not really worth straightening. Martha Winterbourne took up the thus unexpected rôle of "floor walkeress" without comment. "This way," she said, steering the flurried little mother of Nellie toward the "perfumery." It gave one rather an important feeling to be a "floor walkeress." A minute ago she had been only a buyer of corsets, and not even Christmas corsets.

"If there isn't Amelia Purtell—that woman looking at handkerchiefs. She'll miss her train too—we live same place. Amelia, Amelia Purtell! You look exactly as I feel! We're awfully late for the four-forty. Oh, you going to wait till seven? I can't. Wish to goodness—You come along to the perfumery, Amelia; this lady's showing me where. That's what she's here for—to show folks. I'll let you have her soon as I get Nellie's bottle o' cologne."

"Then I'll come," sighed Amelia Purtell. "I need a guide. Honest, Mary, I haven't been to the toy department yet! I got all mixed up and jumped around dreadfully on my memorandum. If it wasn't shopping for Christmas—"

"It is," smiled Mary. "That's what's kept me alive. You couldn't make me cross the day before Christmas. I keep thinking how pleased everybody's going to be—Nellie'll just love her cologne—"

On and on ran the two sweet voices, splendidly sweet. Nothing could make Amelia Purtell cross either. Martha Winterbourne thought of her own impatience and disgust at the crowds—but

then, hers has not been Christmas shopping. Could it be that would have kept her, too, sweet? She found herself sighing.

"There, that's done! Now I've got to run for it. You let this lady help you with your toys, Amelia. She'll advise you, too. You need it with five children to toy up!"

In spite of herself, or perhaps because novelty had lent sudden charm to her lonely and jaded personality, Martha Winterbourne found herself in the elevator with Amelia Purtell, whoever Amelia Purtell might be. Then in the toy department, advising how to "toy up" five little unknown children.

"This is as good as a story book," thought Martha. And to think it came easy, to think she liked picking out games and dolls and stodgy little sail boats and everything nice!

Martha Winterbourne was so close on forty years old that the figure 4 on a calendar or house front disturbed her peace of mind; she looked away. To be close upon forty years old when one lives alone in a great servant-ridden house is a thing to dread, hate, break one's heart. Both these shopper women she had helped must be as old as she, but little Nellies and Alwildas softened their "dead line" for them. If she had little children—

"I need a cup of tea," Martha decided when her curious duties were over. She went up many floors to the restaurant and sat at a little round table and sipped tea. Even here she was not alone. A tired-faced elderly woman sat opposite her. The whole big bright room was full of tired faces and sippers of tea.

"I guess you did your Christmas shopping early, you don't look all worn out like the rest of us," the woman opposite said in the faint voice of exhaustion. "Next year I'm going to begin Fourth o' July. Here it is the eleventh hour and I'm up to my ears in things to do yet—and me sixty years old and two to carry!"

Sixty-two years old! Suddenly Martha felt young. What was the edge of forty! Suddenly the yearning to do Christmas shopping clutched at her heartstrings and jiggled them up and down importunately. To buy perfumery and little stodgy sailing-boats—and to have her arms filled up full.

She forgot the rest of her tea and the salad she had ordered. Across the table she nodded friendly to the poor old soul who was sixty-two; they were souls with the common bond of Christmas shopping.

"I've got a lot to do," she said with a fine effect of hurry. "If you like chicken salad there's some coming to me that I can't stop to eat—too bad to waste it!" She was on her feet, laughing down at the elderly woman. Down the room at the desk she stopped to settle her account, and then darted away, weaving in and out of the crowds as she had watched other women dart and weave. She was a different woman.

She would buy the things those two suburban women had bought—all the things. They were her cue. Embroidered corsets and all! She hurried away to the corset department as a starting place. Curious how busy and important she felt! Again she laughed. Martha Winterbourne's face when it laughed was beautiful.

Perfumery, corsets, dolls, little boats—she bought them all and started homeward laden with them, piled up as the impulse had seized her. The packages were tied together and dangled from her arms—they were Christmas-looking packages, Martha thought, looking gaily down at them. She would pass for a Christmas shopper all right.

What she was to do with all these remarkable and useless things did not disturb her as yet. She was still elated with the revivifying sense of doing something new; her blood, so close to the edge of forty, tingled youthfully in her veins. When before had Martha Winterbourne done anything out of the straight and narrow rut of her kind?

A red-light car went by packed to the doors. That one coming now had a

green light—really, a green-light car would take her home quicker, but it would go through Murphy Street. Martha Winterbourne never went through Murphy Street. Still, just to-night—and it wasn't a packed car, this green-light one. It would be almost too dark to see—to see things she did not want to see. Besides, need she look? It was a day of impulses. Martha raised a laden hand and signaled the green-light car. At her heels a small girl trotted; at the car step disaster overtook the little creature when one of her bulky bundles smashed to the street. The child picked up the wreck and struggled up the steps of the car. She was sobbing softly when she sat down beside Martha Winterbourne.

"Oh, I'm sorry!" Martha said kindly. When before had she voluntarily spoken to a little child? Was this Christmas in her veins?

"I'm afraid you have broken one of your Christmas shoppings," she said. The child shook her head.

"'Twasn't Christmas I smashed; 'twas Father's medicine. It's dreadful 'xpensive. They's quite a lot in the bottom o' the bottle an' I'm going to take it home; Mother can strain it." She was holding the wet and bedraggled little bundle carefully.

"Is your father very sick?" Martha Winterbourne found herself hopefully waiting to hear that the child's father was not very sick.

"Sometimes he is an' sometimes he isn't." The childish face was grave. "When Mother smiles we know he's better, and when she doesn't he's worse. You have to go by mothers; fathers always smile. 'Tisn't a—a hot sickness—he got broken in three places and he isn't knitting very well. Mother made 'em bring him home from the hospital so's she could knit him. She said she always was a splendid knitter."

And now the grave little face dimpled. That was evidently one of the times when Mother made the family smile, if she did not smile herself. Martha Winterbourne was distinctly interested.

"I hope Christmas will make him knit," she smiled.

"Oh, not Christmas—just Mother. We're going to play have a Skip Christmas at our house this year."

"A 'Skip Christmas'? What is a 'Skip Christmas'?"

"The kind you skip and don't have. Us children decided to; we wanted to. Christmas are 'xpensive. We're going to pretend Santa Claus got all mixed up on Murphy Street and missed our chimney. So many chimneys—it's a dreadfully mixed-up street. I wouldn't blame Santa Claus." The dimples deepened.

"This is a kind of a jaggedy bundle, all pieces o' glass, but Mother can strain it. She'll feel dreadfully though."

"Will she scold you?" Martha waited eagerly to hear that Mother would not scold.

"Mercy, scold? Nobody scolds at our house. We just wish we hadn't. I guess you don't know Mother."

No, she did not know Mother, nor anyone else on Murphy Street. Except—there was no except. For eleven years she had not "known" her brother John. Not since that sickening, that shameful time when he had married a clerk at a ten-cent store. A ten-cent wife!

"She had never spoken to him since then, but had lived on alone in her beautiful house on the Parkway. There was not a confusing, mixing-up crowd of chimneys on the Parkway; Santa Claus would have no excuse for skipping there.

The house was her own. John's share had been money, and what he had done with it did not concern her. She had heard reports of losses, but does one need money with a ten-cent

wife? Martha Winterbourne shrugged her shapely shoulders. Yet she and John were twins; sometimes that thought wrenched her soul. The Parkway and Murphy Street—how far apart they were! Once, and once only, she had ridden through Murphy Street and seen John's children playing on the sidewalk. She had known they were John's because he had come out of a house and kissed them all good-by, evidently on his way to his business.

Where he had been going did not concern her. She had never risked herself on that street again till to-night. To-night was—different.

The name had been Smith or something like Smith. And John's name Winterbourne! His little sons and daughters had Smith or something-like-Smith blood in their veins. She could not bear to think of it. It was not until to-night—was it because to-night was different?—that she had ever thought that John's children had Winterbourne blood too. It was an illuminating, a startling thought. His blood—John's! Hers! Some of them might look like John—or her!

"Would you look round an' see if we're coming to the grocery store we live over? I dasset move much." The childish voice was again in her ear. "It's three stories high, with a teeny Christmas tree in the show window. Painted red—you'll know it. Oh, there it is, I looked! I don't see how I'm goin' to get out. Would you press the button, please?"

Martha Winterbourne, herself encumbered, lifted her hand and pressed. She carefully repiled her own bundles and reached for some of the child's. It was curious how matter-of-factly she did it, as though she were accustomed to help burdened children with their bundles.

"I'll take all but the smashed one," she said. "You'll need both hands for that. I'm going to get out here too." She was going to get out on Murphy Street!

They got down from the high step after a fashion—not the usual slow and dignified fashion of Martha Winterbourne. Together they mounted two flights of steep stairs over the grocery that was painted red, with a teeny Christmas tree. Someone above them on the upper landing called down clearly.

"That you, Mattie? Who you got with you—oh!"

"I am Martha Winterbourne. I was on the car with your little girl, and came to help her bring her bund—" Martha Winterbourne got no further; something in the face of "Mother" arrested her. It was a good, sensible face, molded by patient cares and sufferings into a sweetness better than beauty. But just at this moment it was a curiously awakened face, struggling with emotions too big to conceal. A certain shy dignity presently crept into it, and "Mother" stood a little straighter on the upper landing. She had put one arm about the child.

"She's Martha Winterbourne," Mother said quietly. "We call her Mattie for short."

"You mean—" gasped Martha. She meant John. She was John's ten-cent wife. The child was John's child, and they had named her Martha Winterbourne! Many, many thoughts crowded into Martha's mind, crowded out again to make room for many more. It was queer how many thoughts she could think in that startling moment of enlightenment.

Then through Martha's veins coursed rich red blood—wine, not water. She caught the other woman's lean, working hands in her own gloved ones.

"Where is John? Take me to John—oh, I've come! [CONTINUED ON PAGE 17]



"A 'Skip Christmas'? What is a 'Skip Christmas'?"



To be a "floor walkeress" was to be important



"That you, Mattie? Who you got with you—oh!"



John's Christmas gift—Martha gave it to him herself



She undid the bundles while John's wife watched

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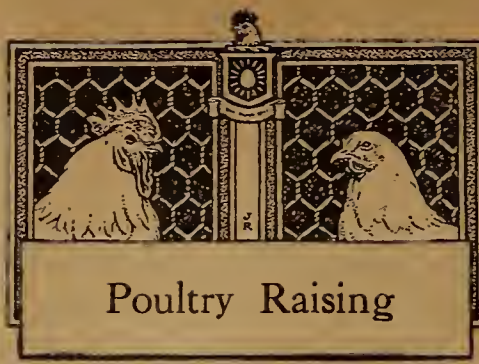
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Poultry Raising

Indian Runners for Me

By J. A. Reid

I DECIDED to do a little experimenting with Indian Runner ducks. I had read so much about the wonderful laying capacity of these fowls that I began to believe that all Indian Runner duck breeders were—well, a little reckless in their statements.

But after one year's trial I am inclined to think that they were too conservative. However, let figures speak for themselves.

In March, 1913, I bought two settings of pure-bred, white Indian Runner duck eggs, paying \$1 per setting. From the two settings I hatched 22 ducklings, 13 of which were ducks, the rest drakes. One duck proved to be a weakling and did not grow as fast as the rest, so I killed it, leaving me an even dozen layers.

Some of them started laying in August, and the rest in September. The following is a record of the eggs that the Runners laid each month up to September 1, 1914:

August, 1913	23
September	69
October	119
November	139
December	144
January, 1914	141
February	114
March	204
April	283
May	291
June	220
July	110
August	63

Total number of eggs laid1,920

My expenses were as follows:

Two settings of eggs	\$2.00
Total cost of feed	19.25
Total expenses	21.25

My receipts were:

Sold 9 drakes at 75c	\$6.75
Sold 21 settings of eggs at \$1 per setting	21.00
133 dozen eggs at 26c	34.58
Total receipts	\$62.33
Total expenses	21.25
Profit (labor not considered)....	\$41.08

The ducks had free range until they were about five months old, at which time I sold the drakes and confined the ducks to a yard. The \$19.25 represents the total amount it cost me to feed them from the time they were hatched until September 1, 1914.

The price of hens' eggs here ranges from 16 to 38 cents per dozen, and I received only the market price of hens' eggs for my ducks' eggs. The reason I received such a high average price for my eggs was because most of them were sold during the winter months when eggs were the highest. In fact, had they laid the same number of eggs in the summer months instead of laying them in the winter months my profit would have been not nearly so great.

I consider my 12 ducks worth fully \$10, so the profit is really \$51.08. This beats everything in the poultry profit line that has ever come to my notice, and I am certainly proud of my "egg-laying machines."

358 Eggs

WORD has just come to hand telling of a phenomenal egg-laying performance of a Pennsylvania Runner duck owned by John Slade. Mr. Slade has made affidavit that this duck, "Victoria," laid 358 eggs in 365 days, from October 6, 1913, to October 5, 1914.

"Victoria" began laying when five months and two days old. Her "no egg" days were February 1st, 3d, 5th, and 14th; July 8th and 10th; and August 8th.

This, while an unofficial record, is not beyond belief

when we consider the extraordinary laying qualities of the Indian Runner duck. A previous unofficial record in Australia, the land of great laying performances, claims an average of 320 eggs from a pen of Runners in 365 days.

Success by the Sour-milk Route

LAST April **FARM AND FIRESIDE** was fortunate in getting a complete account from Dr. Philip B. Hadley of his experimental work in overcoming the black-head disease in turkeys. This disease has well-nigh put a stop to turkey-raising in most of the older sections of this country. Dr. Hadley's work with turkeys at the Rhode Island Experiment Station has proved that by means of a carefully regulated diet of which a prominent part is sour milk it is possible to raise at least 50 per cent of the poult hatched. The feeding of sour milk is begun when poults are a few days old, and is continued daily until the turkeys are matured.

The experience of several **FARM AND FIRESIDE** subscribers who have tried the feeding system recommended by Dr. Hadley is full of encouragement. Two of these experiences are here given:

Not a Turkey Sick

We decided to treat our turkeys as nearly as possible as directed in **FARM AND FIRESIDE**.

We took the little poults from the nest after they were dry, and after dusting the mother with a good insect powder we put them together in a big roomy coop, where we kept them about four days. We fed them rather sparingly, hard-boiled egg, shell and all, liberally sprinkled with black pepper.

I began feeding the clabber when they were ten days old, feeding it in a thick, well-soured condition in clean pans, morning and night, never allowing the milk to become putrid or spoiled.

The turkey hen kept her little ones near the house until they were quite a good size, coming up regularly night and morning for the sour milk. After I began feeding it I gave them no other food. We had a wheat field quite near the home grounds, and they have spent part of every day there since the wheat was cut. But they never fail to come for their clabber, and if I am not quite ready with it, such a scolding as I get! They circle round and round, calling loudly for it.

I am convinced by this summer's experience that it is *the thing*. I have not lost one turkey by sickness this season out of my flock of 25, and all are so fine and healthy. I lost several by having them taken by hawks and cats, but have had not one sick turkey at this writing. I usually lose one half of those hatched. Hereafter we will raise all our turkeys by the sour-milk treatment.

I have not been to one bit of expense for feed, aside from the value of the sour milk.

MRS. J. F. WELLS.

Four Raised Out of Five

Near the middle of June I had 5 turkey eggs given to me, and had 5 turkeys hatched the 9th of July. I went by the sour-milk feeding schedule exactly as published in **FARM AND FIRESIDE**, all but the green feed. They were loose in a yard and picked their greens at will. As I write I still have 4 turkeys twelve weeks old, the largest weighing 4 pounds. I knew nothing about raising turkeys when the turkey eggs came into my possession.

MRS. S. TIMMS.

DAVID LUBIN says that on account of the sane management of the farmers' organizations of Europe there are now "no middlemen for farm products in Continental Europe."



Garden and Orchard

Varieties of Potatoes

ACCORDING to Greene and Maney of Ames, the leading early potato of Iowa is the Early Ohio, and the favorite for the late or main crop is the Rural New Yorker.

Other early potatoes which have given as good or better results at Ames as these are Bovee, Early Six Weeks, Early Rose, and Beauty of Hebron.

For the late or main crop, Prosperity, Peerless, Ionia Seedling, Vermont Gold Coin, Norcross, and Carmen No. 3 have been found as good as or better than Rural New Yorker.

Much depends on climate and soil. We should like to hear from our readers as to their favorite variety, and why.

A Living Monument

WHO would not rather have a living, productive plant or tree that affords beauty, pleasure, and sustenance to those coming after than the most artistic and costly monument of marble with which to perpetuate his memory?

The Marshall strawberry is such a memorial for the late Marshall Ewell of Marshfield, Massachusetts. This strawberry of exceptionally fine flavor, beautiful appearance, and rich, appetizing, blood-red juice was discovered as a promising seedling by Mr. Ewell, and developed by him over a generation ago.

The Marshall strawberry is not a variety for the big commercial grower. It requires for its best success careful, special treatment. It then produces generous crops, which return a profitable income when sold to near-by discriminating consumers.

The recent death of the originator of this long-time favorite strawberry will accentuate interest in both the Marshall and Franklin strawberries. The last-named variety is another seedling developed by Mr. Ewell.

What better work for a man's declining years than the effort to originate or develop a new berry, apple, potato, or flower?

Who Gets the Profits?

By G. W. Warrington

AFTER reading in the October 10th **FARM AND FIRESIDE** the statement of Mr. Thomas Lauxman on marketing produce, I would like to know who gets the money for our produce.

This is my selling experience with tomatoes:

I planted a choice variety. The seed cost \$8 per pound, wholesale price. I set the plants the first week in May and raised a fine crop of large tomatoes, uniform in size and color.

My first shipment was ready for market July 15th. I shipped them in standard tomato carriers that cost me 14 cents each. I shipped them to a commission concern in New York City and was checked back \$1.70 for 10 carriers, or 17 cents per carrier. After paying for the carriers I had the whole sum of 30 cents net profit on the shipment.

Not being entirely discouraged, I decided to try my next consignment to a Philadelphia firm, and they wrote me that they sold the tomatoes for expenses only. So I had to pay for the carriers wholly out of my own pocket.

To cap the climax, a friend of mine came from Philadelphia to spend a few days with me, and while here she was commenting on the high price of tomatoes. I inquired what the price was, and she told me the large size were 5 cents each, and the medium size 3 for 10 cents.

Also a friend of mine made a trip to the city on business, and he verified the statement that they were selling as high as 3 for 10 cents. I think such things are outrageous, and farmers ought to co-operate with the consumers rather than waste time and money raising produce to fatten the pockets of middlemen.



Would you not be proud of such "egg-laying machines"?



loans after a while.

They are "get-rich-quick" concerns—and their officers are the ones who expect to get rich.

No rural-credit scheme can live which supports a national organization of canvassers and stock salesmen. There is no room for anyone to make much money in the loan business if the loans are made at as low rates as those of the insurance companies and the regular, established loan agencies.

Better borrow of people you know, and pay the regular rates, than risk your money in so-called "amortization" schemes operated by fly-by-night concerns whose officers you do not know.

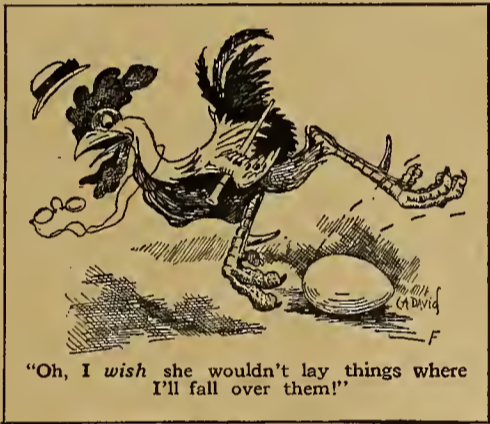
Only one sort of plan can give us lower rates than we now have to pay, and that is the co-operative credit plan, under state or national regulations, operated by yourself and your neighbors with no idea of making any money.

Avoid imitation land-bank and rural-credit schemes. They are snares.

Avoid the numerous investment schemes now offering rapid gains. You will not get the gains. If you have money to invest, there are plenty of good securities that are safe and pay fair returns which may be bought of reputable people.

Anything above a fair return is unsafe. The promise of big profits from small investments is a badge of fraud. This is a financial maxim, and is a perfectly reliable guide.

There are half a dozen concerns now operating, wherever state laws will permit, whose names might be mentioned if it were wise, but it is not. Names change overnight with these gentry, but principles do not. The principles are: Deal with people you know, remember that nobody can make money selling the right sort of rural credits to the farmer, and large profits are promised by nobody except the unsafe concern.



Heat Kills the Germs

MANY inquiries have been made as to the effect of foot-and-mouth disease on meat. There is no particular danger from this source—provided. First, more than half the meat the country uses is killed in establishments where the federal meat-inspection law is enforced. Here the animals are inspected on the hoof first; a diseased one goes promptly to the fertilizer vats. After they are killed the meat is inspected again, and if anything is wrong the carcass is thrown out.

This inspection, however, does not extend to small plants that do not kill for any interstate business. If you are near a region of infection, and if your meat comes from a small plant, then you can be secure if the meat is cooked thoroughly. Just as Pasteurization of milk will kill the germ, so will cooking of the meat.

It is worth while to take all precautions with both milk and meat.

It Has Been a Fight

BESIDES the big staff of the Bureau of Animal Industry in Washington, which has worked days, nights, and Sundays since the first case of foot-and-mouth disease was reported on October 10th, the Bureau has about three hundred inspectors in the field, looking up suspected stock, tracing shipments that passed through infected stock yards, hunting up and disinfecting cars that carried them, and so on. It is believed, at the end of November, that Michigan, where the disease first appeared, is now pretty thoroughly freed of it, and that in general the situation is on the way to rapid restoration of normal and safe conditions.

Modern conditions of long-distance shipment, use of stock yards, cattle cars, and the like make it easier than ever before for such a disease to be disseminated fast and far.

Unless promptly and thoroughly rooted out it would very soon deal a ruinous blow at the country's stock industry; a blow, indeed, from which it might never recover.

Of that there seems now to be no imminent peril. In the early stages of the fight, however, when the disease was reported almost every day in a new State, there was the utmost alarm.



Portable Pastures and Canned Cow Feed

THE pastures upon most Iowa farms do not furnish enough feed for the cattle during the hot dry months of summer."

So says Prof. H. H. Kildee of the Iowa Station in Circular No. 12 on Soiling Crops to Supplement Iowa Pastures.

He speaks of Iowa conditions, but where is there a place in the United States where the pastures furnish enough feed during the summer? We think of none. Therefore the subject of this circular is of almost universal interest.

Which is cheaper, a silo or green crops cut and fed to the stock? The Iowa people do not know, because the difference is so slight that the answer is not clear.

A small-diameter silo, however, filled for summer use, is thought to be the best solution of the feed question when the pastures fail, if for no other reason than that we are pretty apt to be busy just when the soiling crops should be cut and hauled.

But what about the renter whose landlord will not build the summer silo? He must needs depend upon the "portable pasture," as the soiling crop may be called.

Again, corn silage is not a complete feed. It lacks a sufficiency of the muscle and bone forming elements. But a balanced ration can be made up of soiling crops by sowing one or more of the clovers, alfalfa, peas, or beans, to feed green with corn, oats, cane, or other non-leguminous crops.

No Flies, No Hot Sun,—Satisfied Cows

Mr. Kildee has found that the nicest way to treat the cows when soiling them is to let them out to pasture nights and forenoons, putting them in the barn about 2:30 P. M. when the sun is hot and the flies bad. He sprayed them to remove and repel the flies, and fed the green crops to be eaten in shade and comfort. There was no difficulty in keeping these cows from falling off in their milk.

Laud is high in the vicinity of Ames, but this method sustained the cows through the entire pasturing season, counting pasture, soiling crops, labor, seed, etc., at a cost of only \$6.62 per cow. This good result was reached by a system which kept each cow the whole season through, counting the soiling-crop fields and pasture on less than three quarters of an acre per cow.

It seems clear that it pays to prepare for this work by sowing special soiling crops rather than trust to the ordinary crops of corn, oats, and the like. In the Iowa case—and it will serve for a guide over a great portion of the nation—a field was sown to oats and Canada field peas as soon as the ground was ready for oat-seeding, and another field of the same was put in two or three weeks later, using early oats in the first piece and late oats in the second.

Another piece was drilled in fodder cane in May, so as to be ready for the cattle in July. On rich ground it is suggested that this crop had better be sown with all the drills open, so as to make a very thick growth to prevent it from becoming too coarse.

A still better crop, according to Mr. Kildee's experience, is the fodder cane

Succession of Soiling Crops Used on the Iowa State College Dairy Farm

Approximate time of cutting	Crops	Approximate time of sowing	Rate of seeding per acre	Average yield of green feed per acre
June 10 to June 15	Alfalfa	Spring or August	20 lbs.	*8 tons
June 15 to July 5	Oats and Canada field peas	April 5	1½ bu. oats 1½ bu. peas	5 tons
July 1 to July 10	Oats and Canada field peas	April 20	1½ bu. oats 1½ bu. peas	5 tons
July 10 to July 15	Alfalfa	Spring or August	20 lbs.	*4 tons
July 10 to July 20	Amber Fodder cane	May 5	70 lbs.	20 tons
July 15 to Aug. 15	Fodder cane and cow peas	May 15	30 lbs. cane 1 bu. cowpeas	12 tons
Aug. 15 to Sept. 20	Fodder cane and cow peas	June 10	30 lbs. cane 1 bu. cowpeas	12 tons
Sept. 20 to heavy frost	Millet	July 10	3 pecks	3 tons

*The first cutting of alfalfa yielded 2.96, the second cutting 1.46, and the third 2.61 tons of cured hay per acre in 1912.

and cowpeas sown on the same ground and allowed to grow together. This is drilled after corn-planting when the ground is warm. The Amber cane was used and the Whippoorwill or New Era cowpeas.

Millet, while not so valuable a feed as the other crops mentioned, is valuable because it may be sown on the ground vacated by the first crop of oats and field peas, and makes very late feed if the frost holds off. If the frost makes it necessary to cut the millet it makes fair hay.

The table below shows the presence of some alfalfa in the soiling ration at the regular time for cutting this crop. The man who is so unfortunate as not to have alfalfa must contrive something else in its place.

Our readers who have a system of their own for supplementing their pastures during the dearth of summer may well find hints in the above for improving their practice. We shall be glad to hear from any farmer who has a better plan. And this excellent outline will do as a guide for the man who sees the advantage of the soiling system and wishes to make a start this year. We shall be glad to advise readers as to the system best suited to their localities.

Landlordism and Cheap Cotton

By Albert E. Hiestor

A Letter From Texas

I WILL try to explain why cotton is so generally raised. It always heretofore brought cash as soon as gathered. The landlord lives in town and demands a great per cent of the land in cotton because cotton requires no storage buildings. The tenant must market it before it is divided.

It almost always yields a bigger rent to the acre than other crops, and although it requires a much greater per cent of labor than almost any other crop it is a much surer crop, and the tenant has to furnish all the labor even to hauling to market. Therefore the landlord requires cotton.

This year the general yield is immense, practically about double that of an average crop. With cotton at 6 cents the landlord gets as much rent per acre as if the yield were average, but as no one can pick over a fourth of what one man and team can cultivate the tenant is compelled to pay \$24 instead of \$12 for picking, which cuts his profits immensely. One bale at 12 cents a pound is \$60, with \$12 off for picking leaves \$48 net. The tenant gets three fourths of the bale gross, or \$45 for his share. The landlord gets \$15 clear. But out of \$45, the tenant's share, comes \$12 for picking, leaving \$33 net on a 12-cent bale.

On two 6-cent bales at \$60, \$45 is for the tenant. That, minus picking, \$24, leaves a net \$21 for the tenant, but for the landlord a net of \$15. So you see the landlord is getting the same per acre this year that he did last year, but the tenant is getting much less, and counting the cost of living he is actually growing poor on a big yield.

The fact is, too much land is put in cotton. Around Caney, Texas, there are lots of 200 and 300 acre fields put in cotton, and under ordinary circumstances those large fields pay the renter but a small margin. This year many renters will go broke or lose \$2,000 or \$3,000 of saved money.

I would much sooner work by the day than raise a big cotton crop.

IN REGIONS where the box elder is used as a shade tree, and especially in the Missouri Valley, the black-and-red bug called the box-elder bug is more or less of a nuisance. They creep into crevices of houses and become too familiar for comfort in the fall. They may be controlled by a kevosene-emulsion spray on the box-elder trees in spring and early summer.

Bogus Rural-Credit Schemes

THERE is a plague of rural-credit schemes in the land. No farmer should buy stock in any of them.

The nearest approach to a proper organization is the building and loan associations fairly common in Ohio, which are doing really good work, but not as good, we think, as might be done by strictly co-operative associations on the German *Landschaft* plan, if the law permitted the latter.

These are local associations. The farmer knows their officers and their histories. He is safe in dealing with them. He should avoid doing business with building and loan associations which spread their operations over States and the nation.

He should have nothing to do with "mercantile" companies, "home" companies, "securities" companies, and the like which promise great profits or cheap

The Kitten's Christmas

By Harry Whittier Frees

Copyright, 1913, by Harry Whittier Frees

FAR, far away in Tabbyland, the home of all the cats and kittens, lived a little kitten by the name of Dottie Cuddles. She lived in a little brick house with green shutters, just like all the other little dwellings of Tabbyland. And beside each tiny house was the dearest little garden you ever saw, all surrounded by a little white fence.

Now, in some ways little Dottie Cuddles was as nice a kitty girl as you would ever wish to meet, but she had one great fault—she was selfish. She never thought of sharing anything she had with any other little kitty girl or boy.

It was only a few days before Christmas in Tabbyland and all the little kittens were greatly excited, for each and every one of them expected Santa Claus to visit them on Christmas Eve with his bag of toys; for Tabbyland, you know, has a Santa Claus just like Earthland. This jolly, roly-poly cat lives up in the northern part of Tabbyland where there is nothing but ice and snow and such bitter cold that he always has to wear a fur jacket and a woolly cap, even though his own furry coat is thick and warm.

One morning, the week before Christmas, Mother Cuddles called Dottie to her and showed her a big bowl of milk sitting on the kitchen table.

"Mother Whitepaws is coming to supper," she explained, "and I want the cream to rise to the top so that I can skim it off.

Be very careful to let nothing disturb it," she continued. "And above all things, do not touch it yourself."

Mother Cuddles then went on about her work, feeling sure that Dottie would do just as she had told her. And of course Dottie fully intended to be a very obedient little kitty girl.

But after a time she got very tired of sitting alone and doing nothing. And as Mother Cuddles was busy out in the garden gathering catnip she thought it would do no harm to take a peep into the bowl and see how much cream had already come to the top.

So Dottie pulled up a chair to the table and climbed up on it until her inquisitive little nose was on a level with the top of the bowl. And there, right before her eyes, floated a feast of golden cream! Oh, how delicious it did look!

"I'll just take a teeny weeny smell,"

whispered Dottie to herself, guiltily.

Just how it happened even Dottie could not tell exactly, but in leaning over the bowl she got a little closer than she intended and dipped her whiskers right into it.

Now, of course, no little kitty girl likes to have anything stuck on her whiskers; so it was only a moment until Dottie's little pink tongue had washed them clean again.

"Um-m-m-m!" gurgled Dottie delightedly to herself at the thought of all that delicious cream. "I'll just taste the *leastest, tiniest* bit more and surely Mother will never know the difference."



Pussies always write to Santa Claus

But in a very few minutes Dottie had skimmed the milk clear of all the cream. And just then whom should she hear but Mother Cuddles herself coming into the house.

"Oh, dear!" gasped Dottie at the thought of what she had done. "What shall I ever say? I'll just run over to the window," she decided quickly, "and maybe Mother will think I've been looking out all the time."

But Mother Cuddles had very sharp eyes and almost as soon as she entered the room she discovered that someone had been meddling with the bowl of milk.

"Dottie Cuddles," she demanded in a tone of voice that made Dottie look around at once, "who has taken all the cream?"

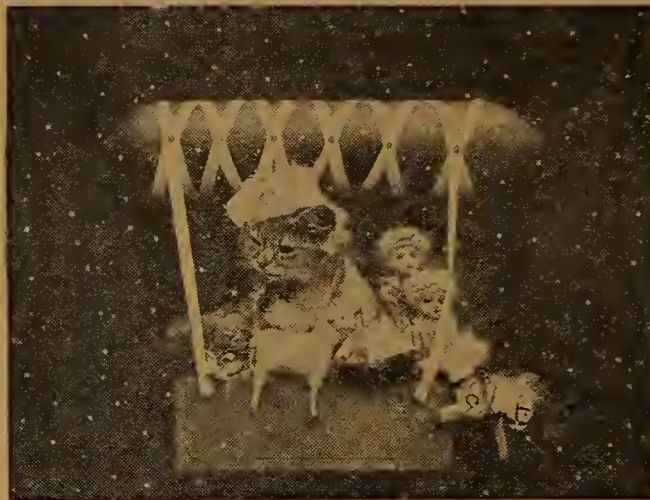
"Oh, Mother Cuddles," exclaimed Dottie, turning to look out of the window

again and thinking to turn her mother's attention elsewhere, "just see the cute little kitty baby going by!"

"Never mind the kitty baby," insisted Mother Cuddles sternly. "Where is that cream?"

And of course Dottie had to tell her mother all about it. Before she was halfway through two little furry paws were vainly trying to wipe the tears out of her eyes, and she cried and cried and cried.

"You naughty, selfish kitten!" declared Mother Cuddles after Dottie had finished. "To think of your eating all that cream yourself! You deserve to be



Santa Claus glided down in his airship

severely punished, and I know you will be. I feel sure Santa Claus will refuse to leave you a single thing for Christmas."

"Oh, Mother Cuddles," fairly gasped Dottie through her tears, "do you think he might? He wouldn't be so cruel!"

"I am almost sure of it," replied Mother Cuddles.

For several days after that Dottie was nearly heartbroken. To think that Santa Claus might not bring her even a single toy! Just the week before she had written him a letter asking for lots of toys, but now no doubt he would pass by their chimney without even looking at it. It was a bitter punishment.

"Oh, dear! Oh, dear!" sighed Dottie over and over again. "If I only hadn't eaten that cream!"

Some time later Dottie had an idea that she felt sure would win Santa Claus

back to her again. She would give her dearest dolly to some poor little kitty girl and then Santa Claus would know she was no longer selfish and greedy.

Among Dottie's dolls was one that had always been her favorite, called Nancy. It had on an old gingham dress and was not nearly so grand a dolly as Arabella, who was dressed in the finest of silk and always slept up-stairs in the bureau drawer.

But Nancy was a dolly that a little kitty girl could hug the lifelong day without any fear of mussing its dress or disarranging its beautiful curls.

So Dottie clasped Nancy in her paws and gave her a big parting hug before she started away.

"Dear little Nancy," she whispered as she cuddled her furry cheek close to her dolly's face. "I love you ever so much, but maybe if I give you to some poor little kitty girl Santa Claus will forgive me."

She hurried on down the street until she came to a group of ragged little kitty girls none of whom seemed to be fortunate enough ever to have had a dolly all their own.

Rushing up to the nearest one she fairly shoved Nancy into a pair of eager, outstretched paws. And then she turned about and flew homeward as fast as her little legs would carry her.

Christmas Eve came to the great delight of every little kitty girl and boy. Dottie Cuddles felt sure Santa Claus had forgiven her, and she was eagerly

awaiting his coming with his bag of toys. Without, the snow was falling gently over all Tabbyland. Every little kitten was snug and warm in his bed, and never a one remained awake to catch a glimpse of Santa Claus as he glided from one little chimney to another in his wonderful airship.

When Dottie awoke on Christmas morning she could hardly believe her eyes. There stood a beautiful Christmas tree with lots and lots of toys beneath it. But best of all, Santy had brought her a dolly that looked exactly like her darling Nancy, only it had on a new dress.

"Dear, good, kind Santa Claus," promised Dottie to herself, "I'll never, never be selfish again."

Nor was she. In all of Tabbyland after that it would have been hard to find a more generous-hearted little kitty girl than Dottie Cuddles.

Last-Thought Presents

What Pretty Thing Can I Make for Her?

THE sewing circle bag may be made of any delicately colored silk or satin. A piece of material ten by twelve inches is required. Seam the ends together to make a bag six inches wide, turn down the top in a two-inch heading with a casing for the drawing strings, and gather the bottom. Cover the bottom shirring with a rose made like that on the card case, but without the stem and leaf, and above them on the outer side of the bag place two roses made like the lower rose, but made of ribbon two and one-half inches wide. Each petal should be two and one-fourth inches long when folded, and they should be sewed around a center of stamens, which may be purchased at a millinery shop or taken from

some discarded flowers. One rose is light pink, the other is deeper, almost crimson. Place a few artificial leaves behind the roses, and run baby ribbon through the bag for drawing strings.

A PRACTICAL gift is a muffler or throat protector for use when wearing unusually thin yokes or the customary open or low-necked dresses.

It is made of white chamois cut so that the front forms a bib-like effect, the opening being in the front. The chamois

yard of each shade of pink is needed, about one eighth of green, and a little pink baby ribbon for the drawing strings—about one yard or less. Begin the rose by making a foundation circle of some stiff material, having it one and one-half inches in diameter. To this sew the petals, beginning with the darkest around the outer edge. Each petal is made of one-eighth yard of ribbon, folded double, the side edges tucked under at

THE card case is made of white satin covered with gold net, and when folded is about four by three inches. Each side has an inner pocket two inches deep. The satin is taken double, and a piece eight inches wide and ten inches long is required. Any pretty brocade, velvet, or like material may be used instead of the satin and gold net. If velvet is used the case should be lined with silk.

The rose on the card case is made of pink ribbon one and three-fourths inches wide, of which twenty-one inches are needed. Cut it in six parts, fold each double for a petal, and tuck the edges under on the fold. Gather the cut ends of one petal and sew the others around it. Wind fine wire around the ends and make a stem two inches long, winding both with narrow green ribbon. Before winding them add a millinery leaf to the stem. Sew it firmly to the card case.



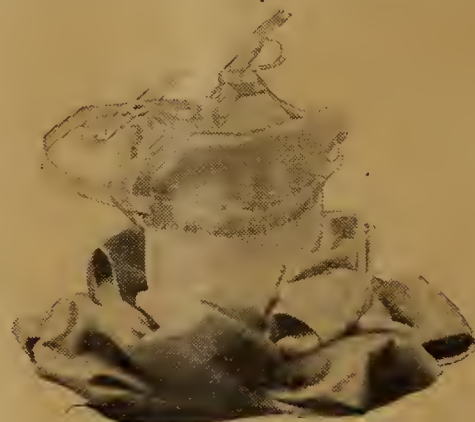
A bag to take to the sewing circle



Just a rose for dress or muff

is covered smoothly with all-over lace, and a flaring collar of the two materials is attached. Wash ribbon may be used to bind the whole neatly, and pretty buttons down the front for fastening. A fold of colored velvet finishes attractively the top of the collar. While giving all the protection needed, the effect produced is that of the customary lace yoke.

TO MAKE the button or trinket rose bag take No. 40 ribbon, using three shades of pink and one shade of green; or two or three green leaves may be used instead of the latter. Five eighths of a



Where buttons may always be found

the fold, and the cut edges of the ribbon gathered and sewed to the foundation. Keep enough of the light shade for the bag—one-fourth yard. Make an inch heading at each end with a casing for drawing strings, sew up the sides, then sew the bottom of the bag to the center of the foundation, with it covering the raw edges of the petals. The rose bag now is complete, except for green ribbon or leaves which are sewed to the foundation back of the rose. If leaves are used the wire ends should be covered with a layer of silk or some soft material so they may not scratch the dressing table.



A card case for the girl in town

The Little Girl's Own House

By Charlotte Bird

AT COMPARATIVELY small cost a delightful playhouse for children can be made out of two piano boxes. This playhouse will be spacious enough and, except in cold weather, warm enough for the children's retreat on rainy days. Thus the noise and disorder in the house may be successfully transferred to a place where it will benefit the children and annoy nobody. If the playhouse is made attractive the children will prefer it to any other spot about the home.

To begin with, knock the two highest sides out of the piano boxes. These boxes, by the way, may be secured from a piano dealer. Then the spot where the little house is to stand having been selected, perhaps somewhere near the back door, set the two boxes on their simple foundations with their open ends facing each other the width of an ordinary window sash apart. They should be firmly set at least two or three inches above the ground to prevent undue dampness.

Into the upper part of the opening on the farther side fit in a window sash so that in hot weather it may slide down, but remain in place when desired. There will be just about room for it to slide down its full length. If there is no old sash about, an old one may possibly be bought of some one living in an old house. One could even make one. The boards which have been knocked out of the high sides of the boxes may be used to fill out the unfinished roof and floor and the open space below the window sash.

Of course, the entire finishing may be left rough. But to make a really satisfactory playhouse, there should be something done to the outside to protect the inside from water in heavy rainstorms. Though it is not beautifying, a coat of tar paper is fine to keep out both water and cold. Or slats can be nailed over the cracks.

A simple door can be hung on hinges

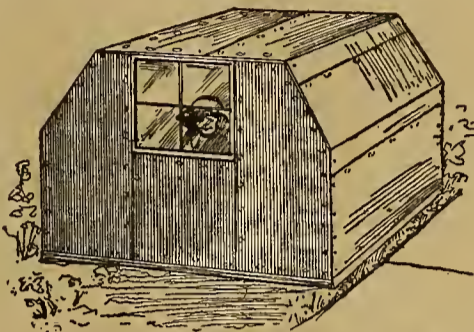
and some kind of a latch put on. All this carpenter work is so simple that it could be done by a boy or woman. When done this will make a little room about 7½ feet long by about 5 feet wide, and it will be about 5 feet high in the central part. This space is sufficient to accommodate two or even three children and the furniture desired. It will be high enough for the children to stand up straight. By children those of eight or ten are meant. This playhouse is not intended for husky boys of twelve.

The decoration of the playhouse inside is a fine exercise for the children in good taste, convenience, and economy. After a room or two in the house has been papered, almost always there are odd lengths of paper left. These appear too good to burn or throw away, and so with a hope that they may some day serve a purpose they are stored away in a closet, where eventually the mice eat them.

Now these odd lengths of paper are exactly the thing with which to finish the walls and ceiling of this little playhouse. The walls may be papered with one and the ceiling with another suitable kind, and there may be a finishing border.

Nearly every home could spare some kind of a rug for a floor covering, or for a dollar a cheap one could be bought. It need not be fine, but in the interest of warmth and dryness there should be some kind of a floor covering.

A sheer white curtain at the window will add greatly to the hominess of the effect. This should be fastened directly to the sash so it need not be mussed or soiled when lowered with the window.



Boxes with window already in place

Small pictures may be hung on the walls. Let the selection of these be an exercise in good taste for the children. Don't give them hideous scenes not fit for the family, but let them select from magazines or art catalogues good nature-study or landscape subjects. Then the playhouse will be ready for the moving in of the dolls and doll furniture, books, toys, and what not.

To the embryo domestic instinct of a little girl such a playhouse is a wonderful developer, just as the making of doll clothes teaches her to sew without any conscious trouble on her part. In this little house with some companion she will sit and sew for hours and enjoy every minute of the time. Here she may set her little table and give her little doll parties. She may arrange her furniture to suit herself, and thus get her first inkling of the artistic effects of tasteful house-furnishing. And naturally she will wish to keep her little house at all times neat and inviting.

By all means, every little girl should have her own playhouse, just as she should have her dolls. There is nothing else which can take the same place in her normal development into true womanhood.

Christmas That Wasn't Skipped

[CONTINUED FROM PAGE 13]

You must forgive me, for it's Christmas—Christmas!"

A little afterward, in John's wife's room, she undid her bundles on the bed, while John's wife watched.

"I'm afraid they're funny presents,"

she hesitated. "No one would want perfunctory and corsets—"

"Oh, cologne—cologne! Mattie loves it so! It's the mother in her, I tell her—can't be the Winterbourne. My mother and I always loved everything that smelt good, every last thing."

And Mattie's mother loved embroidered corsets too. She caressed the pair on the bed with smoothing fingers.

"Those aren't ten-cent ones!" she laughed shakily. "I've got so used to wearing 'ten-cent' things. My, I shan't ever want to put my dress on over them!"

The toys fitted beautifully. The two Martha Winterbournes, young and old—no, both young—sorted them over together. This for Johnnie, that for Mollie—Sue—oh, that for the baby! There were toys enough to go round twice.

John's Christmas gift—Martha sat beside his pillowed chair and gave it to him. Martha's eyes were wells of light—John was so dear! How was it possible that she could have forgotten John was so dear?

Then the idea came—queer it hadn't come long ago! Of course she had known the house was big, and had shuddered sometimes at the stillness of it and the everlasting monotony. She had known it, but hadn't known she knew.

"It's such a big house, John. I rattle round in it alone. You shall have the biggest half, only you won't be able to shut me out of it. Not now—never, never again! Oh, John, it's Christmas, when people forgive—can you forgive me for Christmas' sake? For the sake of 'Peace on earth, good wi—'"

It was John's lips that interrupted her. So John forgave. From the other room came in to them the children's joyous chatter and "Mother's" high, sweet laugh.

"It isn't goin' to be a Skip Christmas after all!" rejoiced the little Martha Winterbourne.

The Brown Mouse

Continued from Page 5

tester, and the other unscholastic equipment, pointed to the list of words and the arithmetical problems on the board.

"Did you get them words from the speller?" she asked.

"No," said he, "we got them from a lesson on seed wheat."

"Did them examples come out of an arithmetic book?" cross-examined she.

"No," said Jim, "we used problems we made ourselves. We were figuring profits and losses on your cows, Mrs. Bronson."

"Ezra Bronson," said Mrs. Bronson loftily, "don't need any help in telling what's a good cow. He was farming before you was born."

"Like fun he don't need help! He's going to dry old Cherry off and fatten her for beef, and he can make more money on the cream by beefing about three more of 'em. The Babcock test shows they're just boarding on us without paying for their board."

The delegation of matrons ruffled like a group of startled hens at this interposition, which was Newton Bronson's effective seizure of the opportunity to issue a progress bulletin in the research work on the Bronson dairy herd.

"Newton," said his mother, "don't interrupt me when I'm talking to the teacher."

"Well, then," said Newton, "don't tell the teacher that Pa knew which cows were good and which were poor. If anyone in this district wants to know about their cows they'll have to come to this shop. And I can tell you that it'll pay 'em to come, too, if they're going to make anything selling cream. Wait until we get out our reports on the herds, Ma."

The women were rather stampeded by this onslaught of the irregular troops, especially Mrs. Bronson. She was placed in the position of a woman taking a man's wisdom from her ne'er-do-well son for the first time in her life. Like any other mother in this position she felt a flutter of pride, but it was strongly mingled with a motherly desire to spank him. The deputation rose with a unanimous feeling that they had been scored upon.

"Cows!" scoffed Mrs. Peterson. "If we leave you in this job, Mr. Irwin, our children will know nothing but cows and hens' and soils and grains—and where will the culture come in? How will our boys and girls appear when we get fixed so that we can move to town? We won't

have no culture at all then, Yim Irwin!" "Culture!" exclaimed Jim. "Why—why, after ten years of the sort of school I would give you if I were a better teacher, and could have my way, the people of the cities would be begging to have their children admitted so that they might obtain real culture—culture fitting them for life in the twentieth century—"

"Don't bother to get ready for the city children, Jim," said Mrs. Bonner sneeringly; "you won't be teaching the Woodruff school that long."

All this time the dark-faced young mountain cracker had been glooming from a corner, earnestly seeking to fathom the wrongness he sensed in the gathering. Now he came forward.

"I reckon I may be making a mistake to say anything," said he, "f'r we-all is strangers h'eh, an' we're pore; but I must speak out for Mr. Jim—I must! Don't turn him out, folks, f'r he's done mo' f'r us than eveh anyone done in the world."

"What do you mean?" asked Mrs. Peterson.

"I mean," said Raymond, "that when Mr. Jim begun talkin' school to us we was pore no-count lot, without any learnin', with nothin' to talk about except our wrongs an' our enemies, and the meanness of the Iowa folks. You see we didn't understand you people. An' now we have hope. We done got hope from this school. We're goin' to make good in the world. We're getting education. We're all learnin' to use books. My little sisters will be as good as anybody if you'll just let Mr. Jim alone in this school—as good as anyone. An' I'll be p' Pap get a farm, and we'll work and think at the same time an' be happy."

XII

Jennie Feels the Puff of Importance

THE great party magnates who made up the tickets, from governor down to the lowest county office, doubtless re-

garded the little political plum shaken off into the apron of Miss Jennie Woodruff of the Woodruff District as the very smallest and least bloomy of all the plums on the tree; but there is something which tends to puff one up in the mere fact of having received the votes of the people for any office, especially in a region of high average civilization, covering 600 or 700 square miles of good American domain. Jennie was a sensible country girl. Being sensible, she tried to avoid uppishness. But she did feel some little sense of increased importance as she drove her father's runabout over the smooth earth roads in the crisp December weather just before Christmas.

The weather itself was stimulating, and she was making rapid progress in the management of the little car which her father had offered to lend her for use in visiting the one hundred or more rural schools soon to come under her supervision. She rather fancied the picture of herself, clothed in more or less authority and queening it over her little army of teachers.

Mr. Haakon Peterson was phlegmatically conscious that she made rather an agreeable picture as she stopped her car alongside his top buggy to talk with him. She had bright blue eyes, fluffy brown hair, a complexion whipped pink by the breeze, and she smiled at him ingratiatingly.

"Don't you think Father is lovely?" said she. "He is going to let me use the runabout when I visit the schools."

"That will be good," said Haakon. "It will save you lots of time. I hope you make the county pay for the gasoline."

"I haven't thought about that," said Jennie. "Everybody's been so nice to me. I want to give as well as receive." "Why," said Haakon, "you will just begin to receive when your salary begins in January."

"Oh, no!" said Jennie. "I've received much more than that now. You don't know how proud I feel. So many nice men I never knew before, and all my

old friends like you working for me in the convention and at the polls, just as if I amounted to something."

"And you don't know how proud I feel," said Haakon, "to have in county office a little girl I used to hold on my lap."

In early times, when Haakon was a flat-capped immigrant boy, he had earned the first payment on his first eighty acres of prairie land as a hired man on Colonel Woodruff's farm. Now he was a rather richer man than the Colonel, and not a little proud of his ascent to affluence. He was a mild-spoken, soft-voiced Scandinavian, quite completely Americanized, and possessed of that aptitude for local politics which makes so good a citizen of the Norwegian and Swede. His influence was always worth fifty to sixty Scandinavian votes in any county election. He was a good party man and conscious of being entitled to his voice in party matters. This seemed to him an opportunity for exerting a bit of political influence.

"Yennie," said he, "this man Yim Irwin needs to be lined up."

"Lined up! What do you mean?"

"The way he is doing in the school," said Haakon, "is all wrong. If you can't line him up he will make you trouble. We must look ahead. Everybody has his friends, and Yim Irwin has his friends. If you have trouble with him his friends will be against you when we want to nominate you for your second term. The county is getting close. If we go to convention without your home delegation it would weaken you, and if we nominate you every piece of trouble like this cuts down your vote. You ought to line him up and have him do right."

"But he is so funny," said Jennie. "He likes you," said Haakon. "You can line him up."

Jennie blushed, and to conceal her slight embarrassment got out for the purpose of cranking her machine.

"But if I cannot line him up?" said she.

"I tank," said Haakon, "if you can't line him up you will have a chance to rework his certificate when you take office."

Jennie felt as light that day as an inflated ball, and bounded through her duties with only an occasional thought of solid ground. What finer ecstasy than to line up a lover before the world's gaze? [CONTINUED IN NEXT ISSUE]

In the next issue will be printed "The Impossible," a story by Mrs. Jean Mahan Plank

MESMERIZED

A Poisonous Drug Still Freely Used.

Many people are brought up to believe that coffee is a necessity of life, and the strong hold that the drug caffeine, in coffee, has on the system makes it hard to loosen its grip even when one realizes its injurious effects.

A lady writes: "I had used coffee for years; it seemed one of the necessities of life. A few months ago my health, which had been slowly failing, became more impaired, and I knew that unless relief came from some source I would soon be a physical wreck.

"I was weak and nervous, had sick headaches, no ambition, and felt tired of life. My husband was also losing his health. He was troubled so much with indigestion that at times he could eat only a few mouthfuls.

"Finally we saw Postum advertised and bought a package. I followed directions for making carefully, and added cream, which turned it to the loveliest rich-looking and tasting drink I ever saw served at any table, and we have used Postum ever since.

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KALAMAZOO STOVE COMPANY
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At the Family Feast

Many Possibilities for the Pleasant Christmas Dinner

By Estelle Cavender and Anna Nixon

BAKED CHOPPED CABBAGE—Run a head of cabbage through a food chopper. Spread a thin layer of the chopped cabbage in a baking dish. Add dots of butter, salt, cayenne pepper, and just a sprinkling of flour. Repeat until the cabbage is all used up. Then pour milk or rich cream over the whole until it is done, which usually takes an hour and a half in a moderate oven. When ready to serve garnish with beet stars, cut from pickled sliced beets, and eudive.

BAKED CARROTS IN SQUASH—Par-boil a whole squash for one-half hour and then cut out the inside pulp. Have some half-cooked carrots run through a food chopper. Add salt, pepper, one tablespoonful of butter, one tablespoonful of grated cheese, one cupful of milk, and a teaspoonful of flour. Mix well, fill in the squash shell, and bake in a moderate oven for about forty-five minutes. When ready to serve place on a platter and garnish with celery leaves, sliced carrots, and stars cut from cheese.

CHRISTMAS THOUGHT CAKE—Cream one and one-half cupfuls of sugar with one-half cupful of butter. Add the yolks of three eggs, one-half cupful of chocolate melted in one-half cupful of boiling water, and one and one-half cupfuls of flour. Stir and beat hard. To one-half cupful of sour cream add one teaspoonful of soda dissolved in a little warm water. Stir in the above mixture and add one cupful of flour, flavor, and fold in the whites of three beaten eggs. Add one cupful of rolled hickory-nut meats. Bake in square tins. For the frosting boil one cupful of sugar in one-third cupful of water until it is past the soft-ball stage. Take from the fire a few minutes and then pour slowly on the beaten white of one egg. Beat until stiff, and spread on the cake. When set, take melted chocolate and with a toothpick print Christmas thoughts of one word on each slice of cake. This will help create a wholesome Christmas spirit.



Baked carrots in squash

CHRISTMAS PICKLE BASKETS—Select large cucumber pickles. Cut a thin slice from one side and scoop out the inside. Take parsley stems and make handles by sticking into each end of the pickle. Run the pickle scraps through a food chopper and fill in the baskets. Garnish with parsley. Old folks who cannot eat pickles on account of their teeth will enjoy this dish.

CUCUMBER SANDWICHES—Prepare cucumbers as for slicing. Slice cold veal loaf, and cut these slices the same shape as the cucumber slices. Place one of the veal slices between two cucumber slices and hold together with toothpicks. Garnish with celery sprays.

TOMATO BISQUE SOUP—One pint of canned or cooked tomatoes, two small onions, one-fourth teaspoonful of celery seed, one-fourth teaspoonful of pepper, one bay leaf, two tablespoonfuls of butter, two tablespoonfuls of flour, one-third teaspoonful of soda, one teaspoonful of salt, one teaspoonful of sugar, one and one-half pints of rich milk. Put the tomatoes, sliced onions, celery seed, pepper, and bay leaf over the fire and let simmer for twenty minutes after reaching the boiling point. Rub through a sieve and return to the fire. Melt two tablespoonfuls of butter and rub to a smooth paste with the flour; add the paste to the tomatoes, stirring constantly until thoroughly mixed. Then add the soda, salt, and sugar and let cook for a few minutes longer. Just before sending to the table add the scalded milk. A stalk or two of celery or a few celery leaves may be substituted for the celery seed.

VEGETABLE SOUP—Three carrots, two potatoes, two onions, one cupful of chopped cabbage, one cupful of chopped celery, one quart of water, three tablespoonfuls of butter, one tablespoonful of

flour, one-half teaspoonful of salt, one-fourth teaspoonful of pepper, one pint of milk. Dice the carrots, potatoes, and onions and brown lightly in the butter. Put into a kettle with the cabbage and celery and a quart of water and cook until the vegetables are tender. Put through a potato ricer or coarse sieve and return to the kettle, adding water to replace that lost by evaporation. Add salt and pepper, and when the mixture boils up add the milk, scalded and thick-



Pickle baskets

ened with the flour. Serve with croûtons or with small oyster crackers.

CREAM OF CELERY SOUP—Two cupfuls of chopped celery, one small onion, one pint of milk, one-half pint of cream, one pint of water, one tablespoonful of butter, three tablespoonfuls of flour, one and one-half teaspoonfuls of salt, one-fourth teaspoonful of pepper, dash of paprika. Chop the celery and onion, put over the fire in boiling water, and cook until quite soft. Drain and rub through a sieve. To the water in which the



Christmas thought cake

vegetables were boiled add just enough to make one pint. Then return the celery to the water and bring to the boiling point. Add the salt, pepper, paprika, and the melted butter and flour creamed together. Stir constantly until the mixture is well blended. Let cook for a few minutes and add the hot milk and cream. Serve with croûtons.

Carrots, fresh or canned peas, spinach, corn, and other vegetables may be substituted for celery in the above recipe, in which case the seasonings should be varied to suit the change. If milk is used instead of cream, increase the amount of butter.

MILK SOUP—Three pints of milk, one egg, one cupful of flour, one and one-half teaspoonfuls of salt, one-fourth teaspoon-



Cucumber sandwiches

ful of pepper, two tablespoonfuls of chopped chives. This is an old recipe which has seldom appeared in print, and one which was much used by country cooks in some localities two or three generations ago. The soup is a special favorite with elderly persons and children.

Sift the flour with a pinch of salt, beat the egg into it slightly, and rub together with the hands until the egg and flour form small crumbs. If any loose flour remains, shake the crumbs over a sieve to remove it. Let the milk come to a boil and add the salt and pepper and the crumbs, a small handful at a time, and let cook for a few minutes. Add the finely chopped chives just before serving.

POTATO SOUP—Four medium-sized potatoes, two or three small onions, one-half teaspoonful of celery seed, one-third teaspoonful of pepper, one quart of water, one pint of rich milk, two tablespoonfuls of butter, one teaspoonful of

salt, one cupful of flour, one egg. Slice the potatoes and onions and boil until soft with the celery seed and pepper in a quart of water. Drain, and rub through a sieve. To the water in which the potatoes were boiled add enough more to make one quart, and return to the kettle with the sifted vegetables, the butter, salt, and milk. When the soup reaches the boiling point add egg and flour crumbs prepared as in the above recipe for milk soup. Let cook for a few minutes and serve. If it is seen that the use of all the crumbs will make the soup thicker than is liked, a part may be reserved and dried, like noodles, to use later.

BEAN SOUP—One-half pint of white beans, one small onion, one quart of water, three tablespoonfuls of butter, one tablespoonful of flour, one teaspoonful of salt, one-fourth teaspoonful of pepper. Wash the beans, and soak overnight in cold water. In the morning pour off the water, add fresh cold water, and put over the fire with the sliced onion. Let cook slowly until perfectly soft. Then drain, and rub through a coarse sieve. To the water in which the beans were boiled add enough more to make a quart. Return it to the kettle, add the butter, and rub with the flour until smooth; add to the soup, stirring until well mixed. Season with salt and pepper, and let cook for several minutes. Serve with croûtons.

A cupful of raw or canned corn added about a half hour before the beans have finished cooking makes an agreeable addition to this soup. Lima beans, split peas, or fresh peas may be substituted for the soup beans in this recipe, in which case the onion may be omitted and a half pint of cream or milk added.

ASPARAGUS SOUP—Two cupfuls of asparagus, one quart of water, one tablespoonful of butter, one tablespoonful of flour, one-half pint of cream, one and one-half teaspoonfuls



Baked chopped cabbage

of salt, two teaspoonfuls of sugar, one-fourth teaspoonful of pepper, one egg yolk. Cut asparagus into half-inch lengths and put two cupfuls over the fire with one quart of boiling water. Drain, and mash thoroughly, or put through a coarse sieve. Return to the kettle with the water in which it was boiled, adding enough to supply that lost by evaporation. Add salt, pepper, and sugar, and when the mixture boils add the butter and flour, which have been rubbed to a smooth paste. Let cook for a few minutes, add the cream and the egg yolk, which have been beaten thoroughly together, and serve immediately. If it is desired to use milk instead of cream, add another tablespoonful of butter. Serve with croûtons.

A can of asparagus may be used instead of the fresh vegetable.

GENSA CAKE—Put a quarter of a teaspoonful of cream of tartar and half a teaspoonful of soda and a pinch of salt into one pound of flour, and sift well together. Warm a large-sized bowl slightly so as to soften, but not melt, half a pound of butter, beat up half a pound of sugar with the butter until it is like cream, to which add five eggs slowly, one by one, beating each egg in well before adding the next and working with a firm even motion of the hand from left to right until all is worked into a cream. Then add three quarters of a pound of seedless raisins, a quarter of a pound of chopped candied peel, giving the mixture a few turns. Now stir in the flour. Pour the mixture into a paper-lined tin, the sides of which should be about three inches deep. Spread chopped nuts thickly over the cake, and bake in a moderate oven for an hour and a quarter. An old-fashioned way to prevent a cake from burning is to place the cake tin in another tin a size or two larger, into which has been put a layer of ashes so that the cake tin rests on it while baking.



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Regardless of price—it is one of the most convenient cars ever built. It is electrically started and electrically lighted. All of the electric controls are conveniently located on the steering column. You can operate every button without changing your driving position.

Regardless of price—it is one of the most complete cars. There are demountable rims, with one extra,

a high-tension magneto, built-in ventilating type windshield, mohair top and boot, magnetic speedometer and curtain box. In fact every modern improvement.

Then remember this—

The first cost is not only considerably less but so is the operating cost. In both directions you save money.

Also remember that every Overland is backed by a world wide service.

So by all means get an Overland—and get it now.

Then, and only then, you'll make 1915 just that much bigger, better and more delightful for your whole family.

Act today.

BRIEF SPECIFICATIONS

Motor 35 h. p.
New full stream-line body
Tonneau: longer and wider
Upholstery: deeper and softer

Windshield; rain-vision, ventilating type, built-in
Electric starter
Electric lights
Thermo-syphon cooling—no pump needed

High-tension magneto; no dry cells necessary
Five bearing crankshaft
Rear-axle; floating type
Wheel base, 114 inches
34" x 4" tires

Demountable rims—one extra
Left-hand drive
Center control
Body:—beautiful new Brewster green finish

Model 81 Prices:
5 Passenger Touring Car . . . \$850
2 Passenger Roadster . . . \$795

Model 80 Prices:
5 Passenger Touring Car—\$1075
2 Passenger Roadster—\$1050
4 Passenger Coupe—\$1600
All prices f. o. b. Toledo, Ohio

Model 81 Prices:
Delivery Wagon with closed body . . . \$895
Delivery Wagon with open body . . . \$850

Handsome catalogue on request. Please address Dept. 62

The Willys-Overland Company, Toledo, Ohio



The Farmer's Wife Pony Club Gives Shetland Ponies to Boys and Girls not only on Christmas but Every Month in the Year and One Can Be Yours

This Pony Given Away



We Will Give You or Some Other Boy or Girl "Peggy" and Her Beautiful Outfit Just as She Looks in this Picture

Send Us Your Name Today If You Want To Own "Peggy"

As soon as we hear from you we will tell you how to go ahead and get "PEGGY" for your own. Our wonderful Pony Club is known all over the country because it gives real Shetland Ponies to boys and girls and you can have one of our ponies as well as any other child. Don't let anyone persuade you that you can't get beautiful little "PEGGY" and her outfit because our plan of giving away ponies is different from others. The fact that we have already given away 260 ponies to boys and girls all over the United States, in 37 different states, from the state of Vermont to the state of California, several going over 1800 miles from St. Paul, is proof that we give ponies away. The postmaster or banker in your town knows that the Webb Publishing Company of St. Paul, Minnesota, established more than 30 years ago, is one of the largest publishing houses in the United States and can afford to give away ponies to advertise its papers. We never heard of one of the 260 children to whom we have already given ponies until they wrote us they wanted a pony and that is why you must send us your name and address at once if you want us to send you "PEGGY" and her dandy outfit. No matter whether you send your name before Christmas or after Christmas you will have the same chance to get "PEGGY."

"Peggy" Is A Beautiful Pony

"Peggy" is a beautiful sorrell Shetland with light silky mane and tail and four white feet. She is six years old, stands about 42 inches tall and weighs about 350 pounds. We have already given away 260 ponies to children all over the United States and "Peggy" is just as pretty a pony as any of these others. We selected "Peggy" from a big herd of Shetland Ponies because we thought she was the prettiest and cutest pony of them all—just the kind of pet that any little boy or girl would love to own. "Peggy" is as gentle as a kitten and likes to play and romp with children all day long. She is a sturdy little pony, too, and can haul along her little pony cart filled with happy children at a merry clip. If you send us your name and get "Peggy" she will carry you anywhere just about as fast as you want to go. Send us your name today and we will tell you just how to get her. Don't delay but do just as our other 260 Lucky Pony Winners did and send us your name at once.

A Wonderful Outfit, Too

Not only will we send "Peggy" to some lucky boy or girl, but we also send the finest kind of pony outfit along with her. The outfit includes a stylish four-wheeled pony buggy, a handsome nickel trimmed harness, a hand-made riding saddle and a wonderful Indian horsehair bridle. This bridle cannot be bought in stores, but is made especially for us by an old cowboy at Deer Lodge, Montana, out of beautifully colored horsehair which he weaves into remarkable Indian designs. No child has a prettier or more complete outfit than the one we send with "Peggy" and we know you will be the happiest boy or girl in your state if you send us your name and get this beautiful pony and outfit for your own. We had just as soon send "Peggy" and the Outfit to you as to any other boy or girl but first you must send us your name and address so we can tell you all about our easy plan. You should fill out the coupon below, or send us your name on a postal card but, remember, do it now before it is too late.

We Have Given Away 260 Ponies

Here are the Names of 33 of our 260 Lucky Pony Winners

- | | | |
|---|--|--|
| "Dainty," Gladys Ellwood, Franklin Co., Vermont. | "Prexy," Laura Myles, Brevard Co., Florida. | "Crescent," Cecelia Garot, Kewanee Co., Wisconsin. |
| "Dot," Glayds P. Cowley, Merrimack Co., New Hampshire. | "White Sox," Crayton Adams, Tallapoosa Co., Alabama. | "Gyp," Lucille Heffen, Union Co., Iowa. |
| "Rollo," Lillian Davis, Dukes Co., Massachusetts. | "Wuzzy," Frank McKissack, Madison Co., Tennessee. | "Eddy," Joseph LeRoy Fjelde, Lac Qui Parle Co., Minnesota. |
| "Pansy," Evelyn Cutler, Windham Co., Connecticut. | "Stubby," Harold Quick, Jefferson Co., Kentucky. | "Snoozy," Mary E. Kennelly, Walsh Co., North Dakota. |
| "Honey," Mabelle Thomas, Oswego Co., New York. | "Kip," Anna Ruth Miller, Logan Co., Ohio. | "Blackie," Glen Herting, McCook Co., South Dakota. |
| "Hummer," Arthur Wallace, Burlington Co., New Jersey. | "Snap," Jennie Nadeau, Ionia Co., Michigan. | "Hector," Verna Beerbohm, Cuming Co., Nebraska. |
| "Lightfoot," Romie Butz, Lehigh Co., Pennsylvania. | "Rustler," Jeanette McCown, Floyd Co., Indiana. | "Jim," Joey Edwards, Barton Co., Kansas. |
| "Flip," Imogene Schwartz, Montgomery Co., Maryland. | "Togo," Harris Greer, Sharkey Co., Mississippi. | "Trixie," Frank Harris, Yellowstone Co., Montana. |
| "Ad," Aurelia I. Leigh, Norfolk Co., Virginia. | "Beauty," Evelyn Russell, Greene Co., Arkansas. | "Lucky," Mildred Struthers, Cochise Co., Arizona. |
| "Winkle," Myrtle Pearl Holbrook, Wilkes Co., North Carolina | "Pedro," Harold H. Hodgins, Atchison Co., Missouri. | "Nap," Susie Bratt, Spokane Co., Washington. |
| "Corporal," Laura Powell, Decatur Co., Georgia. | "Rocky," Clarence Kappner, Adams Co., Illinois. | "Marmalade," Crystal A. Andreas, San Bernardino Co., California. |

Notice we print the names of 33 of our 260 lucky Pony Winners. We would gladly print the whole 260 names if we had room for them here, but we will send them to you just as soon as we hear from you. Possibly some of these happy children live in your county or a county near you and, if so, you probably know them because our Lucky Pony Winners are the best known children in their neighborhoods. However, it doesn't make any difference where you live; if you send us your name and are the lucky child to get "Peggy" she and her whole outfit will be shipped without one cent of cost to you. If you send us your name the day you read this, we will send you 1000 votes for "Peggy" and a big surprise that will double your chances of getting this Shetland Pony.

Cut Out This Coupon and Mail Today

The Farmer's Wife Pony Club
591 Webb Bldg., St. Paul, Minn.

Please send me pictures of "Peggy" and names of the 260 ponies you have given away, and also tell me how to take care of Shetland Ponies. I have no pony and want to join the Pony Club and get "Peggy" for my own.

NAME.....

P. O.

R. F. D. STATE.....

THIS COUPON IS GOOD FOR 1000 VOTES FOR "PEGGY"



On the Way!

Every Club Member Gets a Prize

Every child who sends us his name and joins our Pony Club will receive a handsome prize of his own choosing. Besides the Pony Outfit (and the Big Surprise we have for you) we will give Bicycles, Diamond Rings, Sewing Machines, Rifles, Cameras, Gold Watches, Flashlights and many other wonderful rewards that you never could get until now. Of course, "Peggy" and her dandy Outfit is the best present of all and you have the same opportunity to get her as any other boy or girl if you send us your name now.

Address all Letters to
THE FARMER'S WIFE PONY CLUB,
591 Webb Bldg., St. Paul, Minn.