

FARM AND FIRESIDE

THE NATIONAL FARM PAPER

EVERY OTHER SATURDAY

ESTABLISHED 1877

MARCH 30, 1912

U.S. Department of Agriculture
MAR 27 1912

This Issue

A Great Victory in Coöperation (Continued), by the Man Who Managed It
 The Cotton Crop as Seen by a Northerner, by That Northerner
 One Way to Produce Hogs More Cheaply, by a Farmer
 Economies in Poultry-Raising, by a Manager of Large Poultry Operations
 All Departments Complete and Practical



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With the Editor

WHEN I started in to read this letter, from Mr. H. N. Welles of St. Andrews, Florida, I sat up a little stiffer in my chair, and my Dutch began to rise. "If this chap," said I, "thinks he can get sarcastic with me and make anything by it, why he'll find himself greatly mistaken! I'll write him a letter which will show him a thing or two about sarcasm!"

And then, as I read on and found out the spirit back of his apparent severity, I softened, then mellowed and finally smiled a little shamefacedly. But I'll give you the letter itself.

I regret that it is contrary to your expressed wishes, yet I herewith enclose my humble application for a two years' renewal to my subscription, with cash enclosed. My excuse is that I am too old to break a habit formed before you became editor. Hence—with the kind permission which I trust you will grant—I shall remain a subscriber as long as I live and FARM AND FIRESIDE remains as all-interesting a paper as it is. But will you allow me to point out the utter inconsistency of your With the Editor in a recent issue? You say that you do not see why anyone other than a farmer should want FARM AND FIRESIDE and go right on to write in a manner that will interest and be of value to any thinking man on earth, either in the shop, the office, at the trades, or in the professions. I was a farmer when I first subscribed, and one prime reason for my leaving the farm was that the farmers would never come together and stick as the workers in the city do. I differ with you as to the value of your paper to the dweller in the city. To give all my reasons would take too long. Your treatment of parcels post would be of value to anyone with brains. As large a majority of the town workers as of the farmers will agree with you in your conclusions. In your handling of general news you pick out that which is of most value to all, and what you give of such news is to be relied upon. Then—and now we are getting down to bed-rock—the question comes: Where does the farmer leave off and the city man begin? Almost all town and city dwellers grow something, if only a geranium or a chicken, and we like to know all there is to be known about it. We and our wives do not want to stay in ruts if anyone can "show us" that there is better wheeling outside. I am glad to see that the farmer is waking up, organizing, getting out of the rut, just as the town worker got out of it long ago, and I give you and your brother editors of farm papers much of the credit for it. Now—do not turn me down, but please send the paper, for I shall continue to pay for it if I have to borrow the money and mortgage "every little chicken in the garden."

Now, what can you do with a man of that sort? He begins with scorching irony, and gradually merges it into compliment so kindly and so broad that one blushes as much with modesty as chagrin. Southern courtesy is vindicated and northern brusqueness rebuked. Clearly something is due from me to Mr. Welles—but what? What can I say? I have invited this kind gentleman clean through the dog-trot and out at the back door, and he accepts the invitation so far as it is creditable to myself, and ignores the part I should not have spoken. He's all right—certainly—but think of my feelings!

So I put his letter aside for consideration and calmness of spirit in which to frame my apology. I take up another letter, addressed in the handwriting of an educated woman, and bearing a southern postmark—Memphis.

"This," said I, "will be agreeable reading, for I know the gentleness and courtesy of the southern ladies. It will relieve the strain of that Florida correspondence." So I give it a slash with my paper-knife, and out falls the following from Mrs. J. B. Rogerson:

You make a statement in your last issue that hits me so hard that I must defend myself. Here is the offending paragraph:

Our paper is for farmers. We really don't care to have very many others on our subscription list. We like to think that we make the paper for farmers only—that is, for those who are interested directly in some of our departments. A subscriber may live in town and operate a farm, or he may do a little farming on the side, or he may be educating himself for removal to the country—in any of these cases, he is a good subscriber. But why a person who is not in any of these senses a farmer should take FARM AND FIRESIDE I never could understand. So Mr. Walsh of the circulation department felt resigned to his loss when he got this grocer's letter.

I am not a farmer-ess, nor yet a farmer's wife or daughter, nor a farmer in any sense, and yet your paper is intensely interesting to me, and to my children. I have been a subscriber for four years.

I take ten magazines, and when I made up my list, I decided that my farm-magazine need could best be met by FARM AND FIRESIDE. So I am on your list. You might just as well say, "Why are farmers interested in city affairs?" as to say that one living in the city could in no way be interested in farm news.

I'm very sorry you wrote that paragraph. The more I think of it, the more sorry I feel. It is just as though I had called to see an old friend, and she had opened the door herself and told me she was not at home.

If you are not at home to us of the towns, you should change your name. "Down on the Farm" would be more appropriate. "Farm and Fireside" has such a warm, cozy, friendly sound it is irresistible; and there are firesides in the city as well as on the farm. I am deeply interested in everything progressive, and FARM AND FIRESIDE stands for progress to a far greater extent than you imagine. You limit its usefulness when you limit its readers. I raise pure-bred poultry, and your poultry department *a'one* is worth your price. Can you recommend another paper more suited to my need—never mind, I doubt your judgment. I chose FARM AND FIRESIDE and I abide by my choice.

Ah! Mr. Quick, you must modify that paragraph, make your paper for farmers by all means, but welcome your friends from the city who are farmers at heart and love to read about what they would do if they could!

LADIES and gentlemen, you overwhelm me! I know not which overpowers me most, your reproaches, your courtesies, or your praise. I was sufficiently embarrassed when it was a man; but to have seemed to shut the door in a lady's face—can I ever make it right!

I apologize! Clearly, good friends, you are of the charmed circle of Eminent Desirable Subscribers. We shall say no more with reference to the mere matter of occupation, if you please. Come in, and take chairs! I hope you-all are well? And I trust that you mean to stop with us for a long time. Because you are not of those who complain when the chickens wake you at dawn, or the cows bawl for their calves, or the mail fails to come through. You will remember that we can't keep a hired girl in the country, and you will make your own beds and will not object to helping with the dishes or turning the fanning-mill or the grindstone. You are real home folks, or you wouldn't like our style as well as you are so kind as to say you do.

Was anything said a while ago about city people not belonging to our crowd? Oh! That was a long time ago, before you made us acquainted with your many attractive qualities of mind, heart and person. We never meant people like you, at all—never! To such as you we open our doors and offer the best we have. It is homely fare, to be sure, plain farm fare, but you are of the sort that will appreciate it.

Can I say more? I really mean every word I have said—then and now!

Herbert Quick

What of the Future?

IN THIS day of practical farming we judge the future by what the past has been. Our readers know that the contributors to FARM AND FIRESIDE have been the best to be found on the farm, on the market, with experiment stations. This will be true in the future as in the past.

Mr. Judson C. Welliver, who talks in this issue about

The Question of a President

will continue to give the readers of FARM AND FIRESIDE news direct from the Capital. He is constantly in touch with government doings.

In the Next Issue

will appear the most thorough story of the problem of fall and spring plowing that has ever been written. There are twenty-five writers on the proposition. All sections of the United States and their peculiar conditions are treated.

The third chapter of "How We Whipped Them" will be published at that time, too.

The market outlook will be discussed by men on farms who are in constant touch with the markets.

And now that the spring season calls for more garden work, watch the columns written by Mr. Greiner. His suggestions are always usable.

As far as that is concerned, each department will be better and stronger than ever. No pains nor expense will be spared to obtain the most practical information written in the plainest manner.

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ABOUT ADVERTISING

FARM AND FIRESIDE does not print advertisements generally known as "readers" in its editorial or news columns.

Mention FARM AND FIRESIDE when you write to our advertisers, and we guarantee you fair and square treatment. Of course we do not undertake to adjust petty differences between subscribers and honest advertisers, but if any advertiser in this paper should defraud a subscriber, we stand ready to make good the loss incurred, provided we are notified within thirty days after the transaction.

FARM AND FIRESIDE is published every other Saturday. Copy for advertisements should be received twenty-five days in advance of publication date. \$2.00 per agate line for both editions; \$1.00 per agate line for the eastern or western edition singly. Eight words to the line, fourteen lines to the inch. Width of columns 2 1/2 inches, length of columns two hundred lines. 5% discount for cash with order. Three lines is smallest space accepted.

FARM AND FIRESIDE

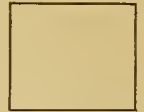


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In the square below indicates that you are an old subscriber and that your subscription expires this month. Renew by accepting one of our offers before they are withdrawn.



SUBSCRIPTION PRICE

One Year (26 numbers) 50 cents
Canadian, 1 Year . . . 75 cents

Subscriptions and all editorial letters should be sent to the offices at Springfield, Ohio, and letters for the Editor should be marked "Editor."

Silver, when sent through the mails, should be carefully wrapped in cloth or strong paper so as not to wear a hole through the envelope.

The output of cotton from the fields of Egypt just about holds its own. In 1900 it was 1,076,652 bales, and in 1901, 1,261,872 bales. In 1910 the production was 1,386,672 bales, and in 1911, 1,287,640. This does not seem to promise much keener competition for us than in the past.

The Reward of Good Tillage

CAMPBELL, the dry-farming missionary, has had from the inception of his apostolate the slogan, "Deep Plowing, Sub-Surface Packing, Frequent Shallow Cultivation." Recent results at the Kansas Experiment Station show that there is gospel in this slogan. Land disked but not plowed cost \$1.95 to "prepare" for wheat and yielded four bushels and a peck to the acre. Plowed three inches deep, it yielded fourteen and a half bushels, and seven-inch plowing gave a bushel and a peck more, for the four inches greater depth of stirring. Where the stubble was double disked after harvest to save moisture, and plowed seven inches deep, it gave a yield of twenty-three and a half bushels, when plowed in the middle of September—just plowed; but when plowed early after disking—August 15th—and cultivated to preserve the soil mulch during the fall, it yielded twenty-seven bushels and three pecks to the acre. Double disking of the stubble July 15th to save moisture, seven-inch plowing August 15th and subsequent cultivation brought a yield of thirty-four and two-thirds bushels per acre. Land plowed July 15th seven inches deep, and kept under a dust blanket the rest of the season, yielded thirty-eight and a third bushels per acre. Campbell has been criticized for saying "Tillage is manure." In this case it is shown to be a fair substitute for it, at least. Tillage, if not manure, is money.

Legumes vs. Corn

THE Tennessee station some years ago made some tests in feeding and keeping up fertility which are well worth the attention of all of us. One year an acre of corn fed four steers 54 days and made 129 pounds of beef. An acre of soy-beans made 406 pounds of gain and lasted 80 days. An acre of cow-peas lasted 54 days and made 203 pounds of beef. The next year the acre of corn made, of beef, 203 pounds; the acre of soy-beans, 541 pounds, and the cow-peas, 327 pounds. The manure from these plots was carefully saved and returned to the land. The richness of the land was increased in all cases, and in that of the soy-bean plot so much increased that the second year the acre crop fed the four steers twenty days longer than it did the first year. What was done on these plots can be done on any farmer's farm.

"Test your seed-corn" as a slogan for every corn-growing State in the Union would not be a bad one.

Do not trust to the other fellow to do the testing. Do it yourself. The germination-box is the most convenient place to ascertain the bad from the good seed. When possible, use seed testing ninety per cent., or better. And then if the seed does not grow, look to soil and seasonal causes for the poor stand. A good stand of good corn means good profit.

What Demonstration Does

IN ATHENS County, Ohio, one year ago, an agricultural college instructor made a demonstration showing the farmers how to spray their orchards. The results have been marked. Two years ago practically no spraying was done in that township. The results of the demonstration were so convincing that nearly a car-load of lime-sulphur has been sold there this spring.

Doctor Knapp found that the only thing which brings truth home to the human mind is demonstration. So he enlisted the farmers of the South themselves in the demonstration work that is gradually ushering in a new

Paris despatches assert that French doctors are recommending horse-meat as so much easier to digest and so superior to beef in nourishing qualities as to be of great aid in the treatment of consumptives. But the report may emanate from the horse-meat dealers rather than the hospitals. If it be true, instead of holding the cotton, wheat and cattle, we should all hold our horses.

Heyburn and the Direct Primary

THE farmers of Wisconsin never had a chance fairly to record their wills in the nomination of public officers until the La Follette government gave them the direct primary. Until this system was corrupted by the enormous wealth of Senator Stephenson, it gave the best results. When the Stephenson debauch disgraced the State, the shamed citizenry took thought on measures to prevent a repetition of the orgy. The last legislature amended the primary so that not even a Stephenson can ever again buy an election. This amendment provides a second and third choice vote so that when no candidate receives a majority the second and third choices of the low men are given the leaders as registered by the voters, until someone does get a majority. If this system had been in vogue, Stephenson could not have elected himself, even with his \$107,000.

Yet when Senator Heyburn, in voting to keep Stephenson in office, spoke against the direct primary, he advocated going back to the system by which himself, Clark of Montana, Lorimer of Illinois and others of bad eminence were chosen.

He said nothing of the fact that the way to perfect the direct primary has been found. Thus we obtain the measure of Heyburn.

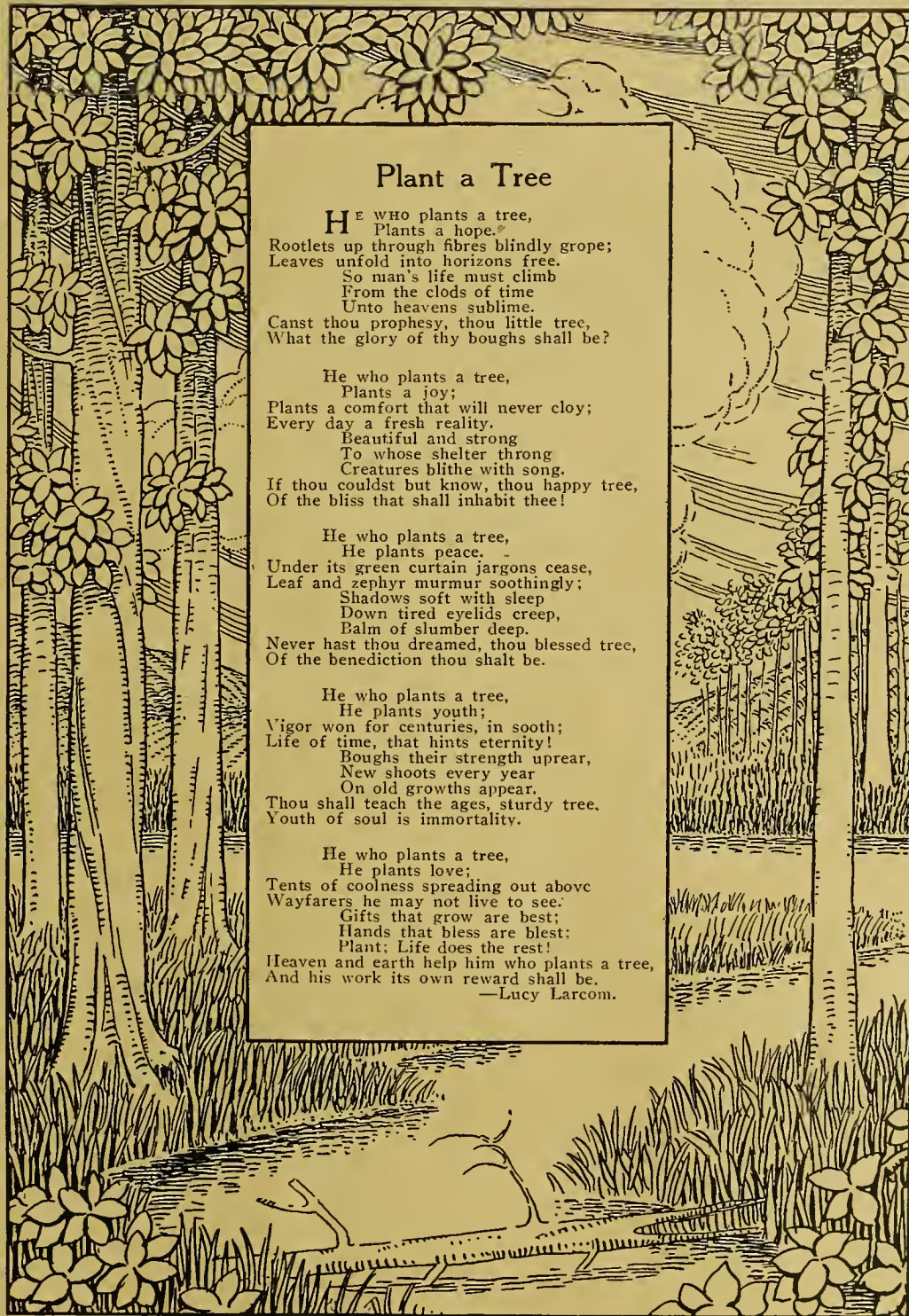
Excell the Brave Little Tailor

IN OUR old book of fairy tales is the story of the brave little tailor who killed seven flies at a blow, and then went out posing as a brave knight, with "Seven-at-a-Blow" blazoned on his shield, and wound up by killing off the dreaded giants that did then infest the land and marrying the princess. We are now able to see that the fly-killer is a greater hero than the giant-killer. Every one of the seven flies, if allowed to multiply, is calculated to have been able to produce a family of a hundred and ninety-nine quintillions in a season. So he might have claimed to have destroyed 1,393,000,000,000,000,000 at a blow!

Any good, active boy or girl ought to do better than that in fly-killing these spring days. Remember that every fly killed now means fewer flies by the thousands, if not by quintillions, in the future.

Common talk has had much to do with corn, but what about the potatoes? One man said, "Select your seed-potatoes in the field from disease-resistant plants. Choose potatoes from those plants which bear a good number of well-developed tubers, rather than from plants bearing very large numbers of various sized ones."

And his philosophy was right. The large potato, from the plant bearing small potatoes too, will produce some of the small unmarketable sort.



Plant a Tree

HE who plants a tree,
Plants a hope.
Rootlets up through fibres blindly grope;
Leaves unfold into horizons free.
So man's life must climb
From the clods of time
Unto heavens sublime.
Canst thou prophesy, thou little tree,
What the glory of thy boughs shall be?

He who plants a tree,
Plants a joy;
Plants a comfort that will never cloy;
Every day a fresh reality.
Beautiful and strong
To whose shelter throng
Creatures blithe with song.
If thou couldst but know, thou happy tree,
Of the bliss that shall inhabit thee!

He who plants a tree,
He plants peace.
Under its green curtain jargons cease,
Leaf and zephyr murmur soothingly;
Shadows soft with sleep
Down tired eyelids creep,
Balm of slumber deep.
Never hast thou dreamed, thou blessed tree,
Of the benediction thou shalt be.

He who plants a tree,
He plants youth;
Vigor won for centuries, in sooth;
Life of time, that hints eternity!
Boughs their strength uprear,
New shoots every year
On old growths appear.
Thou shalt teach the ages, sturdy tree,
Youth of soul is immortality.

He who plants a tree,
He plants love;
Tents of coolness spreading out above
Wayfarers he may not live to see.
Gifts that grow are best;
Hands that bless are best;
Plant; Life does the rest!
Heaven and earth help him who plants a tree,
And his work its own reward shall be.
—Lucy Larcom.

era in farming for Dixie. We of the North need demonstration farms. We may read about better methods, and some of us can use what we read; but the living fact before our eyes is a crying need of the age. Give us more demonstrations. And, if possible, let the farmers everywhere be enlisted.

For a simple field test for the phosphorus in phosphate rock, place a small crystal of ammonium molybdate on the rock to be tested, then drop a little dilute nitric acid on the crystal. If the crystal turns yellow, there is phosphorus in the rock, and the more phosphorus, the deeper will be the yellow.

How We Whipped Them

The Story of the Rebellion of the Farmers of the Middle West Against the Grain, Coal and Lumber Trusts. A Study in Coöperation

By Edward G. Dunn



tried to browbeat them into joining the association and fixing prices, and when they refused, declared war on the farmers' elevator. The present chapter tells of the war.

HERE was I, on August 19, 1903, a boy just "of age," in charge of a coöperative grain-elevator and coal yard, as the representative of an organization of farmers which had so scared the big grain companies that, as soon as we had won our fight for a site on the railway track, the Iowa Elevator Company had hurried to sell us their business for less than it was worth. The Pease concern of Minneapolis and Ft. Dodge, Iowa, owners of the Iowa Elevator Company, with grain-houses in Mason City, Burchinal, Thornton, Meservey, Clarion, Florence, Eagle Grove, Industry, North Moorland, Somers and Lohrville, had surrendered the field to us without a struggle! Truly, I think I may be excused for a little swelling of the heart—and maybe a little of the head—as I looked at the big elevator and the spacious coal-sheds. We were about to free ourselves from the parasites that had been sucking the profits from our farming.

Here we!

"We'll Pay What Grain's Worth"

I can see that my competitor, Mr. Crall, who had been left in the town to make the fight on us, while the "line elevator" had got out of the way to save losses, was gloatingly sure of the fact that the Pease family of Minneapolis and Ft. Dodge would be able to buy the business back from us at their own figures, and that right soon. He had every reason to think so, for he knew of things of which we were in blissful ignorance.

Presently Mr. Crall strolled over to make a call on me. I like to be friendly, and I greeted him cordially. There seemed to be no reason why we should not be friends personally, no matter what our business relations might promise to be. I soon found, however, that there was business in his call.

"Well, Ed," said he, after passing the time of day, "I suppose we'll have no trouble in doing business here amicably?"

"Why certainly not," said I. "I expect to pay what grain is worth, and if I don't get my share of the business, there'll be no hard feelings on my part, I can assure you."

"Of course," said he, "we'll pay what the grain is worth, just as we've always done here."

"A little nearer what it's worth," I replied, "than we've always done—I hope."

"See here, Ed," said he. "There's just one way to do this—only one way to get along, and that is to get together on prices and cut out all cutthroat methods. Are you ready to do that?"

"No," said I, "not if you call fair competition cutthroat methods. I am here to avoid all this business of agreeing on prices. That's what we organized this farmers' coöperative company for."

"Now you are a bright young man, Ed," said he—I was beginning to learn that when a young man is urged to do some conventional but questionable thing, the tempter always begins by telling him how bright he is; "you are a bright young man, and I want you to do well. And I want to tell you that if you are going to last in this business, you must get in line with the other boys."

"What do you mean by getting in line?" I asked.

"You must join the Grain-Dealers' Association and do business according to the plans that have been worked out for the good of the business," said he. "Will you?"

"I will not!" said I. And Mr. Crall went off to his own elevator.

A train arrived at Burchinal from the south every day at 2:35 p. m., and on that first eventful day of our grain business a well-dressed stranger got off this train and went to Mr. Crall's office. After a long stay there, he came over to see me. I never learned his name, but he made his business plain. He represented the Iowa Grain-Dealers' Association, he said, and he just wanted to inform me that if I didn't get in line and pool prices with Crall and divide receipts with my competitor, he would give me just thirty days to bust in! I invited him to leave my office; and as I am over six feet, and had quite recovered from the attack of typhoid that took me out of college and into the grain fight, the gentleman went without any demur or delay. Within the thirty days I had good reason to remember his threat.

I knew something of the Iowa Grain-Dealers' Association, but not as much as I afterward learned. I knew

that some farmers' coöperative elevators had been forced to join the association or lose all they had put into the coöperative business. The full power of this organization for evil is now known, and as a matter of history and an illustration of the way things have been and are done to producers when they fail to look out for themselves in a collective way, I think it important that we be reminded what this association was and how it worked. Nothing could have broken its baleful power save the success of our coöperative movement.

The Uselessness of the Law

I suppose the present activity of the federal government in prosecuting such combinations under the Sherman Law makes it necessary for these things to be done with greater secrecy than formerly, where they are done, as I think they are in States where the farmers are still dead to their rights and their power—but I see no reason to doubt that the thing is done in such States as effectively as ever in some way. Nothing but coöperative action on the part of the farmers will prevent it. The law will not. And the men who were running these things a few years ago are still in control of their elevators almost everywhere.

When I first came into contact with the Iowa Grain-Dealers' Association, which my unknown caller had ordered me to join, Mr. I. King of Nevada, Iowa, was its president, and Mr. George Wells, then of New Richmond, Wisconsin, but now of Des Moines, was its secretary. Mr. Wells was the moving spirit of the association and its chief organizer. He was auditor of the Northern Grain Company, owned principally by the Weyerhausers. All the so-called "independent" elevators in the State, like Mr. Crall in Burchinal, were members; the Atlas, Neola, Milwaukee, and some other line-elevator concerns owned and controlled by the Armour interests; the Northern, of which I have spoken; the Nye-Schneider-Fowler Grain Company of Fremont, Nebraska; the Reliance Elevator Company; the Anchor Grain Company; the Counselman Grain Company, later merged into the Chicago Elevator Company, and the Western, operating on the Illinois Central and Northwestern railways.

Thus were banded together, not only the secret rebate-takers, of whom I spoke in my last article, and who got a cent of rebate not only on every bushel on which they paid freight, but on every bushel on which their competitors on the same lines paid freight, but those very competitors themselves, all for purposes much resembling in some of its ideals the purposes of those who cut holes in the floor of the farmer's granary and load wagons with his grain in the dark of the moon! This was the combination which we farmers were up against.

This Iowa Grain-Dealers' Association had already got to the farmers with a blow at their individual shipments off the farm. Farmers who shipped direct, shoveling their grain into cars on the sidetracks, were called "scoop-shovelers" and were shut off in their efforts to get fair prices by the activities of the association. The local grain-dealer—like our Mr. Crall—would take the number and initial of the farmer's car as it stood in the yard, usually find out from the railway agent the name of the commission firm to whom it was consigned in Chicago, or other terminal market, and report the shipment to Mr. Wells, who made a demand on the commission man to whom it was shipped not to sell it. What chance had the granger against such an organization? None standing alone. And it soon appeared as if he and his brethren wouldn't have much chance standing together. On that eventful August morning, however, it looked to us as if we were past the danger stage. We were not of the despised "scoop-shovelers." Not we! We were owners of an elevator and thought ourselves safe.

The Famous Des Moines "Card Committee"

But all unknown to us this association had pooled all the grain in the State. They had arrived at a secret basis of dividing the grain among the members of the association. Usually, the elevators were "entitled" under this pooling agreement to half the grain, where there were two—an equal share. Sometimes the "line elevators" got more than an equal share. It was a case of multiplication, division and silence. If one bought more than he was "entitled to," he had to pay his "competitor," for his infringement of the rules, so much per bushel—a cent a bushel on oats and corn, two cents on wheat and barley, three cents on rye and flax, and ten cents a hundred on timothy-seed. This penalty for competing, even when the dealer tried not to compete, was paid to D. R. Howard of 209 Flour Exchange Building, Minneapolis, who figured their reports, collected the penalties, took out for his trouble seventy-five cents from each elevator that had a balance "due" it and sent checks for the balance. For instance, there were four elevators at Garner, Iowa: The Loomis-Johnson-Lee Grain Company, the Reliance Elevator Company, the Close-Cooper Grain Company, and Adam Schneider. The arrangement under the Iowa Grain-Dealers' Association pool was that each should be allowed to buy a quarter of the grain brought in.

The Loomis Company—the Loomis of the company is Senator Loomis, a member of the Senate of South

Dakota, representing a farmer constituency—bought five more bushels of oats in the second week of March, 1906, than it had a "right" to buy, and paid Mr. Howard of Minneapolis five cents to give back to the other fellows! Think of it! The farmers hauled their grain into Garner, and the buyers of these three concerns went to the wagons, examined it, and smelled it, and tasted it, and put on the stage a comedy called "Competition." And all the time they were quite indifferent as to whom the grain went to. They would have resented it, too, had the suggestion been made that they were not honest. And as in Garner, so it was everywhere in Iowa.

But whence did they get their fixed-up prices?

That is a good story, too, and one of which the boy in his new office in Burchinal was ignorant.

After the association was formed, it organized a "card committee" at Des Moines. It was called "The Des Moines Cereal Club," and was composed of the line-elevator grain-men of Des Moines, such as Armour's man, W. G. McDougal, McFarland of the McFarland Elevator Company, Lockwood of the Lockwood Grain Company, our old friend Wells of the Northern and some lesser lights, such as Mr. King of Nevada, Stebbins of Red Oak and Tiedeman of Fonda. The "Cereal Club" met, ostensibly to eat—but it ate farmers' profits rather than cereals. On Saturday nights, at some hotel or café, they dined well, I hope, and before going to their comfortable homes, some one of the jolly party would move that oats in Iowa should be bought the next day at a certain margin, say three and one-half cents a bushel—I am not stating an absolute margin, which really varied from time to time,—corn at, say, five cents to six cents and wheat from ten cents to twelve cents below the price delivered in Chicago, with freight deducted. And so of other grains.

Mr. Wells would put the motion, and the vote decided the matter. Mr. Ward Case was the secretary and kept the records. Each day he would get the Chicago prices, and after making deductions for freight, commission and shrinkage, he would deduct this margin to determine what the Iowa farmers should get. Then he would print cards which purported to be a track bid for grain in Chicago, or whatever terminal market the portion of Iowa to which it was sent was tributary. This card bore a Chicago or Minneapolis date line, but it was postmarked at Des Moines, Mason City, Waterloo, Cherokee, or some other town from which it could be mailed so as to get to the elevator men so they would know the pool's price for that day. The farmers never saw the postmark, but they often saw the card.

"Dummy Track Bids" Everywhere

This was the famous "dummy track bid" for Iowa. There was a similar condition in Kansas, with Mr. Smiley as secretary of the Kansas association. In Nebraska it existed with Harry G. Miller as secretary. It existed in the Tri-State Association covering Wisconsin, Minnesota and South Dakota, under Jack Quinn as secretary, and in Illinois under Harry Knight of Monticello. I have no doubt that it existed wherever in the United States there was grain enough to be worth preying upon. I think this, because there was a National Grain-Dealers' Association in which all the State associations were federated. Against this combine of railways, line elevators and local elevators, federated and bound together with an organization of more than military discipline, what chance had the Burchinal Farmers' Elevator, with young Ed Dunn, a farm kid, as manager? We shall see.

I received the card bids, and found by calculations that they were buying on a margin of four and one-half cents a bushel for oats in Burchinal. They were taking thirty-three pounds for a bushel, too, which was a pound too much under our law. I believed that I could buy on a two-cent margin, and made the price accordingly.

At once I found I had shot the grain-market all to pieces, in all that region. Grain began coming to us from all the neighboring towns, except Rockwell, where the farmers' elevator paid the same prices I paid, which were from two to three cents a bushel more than other towns. I got grain which was pulled right through the town of Thornton, and from within a mile of Emery on the west. Grain left markets a mile and a half away, and came to us seventeen miles. These teams usually hauled coal back, which we were selling from a dollar to two dollars per ton cheaper than their home towns. I have sold coal at our regular prices right into the city of Mason City, and I sold a hundred tons to be hauled to Clear Lake, thirteen miles away. The same change can be wrought, I believe, in any community which has no coöperative grain, coal and lumber establishments.

Things were going swimmingly, you say? So we thought—when suddenly, like a bolt from the blue, came the first real stab from the weapons of our enemies. It came when we began shipping our grain. There came back to me the words of my caller who gave me thirty days to bust in, unless I joined the association. But I must have a whole chapter for that story.



What King Cotton Teaches the Northerner

By Walter S. Smith

INDIANA had been my home for a number of years prior to March 1, 1911. I was familiar with all of the farming practices and methods used in Indiana, and I had traveled through many of the other Northern States. I could say that I really knew how the folks in the northern half of the United States farmed. I knew the crops they raised. I had never thought much about conditions elsewhere. For that reason, perhaps, cotton appeared to me as a wonder crop when I first saw it. And for me it still has a charm no other crop possesses.

On the date mentioned above we moved to this part of southern Texas from which I am writing. Since that time I have been in a position to see all of the processes through which the cotton crop passes before it becomes the finished product. The oddities about this crop have compelled me to take an interest in it.

Probably many of the readers of FARM AND FIRESIDE are now familiar with the cotton-plant. I was not. So everything about it attracted my attention.

Cotton grows much like a shrub, but it is only about half the size of the ordinary northern shrubs. The stem is extremely hard. The plant cannot be considered as a true perennial, and yet it bears right on through the year in those States which are south of the frost-line.

In preparing the ground for this cotton-plant, the soil is quite frequently thrown up in ridges, wide and high. On certain sandy soils the planter makes a bull-tongue furrow on the crest of each ridge. The furrows are made two to four inches deep and into them the seed is dropped, or perhaps it would be better to say sown. My first great surprise came when I saw the large amount of seed that was used. In fact, here in our section of Texas several seeds are sown to the inch. I asked the reason for this lavishness.

"Do you see that broken ground along the ridge?" was the answer I received.

I had already noticed that with much surprise. The half-sand, half-clay soil looked as if a mole had been along with his burrowing apparatus. The surface of the soil showed a ragged line of clods and sand which indicated to me that considerable force had been used in preparing that seed-bed. The planter went on to explain:

"The cotton-plant, at first, is very tender and weak. In a soil like this one plant alone would not be able to push its way through. The combined action of the many plants overcome the resistance of the crust, and allows all of them to get a fine start."



I suggested what I thought would be a distinct improvement. I asked why the proper sort of a planting tool could not be devised, a tool that would allow the seed to be planted just as one would finally expect the plants to grow.

"Well," he replied, "we find cotton subject to many dangers, especially in its early career. Experience has taught us to plant as you see us doing, in order to get the stand we desire. The value of the seed is insignificant when compared with the value of a good stand."

I continued to learn of the methods that were then strange to me. The bull-tongue furrow is made in order that when the sand-storms come soil may be filled in around the plant instead of the plants being blown away. After the plant comes up, the planter runs over the field with a cultivator. That together with the use of the hoe smooths the broken crest and allows the plant to reach the height of six or more inches, when it is supposed to be established

and likely to live. Then comes the "chopping out" process. All hands, including the planter himself, and sometimes the planter's wife, march onto the field with sharp hoes. Eighty-five per cent. of the growth is chopped or pulled out. This leaves a plant to every twelve to fifteen inches on poor ground, or twenty to thirty inches on stronger soil. The stronger soil does not seem to give the results of the other. I am of the opinion that this comes from overplanting. The temptation to have the ground covered completely is too great for the average man. But cotton is a sun-loving plant and should not be shaded by its neighbors.

At this thinning all of the weeds are removed and the ridges are leveled so that little cultivation is required thereafter. Since cotton is adapted to a dry climate, the growers are not bothered with weeds.



Cotton-planting time varies with the latitude from March on the gulf to mid-May in Tennessee. And all of this sweep of time and sometimes more are to be found in Texas. In fact, I have seen Texas fields planted in June. The farmers plant earlier as well as later here. Their point in planting early is twofold: a longer picking season and exemption from drought are assured. Drought in Texas must be fought in every way possible.

Cotton begins to bloom when the plants are twelve to fourteen inches in height. This bloom is not alike

for all varieties. Some appear a beautiful cream white, some a white with a pencil of red within and others yellow. What puzzled me most was the appearance of two colors on the same stalk. I was trying to account for it in some botanical way, when a negro who was standing by me said:

"Dey all does dat way. In de maw'nin' dey's w'ite, an' same day dey's red."

By red he meant purple, for the real color is a beautiful purple, beautiful except for a certain lack of sprightliness. They looked withered and drooping. In this they differed from the white bloom, for that was fresh-looking.

I had examined the plants carefully expecting to see male indications in one case and female in the other. But no such difference appeared. I was in doubt until I discovered my negro teacher. Then I guessed properly that the plants were only following the same course in nature as is seen in timothy and other northern plants. The flowers come out white, are fertilized at once and turn purple. The whole period of a flower's life is but a day or two.



As soon as the flower drops, the calyx hovers over the fertilized pistils in a "square," as it is called. Since there are but three lobes in the calyx, it is a little queer to see them shouldered into a square. Within is the fertilized center, which develops into the boll. The boll



The gin-house, showing loads of cotton ready to be ginned

is nature's workshop where the great staple is made. The peculiarity which gives value to this plant is a seemingly unnecessary appendage, a filament of delicate white an inch or more in length. There are many of these filaments in each boll. They are the cotton.

The boll grows rather rapidly and as round as an eyeball. Soon the seed is ripened. At this time the boll is a little over an inch in diameter. The filaments are all around the seed, for what botanical purpose I do not know. There are five seed-chambers in the boll, and so when the boll is opened there are five "locks" of the cotton. The boll in bursting turns back, a hard dead hull firmly adhering to the stalk. A small-sized handful of the fiber, with the seed in it, hangs down from the underside. The hull serves the purpose of a roof, and the cotton will adhere to it until the picker comes after it. It takes a smart wind to blow it off. It will hang there for weeks, even against hard winds.



But the cotton is not difficult to pick. Any time after the boll is open the locks will come off easily into the hand. Nor is the little cotton that falls off on the ground seriously injured, unless it happens to be tramped or the seed is allowed to sprout.

In this territory there are thirty to forty seeds in a boll, and each is thickly covered with fibers. These fibers will not separate from the seed without breaking. The gin does this work and much better than the hand can do it, and yet when the seed is received at the oil-mill it yields enough fiber to pay for re-ginning. This shorter product is used for batting and for "shoddy."

A special wagon-bed which contains a "bale," as it comes from the field, is made to cart the locks to the gin. The seed weighs twice as much as the seedless fiber. A bale of the fiber after ginning weighs 480 to 540 pounds. So these wagon-beds contain about 1,600 pounds.

The seed sells for a good figure, quite enough to pay for the charges of ginning. This seed, of course, goes to the oil-mill, as a rule. At this mill some very interesting processes are noted, and the most of these result in products useful on the farm. By a steam process the hull of the seed is separated from the kernel and hauled away for cattle-feed. Indeed, the cow is quite fond of the raw cotton, and will lick it out and eat it from the bale. Several kinds of stock will eat the seed, but feeders use it sparingly. It is considered too rich. The most useful product of the mill as far as the feeder is concerned is the oil-meal. This, of course, is the ground oil-cake which is composed of the seeds after the oil has been removed by the hydraulic press.

But to get back to the cotton itself and the value of its main product to the world. From the car-window the view of a cotton-field is an attractive

one. One sees cotton, cotton everywhere. It is like the sight of wheat and corn in Ohio and Indiana, except it is more monotonous. Wheat and corn relieve each other. They never look alike. But in the cotton belt all is cotton. It is really a relief to see a field of rather indifferent-looking corn, even though that indifference is striking in itself. But corn in the cotton belt is an insignificant matter. That is, it has been insignificant.

It will probably be more important in these States as the years prove to the southern farmer that crops cannot be grown with profit unless they are rotated.



But the importance of cotton is the subject of this article. It was the value of cotton which brought forth the cotton-gin, and it was that gin which in turn made the cotton important. The story of the invention of the gin is pretty widely known, but we too frequently fail to remember that prior to this invention cotton was not much cultivated in this country. All cotton fabrics were very costly. The chief supply came from India, where it was picked by hand, separated by hand, carded, spun and woven by hand. And all the rest of the crude methods which were used in India made the product expensive. To-day the story is reversed. Cotton goods are cheap, very cheap compared with those old-time prices. And besides the clothing that is manufactured from the fiber, we have sail-cloth, tent-goods, tarpaulins, paper, ropes, carpets, mattresses and every variety of sheeting.

It enters into the manufacture of explosives. In fact, new uses are being learned by the public every day of the year.

Now cotton is quite generally exported from our shores. And this can be done at a profit because of the improved machinery with which it is handled, in the field, in the gin, at the compress. The time will no doubt come when much more of this work will be done by machinery, and, of course, that time will bring with it new conditions in the Southland.

The Alabama Outlook

By Mrs. J. R. Cross

To MY mind, South Alabama is the only place to go to enter the dairy business. Especially do I speak of the eastern shore of Mobile Bay.

We have no malaria, few flies and mosquitoes, not so many as other parts of the country.

Then, too, we have the bay, which affords great pleasure at all times.

I have ten acres of single-tax land, one acre of which is in oranges. I intend to make this ten acres produce the equal to thirty acres in the North. You can see what a saving that means in hired help, which is so expensive in most parts of the country.

Ten acres will keep ten cows here, but it will take five years to get the land up to this state of cultivation.

We get thirty-five cents the pound for butter-fat, ninety cents for cream and eight cents for milk. Cows here will not give the milk of the northern cow—simply from the lack of feed. I have a cow which I bought the first of last year which gave three pounds of milk for five weeks, then went dry. The people smiled, but I bought a cow, before she went dry, that came in on the twenty-fourth of May, which gave twenty-two pounds of milk. The reason is that she got three pounds of grain for ten pounds of milk. I stake her in the cow-pea patch about two hours each day, give her an armful of green corn at night with salt sprinkled on it and plenty of water. She makes a half-pound of butter the day.

I feed the skim-milk to the calf when five weeks old. Such cows can be picked up all around here for from thirty-five to fifty dollars.

You can buy land here all the way from ten to fifty dollars the acre. I think that single-tax land would be best for a new-comer.

We are most all people from the North, and all sections are represented. This land rents for a ninety-nine-year lease. Farm lands three and one-half miles from town may be rented at fifty-two cents the acre.



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One Way to Produce Hogs More Cheaply

By Robert H. Brown

THE great problem before the swine-raiser in South Dakota, and no doubt in other States, is that of cheap winter feed. Our summer is a short one, and succulent feed can be had in abundance for about six months. The other six months the sows, fall pigs and fattening hogs depend alike upon corn.

Corn is abundant and reasonably cheap, but while it furnishes just the elements to quickly fatten, it lacks the nitrogen elements necessary for general growth.

The losses incident to the production of young pigs make it exceedingly desirable that shoats once gotten should be kept growing rapidly and not fattened until they have reached a profitable market size. With us, as a rule, this is not done. A great percentage of them go to market fairly fat, weighing 150 to 175 pounds. They have had as a rule only corn. The average farmer cannot see his way clear to buy shorts at \$25 per ton or oil-meal at \$35, when corn is worth thirty or forty cents a bushel. With us even clover and alfalfa are difficult to raise, and during the last two years have been quite out of the question on account of drought. What we want in Dakota, and what is needed in many places, then, is some crop that we can produce profitably which will contain sufficient of the nitrogenous elements to mix with our corn, in order that bone and muscle may be put into the shoats. Likewise, with it we will want to winter our brood-sows and fall pigs and thus save that almost prohibitive tax now paid to railroads and mill-owners for mill feeds. Farther south the whole group of legumes have solved this problem, but South Dakota is as yet in need of even one single plant that is dependable. Red clover and alfalfa are the best, but as yet are uncertain and furnish only summer feeds, for the average farmer is slow at "catching on" to feeding hay to swine in winter.

On casting about for the desired grain, we learn that a few men in Wisconsin were successfully raising soy-beans from northern-grown seed. In the spring of 1910 we procured sufficient seed for six acres. We

planted them in drills with a corn-planter on an old timothy and clover meadow at the same time that we planted our dent corn with the rows the same distance apart. During the season we cultivated them the same as the corn, except that we went through them once after the corn was laid by. The beans were ripe as early as the corn. We cut them with the mower and raked them with the horse-rake. We thrashed early and, when through with the grain, hauled them to the machine directly from the wind-row. Better than fifteen bushels to the acre went into the granary.

Now for the mistakes we made in our first experiment. The rows were much farther apart than necessary, and the plants were not thick enough in the rows. After cutting we let the plants lie too long on the ground

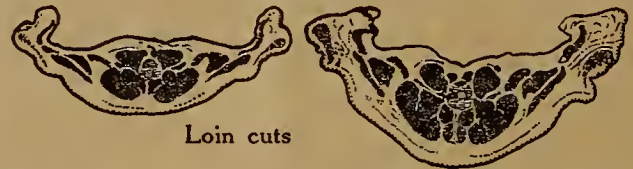
before thrashing, and too many of the pods opened and scattered the beans on the ground. The machine cut too many of the beans, because the thrasher did not understand the proper arrangement of the concaves.

Notwithstanding these losses but considering the feeding value of the beans we had no other crop, except corn, that produced a more valuable yield. We made no attempt to save the straw, just leaving it as the machine piled it. During the winter, a hundred breeding ewes and fifteen head of horses ran at large in that field, which also contained corn-stalks. Day after day and month after month they hung around that old bean-stack, till they ate it practically all up, while the sheep gleaned from the ground most of the beans left by the rake.

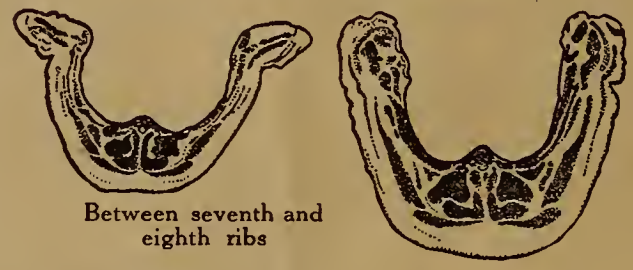
We have fed the beans without grinding to sows and pigs, and while so doing have used much less corn and absolutely no shorts. We have no reason to complain of the results; the beans have filled the bill. Of course, the question of their feeding value has been fully demonstrated before and needed not our confirmation; we were simply interested in the problems of growing them successfully in South Dakota.

In 1910 we had no late spring frosts to try the resisting qualities of the young plants, but in 1911 a volunteer crop came up as soon as the ground was warm enough to germinate the seed and stood two or three inches high at corn-planting time.

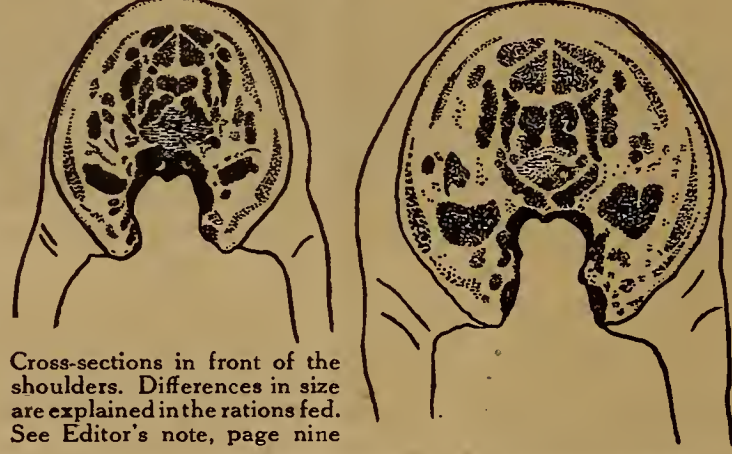
Last year, 1911, we replanted the same field, rectifying our mistakes of 1910 by getting at least one third more plants growing to the acre. The season was an abnormally dry one, more so than any since 1894, and all the ordinary spring grain crops were practically a failure. Much of the wheat, oats, barley and spelts were plowed up or turned into pasture-lots, and nearly all of the rest was so meager as to scarcely pay for the harvesting. Even the corn in many sections did not ear at all. It merely tasseled out at little more than half its ordinary height, and the blossoms were injured by hot winds. [CONCLUDED ON PAGE 9]



Loin cuts



Between seventh and eighth ribs



Cross-sections in front of the shoulders. Differences in size are explained in the rations fed. See Editor's note, page nine

Economies Possible in Poultry-Keeping

By Gustav Walters

IT SEEMS to be the custom of the average farmer to market his poultry after the first cold spell, which is usually just before Thanksgiving; a time when the market is overstocked and the price the lowest of the year. Chickens especially should be disposed of as soon as marketable, which is from one and one half to two pounds, or the broiler stage. By doing so not only do we save several months' feed and care, but the younger stock have more room and get better attention and the broilers bring as much or more apiece than the same chickens grown to maturity. Especially is this true of the June and early July birds.

After the breeding season, all roosters not wanted for next season's breeders, as also all old hens when commencing to molt, should go off to market.

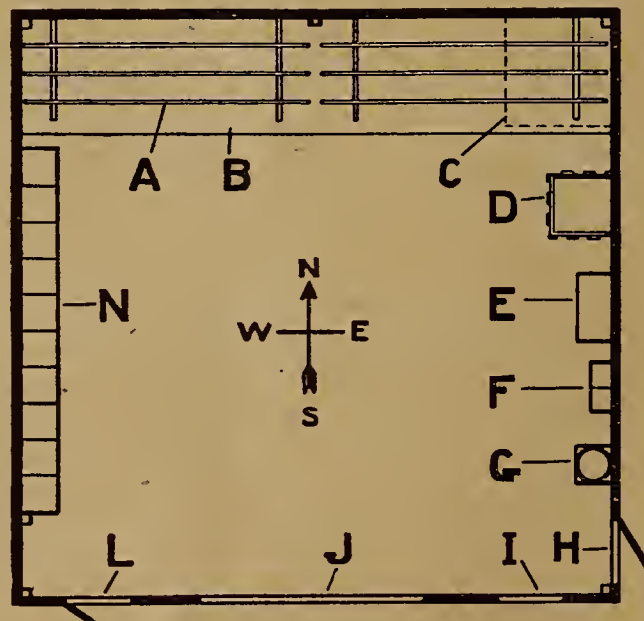
The ideal mating is a vigorous cockerel with selected two-year-old hens. Such breeding produces more vigorous chicks and larger hatches, about three fifths of which are female chicks. A cock and pullet mating is very good, but the result is that, in the offspring, the males predominate in number. If all the breeders of various ages are running together, then one well-matured cockerel for each fifteen hens of the larger breeds and twenty of the smaller is best. One to twenty-five gives excellent results with Leghorns on free range. On too many farms do we see far too many roosters in the flock; not only are they useless, but they add to the feed-bill, fight one another and misuse the hens.

Broody hens are a nuisance. It seems the hens all become broody just after hatching-time. The larger the breed, the more persistent are they. The best and easiest way of breaking them of the habit is to put them in a coop about three feet square, with slats two inches apart on the sides and the bottom. The coop may be built against the wall in the hen-house. Catch the hens daily when gathering the eggs. The sooner they

are caught, the easier are they broken. With plenty of feed and water, the average hen is over broodiness in four days and soon

a minimum of work, time and feed. The hens are fed a half ration of about four quarts to each one hundred hens at 7:00 A. M., and a full feed of eight quarts one hour before roosting-time. This feed is spread in deep straw litter on house floor in winter and in the yard in summer. This grain ration consists of two parts corn, two of wheat and one of oats, by weight. It varies according to price and availability. The mash mixture consists of two parts bran, one of middlings, one of corn chop or ground oats and one of beef-scrap. It is fed dry in self-feeding hoppers holding about two bushels and open so the hens can help themselves any time. If beef-scrap are not available, then green cut bone or skim-milk, mixed with the mash ration (fed warm in winter) is fed at noon. Charcoal and oyster-shells should be available at all times. Stock beets or cabbage should be fed in winter. Clover or alfalfa hay is also very good. This ration may seem elaborate, but it actually costs little and it is very palatable. This hen ration when the corn is cracked is also very good for the four-weeks-old chicks.

In poultry-house construction the essentials are plenty of light and ventilation, comfort of fowls and the placing of interior fixtures so that the fowls will have all of the floor space. Then the building should be convenient for the attendant who cares for the chickens. Such a house can be built cheaply by having single walls. To insure against draft and frosted combs, the house can be lined on the outside with tarred paper and lath. A cement floor is desirable for cleanliness, a board floor for harboring rats and wasting feed, and a dirt floor for cheapness. The dirt floor, when covered with a load of gravel and six inches of straw, gives best results. The illustration is the floor plan of a house twenty feet square, big enough for one hundred hens. The nests, broody coop and dropping-board are well above the floor,



The floor plan of a twenty-foot house

A, roosts; B, dropping-board; C, dusting-box; D, broody-hen coop; E, mash-hopper; F, grit, shells and charcoal hopper; G, water-pan; H, door; I, window; J, cloth front; L, door and window; N, nests

Overland

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\$1250 car. The transmission is fitted with F. & S. annular bearings, which are used on the most expensive cars made. You get a fine Splitdorf magneto. Same as the \$1250 car.

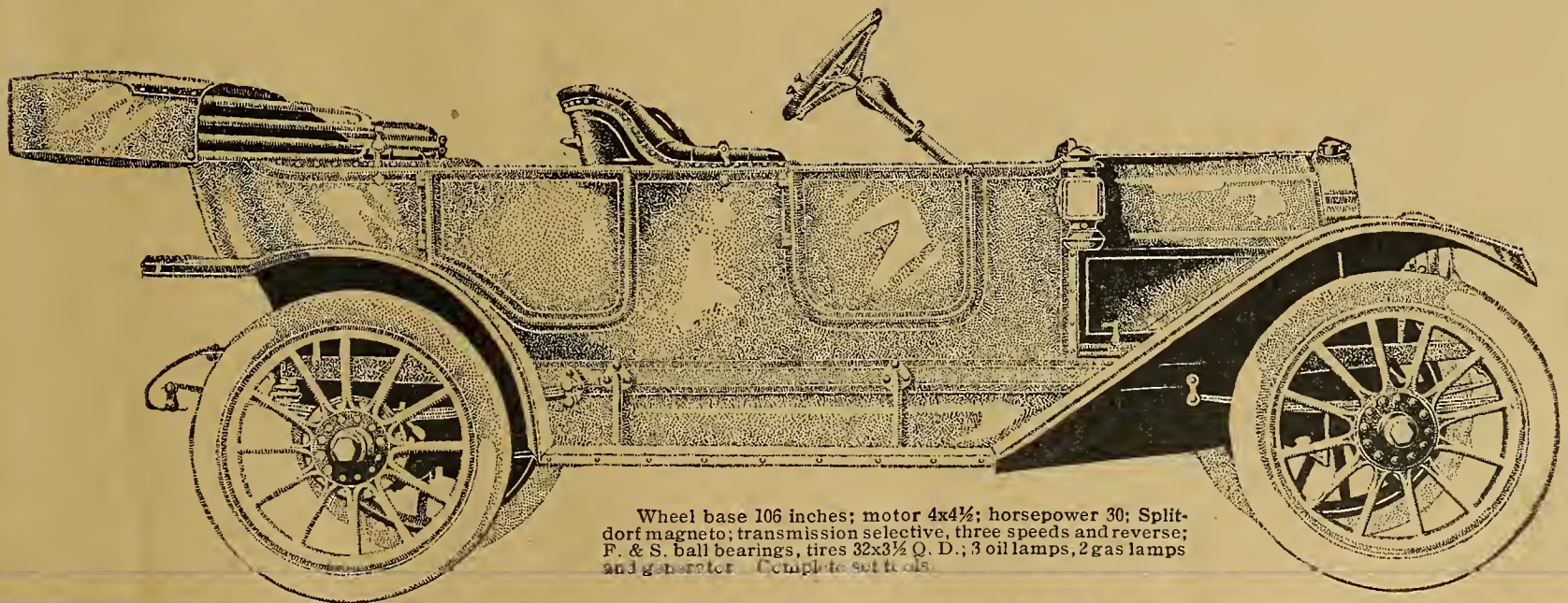
The motor itself is a beautiful job. It will never give you a particle of trouble. Just as true and sound as any of those big powerful engines you see on famous racing cars. It is of the most modern design, and as simple in operation as ABC. All the gear and crank casings are of pure aluminum, *which are found only on very expensive cars.* The gears are of Vanadium steel, *found only on very expensive cars.*

In appearance it is just as carefully and thoroughly finished. The body is in dark Overland blue. The upholstery is of good leather hand stuffed with fine hair. A car could not be made more comfortable. The body design is graceful, pleasing and right up-to-date in stylish appearance. Why should you pay \$1250 for a 30 horsepower five-passenger touring car when you can get a car like this for \$900?

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The Market Outlook

Get Your Pencil Out

THERE is little prospect of any great advance in stock cattle now until grass, as the country is practically destitute of roughness.

The demand for good, heavy fat steers still holds good, and will without doubt continue to do so, consequently everyone at present talks and thinks heavy steers, and members of live-stock commission firms, when asked or interviewed, always advise their customers to put warmed-up cattle in the feed-lot, claiming it is cheaper to buy the beef than to put it on, and this theory seems to be general. Now I wanted some more cattle for the feed-lot, so got to figuring what to buy, and here is how I figure it:

22 steers, 1,100 lbs. @ 6 cents.	\$1,452
Interest, 120 days, @ 6 per cent.	28
17 lbs. shelled corn per head daily for 120 days=800 bu., @ 56 cents.	448
30 lbs. silage daily per head=40 tons, @ \$4 per ton.	160
2 lbs. cotton-seed per head daily, @ \$30 per ton	77
	<hr/>
22 steers sell for \$7.40, weight 1,400 pounds	2,280
Profit	\$115

Figuring on the light-weight cattle:

22 steers, 900 lbs., @ \$5.25.	\$999
Interest, 120 days, @ 6 per cent.	20
14 lbs. shelled corn per head daily for 120 days=660 bu., @ 56 cents.	370
26 lbs. silage daily per head=35 tons, @ \$4 per ton	140
2 lbs. cotton-seed per head daily, @ \$30 per ton	77
	<hr/>
22 steers sell for \$6.50, weight 1,200 lbs.	1,716
Profit	\$110

Can you see anything wrong with these figures, if so what is it?

The light cattle are figured at \$1.25 advance and the heavy cattle at \$1.40 over purchase price. Am I not just as likely to get over \$1.25 advance on the light cattle in June as to get over \$1.40 advance on the heavy cattle?

Both lots are figured at two and one-half pounds gain per day. Am I not more likely to get over that on the light cattle with the bill of fare provided and less than that on the warmed-up cattle? Of course, I realize that the heavy cattle might not have to be fed four months to get a good advance, but this year the same also holds good on the others, as packers are now killing cattle in little better than stocker condition.

Opinions given by members of commission firms are simply opinions, and unless backed up by figures are of no use and often do a great deal of harm.

Some time ago FARM AND FIRESIDE started a page and asked farmers to name the most useful tool on the farm. Only one of them named the most useful article, the lead pencil.

W. S. A. SMITH.

Market Sheep

TO MANY competent judges there have appeared to be solid reasons for looking for a general dullness of trade and a lowering of prices of meat of all kinds toward the end of February. The commencement of the Lenten season; the very uncertain weather conditions, causing serious blockades of the railroads, and the known existence of great numbers of both sheep and cattle, which, though in a very unfinished condition, had become a burden too heavy to be carried any longer by feeders who had either to pay unprecedented prices for feed, or to get rid of this stock as soon as possible, and stand the loss, seemed quite sufficient reasons for these gloomy anticipations.

The markets, however, in spite of all these depressing influences, failed to show any downward tendency. Of course, there were the usual fluctuations. A day or two of open weather and a consequent clearing of the tracks would bring in a flood of cattle and sheep and an avalanche of hogs to the principal markets, and the feeders would get "stung." Then, in a day or two, a big blizzard would come out of the west or the north, and those who were lucky enough to reach the markets on those days would take to themselves credit for superior judgment, giving none of it to poor old "Luck," who really was responsible for the increase.

Early in the present month it became evident that the general trend of the market was upward; and had offerings been as good in quality as in quantity, we should probably have seen eight-dollar lamb by April 1st. The very short supply, however, of prime sheep and lambs seemed to make buyers tired of hunting for them, and to compel

them to content themselves with second grades. These, according to my ideas, commanded quite as good prices as could reasonably be expected at this season; lambs realizing from \$6.25 to \$7.25; 60 to 90 pound yearlings, \$5.50 to \$6.25; wethers and ewes from \$3.75 to \$4.50. Even before March 1st Buffalo was quoting prime lambs from \$7.35 to \$7.50—the highest for many a day—and crying for more of them; culls as high as \$6.50 and sheep from \$4.25 to \$5.25. Chicago, Kansas City, Omaha and the other leading western markets were all able to show much stronger markets and better prices than have been ruling of late. Still, though the general tendency is upward, even greater spreads in prices than usual have occurred recently from day to day on account of weather and feeding difficulties. The demand for heavy sheep and for yearlings has improved.

The high prices of hay and mill feed, of course, are discouraging, and productive of much "drat them sheep" talk; but it is to be hoped that those who have a nice lot of ewes with their lambs in the yards, will not spoil their almost certain chances of good spring prices for the sake of saving a dollar or two a ton in the cost of rations, when relief from the pressure is so close at hand. Those who have a few fat ewes or wethers, or some fairly finished yearlings can safely send them to market now at any time, and so ease up the pull on the pocketbook caused by this extra cost of feed, and give the ewes with their lambs a better chance.

JOHN PICKERING ROSS, Illinois.

Hog Prices Advance

THE present conditions of the hog-market place the bear element in the trade upon rather slippery footing. The prospective view of the market lines up as follows: The supply of fat cattle which will be marketed during the summer months is known to be short everywhere in the United States and throughout Europe. It will take about ten million hogs to make good this shortage of cattle. Sheep generally have been closely marketed and winter and spring feeding operations are far below normal, consequently future receipts will be light. Produce such as butter and eggs is selling at high prices. Domestic demand for pork is broad and export demand for the same article is very strong. Eastern shipping demand for live hogs is the strongest in years. For some time an average of 10,000 hogs per day have been shipped from Chicago alone. This shows the depleted condition of the herds in the East.

During the latter part of February the weather conditions did much to control the hog-market. The heavy snows made light enough receipts to cause a twenty-five to thirty cents advance. This was the first of the lighter receipts from the heavy packing season, and the advance and activity of the market showed its healthy condition and the legitimacy of the prices current at that time, disproving the bear argument coming from the provisions pit about overstocked pork-cellars. Such advances on the first light runs of the season can be taken as a criterion of what may be expected later on.

Early in March the top quotations moved up to a point higher than any other since October. Whenever both packers and order buyers attempt to fill their entire needs, the prices advance.

It will prove profitable to the producer owning light shoats to hold them until the 225-pound mark is reached, and after that to sell them, as the price that heavier hogs command is not enough higher to warrant further feeding. The spread of prices has narrowed until it is the narrowest in months.

L. K. BROWN, South Dakota.

The Green-Bug Hoax

BOARD of Trade rumors make much of the probability that a great deal of damage will be done the wheat this year by the "green bug." There seems to be little ground to think that prices will be much affected by this pest. These reports say that this will probably be a bad year for the green bug, "because they get bad about once in five years." This is not at all true. The green bug is not a "periodical" like the seventeen-year locust. Its multiplication depends on weather conditions.

The "green bug" is an aphid, or plant-louse, and feeds on rye, barley, oats and orchard-grass, but seems to prefer the wheat-plant to any of them. It infests the Southwestern wheat-fields, as far north as Oklahoma, and is on hand every year. Some seasons it multiplies so that its many enemies cannot destroy and keep it in check, and in these years it causes a failure of the wheat crop.

For these conditions the green bug needs a warm, open winter and a cold, late spring. We may have this kind of spring, but we certainly have not had the green bug's favorite winter. All over the green-bug territory the winter has been severe. It is probable that it will not be very bad this summer.

Even if it should do some damage, as it may, it is not likely to do so much as to affect the price of wheat save on panics and scares. In 1909 our entire wheat crop was 725,000,000 bushels, while the crop of

Oklahoma was 12,000,000 bushels, and Texas, 17,050,000 bushels. This is a considerable fraction of the total, but not a controlling one. More land has been brought under cultivation in these green-bug States since 1909, but whether there will be more in wheat in 1912 is a question. Anyhow, the damage that the green bug is likely to do this year, in view of the sort of winter we have had, is scarcely likely to affect the total much. For it must be remembered that this insect does some damage there every year. Probably it will do no more this year than usual. I. M.

Butternuts for Profit

MUCH attention has been given in recent years to the raising of nuts for profit. Orchards of chestnuts, pecans, English walnuts and filberts have been planted, and fabulous stories are told by nurserymen of the quick growth, early bearing and great yield of the stock they advertise. Attempts have been made to grow these nuts in climates not altogether adapted to them, not always with the best of results. Occasionally appears the destructive chestnut-bark disease to destroy the work of years, but scattered over the Northern States are nut-trees growing wild, perfectly hardy and untouched by disease, bearing, in their uncared-for condition, good crops of nuts.

One of the best of these wildings is the butternut, or white walnut. By roadsides, in fence-corners, in barren pastures this hardy nut-tree grows thriftily. Rarely are butternuts gathered except, perhaps, a few bushels to be cracked by the home fire in the winter evenings, yet the largest daily in the State of Vermont has carried an advertisement all the fall asking for 2,000 bushels. The few who have gathered them for sale in past years have received from seventy-five cents to one dollar a bushel for them. There is a market for them in all large places. The white walnut will grow anywhere and will grow very rapidly even without care.

If the butternut-tree be cared for as are other orchard-trees, it makes a phenomenal growth and is one of the most beautiful trees that grows. It comes into bearing at an early age and lives to be very old. When grown on good ground, the nuts are much larger than when grown on poor soil, thus showing that it, in common with other trees, does better when well fed. The kernel is very rich and palatable, being ahead of the English walnut in respect to food values; its name butternut or oilnut indicating its superior fat content. HELEN MATHIE.

The Middleman

THE other week a number of farmers from our section of Colorado ordered a car of coal from a company just sixty miles away. The mining company charged one dollar and a half per ton for the forty tons. The day we went for the coal, the neighbor who had sent the order for the coal, paid our freight agent fifty dollars, or one dollar and a quarter per ton freight. The producer received sixty dollars and the railroad just ten dollars less. How long the mining company worked to secure the coal, I do not know, but probably several hours. The railroad could haul the coal to its destination in two hours. It seemed to me the freight was unjust. If this coal had been bought from home dealers, it would have cost us four dollars per ton, instead of two dollars and seventy-five cents. So the producer would have received one and a half dollars while the middleman would have received two and a half per ton for his output of coal. So it is not surprising that the middleman is the fellow who is getting rich, while the producer struggles on with a bare living.

Another instance: Last summer I shipped cantaloups to Denver that sold for one dollar and ten cents per crate in that city. The express company received fifty cents per crate, the commission firm charged ten per cent. for sales, leaving me less than fifty cents per crate, from which I must deduct twelve cents, the cost of the crate. By the time the middlemen got through with my product they had received nearly two thirds of its value. I had labored from April to August to produce my crop and they handled it in less than twenty-four hours. I am reliably informed that one year the farmers of this community shipped two hundred thousand dollars' worth of cantaloups. Of this amount the middlemen received one hundred and twenty thousand and the farmers eighty thousand. This is not only true of cantaloups but most every other crop the farmer grows whenever the middlemen, especially railroads and express companies, must handle it before getting to market.

One more circumstance: I shipped tomatoes in baskets containing twenty pounds. On the city market they brought seventy-five cents per basket. The express company and commission firm received together thirty cents. I received forty-five cents, and each basket cost me ten cents, leaving me thirty-five cents net profit per basket. The middlemen handled these tomatoes in one day. I labored six months to produce them. Was this just?

Now, it seems to me that twenty-five dollars would have been a reasonable charge for the freight on the car of coal, twenty-five cents per crate a fair amount for the express on cantaloups, and twenty cents per basket enough for putting the tomatoes on the market.

The conclusion I have reached after carefully studying the matter is as follows: Unless railroads, express companies and other middlemen cut down the rates for handling what the farmer produces and what he consumes, the tillers of the soil need not expect much more than a living. The buying of more land or the paying off of mortgages will be out of the question.

It seems there may be a ray of hope for the farmers if they will organize and use their influence to elect men who are at least favorable to their interests. W. D. NEALE.

Make Your Crops Marketable

EARLY in February of last year I planted a piece of ground two hundred by forty-five feet to the American Wonder pea. I top-dressed with manure from the hen-house. June 10th I picked the first peas, and on June 25th I planted potatoes between the peas in drills twelve or fourteen inches apart, two eyes or pieces in each. I cut potatoes to one eye, as the weather was warm. The first week in October I dug the potatoes and gave the land more hen-manure and sowed it to white and purple top turnips. It was not very long until I began selling young turnips for twenty-five to thirty-five cents per gallon.

I commenced pulling turnips when they were three-eighths to one-half inch in diameter and up to the size of a small pullet's egg. In preparing them, I cut or left a piece of the top one inch or more long and cut off the root and then washed them in tubs and sold them to hotels, restaurants, boarding-houses and private residences, measuring by the gallon.

The amount summed up as follows:

Peas	\$46.70
Spuds	26.00
Turnips	24.80
Amount	\$97.50

After the ground was plowed, I did the balance with a garden-rake, spade and hoe.

In preparing peas for market, I pulled in the afternoon and shelled them, and sold them at ten to fifteen cents per pound. I could not have realized more than half that in the pod, as hotels and boarding-houses do not have the time to shell them.

The way we like the turnips prepared is to cook them in boiling water until you can puncture them easily with a fork. Have ready a thickening made of flour and milk. Season with salt, pepper and butter to suit your fancy. Pour off the water, and put in your thickening. Let them cook four or five minutes. Then serve. Remember to cut the top off one inch from the turnip, and then cut off the root. Do not undertake to peel them. By following this plan you will have a dish that will call for more, if you like turnips at all. M. C. WRIGHT.

Producing Hogs More Cheaply

[CONTINUED FROM PAGE 6]
and the silks did not appear. Those beans at corn-tasseling time stood about eighteen inches high, a bright beautiful green and looked as promising as last year at corresponding date. The balance of the season did little harm to them.

Considering the success we have had with soy-beans thus far, remembering the fertilizing qualities of the plants (legumes), their feeding value in taking the place of the expensive mill feeds, their hardiness as against light frosts in the late spring, their ability to withstand severe drought and their fair yield as compared to other grains, we feel very hopeful for the cheaper production of market swine in South Dakota.

EDITOR'S NOTE—The illustrations of meat-cuts on Page 6 were made from actual photographs which were taken after a series of experiments, conducted at the Wisconsin Experiment Station by Prof. J. G. Fuller, were completed. The object of the experiments was to show what value the feeding of a balanced ration had when compared with one not balanced. In other words, how important is protein in the feeding of pigs? How valuable may such a crop as soy-beans, about which Doctor Brown talks, really be? The experiment ran like this: Six pure-bred Berkshire pigs were divided into two lots and fed from October 23, 1903, to February 10, 1904. The one lot was fed nothing but corn in the form of meal mixed up with water. The other lot received equal parts, by weight, of corn-meal and wheat-middlings, mixed up with skim-milk. The total cost of the feed for the first lot was \$6.58, and for the second lot, \$13.81. However, the first lot showed a net profit of only forty-nine cents, while the second lot netted \$5.90. The live weights of Lot 1 were respectively 103, 84, 100, and of Lot 2, 194, 139, 190. The dressed weights for the pigs of the two lots were respectively 75, 60, 70, 104, 147.5, 147.5. These marked differences are shown in the sketches on Page 6.

The photographs from which the sketches were made show cuts from representative pigs of each lot. The sketches on the left show cuts from Lot 1 and those on the right from the lot fed the balanced ration. Perhaps the ration was not exactly balanced, but the marked influence of protein for growing pigs is plainly demonstrated. It seems likely that the soy-bean is just what is needed in many States to supply that much-needed feeding element.

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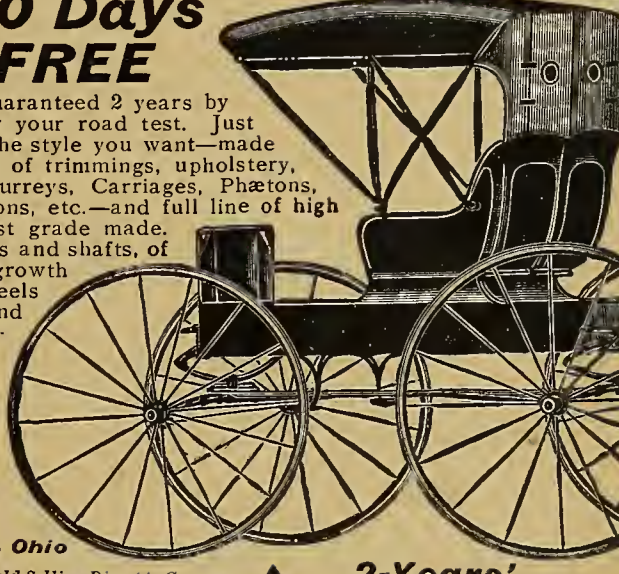
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We wish to present you with eight beautiful Bird and Butterfly post-cards, in all the original and striking colors, merely to introduce you to our post-card offers. These cards are replete with action and color and are the most gorgeous that we have ever offered. We ask you to send us only two two-cent stamps to pay the cost of mailing. Just as soon as we hear from you we will send you these eight beautiful cards and tell you how to get a set of

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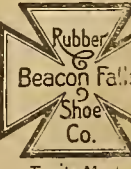
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THE CENTURY BOOT (Beacon Falls Brand)



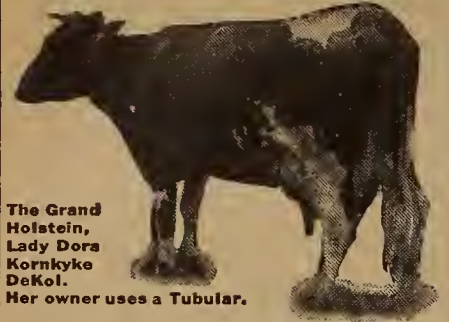
No matter how carefully they were made, you wouldn't secure a better wearing boot. CENTURY Boots are made of fine rubber—the best rubber produced in the world. The vamp is made extra strong by forcing rubber under powerful hydraulic pressure into the best quality of canvas duck. To prevent cracking at the ankle (like ordinary boots) an extra pure gum, no-crack ankle reinforcement is used. CENTURY Soles are made of the toughest compound known. This sole is so compounded and vulcanized that it will rebound when it strikes a hard substance rather than chip off, as the soles of an ordinary boot would do.

Century Boots Are Cheapest because best—best in material, best in workmanship and best for wear. Look for the name Century and the Cross on the boot. When you want a high-grade satisfactory rubber boot or shoe, ask for the Beacon Falls line. Look for the Cross. It insures you quality and service. If you can't secure CENTURY Boots from your dealer, write us, send his name, and we will see that you are supplied. A handsomely illustrated booklet describing Beacon Falls rubber footwear, free, if you send your name.



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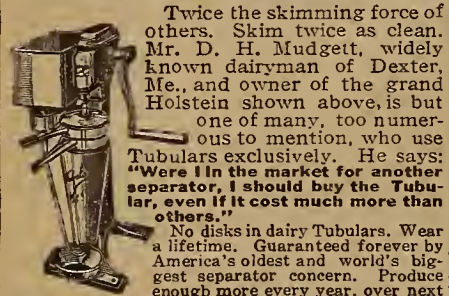
BIG MONEY-MAKERS



The Grand Holstein, Lady Dora Kornkyke DeKol. Her owner uses a Tubular.

Wheat or other crops without dairying robs the soil. Keen dairy farmers who are making most money use highly productive land and big-producing cows. For similar reasons they use and recommend high-producing

SHARPLES Tubular Cream Separators



Twice the skimming force of others. Skim twice as clean. Mr. D. H. Mudgett, widely known dairyman of Dexter, Me., and owner of the grand Holstein shown above, is but one of many, too numerous to mention, who use Tubulars exclusively. He says: "Were I in the market for another separator, I should buy the Tubular, even if it cost much more than others." No disks in dairy Tubulars. Wear a lifetime. Guaranteed forever by America's oldest and world's biggest separator concern. Produce enough more every year, over next best separator, to pay a big part of the purchase price.

Write for FREE Catalogue 112

THE SHARPLES SEPARATOR CO. WEST CHESTER, PA.

Chicago, Ill.; San Francisco, Cal.; Portland, Ore. Dallas, Tex.; Toronto, Can.; Winnipeg, Can.

Live Stock and Dairy

Dairy Cows Compete

HERETOFORE semi-official testing has been employed only by owners of pure-bred stock, especially those breeding Guernseys and Jerseys, who desired to place their cows in the Advanced Register or Register of Merit. However, in 1909, the Wisconsin station, under the supervision of Professor Woll, made efforts to interest a number of breeders of dairy cattle in a dairy-cow competition. These efforts were successful beyond expectation, and the Wisconsin Dairy Cow Competition was inaugurated November, 1909, and extended to November, 1911. Through the liberality of a number of leading breeders, a sum of money aggregating over \$2,600 was rendered available for prizes, to be awarded for the highest records made during a period of one year by single cows, and by groups of a number of cows in the same herd. All records were to be made by the semi-official method of yearly testing, explained above, and the competition was open to all cows in the State, be they pure-bred, grade or scrub. This gave farmers throughout the State an opportunity to compare what their cows were doing with the results obtained by other dairymen, and tended to stimulate an interest in building up profit-returning herds. The owners were also required to furnish a detailed monthly statement of the kind and amounts of the different feeds eaten each month by the individual cows entered in the competition. In order not to place young animals at a handicap in the award of prizes, the records of production

actually made by cows under five years of age were increased as follows: 2½ years old at the beginning of the test by 30 per cent.; 2½ to 3 years old by 24 per cent.; 3 to 3½ years old by 18 per cent.; 3½ to 4 years old by 15 per cent.; 4 to 4½ years old by 8 per cent., and 4½ to 5 years old by 5 per cent.

Records of production began on the fifth day after calving, and closed 365 days from the date of the beginning of the test. Prizes ranging from \$300 down to \$50 were offered for the best individual cows, and from \$500 down to \$50 for the best herds of ten cows. In addition, a large number of special prizes were offered by machinery concerns and men interested in different dairy breeds.

The test brought out some revelations in regard to the producing capacity of grade cows, and although the pure-breds won first places, the grades were a close second, while in no case did a scrub cow showing no crosses of dairy blood make anything like a creditable showing. First prize was won by Queen Juliana Dirkje, a pure-bred Holstein, owned by John Hetts of Ft. Atkinson. She produced 890.68 pounds of butter-fat during the year. R. J. Schaefer of Appleton secured second prize on a pure-bred Holstein, which gave 888.15 pounds of butter-fat. Third place was secured by a grade Guernsey owned by R. W. Rowlands of Waukesha, on a record of 777.945 pounds of butter-fat.

What Profits Do We Make?

In farming and dairying, as in any other business, our success is measured by the profit we make from it. The only accurate method of estimating the profits in dairying is by weighing and testing each cow's milk for the entire year, and computing the cost of her feed and care. The Wisconsin Dairy-Cow Competition was designed to further develop the dairy industry of the State by stimulating interest in yearly testing of cows, and encouraging business methods in the management of the dairy.

The official dairy tests have become almost a necessity to breeders of pure-bred dairy animals, in order to dispose of their stock at good prices, and, as a result, calls for this work have increased every year during the last decade. Most of the tests in early years were conducted for periods of seven days, but of late years the tendency has been to continue them for longer periods, as it has been felt quite generally among dairymen that the results of tests conducted for only seven days do not necessarily give a correct indication of the value of a cow for dairy production. The system of semi-official yearly tests of dairy cows, under which the Wisconsin Dairy-Cow Competition has been run, therefore, has been gradually developed. Under this system the cows are tested for one or two days each month during the year, and the average fat content of the milk for these periods is taken to represent the average quality of the milk for the respective months. The quantity of milk yielded by the cows is determined by separate weighings of each milking during the lactation period, and the monthly milk records of the cows are furnished by the owners. Past experience has shown that the system of semi-official testing gives accurate and satisfactory results, and the records of production thus obtained have been accepted by the general public.

About three hundred cows were entered in the competition, and these were owned by interested dairymen in all parts of the State. As has been said, the competition was not to show any exceptionally large records, but was a purely educational feature, tending to show which cows were returning a profit on the feed they consumed. By this means it was hoped to interest farmers in the weighing and testing of each cow's milk, and of keeping an accurate record of the feed consumed. That this interest has been aroused and that farmers are realizing the value of employing business methods as a result of this competition, has been proven by statistics. Already dairymen in all parts of the State have either organized county testing associations or are contemplating doing so in the future. This has been the most valuable result of the competition, and by this means it will be possible for farmers to keep an accurate account of the performance of their herds with a minimum amount of labor and expense. As yet, however, the county associations are only in their infancy, and although their efficiency has been proven, they are not yet considered as a necessity in dairy communities.

JAMES H. MURPHY.

cow wading through muddy or filthy places or lying thereon. Do away with such causes. Clean up, disinfect and whitewash the stable. See that the floors are kept clean, freshly bedded and frequently disinfected.

Treat affected parts as follows: Cleanse perfectly; then rub a little citrine ointment upon each forming boil. Repeat the application once daily. When the boil softens, open it, swab inside and out with tincture of iodine, and repeat the latter application once daily until healed. As the cow in question is thin in condition, there always is a suspicion that tuberculosis of the udder may be present. It would be wise to have her tested with tuberculin, which will settle the matter one way or the other inside of forty-eight hours. Meanwhile she should be kept isolated.

A. S. ALEXANDER.

Feeding for Beef

CONTRARY to the views of many prominent live-stock experts, beef-cattle are being raised and fed on the high-priced lands of the immediate corn belt at a profit. These operations are quite the reverse of popular opinion which usually associates steer-feeding with the cheaper grades of land. In fact, many farmers have abandoned beef and pork production, claiming that the high price of their land prohibited the profitable pursuit of such branches of farming. However, there must have been some other latent reasons for such action, such as defective rations or poor general management. High land-values alone present hardly an adequate or plausible explanation. The practical results of numerous feeders and breeders who are realizing snug profits from beef feeding on land worth from \$125 to \$200 per acre belie these contentions.

In many cases the trouble lies in the feeding ration. For attractive financial returns the majority of the grain and roughage supplied to the feeders must be home-grown. At the existent inflated values of mill feeds and concentrates the bees consume a large share of the gross income resulting from their sale if much of their diet is supplied through resort to the local feed-merchant. The utilization of by-products of the commercial industries, the feeding of screenings and salvage, the home production of a greater part of the grain and roughage, and a careful study of feeding operations which renders possible maximum gains at minimum cost spell success to the farmer who finishes live stock for market.

Among the many profitable operations in feeding beef-cattle for market, that of Louis Graber, near Mineral Point, Wisconsin, is worthy of special comment. He annually markets about 250 grass-grown beefs from his 700-acre farm, which is extremely rich in excellent bluegrass pasturage. The fattening steers receive no other grain or roughage than an abundance of bluegrass topped off with a little green corn just previous to market-time. As a usual thing the animals are summer-fed, although occasionally some are toned up for sale as fat beefs during the winter. All types and breeds of beef feeders are bought up on the St. Paul and Chicago markets, the only requirement being that the animals be of a variety that will fatten readily and as nearly as possible make good gains on a grass and corn ration during short periods. A recent bunch of high-grade Herefords were purchased at \$50 per head in the fall, were wintered on hay and a little corn-fodder, and marketed in the early spring at \$105 an animal, yielding a profitable return to their owner, as the cost of feeding and caring for them had been practically nil.

Steer-Feeding Pays Dividends

Thin stuff weighing approximately 850 pounds per head will fill out to tip the beam at 1,200 to 1,300 pounds after a summer spent in grazing over this luxuriant bluegrass meadow-land. Unusually promising individuals are graded out of the common feeder stock and are finished on green corn in the fall, and in this way are dressed into shape to push the market-toppers for these premier honors. This corn is fed as a soiling crop, being cut up and scattered broadcast over the feeding-yard. Probably one of the reasons in explanation of the exceedingly rich character of this pasturage is due to the fact that much of the land has never been under the plow, as its owner is of the opinion that once a meadow of this variety is broken up that henceforward its efficiency for bluegrass is so weakened that it is a waste of time to seed it down again in this way. Mr. Graber estimates that an acre of bluegrass will produce 150 pounds of beef. He furthermore states that the reason for his adopting his present system of farming was on account of the difficulty in securing reliable, competent help. Under his present management labor is minimized in every respect, and about the only expense involved in the operations is paying the interest on the money invested in the land.

Another practical feeding and breeding proposition is that of H. N. Thompson of McHenry County, Illinois, who owns a herd of 125 head of pure-bred Herefords which he has bred and raised on his home farm. He utilizes about 100 acres of rolling land, which is very prolific in producing bumper crops of pasture-grass, as well as big yields of timothy and clover hay. In addition,

Trade Your Old Separator

for a New One

Here's Our Offer

We Will Take Your Old Cream Separator as Part Payment for Our Brand New

1912 Economy Chief

Positively the Highest Grade, Closest Skimming Cream Separator Ever Manufactured.

Don't let your old, worn out cream separator stand in the way of your getting a new **big business** machine like the **Economy Chief**. The price of butter is high and likely to be higher, and you need a **big, close skimming, reliable separator** to get the big profits.

We will make you a trade. If you have an old cream separator of **any make** that is out of repair, hard to run or will not run at all, we will take it off your hands as part payment for a **big, brand new Economy Chief**. Furthermore, we will make you a **good liberal and fair proposition**. Write us at once for particulars.

Regular \$70.00 Separator

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Actual fact! Only \$27.65—full and complete purchase price—for the **big Economy Chief Cream Separator**, absolutely proven by expert tests and thousands of testimonials to be the **closest skimming and most durable cream separator ever placed on the market**. SKIMMING CAPACITY, 300 POUNDS OF MILK PER HOUR.

Shipped Direct From Factory.

That's the secret of our amazingly low prices. You only pay one small profit—the actual factory profit. No dealers', agents' or jobbers' profits for you to pay whatever. You pay only the **rock bottom price**. Consequently we can save you from \$40.00 to \$50.00 on **any capacity** machine you want.

Furthermore, we will positively ship you the **Economy Chief Cream Separator** on sixty days' trial. Give it a good hard test on your farm for sixty days before you decide to keep it. Then if you don't think it the **BEST EVER**, simply send it back to us and it won't cost you a cent.

Send Today—At Once—For Free Booklet No. 72F75

Be sure to send your name and address at **once—today**—for the **Economy Chief Booklet No. 72F75** and the **full particulars** of our **great exchange offer and bargain prices**. Postal card will do.

Sears, Roebuck and Co., Chicago, Ill.

Don't Pay for This Sheep Shearing Machine Until You See and Examine it

Most dealers have it. If yours hasn't, ask him to get one for you, and when it comes have it set up and try it. If you are convinced that it is what you want, buy it and try it on your sheep with the distinct understanding that it must do the work O. K. or no sale.

This STEWART BALL BEARING MACHINE No. 9

is just the easiest of all shearing machines to turn. A boy can run it all day without tiring. It is ball bearing throughout, including a ball bearing shearing head, shears quick and evenly all over.

The price including four sets of knives is only \$11.50

It is really a wonderful machine and you will be agreeably surprised at the work it does.

Get your dealer to send now, or if you prefer send \$2

and we will ship C. O. D. for balance and you may try the machine and if not satisfied we will refund all you paid out.

Send for copy of new 1912 catalogue and Expert Instructions on shearing sheep.

CHICAGO FLEXIBLE SHAFT COMPANY CHICAGO

184 La Salle Avenue



thirty acres are devoted to the culture of alfalfa, which yields three cuttings and four tons to the acre. Forty acres of corn and twenty acres of oats furnish enough grain on which to mature these "whitefaces." During the summer the entire herd are maintained on grass pasture, only receiving an occasional feed of grain. The young stock receive a ration of alfalfa-hay, ground corn and oats supplemented in the fall by chopped corn. Oats are fed only when their price is sufficiently low to justify their use as a stock food, while a little bran and corn-meal furnish variety to the ration whenever a change is necessary.

For steer-feeding Mr. Thompson recommends cotton-seed meal where it can be bought for one and one-half cents or less a pound. He finishes the animals on this concentrate, beginning to use it in small amounts and then gradually increasing the portion as the steers become accustomed to this new feed, until they are finally getting about five pounds per animal—this concentrate being fed with shelled corn. Up to the time of the final conditioning work the steers are maintained wholly on pasture, timothy and clover hay and corn-fodder, which is fed chiefly in the fall and winter.

S. R. Pierce has made an annual practice of feeding from 100 to 300 Angus steers on a ration of corn-fodder, broken ear-corn, timothy and clover hay and a little cotton-seed meal or oil-meal. In addition to buying up steers in his local community, Mr. Pierce also feeds any of the surplus stock which he culls out from his breeding herd, as well as picking up some feeders on the Chicago market. He formerly made efficient use of the self-feeder in his yarding operations during the winter season. Feeders which have been finished on the Pierce farm have been market-toppers many times during the past score of years. Just last year one car-load brought a top price of \$9.25 per hundred pounds, while a second load sold for \$9. During the summer the feeders are ranged on pasture in the daytime and allowed access to the feed-lot at night, where the self-feeders are kept loaded with grain.

How to Feed for Profit

For good profits the steers must be purchased at five to six cents a pound, fed and finished for eight to ten months, and then sold for seven to ten cents per pound. In feeding for beef, according to Mr. Pierce, it is necessary to buy up good stock which will round out under efficient feeding and make maximum gains at a minimum cost, as well as producing as much as possible of all the grain and roughage which is fed on the home farm. Recently a general farmer in his vicinity served his cows to a pure-bred Angus bull; this young stuff was fed, and made 828 pounds average weight at the age of ten months, bringing a top price on the Chicago market. The Pierce ration for the breeding herd is as simple as possible. Mr. Pierce has tried practically every combination of grain nutrients and all sorts of balanced rations in the course of his extensive feeding operations. He maintains that for general all-around efficiency corn has the other feeds backed off the map. Corn can be easily produced at home and is not such a heating food or unbalanced in its feeding value as the majority believe, according to the experience of this successful beef-feeder. His breeding stock thrive on a ration of ear-corn, plenty of corn-fodder and an abundance of timothy and clover hay, as well as lots of pasturage.

There are many other results of a similar nature which go to show the profit to be derived from the feeding of beef throughout the section of relatively expensive lands in the corn-belt states and adjoining regions. Where intelligent management is practised and attention is paid to the study of the most economical methods of feeding, as well as to the character of market conditions, beef-feeding pays well. The project of finishing a few steers for market should prove attractive to the general farmer who is able to buy up such stock in the spring at anything like reasonable prices, pasture it over the summer feeding period, finish it to a fair condition in the fall and dispose of it when the price is right for a profitable return on the operation. An Ogle County, Illinois, feeder is going his associates one better in that he buys heifers in the fall, feeds them through the winter on corn-fodder, broken ear-corn and cotton-seed or oil meal, in addition to alfalfa and clover hay. He purchases about 150 head and aims to hold them over for a late spring market along about the month of May, when animals of this character are scarce and as a result command a high price. By keeping in close touch with the market this farmer has been able to realize big returns from his heifer-feeding operations and claims that under existing conditions this line of work offers a greater opportunity to the average countryman than does steer-feeding.

GEORGE H. DACY.

Why the Wool Tariff?

I HAVE before me the returns of the committee appointed to investigate the tariff on wool and woolen goods, and there are a few things I wish to call attention to from the farmers' viewpoint. I raise sheep and have wool to sell and have to buy woolen clothes. That is why I happened to be so interested in this wool tariff. We must not forget that in America, except in the range country, wool is a by-product of the sheep industry and that sheep would be profitable if they sheared no more wool than a goat.

The report says that "the average clip for the United States is 6.5 pounds and that it costs 9½ cents a pound to produce it, or \$0.61½ a sheep." That is about twice as much as it costs to grow wool in South America. The average farm flock is about 55 or 60 sheep. Then the report says that "we got 23 cents on the average for our wool last year." So we got \$1.48½ a fleece. Since it costs \$0.61½, our profit was \$0.87 on each fleece. Then it goes on to tell that a three-piece suit of clothes for a man has about 9½ pounds of wool in it. That being so, the farmer gets 9½ × \$0.23, or \$2.18½, for the wool in that suit. Each pound of wool costs the farmer 9½ cents to produce. There are 9½ pounds in the suit, so it costs him \$0.89¼. Then his profit is \$1.29¼ on the wool in a suit of clothes.

The report goes into detail of the expense of weaving and the making of the suit, including all materials, so that when the wholesale clothier has the completed suit, it has cost him \$14.32. He sells it for \$16.50, so his profit is \$2.18. The retail clothier buys it for \$16.50 and then he makes a scoop. He sells it for \$23 or more. Don't forget the "or more." It is almost always more. So he gets \$6.50 profit on what the farmer got \$1.29 profit on.

Now with a suit of clothes at \$23 and the farmer's profit on a sheep's fleece of \$0.87 you can quickly figure it takes the profits of the fleeces of 39 sheep to buy that one suit. As it is, the farmer has to use money gotten other than from the profits on the wool to furnish enough woolen clothes and bedding for his family. Then why not open up the gates and let in woolen cloth and woolen clothing? Then, instead of having to pay \$23 or more for a suit, we could get the same suit for \$10 or \$12.

The number of men who produce wool is very small compared with the numbers who use woolen clothes and bedding. Although I am one of the producers of wool, it seems to me exceedingly unfair to have this high protective tariff on wool, for which the farmer who produces wool gets so little benefit. The farmer who does not produce the wool is certainly not benefited, and how about the thousands of laboring men and their families who have to pay twice as much for their woolen goods as they should be forced to pay were there no tariff?

There are thousands of families in this class that are improperly clad every winter on account of this wool tariff. Who is reaping the benefit of their suffering? It is certainly not the farmer who is producing the wool.

Were the tariff removed and the price of woolen goods cut in about half, the retailer would be selling more than twice as much goods and would be taking a much less margin of profit than now. That is the condition just across our line in Canada. A suit of good woolen clothes there costs about one half what it does in the United States. Even though two stores selling the same kind of goods may not be ten miles apart, as is the case of the stores in Detroit and Windsor, yet a poor man living in Detroit cannot go over to Windsor and buy a suit and return with it without paying duty enough on it to make it cost him as much as it would in Detroit. PAUL H. BROWN.

Profits in Buttermilk

ONE by one the various waste products of the farm have been utilized and put into a form having a market value, so it is not surprising to find persons making extra dollars and cents from the sale of buttermilk. An enterprising farmer's wife living near Yates Center, Kansas, is not only deriving a neat income from the sale of her butter, but she also sells the buttermilk to one of the principal hotels of the town for ten cents per gallon.

Good buttermilk is a wholesome and refreshing drink the year round, but its popularity in cities is greatest during the summer months, when it is in strong demand at five cents per glass.

The best buttermilk can be made only from the best and cleanest carefully ripened cream.

Nowhere can better buttermilk be produced than in the well-kept dairy of a well-managed farm.

A twenty-pound churning of butter from average cream will make about eight gallons of buttermilk worth from eighty cents up, according to its quality and the kind of a contract one is able to make with local restaurants and hotels. The fresher the buttermilk, the better is its quality and the more refreshing it seems. To build up a reputation for good buttermilk at profitable prices, deliver it promptly in clean cans and as cold as possible. D. S. BURCH.



Use it 10 Weeks FREE

NO MONEY DOWN

KING \$24.95

Sanitary Cream Separator

Send No Money Make Your Own Terms

We don't ask you to send a penny, make any deposit or obligate yourself in any way. Simply try a King Sanitary Separator in your own home or dairy for **Ten Weeks Free**, just as if you owned it, test it with warm or cold milk, and if it doesn't separate all the cream right down to the very last drop in finer condition and do it easier than any other separator on the market, bar none, then return it, at our expense, the trial costs you nothing.

Cleanest, Simplest, Most Efficient, Absolutely Sanitary

The KING skims warm or cold milk more thoroughly and easier than any separator made, regardless of price. Positively never defeated in a skimming contest. Strong, durable, runs very freely; has all latest improvements including our improved separable disc bowl. Simplest machine to clean, all parts readily accessible. No nooks or corners to gather or hold dirt. After ten weeks **Free Trial**, if you decide to keep it, you can take all the time you want to pay.

The **KING SANITARY SEPARATOR** in all sizes cost you only one-half as much as agent's machines. Buying direct from our factory saves you all the expense of the agents, salesmen, stores, wagons, etc. To prove our claims, we make the **most liberal offer ever heard of.**

Life Long Guarantee Should any part of the King Separator prove defective in material or workmanship during the entire life of the machine, we'll replace it with a new and perfect part absolutely free of all cost to you and prepay all express charges. **Our half-million-dollar-factory stands back of every KING Separator.**

This is your opportunity to save money. It is to your advantage to read our descriptive catalog immediately. **Send for Free Catalog at Once.**

King Separator Works 57 RANO ST. BUFFALO, N. Y.

\$29.50 Buys This Elegant **Top Buggy.**

WARRANTED FOR Five Years.

Retail Price \$60.00. Buggies, Surreys, Spring Wagons, Farm Wagons. We have cut out our Jobbers, our Wholesalers and our Retailers and offer YOU their profit. Write today for our **Free Catalog and Delivered Prices.**

Mutual Carriage & Harness Mfg. Co.
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In Sets of Twelve

A DIFFERENT card for each month in the year, showing the birthstone, the sign of the zodiac and a brief horoscope—witches, owls, crescent moons, black cats and all of the Fortune-Teller's paraphernalia. With these cards you can have loads of fun telling the fortunes of your friends. Tell them their lucky and unlucky months and days. You can tell them more about their characteristics than they know themselves.

All for Six Cents

postage. Send us three two-cent stamps, and in return we will send you, post-paid, a complete set of these new Fortune-Telling Cards. Send at once to

Dept. E, Farm and Fireside, Springfield, Ohio

\$15.95

AND UPWARD

SENT ON TRIAL. FULLY GUARANTEED.

AMERICAN SEPARATOR

A brand new, well made, easy running, easily cleaned, perfect skimming separator for \$15.95. Skims one quart of milk a minute, warm or cold. Makes thick or thin cream. Thousands in use giving splendid satisfaction. Different from this picture, which illustrates our low priced large capacity machines. The bowl is a sanitary marvel and embodies all our latest improvements. Our richly illustrated catalog tells all about it. Our wonderfully low prices and high quality on all sizes and generous terms of trial will astonish you. Our twenty-year guarantee protects you on every American Separator. Western orders filled from Western points. Whether your dairy is large or small, get our great offer and handsome free catalog. **ADDRESS,**

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Garden and Orchard

Importance of Spraying

EACH year it becomes more apparent that spraying is probably the most important factor in the successful growing of fruit. At different intervals in the development of the horticultural industry different topics have held the center of the stage for shorter and longer periods.

Time was when pruning was the subject most often discussed. Growers waxed warm in defending their own pruning methods and in condemning every different method. At the present time many well-informed orchardists look upon the subject of pruning as General Hancock did the tariff: "As a local issue." The pruning, advisable in order to give color to the fruit in New York or Michigan, might severely injure the trees in southern Illinois. The open-heart, inverted vase system often successful with York Imperials will generally cause Northwestern Greenings to split all to pieces. In Berkeley County, West Virginia, one of the most profitable commercial orchards ever developed in that section has been trimmed to grow like a hedge-row; and the trees in an equally successful orchard of about the same age have been carefully trained systematically around the central trunks. Large quantities of apples of good color and high quality have been produced year after year on trees pruned after all sorts of systems. The problem of pruning is generally most successfully solved by the growers having the best "horse sense" as to what limbs to take out. It is far from an exact science.

So, too, relative to cover crops and fertilizers, and tillage and mulching, and other factors in fruit-growing. One experimenter finds that nitrogen is the controlling factor in his fertilizer tests. Another recommends liberal amounts of phosphoric acid and potash. Most growers find intense cultivation necessary to conserve their soil moisture. Others succeed by mulching. Every one of these problems is being constantly solved, not always in the best manner, but yet successfully solved, by the use of ordinary "farming common sense."

Spraying, however, presents problems the solution of which require more exact knowledge as to the "why" and the "how" and the "when" than do these other factors. An inherited instinct for successful farming may lead an otherwise untrained man to prune and cultivate and fertilize his trees so as to get large quantities of fine fruit. But when he comes to spray, the lack of accurate information will make of no avail all his hard work in other ways. If he assume self-boiled lime-sulphur to be a dormant spray against the San José scale, his trees may steadily go down hill from the ravages of that insect unless someone informs him that the self-boiled lime-sulphur is a summer spray for use on peaches, and that the caustic lime-sulphur made by boiling is the San José scale remedy. So likewise may his apples be made unsalable by the codling-moth if he assumes that Bordeaux is a poison to be used for killing worms, where properly arsenate of lead ought to be used.

Every person who hopes to get a satisfactory income from his fruit-trees, no matter how good a "general farmer" he may be, must specialize in horticulture so far as spraying is concerned. He must learn not only how to control the numerous insects and fungi now in his neighborhood, but must keep constantly in touch with other horticulturists so as to be prepared to control the new pests that come almost every season.

This necessity of getting accurate information about spraying methods and spraying remedies impels each season larger and larger numbers of fruit-growers to attend

the big horticultural society meetings, where spraying problems always have a prominent place in the program.

Many growers, however, who do not have sufficient acreage to warrant the expense or do not feel disposed to travel long distances to these meetings, need the information as much, if not more, than most of those who do attend. Hence arises the desirability of local horticultural societies.

Such local societies are rapidly increasing in number and in usefulness, and the organization of still more of them should be fostered by university extension, departments, State boards of agriculture and State horticultural societies. Interesting programs for local meetings are not hard to arrange even if speakers from away cannot be afforded. Field meetings held in central orchards always draw crowds, as do spraying demonstrations where agents of different manufacturers are invited to compete.

Such local societies are also very useful to the horticultural departments of the agricultural colleges as the instruments for getting promptly in touch with the horticultural problems of the different localities, and for presenting to such localities the work of the colleges.

The more strong local horticultural societies there are in a State, generally the larger and stronger will be the State society. The local societies generally act as feeders to the State society; so that as a matter of self-development the State societies should make a special point of assisting in the development of local and county societies.

As spraying is now and will for some time, at least, be the largest single factor determining the success or failure of commercial fruit-growing enterprises, so, in my judgment, the local organizations of fruit-growers, whether known as horticultural societies or by other names, are and will continue to be the largest single factor in the spread of information regarding the art as well as the science of spraying.

NAT T. FRAME.

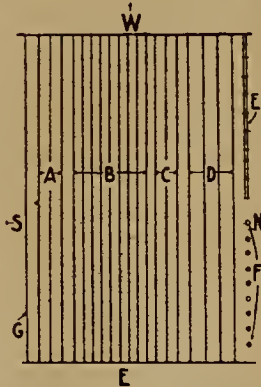
Get Rid of Scale

OYSTER-SHELL scale is not always removed by the lime-sulphur spray. But the Dominion Experimental Farm at Ottawa, Canada, has shown by actual test that a good whitewashing will succeed where the spray fails. Forty pounds of lime, forty gallons of water and eight pounds of salt make up the recipe. Spray on the tree just after the leaves fall, and again as soon as the first wash has dried. The scales will loosen up from the bark and fall off. This will not do away with the need of the lime-sulphur spray for San José scale, but is additional.

The Small Garden

FROM my own and other gardens for a half-acre (or less) I would, and do, try the following: Use plenty of ashes and stable manure, with either nitrate of soda or Lazaretto fertilizer. We use the latter. The list of varieties should embrace lima beans (B), cabbage, early potatoes (C, D), followed by Kentucky Wonder beans (C) on digging the potatoes; a few grape-vines (E) at one side; horse-radish set in rows (A) for spring sales; sugar-corn, with bunch beans between the hills, and a row of big rhubarb (G). Make the rows the entire length of the plot, for convenience in tillage and gathering. This selection for the small family or market will turn in more money than any other assortment.

CLIFFORD E. DAVIS.



and I do not need it for some later vegetable, I prepare the land at once and sow to cow-peas very thick; this stops weeds from growing and is fine for the land. I raise such things as are liked in the home and lose but little time with novelties. Most of the standard varieties are good enough if given a chance. I have vegetables from the very earliest to the very latest. Frost always finds a good supply of beans, roasting ears, etc., in my garden, and why not? You have the land and seed is cheap, so you are at but little expense to have all these good things almost the year round. When there is more than can be used green, can them. They come to you much cheaper than when handed out over the counter by your city merchant. And then, always raise some to carry along to the city folks. Have your vegetables so nice, fresh and crisp that the people will be glad to buy from you. This helps to make the garden pay. I have sold many dollars' worth of vegetables in just this way. Only this year I sold twenty dollars' worth of beans from my early planting, and it took but thirty cents' worth of bean-seed. So when some fellow comes along and shakes his head and says, "Brother, you are too early," you never mind. Plant and see.

I aim to have my garden a little richer each year; at least, I want to keep it up to its high state of cultivation, for you can't draw large crops from poor, impoverished soil. I want to say in all truth and candor that I do not believe one hundred dollars would begin to buy what vegetables we use and sell from this three-fourths acre of land, and the satisfaction of growing them yourself and just seeing them grow cannot be estimated in dollars and cents. By all means plant a garden, but don't forget to work it. Be sure to plant good seed. Buy them from a good reliable seedsman. There are a good many of them. Plant early, plant between seasons and plant late, and don't let your garden fever cool down. Take my word for it, you will be pleased with your labor, your table will be filled and you can pat your pocketbook with a great deal of satisfaction.

J. H. HARDISON.

Long Red Potatoes

LAST June, when it became apparent that our potato crop had been practically ruined by drought, we bought a few potatoes from a neighbor. They were of a very old late variety, called the Long Red or Long John potato, that were popular some forty years ago here. We planted seven small ones in the garden on June 27th. The ground was so dry that they did not come up for three weeks. When they did come, they were very weakly. About August 1st we were preparing to sow some turnips, and the potatoes were so small that we dug up about half of them. The ones remaining were hoed and kept to see what they would do.

When frost came, we dug one-half bushel of nice potatoes from the ones that escaped our hoe at turnip-sowing time. The late summer and fall rains had brought them out so that they yielded fairly well. The vines were green when frost came.

This variety has long had a reputation for large yields. It bears a fairly good potato for table use in the spring and early summer after earlier varieties have begun to damage from age.

A. J. LEGG.

Why Figs Fall

"FIGS fall from the tree" is the heading of an article that appeared in FARM AND FIRESIDE of December 9th. B. F. W. T. is right in part of the information given, but did not go quite far enough in explanation. Having grown figs in the eastern part of North Carolina for some twenty years, I have had some experience. The very hard freezing in some winters will kill the trees, but the cold winter winds never hurt a fig-tree in any section. It is the cold late spring winds that come after the fruit is set that cause them to drop their fruit. Fig-trees respond more quickly than any other sort to the sunshine of early spring days to start their sap upward. The roots of fig-trees grow near the surface and feel the sunshine and warmth of the ground much sooner than any other tree, especially if they are in a warm location. In beginning to grow figs, my idea was to protect them from cold winds. I did this by building a high tight board fence on the north-east side of a row of trees. Result: Figs fell off when about the size of acorns about every other year, and first crop always dropped off. I removed the fence to the southwest side of the trees to shield them from the sun's rays and keep the ground cold and roots shaded as long a time as possible in the spring. Result: nearly every season had two crops and never did the second crop fall off and no trees were winter-killed after this was done. Retarding of early starting or fruiting from two to three weeks was gained in above manner, which caused them to escape the late cold winds.

Somerset County, Maryland, and Accomac and Northampton Counties, Virginia, are much better adapted in climatic conditions to the growing of figs than North Carolina, and these sections now produce three times as many figs each season as the entire State of North Carolina.

A. C. DAVIS.

A Tennessee Garden

MY GARDEN contains three fourths of an acre and is so laid out that I can use a horse to do most of the cultivation. I use a fourteen-tooth Planet, Jr., cultivator. Quick work in going over my entire garden after every rain as soon as it is dry enough, is my policy. I break my garden in the fall of the year with a two-horse turning-plow, plowing deep. Then through the winter I haul out manure, ashes, rich dirt, etc., and scatter broadcast over the whole garden. Then the first time in February that the land can be worked I go in with a two-horse harrow, and I do not come out until the garden looks good to me. I am then ready to do my first planting. And this consists of peas, beets, radishes, Irish potatoes—for these things are not hurt by the cold weather we have in Tennessee. The potatoes do not come up for some time after being planted. In all of my garden experience, a period of fifteen years, I have never lost out on account of a freeze. I start cabbage and tomatoes in a cold-frame in February, and I always have very early plants of this kind. I rotate my vegetables every year, never growing the same vegetable on the same land two years in succession. I often raise two or three crops on the same land each season. After any early crop is off the land

POTASH

The corn crop fooled lots of farmers last year.

Many fields looked good but fell down on the yield. This was owing to a lack of available Potash, for Potash is primarily a producer of grain.

Your corn must have enough quickly available Potash to produce well-filled ears as well as stalks.

A corn fertilizer should contain at least 8% Potash—better 10%—no matter in what form the fertilizer is used. Rain it, 75 to 100 lbs. per acre, drilled in with the seed, will keep away cutworms and root lice.

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Poultry-Raising

Real Farm Poultry



HAVING kept poultry on the farm for twenty years, it is with much interest that I watch the doings of others in that business and read the widely different methods employed by different people in rearing, feeding and caring for poultry. For one

beginning in the business it's a rather hard proposition to decide on the breed and method that should be used.

I believe people have become too enthusiastic over the "open-air" house, especially for cold climates. Fresh air is as needful for fowls as for anything else, but no slender bird can use the food consumed for making eggs and at the same time produce enough heat energy to keep the body from freezing. Anyone raising swine knows that such animals make absolutely no gain during cold weather, no matter how good the feed, if proper shelter is not provided.

When cold weather comes in November, my hens are locked up in their house, and they never set foot again upon the ground or snow outside until spring. Cold feet from any cause most surely means an empty egg-basket.

Only two small curtain-covered windows are used to leave fresh air into a house thirty by fifty feet, and even these two openings can be securely closed by wood doors on hinges when the weather is too severe. Further than that, I believe a coal-stove in the hen-house helps a whole lot toward having the egg-basket filled, and were it only used to make it comfortable for the one taking care of the poultry, it is worth while. I use about eight dollars' worth of coal during the winter and am able to keep the chill off the air nearly all the time. At this writing it is nearly thirty degrees below zero, and the temperature has hovered between twenty degrees below and thirty degrees below for two solid weeks. Little comfort, that "fresh air" for hens! The effect was shown on the receipt of fresh eggs in Minneapolis, the amount being nine cases for a whole week.

Some people aver that they let their hens out every day that the sun shines during the winter, no matter how cold, to get exercise. It is much better to provide a small scratching-place inside, where they might take their "exercises" in comfort.

For Eggs—Wheat, Oats and Barley

Though many people advise against it, I like to feed my hens by the hopper method mainly. The hoppers are large enough to hold about 100 pounds, each, and in different hoppers I put oats, bran and meat-scrap, wheat and barley. I tried a hopper with corn, but found they ate 300 pounds of corn to every 100 pounds of wheat and 25 pounds of oats. Wheat, oats and barley being the best egg-producing grains, the corn-hopper was closed and the proportion of the different grains then consumed was four parts wheat, two parts barley, one part oats and a little bran and beef-scrap. This comes pretty near the "lay or bust" ration given out by the Oregon Experiment Station. Milk, whether skimmed, sour or butter, is a valuable addition to any ration. In addition to the grain they get from the hopper, corn is fed at night, and while this may appear peculiar, having other grains before them all day, the hens do find room for no small amount of that grain which they like best. The only green feed they get is cabbage. While grit and oyster-shell is supplied, I value the coal and wood ashes most highly. The dust is added to their dusting-pen, and the small unburned pieces of coal are relished by the hens more than either the grit or shell.

Some good poultry folks make \$3 to \$6 profit from each hen (on paper), but I got close to \$1 over feed, and considering the fact that little time was spent in caring for them, they paid better than any other stock kept on the farm. The hen that lays 150 eggs a year is a rare one, though it is something all breeders should strive to produce. A good flock of hens will average 75 to 100 eggs a year, and if a portion of them are laid during the winter, it is safe to place the average price per egg at two cents, making \$1.50 to \$2 as the value of eggs from each hen. Having kept a record of all the feed consumed during the year for my 400 hens, the cost of feed for each hen can be placed pretty close to 75 or 80 cents. Mr. Vandervort in a recent article gave an account of a record kept for the month of June and estimated the cost of a dozen eggs at seven cents. No one should do any figuring from that account, for it costs close to 25 or 30 cents to produce a dozen eggs in January.

W. RITCHIE.

EDITOR'S NOTE—Many poultrymen, with experience as wide as the writer of this article, will take issue with a number of the

conclusions reached by him while agreeing with his recommendations in the main. Open-front scratching-sheds made draft-proof will not be given up by those whose stock has been made vigorous and disease-resistant thereby. The heavily feathered hen and the bristle-covered hog cannot be considered together so far as their housing needs are concerned. Cost of producing winter eggs must vary with conditions, but basing the annual keep cost at eighty cents per hen, the egg cost per dozen need not be as much as given by this poultryman.

A Record

SEVEN Rose-Comb Rhode Island Reds, hatched in April, 1910, were placed in a colony coop in October. Eggs laid in November, 19; December, 76; January, 1911, 110; February, 110; March, 129; April, 137; May, 136; June, 110; July, 117; August, 120; September, 116; October, 115; November, 72; from December 1, 1910, to December 1, 1911, 1,328. We are not keeping fancy stock, just business hens.

H. E. EVARTS.

Guarding Against Gapes

WE SHALL soon hear, as we usually do about this time each season, that the gapes are prevalent among the young chicks on many farms. Perhaps the disease has been present each year in the past on these farms and their owners have come to expect it as soon as they have a nice lot of young chickens on hand. There will be a call for remedies and, it is to be hoped, some chicken-raisers may inquire whether or not there is any way of preventing the disease. When a poultry-raiser begins to seek for a way to prevent this disease, he is on the right track.

To prevent gapes, if possible, is better every time than any attempts to give relief after the chicks are affected. Gapes can be prevented, as many poultry-raisers will testify.

This disease is caused by the presence in the windpipes of the little chickens of a small red two-headed worm which attaches itself to the mucous lining of the windpipe by means of its heads. There it clings, obstructing the passage of air to and from the lungs, sapping the very life of the little chicks. These worms are gathered in an embryo state from filthy or unclean ground. Uncleanliness or damp conditions always promote the disease of gapes. Rich, moist places, such as are favorable to earthworms, are always favorable to gapeworms. Brooder chicks seldom have gapes, as they are usually kept confined in a clean run and are not permitted to run over filthy yards.

It is obvious, therefore, that cleanliness is a preventive of gapes. Keep the runs and coops free from filth and dampness. Well-drained yards, or yards located on an elevation, are always best for chicks and old fowls, too, for that matter. Feed the little chicks on clean boards rather than on the ground. During damp weather, a good preventive measure is to sprinkle air-slaked lime freely over the chickens' runs. The lime will destroy any worms or their eggs which may be present in the ground.

Yards over which any considerable number of affected chicks have run are pretty sure to be the source of gapes year after year if they continue to be used, hence, under such conditions, a clean, fresh location where gapes have never been present is desirable. The old runs will "clean" themselves in about two years if let alone, or matters may be hastened by turning under the surface soil with plow or spade in the fall and again in the following spring, and scattering lime freely over the ground. Some poultry-raisers who have only a small plot of ground for their chickens and are unable to provide fresh runs each year, apply the above process to their yards each fall whether gapes were prevalent among their little chicks or not.

What Will Cure?

As for cures and remedies for chicks affected with the gapes, there are several, all more or less successful. Some obtain good results by using a twisted horsehair doubled, inserting one end in the chick's windpipe and by a twisting motion dislodging and removing the worm, or worms. (There may be several worms in the windpipe of a chick.) The success of this treatment depends a great deal upon the skill of the operator and the size of the chick. The windpipe of a very young chick is a small and very delicate organ, and care must be used, or more harm than good may be done. This treatment can be used most effectively upon large chicks, but these will usually recover without any treatment.

Spirits of turpentine is considered a good remedy by many. A very sick chick may be given a drop of turpentine upon a breadcrumb. Remedies used as irritants are sometimes resorted to, such as burning tobacco in such a way as to let the smoke circulate among the chicks, sifting lime through a cloth onto the affected chicks until they cough freely, or burning carbolic acid so as to permit the fumes to reach the chicks which have been confined in a box or basket. The irritation set up by these remedies dislodges some of the gapeworms and induces the chicks to cough them up. One should

understand administering these remedies pretty thoroughly before undertaking to treat a large number of chicks. There is danger of suffocating the little birds.

W. F. PURDUE.

Profits from Leghorns

I RAISE Single-Comb Buff Leghorns, and as a breed to produce nice, large, white eggs and plenty of them, they are hard to beat. Probably there are others just as good, but I like the Buffs. Picking the breed should be a matter of choice. They are all good, and with proper breeding, care and feeding will produce the results expected. Aim high. It is better to aim at two hundred eggs per hen each year and get only one hundred and fifty than to go at it haphazard and get only a few now and then. Have a system and follow it out.

At this writing my pullets are doing fine. I have one pen of fifteen pullets that laid in the neighborhood of eighteen eggs apiece for the month of December. I consider this a fair average, since none of the hens have been forced. Other winter months will run as high or higher. The birds are housed in a coop four by six and four and a half feet high, having two floors. It is built on the order of a colony coop: roosting-room, dry-mash hopper, shell and grit boxes, water-fountain and dust-bath up-stairs; scratching-room, or feed-room, and nest-boxes down below.

That they are well satisfied my egg-basket testifies.

As to feeding: In the morning they receive a feed of small grain consisting of as many varieties as I can secure. I feed a small handful to each two hens in a litter of straw six or seven inches deep. It is a pleasure to watch them work from morning to night, hunting for each particle of grain and singing all the while. At night they receive all the whole grain they will clean up. Feed more corn on cold nights than you do on mild. Have plenty of fresh water, oyster-shells and grit available, and keep the dry-mash hopper full. Feed them meat food of some kind at least three times a week. Supply them with green food of some sort, such as alfalfa, sprouted oats, cabbage, beets, etc., and if your hens are healthy, free from vermin and well protected against cold drafts, there is no reason why you should not receive eggs and plenty of them.

T. E. WISTNER.

Style and fashion hang out the sheriff's red flag.

The Chick-Yard

MUCH of the health and vigor of the chicks depend on the yard in which they are kept. Chicks are very susceptible to surroundings at this stage, easily contracting dangerous diseases from what appear to be trivial causes.

The chick-yard should be sunlit, yet have plenty of shade available. The little fellows are very sensitive to the action of direct sun-rays, often succumbing to them within a very few minutes. Dampness in all forms is to be avoided, as it is productive of various ills in chicks.

Whenever a chick dies, it should be immediately removed from the yard and buried. If this is not done, it soon decomposes, attracting flies to the premises and promoting unsanitary conditions. Leaving dead chicks lying around is also a good way to teach the cats bad lessons.

If possible, the chick-yard should have grass within range of it, as the chicks soon learn to snip the tender blades, which are excellent regulators of their young digestive organs. Where the yard is small and this range is not available, the ground should be spaded up once a week, to bury the droppings and all other filth.

M. COVERDELL.

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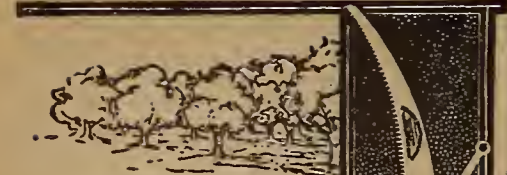
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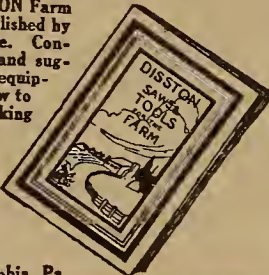
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BURLINGTON BLANKET CO. Dept. 56 Burlington, Wis.

Greiner's Sound Doctrine

Newest Fruit-Growing Points Gathered at Recent Horticultural Meetings

WORDEN-Seckle Pear—The Worden-Seckle is a good pear, but in central New York the old Seckle still takes the lead as bringing highest prices. In some years Worden-Seckle ripens a little earlier, in other years a little later than the Seckle. It keeps about as well.

Spraying Strawberries—For spraying strawberries, Professor Stewart (N. Y. Exp. Sta.) recommends Bordeaux mixture rather than the lime-sulphur mixture, as he also does for potatoes.

For Codling-Worm—Doctor Felt, New York State entomologist, states that one spraying for the first brood of the codling-moth, if thorough, using any spray mixture to which arsenate of lead, at the rate of 2 or 3 pounds to 50 gallons, has been added, will clean the codling out so thoroughly that no second brood will appear. He claims to have obtained 89 to 99 per cent. clean fruit. The spray must be directed from above into the upturned blossoms, and the whole tree covered. This within a week or ten days after the blossoms fall.

Pruning Peaches—On sandy soil, and where peach-trees do not make much growth, says Professor Hedrick, cut the wood back some every year. This is not advisable for thrifty-growing trees on stronger soils. The Kieffer pear is to be cut back quite severely every year.

No Wind-Breaks for Apples—Mr. Van Alstyne (good authority) wants no shelter belts or wind-breaks for his apple-orchards. They only increase the tendency to fungus attacks.

Age of Trees for Setting—Expert fruit-growers now select trees of medium size only for setting, and do not pick any more for extra large ones. Apple and pear trees two years old are best. Professor Hedrick would set a good one-year tree in preference to a three-year-old. He would not hesitate to set apple-trees in the fall.

Peach-Trees Not Cut to Whip—The practice of trimming a peach-tree for planting to a mere whip is going out of fashion. The strongest buds are at the top of the spurs. Select the three or four spurs wanted for the framework to leave, and cut out the rest.

Commercial Apple Varieties—With all the numerous new apple varieties introduced during the past quarter of a century, New York growers still find none better for commercial planting than Baldwin, Greening and Northern Spy. King, MacIntosh and Hubbardston may be planted locally. Rome, Dutchess and Wealthy, perhaps Wagener and Alexander, for fillers. But the impression prevails generally that the first three mentioned will be our standard apples for years to come.

Sandy Soil for Peaches—New York State fruit-growers plant peaches on all kinds of soil. Professor Blake of the New Jersey station told of peaches grown on the sandy soils of that State, and said that these soils respond wonderfully to treatment with commercial fertilizers. Better peach crops are grown on even poor sandy soils with the help of fertilizers than on stronger and richer soils.

Peach-Leaf Curl Easily Controlled—You can spray for leaf-curl of the peach with any fungicide. Lime-sulphur will do. So will Bordeaux mixture. Applications to be made before buds break, and so thoroughly that the whole tree is covered. This is given on the authority of Professor Whetzel of Cornell.

The Life of a Peach-Tree—Mr. Case (and he knows) gives the average life of a peach-orchard as twenty years. Occasionally we find orchards older than that, and still productive. But it is not now the rule.

The Shothole Borer—The shothole borer has done some damage to fruit-trees in recent years. It lays its eggs in dead wood or sick trees. Remove the source of infection. That is the easiest way to prevent its attacks. It has three broods. Caustic potash and whale-oil soap applications will kill them in a short time.

Young Growths for Transplanting—A very young plant seems to be less seriously affected by the shock of transplanting than an older one. So it is with trees. Senator Dunlap, one of the prominent Illinois fruit-growers, also says that a two-year tree, well grown, is best for planting.

Cultivation versus Sod—For level lands, clean surface tillage, with cover crops for fall and winter, is the right thing, while sod-mulch may do for hillsides, preventing wash-outs. Thus stated by Senator Dunlap, and endorsed by New York State fruit experts.

Spray or Get Out—The orchardist who does not spray, will soon go out of the apple-growing business. This also comes from Senator Dunlap. The spray calendar, however, is not a fixed formula. It has been changing, and will change again.

Mulch No Frost Remedy—It is not true that keeping the ground in orchards frozen by means of a mulch will retard the starting of buds on trees. Buds are independent of

the roots and will start when the air gets warm enough. Big Illinois apple-growers are now making use of smudge-boxes and have been very successful in preventing damage by late frosts.

Selling Orchard Run Now Condemned—The plan of selling the entire crop of apple-orchards on the trees, on what is known as "orchard run," is now being seriously denounced as mischievous. It leads to poor sorting and packing on the part of the buyer, who wants to get all the money he can for the poorer grades of fruit. No man, says Senator Dunlap again, can come into the orchard from the outside and harvest a crop of apples at less expense than the owner can do with his own help or assisted by neighbors. To do away with this system would be a great thing for horticulture.

Food for Man—That the food question is a great problem, as stated by Mrs. Dunlap, is undoubtedly true. The American housewife should learn about the balanced ration for man, rather than about botany and other things, which are soon forgotten. If the feeding of the race were looked after properly, what a difference it would make in American manhood and American womanhood! She believes that the American people should in a greater measure be vegetable and fruit eaters. Fruit-growers are just the people that should more fully appreciate their opportunities. Fruits contain the acids that the human stomach is in need of. Fruit-growers should set a good example by consuming more of their own products. The question of what to do with our fruit products would then settle itself. No child is naturally irritable. If it is cross, perhaps the father or the mother ought to be punished. The trouble is most likely in the feeding.

Garden Memoranda

Nothing better for commercial asparagus-growing than rich sandy loam. If you don't have it, plant on any soil you have, but let it be well drained. For home use, plant any way.

Our preference for making a new asparagus-bed is to set strong one-year-old plants, unless we desire to use all male plants, which are known to be better producers. In that case, we must select the plants during the bloom of the second year, marking the plants that have only male blossoms and rejecting those that bear seed-berries.

For white or "blanched" asparagus-stalks, set the plants deep, and when the cutting season approaches, form a round or flat ridge over each row, say six inches high.

A new muskmelon of bush habit is offered this year by Peter Henderson & Co. The hills can be made three feet apart each way, and the melon is said to be of superb quality. We shall see.

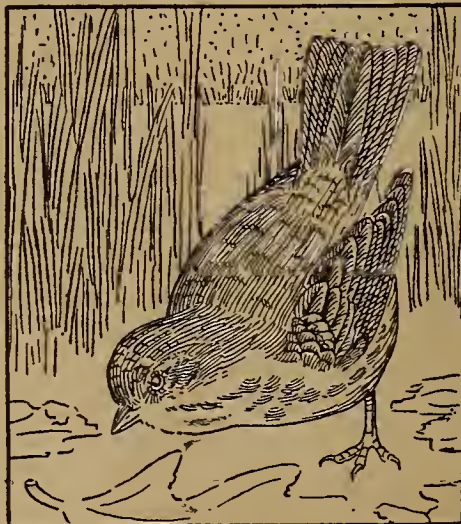
We are getting very busy now in greenhouse, or with hotbeds, starting all sorts of plants—on the bench, in flats, in flower-pots and in paper boxes.

You cannot disguise work in any sort of shape to make a lazy man like the looks of it.

The Fox-Sparrow

THE fox-sparrow arrives in early spring. The mature males are elegant specimens, easily equaling the hermit thrush, for which it is often mistaken. Their reddish-brown coats glow in the bright sunshine, and their loud and rich song attracts attention by a sweetness that seems entirely out of place in leafless March. They are migrants, and as such they are in one place only two weeks at a time. In the north they are present in the fall and in the spring.

There are two species. Each is about the other's size; but the short, thick, conical bill of these sparrows should identify the foxy



finch. Then, too, this sparrow sings while it is with us, while the hermit is silent; at least, so far as my experience goes. It only utters its alarm notes or its clucks. Look for "foxy" among the brush-rows, weedy pasture-lots, open woods and weedy roadsides.

My first specimen was observed in our city garden, where I had a good chance to study him before he took his, all too sudden, departure.

The chief value of these migrating sparrows, to the farmer, is that they come at the season when weed-seeds are very abundant. Of these seeds they destroy many tons in the aggregate in a few weeks.

H. W. WEISGERBER.

HARLEY-DAVIDSON

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Here is a chance for someone in your county to get a permanent position that will pay well. It is mighty pleasant work, and we guarantee good pay.

If you want to make more money than you do now, or if you are looking for a good job, write to us to-day.

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They are the badge of prosperity. Found around the homes of the farmers who are successful, who really do things—from the man on a ten acre truck farm to the rancher with ten thousand acres.

There are in use many times more Cyclone Fences and Gates than other makes, and no other brand gives such universal satisfaction. Merit is the reason.

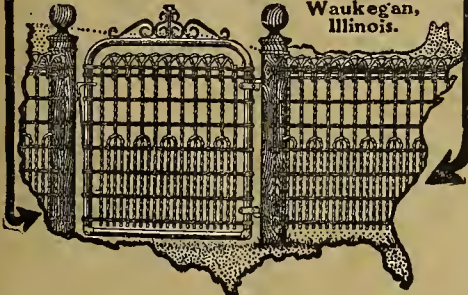
We are Fence and Gate Specialists, devoting the biggest, best equipped fence factory in the country to this work alone. We build strength and durability into our fences and gates.

Cyclone Fences are easily put up, on wooden or iron posts, and are self-adjusting to uneven ground. The fabric is made of big, strong, heavily galvanized wires.

Cyclone Farm Gates are light, strong, indestructible. Frames are high-carbon tubular steel, with brazed seams.

Read our Fence and Gate books. The books are free—write for them today.

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Many styles and heights. Our large Free Catalog contains fence information you should have.

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Fences for horses, cattle, sheep, hogs, chickens, etc.
Special low bargain prices. We pay the freight.

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Farm Notes

The Tractor Plow

By Berton Braley

WHERE once the single furrow ran, I turn the sod in ten;

Where once the blind mole's burrow ran, I serve the need of men.

I make the great fields ready for the seed that shall be sown,

And hold my pathway steady for the crops that shall be grown.

I lighten labor's dreariness, the stress on flesh and nerve,

Knowing not rest or weariness—I serve!

Lightly I do what many a team would do with sweat and strain,

That man may realize his dream of waving golden grain,

That where the crooked stick once scratched when earth was at the morn

The bounteous fields may now be thatched with wheat and oats and corn.

No creature frail of chance am I that any doubt may swerve,

Yet Lord of True Romance am I—I serve!

Before my plowshares' sabring the waste and weeds give way,

I spare the sweat and laboring that turned the farmer gray,

I toil to bring prosperity for all the world that heeds,

I sing no song of charity, but one of work and deeds,

I know not fear or bravery, I know not sloth or verve,

But glory in my slavery—I serve!

Amid the steel-mill's hammering men formed me to their will

That all the hungry clamoring of cities might be still,

That I might aid to till the soil in answer to the call,

The call for wheat and corn and oil to feed the world and all;

For mine the task laborious from which I may not swerve,

The destiny most glorious—I serve!

The Winning Farm Organization

A good way, no doubt, to show the advantages of community organizations in the rural district would be to tell of what has been accomplished in some locality where such an organization is in operation. In this way we would get the practical workings of the society.

The organization which we will mention here was started about ten years ago. Contrary to the opinions of many farmers and many city people who say that the farmers are too selfish and too pig-headed to stick together, this organization is still in existence. Practically every farmer in that community within a radius of two—yes, three—miles of the meeting-place takes an active part in it.

When the movement was first started, one old gentleman said: "It's out of the question here, because none of the neighbors can get along with each other now, especially the women." (The organization was for everyone—the farmers, their wives and their sons and daughters.) "Why," continued the old fellow earnestly, "if Christ Himself should happen to come into this neighborhood and be in need of a new coat, everyone would get to scrapping about what color it ought to be. One would want it red with little white dots, another would want it plain blue and others would want it to be of Scotch plaid."

The old fellow changed his mind, however; and now, although quite feeble, he attends the meetings, and is one of the most active members.

The preliminary work, that of getting enough neighbors interested, took considerable time; and if it had not been for the persistence of those who took the initiative, the movement would have fallen by the wayside. There are always skeptics like the old fellow mentioned; then there are others who get the idea that the promoters have some selfish motives in mind, and there are still others who are apparently satisfied with conditions as they are—they would "just as soon stay at home, anyway." In trying to effect an organization of this kind, one must have no conscience whatever, and one's back must be broad.

When those who had assumed the leadership in the movement thought that the time was ripe, they passed out the word that there would be a meeting at the little cross-roads schoolhouse, which was located in about the central part of the neighborhood. They arranged a musical program, because they knew that by so doing they would get more of the farmers together—everyone likes music. At this meeting a temporary presiding officer was appointed and arrangements were made to meet the following week for the permanent organization.

At the next meeting there were eleven who pledged themselves to do all they could

to promote the welfare of the organization, and it was evident in their earnestness that they meant business.

Each meeting-night after that, which was every two weeks, new members were added to the list, and it was not long until the little schoolhouse was not adequate. The next move was to find a place that was large enough. They did so by erecting a hall of their own.

In this community where the organization was formed the farmers are not very prosperous, owing to the fact that their soil is not overly productive. Of course, there are a number of good farms, but such are in the minority. Therefore, when it was proposed that a hall should be built, the money was not raised by subscription, as one would expect it to be in a prosperous community.

The Organization Grew Rapidly

This is the way they proceeded: One of the members, who was a carpenter, was appointed chairman of a committee to draft plans of the building; a committee was appointed to look up a desirable location that could be purchased, and another committee was appointed to look after the financial backing.

The building plans, together with estimates of materials and costs of materials, were laid before members of the organization, the location was selected and financial aid was procured. The money required to pay for the materials and ground was obtained from a bank in a near-by town; and, in addition to giving a mortgage on the building and lot, each member of the organization signed the notes that were given on long time. Although it does not take many words to tell of this, nevertheless considerable time was consumed before the final arrangements were made.

It took a very short time to put up the building after the materials were on the ground, because nearly every member came to aid in the work—women as well as men. The work was pro rated, and each member was supposed to do a certain amount of work, or pay someone else to do it for him or her, as the case might be.

Those who have never partaken in anything of a similar nature cannot imagine the good it did those people in that community to be there working together on something in which they were interested in common. If there ever was a joyful occasion, the building of that structure—a monument to their cooperative spirit—was one. The dedication of that hall was an occasion that can never be erased from the minds of those who participated.

Although there were no additional expenses other than the cost of the lot and the materials, the notes given to procure money for these were not all paid until October, 1911. This will seem strange, no doubt, yet it must be remembered that it was not a community blessed with an excess of this world's goods. Now, however, the hall is paid for and those neighbors are a proud lot of people you may be sure.

What Made the Work a Success?

The motives of the organization are to promote the social, intellectual and moral sides of farm life. The organization has cemented that neighborhood together with ties of friendship that can never be broken; it has provided a place where questions pertaining to farm subjects can be discussed; it has provided entertainment where there was very little before, and it has had a wonderfully marked influence in bettering the moral conditions.

It is the purpose of the organization to settle the petty troubles that arise among its members. There is a committee to look after all such affairs and adjust them. The sick are cared for, the laggard is spurred on, the needy assisted, and there is a neighborly feeling prevailing here which is not found in localities where the get-together spirit has not taken possession.

The germ of sociability is not dead in farm communities, it is just dormant. It springs to life instantly when brought out into the sunlight of neighborliness.

Each meeting-night the farmers in that neighborhood congregate at their hall to visit, to listen to an entertaining program and to discuss farm affairs and current events. They have something to look forward to as they go about their daily farm work, and those farmers get more true pleasure out of life than any city man can ever get out of life in town.

It is possible to form a similar organization in any farm community. It will take time and patience to do it, but it is worth while.

ISSAC L. TOTTEN.

One Mississippi Boy

THE prizes which have been offered by the United States Department of Agriculture, of course, please me, for I have won one of them. And the best part of the prize was the trip to Washington, where I was able to see many things of interest.

Yes, I raised 227 1/16 bushels of corn to the acre. I say that positively to those who are doubting the fact. But I do not deserve so much more credit than many other boys in Mississippi, for there were several who



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Genasco THE TRINIDAD-LAKE-ASPHALT Ready Roofing

is made of Nature's everlasting waterproofer—asphalt from the world-famous Trinidad Lake. Its valuable natural oils do not dry out like the so-called asphalts made by man. Natural asphalt gives Genasco life and resistance.

The surface of Genasco is handsome—mineral or smooth; and it is lastingly waterproof through and through.

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One Price—One Quality—Now 50,000 best Columbus Buggies ever made—exactly alike—one quality—one price—offered this year direct at only 81 factory profit on each to us. We've reorganized whole factory to make this. 5 weeks Free Trial—2 year guarantee. Satisfaction or money back. Write. Big Facts Portfolio Free.

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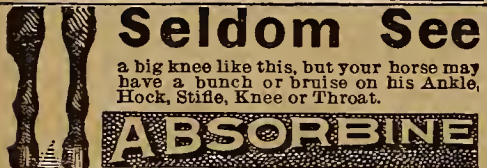
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Seldom See

a big knee like this, but your horse may have a bunch or bruise on his Ankle, Hock, Stifle, Knee or Throat.

ABSORBINE

Before After will clean them off without laying the horse up. No blister, no hair gone. \$2.00 per bottle delivered. Describe your case for special instructions and Book 8 E free.

ABSORBINE, JR., liniment for mankind. Removes Painful Swellings, Enlarged Glands, Gout, Wens, Bruises, Varicose Veins, Varicosities, Old Sores, Allays Pain. Price \$1 and \$2 a bottle at druggists or delivered. Manufactured only by W. F. YOUNG, P. D. F., 23 Temple St., Springfield, Mass.

WE WOULD LIKE to arrange with some party owning a small farm, to raise BELGIAN HARES on a liberal scale. Address: Manager Pope, 210 West 56th St., New York.

WANTED: Men to become independent farmers in Eastern North Carolina, The "Nation's Garden Spot." Leads for large profits on small capital. Write for booklet. C. VAN LEUVEN, 516 Southern Bldg., Wilmington, N. C.

raised high-yielding corn. One boy gathered 225 bushels, several went as high as 200 bushels, and there were many in the 100-bushel class.

The land on which I raised my corn is just ordinary land. Perhaps it might be called poor land. It lies in the piney-woods country. The soil is rather shallow, but underneath it is a good clay subsoil. But if I give my record just as I reported it, all these facts will be stated. Here is my report:

The amount of land planted and cultivated was one acre.

The soil was dark upland, twelve inches deep.

The subsoil was a red clay.

Corn grew on the land last year.

The land had been farmed eight years.

The land was first broken in December, 1910, and again in March, 1911.

Condition of land at time of planting was good.

Was planted April 15th.

Variety of seed planted, "New Era."

Width of rows, three feet.

Plants were twelve inches apart in the drill, usually two stalks to the hill.

The only fertilizer used was eleven loads of barn-yard manure.

The stand of corn was splendid.

It was given surface cultivation once each week until in silk.

Average yield of land around this plot, twenty-eight bushels.

Have carefully selected in the field for next year's crop.

The cost of this acre of corn is estimated as follows:

Rent of land	.....	\$5.00
Preparation of seed-bed	.....	2.00
Cost of seed	.....	.25
Cost of planting	.....	.50
Cost of manure	.....	11.00
Cost of distributing	.....	8.00
Cost of cultivation	.....	2.50
Cost of gathering	.....	2.00
Total	.....	\$31.25

Average cost per bushel, 14 cents.

This corn was well worth 75 cents per bushel, or \$170.25. Deducting the cost of production, there is left \$139 as profit for the acre.

I think this is a pretty fair profit on land that would sell for \$25 to \$30 per acre. There are ten thousand of us boys in the work this next year, so the Washington men say. I expect to hear of some big work being done. Already reports would indicate that this season will be even a greater one than last.

BENNIE BEESON.

Useful Bacteria

BEFORE proceeding farther in our discussion of the changes which bacteria bring about, it will be well to get clearly in mind the kinds of bacteria that are useful to man, particularly to the farmer.

Bacteria and Milk—Bacteria are responsible for the souring of milk, the ripening of cream for butter-making and in part for the ripening of cheese.

Bacteria and Decay—Decay is the means used by nature to get rid of all refuse. Not only are the waste materials eliminated, but are converted into food for growing plants.

Many of the most important steps in this process are brought about by bacteria in the soil. For example, they change the barn-yard manure so that it can be used as a food by the crops.

Bacteria and Other Fertilizers—Many of the commercial and other fertilizers used are of no value to the crop grown until they have been changed and modified by the bacteria in the soil.

Bacteria and Nitrogen—Bacteria living free in the soil or on the roots of leguminous plants, such as peas and clover, constantly enrich the soil by securing plant-food in the form of nitrogen from the air and putting it into the soil in such form that it is eventually used by the crops. But for these bacteria, most soils would quickly become sterile and refuse to support plants.

Bacteria and Foods—Vinegar is produced by bacteria, cider and wine by the closely related molds; silage, dill pickles and similar fermented foods are preserved by the activity of bacteria that form acids that are responsible for the souring, and thereby prevent the growth of decay-producing forms.

R. E. BUCHANAN.

of the drag. So we put on three and sometimes four horses, as we wished not only to do satisfactory work, but to have the best road leading out of the town. We commenced dragging about the 15th of January, 1911, and quit November 7, 1911. During this time we dragged twenty times, receiving \$60, or \$6 per mile. The work could probably be done for a year at a cost of \$8 per mile. Now the committee's work has stopped for lack of funds, but the roads were left with a hard surface from twelve to eighteen inches deep. They are shedding the winter rains.

Although the committee may think their work a failure and their funds wasted, yet, as they had hoped, the work is being taken up by the roadmasters, and all of the principal roads in the country are being dragged. They have also accomplished a great deal in teaching the people to appreciate good roads, getting them so used to having them that they will not now do without them at any cost. Farmers have also found that to have a good road it is not necessary to macadamize it. Put a King drag on it with a good team hitched to it, and a man who knows how on top of the drag, and a road that is as good as a macadamized one, and one more pleasant to ride over, will be the result.

Beside initiating good roads, the Commercial Club, composed mostly of young men, has awakened a town which has been asleep for forty years, and made it one of the most attractive and booming towns in the State.

WM. A. FAULK.

It's Fair, Isn't It?

AN OHIO reader takes exception to what we said in talking about the mail-order houses in our issue of February 3d. His statements are so fairly expressed that the entire letter is herewith printed. He says:

I do not see much wrong about the mail-order people making a leader of sugar, or anything else for that matter. Any merchant can meet any price or proposition which the mail-order people make, on the same terms and in the same quantity. Nor do I see anything wrong about your putting in their ads., if you believe it is a benefit to the farmer to deal with them. Nor do I believe the retail merchant to be so incompetent as to fail to grasp the situation sufficiently to be able to meet it.

You jump to the conclusion that this grocer is asking the farmer to be "loyal" to him when he says the farmer should be educated to deal at home. I think it is as much, or more, to the interest of the farmer and that of his neighbor to deal with his home merchant as it is to the merchant himself.

The merchant will probably live even if he has to go into other business, but if his business is cut down one half, he must be satisfied with less income and he buys less, both of goods and produce to sell, as it cuts the population, and the consumption of the town and of the stuff which he buys for his own use. And as he does less business, he must make a larger profit, especially if he extends credit. He does this, not because he gets a big price, but because he extends credit and carries a man for six months at a time. Besides, very often, he delivers goods in the country several miles. He naturally must get a larger profit than the mail-order house who does none of these things.



Winter's last touch

Making Good Roads

FIVE years ago the people of this Missouri community supposed the automobile would never come into prominence here, because the roads were so bad.

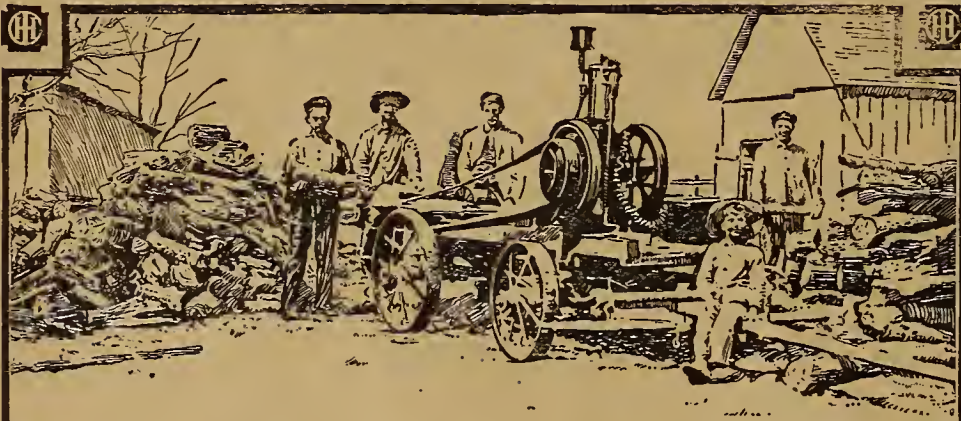
But here and there a farmer found pleasure in having a good road along his farm, and realized that as the road became better his farm would increase in value. So he applied the drag whenever he could spare an hour for that purpose. Often as I have dragged the road which passes my home, I have gone on past a neighbor's place. When I passed, he usually accosted me and said dragging was just what the road needed, and he rarely failed to give me instructions as to how the work should be done. He had learned how, you know, by observation!

Well, this patch-work went on till the beginning of 1911. Then the Commercial Club of my home town took it up, hoping to bring the town into prominence and increase business. Then also when they wished to take a trip out into the country, that trip would be a pleasure instead of a dread.

Steadily the automobiles increased in number, and at present there are more than fifty. The owners of these machines, as well as other business men of the town, were appealed to by the Commercial Club, and \$400 was raised for good roads.

A committee was then chosen to carry on the work. They decided to have six of the roads leading out of town dragged for a distance of ten miles. So six King drags were made at a cost of \$27. They were mostly of cypress, and although they were light, they did effective work when properly used.

After these were made, the committee advertised for a farmer on each route to drag it. In due time men were hired. My brother and I took the route on which we live. We were supposed to use two horses on the drag and to drag whenever the road needed it, dragging the ten miles in one day for \$3. We found out on the first trip that two good horses could not do the work satisfactorily. To do effective work, it was often necessary to stand on the front edge



Let an I H C Engine Save You Hours of Drudgery

WHY should you waste hours of valuable time sawing wood, pumping water, shelling corn, or turning a grindstone by hand when a few cents' worth of gasoline in an I H C engine will do it all and let you use your time for important, profitable work?

An I H C gasoline engine will furnish cheap, steady, dependable power for running the pump, woodsaw, feed grinder, corn sheller, grindstone, emery wheel, cream separator, churn, washing machine, wringer, etc. It furnishes power to sharpen plows and disks, light the farm buildings, and do many other kinds of work.

I H C Gasoline Engines

have a well-deserved reputation for reliability and durability. They are simple. They are economical of fuel. From every point of view an I H C engine is the most satisfactory engine you could buy.

They are made in all styles, vertical and horizontal, portable and stationary, air and water-cooled, in sizes from 1 to 50-H. P., to operate on gas, gasoline, naphtha, kerosene, distillate, or alcohol. Gasoline and kerosene tractors, 12 to 45-H. P. Sawing, pumping, spraying, grinding outfits, etc.

The I H C local dealer will show you the engine and explain its good points. For catalogues and full information, see him, or write

International Harvester Company of America (Incorporated)

Chicago

I H C Service Bureau

USA

The purpose of this Bureau is to furnish, free of charge to all, the best information obtainable on better farming. If you have any worthy questions concerning soils, crops, land drainage, irrigation, fertilizer, etc., make your inquiries specific and send them to I H C Service Bureau, Harvester Building, Chicago, U.S.A.





The FARMERS' LOBBY.

The Question of a President

What Subscribers to FARM AND FIRESIDE Have Had to Say. The Farmers of the United States Speak Strongly for Roosevelt

By Judson C. Welliver

WHAT about politics? Don't ask me. You FARM AND FIRESIDE readers have been doing the guessing, and it merely happens that the editor has turned over to me the privilege of seeing the first statistics on the guess. And, believe it or not, you certainly are some guessers.

I recollect, back in 1896, I saw a straw-vote of my own State's sentiment, for every county. I projected that test over the State, in proper proportion, and figured McKinley over 60,000 plurality. Being younger and less conservative than now, I bet all I could scrape or borrow on McKinley getting over 40,000. I won.

Now, the editor has taken a vote of subscribers—about 40,000 of them—and sent the results to me to figure out what they mean. I'm doing it in this letter; and at the outset I want to say don't bet; certainly not on elections; 'specially not this year. If I were to guess, it would be that for many elections to come folks will look back to 1912 and discourse about the marvels of this year; how the expected didn't happen, and the unexpected did; how the wise ones were fooled and the fools panned out the wisdom, and so on.

The United States is Progressive

The plain people of this country, Democrats and Republicans alike, are progressive by a huge majority. The figures of this poll show it. The FARM AND FIRESIDE poll is probably the best, most representative and reliable ever taken at this stage of a campaign. It doesn't pretend to speak for anybody but farmers. It shows that among them Roosevelt is their first choice, by almost as many votes as all other candidates put together—Republicans, Democrats and Socialists. For Roosevelt gets 16,903 first-choice votes, out of 36,602 ballots. Taft runs second, but gets only a little more than one vote to every four for Roosevelt. Bryan comes third, with just a shade fewer than Taft polls. The first choice polled for all the candidates who received votes were:

Roosevelt	16,903
Taft	4,228
Bryan	4,173
La Follette	2,596
Wilson	2,715
Harmon	1,708
Debs	1,507
Clark	1,402
Hughes	501
Underwood	432
Cummins	265
Carter H. Harrison	118
Knox	54

These names only were on the ballot sent out.

Keeping in mind now that these votes represent every State in the Union, we are compelled to realize right at the outset that the total vote cast for Bryan, Clark, Harmon, La Follette, Wilson and Taft, aggregating 16,822, was a trifle less than Mr. Roosevelt alone received!

Whether you are for Taft or Roosevelt, for Harmon or Wilson, for Calhoun or Jackson, for Hamilton or Jefferson, for Federal or State sovereignty; whether you are a Christian or a heathen, blond or brunette, Socialist or individualist—you can't contemplate those figures without getting a distinct impression that the people have a distinct leaning in the general direction of Oyster Bay.

This is not the only remarkable thing these figures show. Eugene V. Debs, Socialist, has more votes than Champ Clark, and almost as many as Judson Harmon. In a large city, this would not be surprising. But it represents actual sentiment of real farmers. Nobody was asked to vote in this poll except subscribers.

My explanation of the Debs vote is that the folks think that way about it.

Some Men are Last-Ditchers

In studying the second and third choices indicated on the ballots, I find that Debs, Bryan, Taft and Roosevelt are all particularly strong in the first-choice column. That is, these men are less likely to have any second choice than Wilson, or La Follette, or Clark, or Harmon men. Roosevelt, while getting 16,903 first-choice votes, got only 4,733 second-choice and 1,480 third-choice votes. But La Follette, while getting only 2,596 first-choice votes, got 5,030 for second choice and almost as many for third. Debs got 1,507 first-choice votes and only 304 second choice; on the other hand,

Champ Clark received 1,402 first-choice votes and a few over 2,200 second-choice votes.

It is a common saying that the man who admits a second choice isn't really for his first choice. My own observation of politics goes a long way to justify this conclusion. The followers of Bryan, Debs and Roosevelt are last-ditchers; they expect to stay to the finish.

Governor Wilson is the one important candidate whose strength seems to be based on intellectual conviction rather than on personal devotion, as shown by the fact that he received almost equal numbers of first, second and third choice votes—2,715, 2,654 and 2,724, respectively. No other candidate balanced up the three columns so evenly, and, just as an amateur psychologist with some experience in such tests, I think this means that Wilson will be acceptable to a larger proportion of people who do not name him as first choice, than any other man in the Democratic list, and perhaps than any other man of either party.

The most remarkable thing is that Roosevelt leads every other candidate, in every section of the country. In the southern group of States, composed of Maryland, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Arkansas, Tennessee and Kentucky, Roosevelt got 1,963 on first choice, and Bryan, 988; Clark, 374; Harmon, 377; Wilson, 825, and Taft, 683. The figures from southern farmers are particularly interesting, because, with the exception of Roosevelt and Taft, no Republican received any significant support in that section. Roosevelt got three times as many as Taft. But this does not mean three times the political strength; for federal office-holders who control the Republican party in the South do not live on rural routes. The southern farmers, among whom FARM AND FIRESIDE circulates, are three to one for Roosevelt as against Taft; but with the office-holders solid for Taft, nothing short of a great popular uprising will take many southern delegates from him.

The Standpoint of New England

Another interesting section under the microscope is New England. Here again Roosevelt leads Taft among farmers by a little more than two to one, the figures being:

Roosevelt	728	Taft	354	Harmon	348
Wilson	119	Clark	65	Bryan	88
Debs	27	La Follette	49	Underwood	37
Hughes	71	Cummins	38		

The vote shows Roosevelt a strong favorite in the Middle Western States, Minnesota, the Dakotas, Iowa, Nebraska, Missouri and Kansas. Bryan is the favorite Democrat in this section. As this group of States and Iowa, Indiana, Illinois, Michigan and Wisconsin are likely to decide the election, these figures are vital. Here are the first, second and third choice votes for the Mid-Western group:

	First Choice	Second Choice	Third Choice
Roosevelt	3,362	747	164
Bryan	668	367	284
Taft	547	921	399
Wilson	248	302	509
La Follette	541	1,234	754
Harmon	671	134	248
Clark	421	322	287
Cummins	104	307	465
Hughes	251	120	257
Underwood	..	..	45
Debs	175	42	108

Not less instructive is the table showing the result for the central group. In this

central group are Ohio, Indiana, Illinois, Michigan and Wisconsin.

	First Choice	Second Choice	Third Choice
Roosevelt	7,175	1,974	441
Bryan	1,452	831	645
Taft	1,493	2,332	1,215
Wilson	718	884	1,097
La Follette	1,339	2,121	2,463
Harmon	1,146	713	609
Clark	324	853	637
Cummins	67	185	501
Hughes	315	493	985
Underwood	344	78	123
Debs	374	176	342

I suppose these are the most representative figures of the poll, because they cover the territory in which FARM AND FIRESIDE has the preponderating share of its circulation. This fact

Some Conclusions

1. Roosevelt is very much the strongest man, of any party, with the mass of people.
2. Bryan is very much the strongest with the rank and file of Democracy in the rural districts, and Wilson in the cities.
3. If the Bryan and Wilson forces unite as the FARM AND FIRESIDE pole indicates they may, they will easily dominate the Democratic convention and have very close to the two thirds required to nominate.
4. Harmon is much stronger with the farmers in all sections than has been generally believed.
5. Wilson has more second and third choice support, in proportion, than any other Democrat.
6. Roosevelt would get the Republican nomination away from Taft with a whoop if the business were left to a nation-wide Republican primary.

throws the calculation a trifle out of joint because FARM AND FIRESIDE has more circulation in Ohio than in any other State; and this fact is responsible for an abnormally large vote for Governor Harmon. But the figures seem to be remarkably representative of general sentiment. Bryan is the favorite Democrat, with Harmon a close second, with 2,120 and 1,717 respectively. Wilson is a poor third among the Democrats, with 966 in these two groups of States.

I want to confess that when I observed that Harmon was so much stronger in this territory than Wilson, it was a distinct surprise. Yet when I added up the first, second and third choice strength of both these candidates in the two groups, I found that Wilson actually led Harmon. He figured up 3,758 against 3,521 for Harmon. That is the dominating feature about the Wilson candidacy in almost every State; there seems to be a decided tendency toward him among the people who support other men for first choice as "favorite sons." Champ Clark has much of this same kind of strength, but by no means as much as Wilson. The Bryan first-choice people seem to prefer Wilson as second choice, which is suggestive of important things that may happen at the national convention.

My list of doubtful States is Maine, Massachusetts, New York, Ohio, Indiana, Maryland, Kentucky, Missouri, Nebraska and Colorado. As a list of doubtful States, this may not agree with your guess, but I think every one of them will be doubtful on the morning after election day. So I shall stand by my little list and present its showing of the first-choice strength of the candidate:

Roosevelt, 7,703; Wilson, 1,079; Taft, 2,043; Debs, 528; Bryan, 2,414; Clark, 581; Harmon, 1,235; Hughes, 382; La Follette, 969; Underwood, 86; Cummins, 117.

Bryan is Popular

It is certainly interesting to note that Bryan is favored by more people than Wilson and Harmon together. Wilson is once more nosed out by Harmon, and again the return seems rather surprising on this point. The fact seems to be that Governor Harmon is a good deal stronger with the masses of the plain people than some others had supposed him to be. But once more, adding the first, second and third choices, Wilson has a snug lead over the Ohio man.

But for the doubtful States, as for every other group, the big, significant fact beyond all others is that Theodore Roosevelt turns up with nearly as many first-choice farmer votes as all other candidates, Republicans and Democrats together, in every part of the country, north and south, east and west, Republican and Democratic. The conclusion is, no matter what your choice or mine may be, that Roosevelt is the overwhelming

choice of all the people for President. We might as well deny the existence of the force of gravity as to argue against a conclusion so plain as the one these figures enforce.

The Scripps-McRae newspapers, coöperating with a number of others, making seventy in all, have made careful test polls of all the important cities. This newspaper poll is as strictly a test of city sentiment as FARM AND FIRESIDE's of rural opinion.

Taft a Strong Second

The figures show that among the Republican candidates Roosevelt has a bigger lead in the country than in the cities, though he is the first choice of the city voters by almost two to one over Taft; who is a strong second. Among the Democrats, Wilson polls nearly twice as many city votes as Bryan, and considerably more than twice as many as Harmon or Clark. Let me set down here a showing of the results of the two polls side by side:

	City Poll	Country Poll
Roosevelt	30,454	16,903
Taft	15,896	4,228
La Follette	5,895	2,596
Hughes	1,448	501
Cummins	736	265
Wilson	10,820	2,715
Bryan	5,820	4,175
Harmon	4,631	1,708
Clark	4,207	1,402
Underwood	2,921	432

Note that Roosevelt is twice as strong as Taft in the cities, and four times as strong in the country. *Reciprocity?*

Wilson is almost twice as strong as Bryan, and more than twice as strong as Harmon in the cities; but in the country Bryan is fifty per cent. stronger than Wilson, and Harmon makes a better showing than in the city.

Our poll seems to justify these conclusions:

1. Roosevelt is very much the strongest man, of any party, with the mass of people.
2. Bryan is very much the strongest with the rank and file of Democracy in the rural districts, and Wilson in the cities.
3. If the Bryan and Wilson forces unite as the FARM AND FIRESIDE poll indicates they may, they will easily dominate the Democratic convention and have very close to the two thirds required to nominate.
4. Harmon is much stronger with the farmers in all sections than has been generally believed.
5. Wilson has more second and third choice support, in proportion, than any other Democrat.
6. Roosevelt would get the Republican nomination away from Taft with a whoop if the business were left to a nation-wide Republican primary.

And Now

In Thinking Over This Matter, are Not Some of These Statements Important?

The tremendous preponderance in favor of Roosevelt is not the only remarkable thing that these figures show.

* * *

It is a common saying among politicians that the man who admits a second choice, isn't really for his first choice.

* * *

The only explanation I can give of the fact that Debs gets more votes than Clark and practically as many as Harmon, is that the folks thought that way about it.

* * *

Roosevelt has a bigger lead in the country than in the cities, though he is the first choice of the city voters by almost two to one over Taft, who is a strong second.

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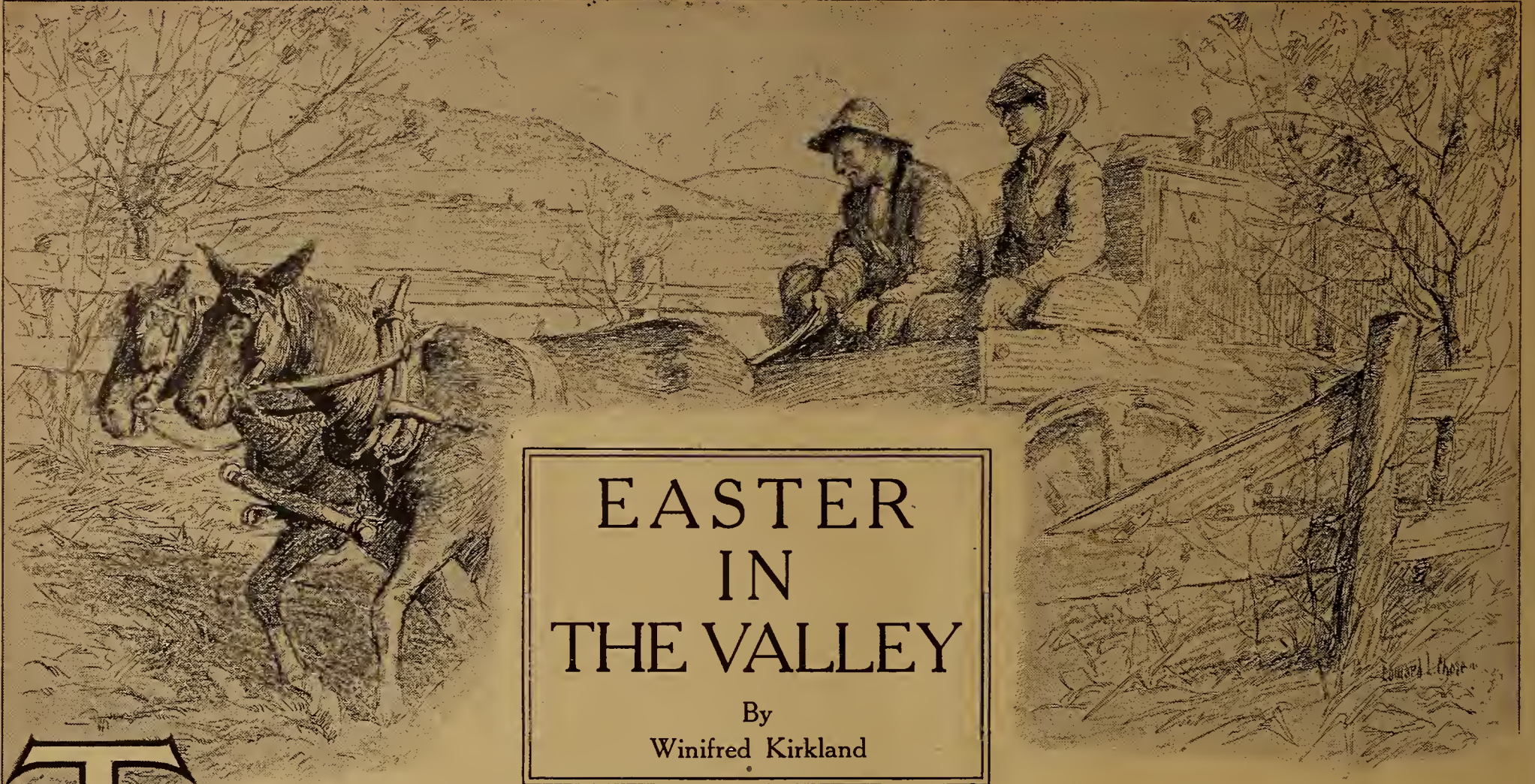
The plain people of this country are progressive by a huge majority. The figures of this poll show it. That is true of the Democratic and Republican masses alike; true of the farmers and the town-dwellers.

* * *

The people who favor Bryan as first choice show a distinct tendency also to prefer Wilson as second choice, which is certainly suggestive of some very important things that may happen at the national convention.

* * *

The southern farmers are three to one for Roosevelt as against Taft; but the office-holders are approximately solid for Taft, and nothing short of the great popular uprising will take any considerable proportion of the southern delegates from him.



EASTER IN THE VALLEY

By
Winifred Kirkland

THE valley stretched brown, sodden, bare of leaf, under the afternoon sun. On either side of its brown meadows rolled a line of blue mountains. Through the middle of the valley twisted sinuously the shining thread of Brooke River, and on the branches of the low willows that skirted its banks hung a mist of green. Above all arched a sky of tenderest April blue, across which sailed slow clouds, soft and far and lazy as those of midsummer. The farm buildings, unsoftened by foliage and surrounding green fields, stood out bare and ugly in shape and tone. The river road was an expanse of mud broken by clear brown puddles.

Splashing and tugging its way through the mud came a team. Two animals, a horse and a mule, still shaggy with the winter's growth, their shabby harness supplemented with rope, were pulling a heavy spring wagon. Scantily concealed by scraps of rag carpet, the load presented a miscellaneous assortment of household furniture.

On the board seat in front sat two persons, a man and a woman. The woman wore a rusty black jacket tight at the armholes, while about her shapeless hat was tightly bound a heavy brown veil, drawn down in a band above her eyes and tied in a little knot under her chin, leaving her face bare. It was a pale, large-featured face, and heavy, but the tenseness of her gray eyes counteracted this heaviness. Her mouth was patient and tired and stern. Hair and temples concealed, it was hard to guess her age. She sat very erect and gazed straight ahead of her. The man beside her looked much younger, but his face had a resemblance to hers evident but hard to define. His coat, too, was shabby, but it sat upon him jauntily. His hat was pushed back from a brow about which clustered boyish blond curls. His shoulders drooped forward a little, but more as if from indolence than from age. His eyes at first seemed frank and pleasant, but on second glance they puzzled one. He smiled to himself now and then as if he were thinking, and the smile was subtle—apologetic, fatuous, and at the same time keenly quizzical, as if he were habitually amused both at himself and other people.

At first you might have thought the silence between the two simply due to the fact that they were too tired to talk, utterly fagged with moving, but the longer you had watched, the more you would have been convinced that it was premeditated, that it meant something. Now and then the man glanced covertly at the woman beside him, and then his smile deepened irresistibly; it appeared to amuse him mightily to see her sitting there so grim and straight while they were bounced through mire and puddle by their ill-assorted steeds, the freight in the rear bumping against the back of the seat.

Dwellers along the river road moved to their front windows to look at the mud-spattered wagon and its occupants.

"The new folks that are fixing up Old Man Kerrigan's place," they said. "They come from 'over yonder.'" "Over yonder" in the valley meant the other side of the mountains southward, a region of richer fields and fuller harvests and roomier houses. "Over yonder" the two in the spring wagon were no strangers, were known everywhere as the Henderson twins, Bret and Marcia, who all their lives had lived at the beautiful old Henderson farm, stretching its broad acres over the meadows and low hills at the foot of the mountains; but yet it was no longer the Henderson farm, for Bret and Marcia were moving into the valley, and they were the last of their name.

Years ago Bret had married a slip of a girl and brought her home to live. At first she had been afraid

Marcia would be jealous of her, but she had thought she could forgive her being jealous about Bret. But what she found in Marcia's great eyes was only a silent pity, and that she could not forgive, until afterward she understood. She was still very young when they laid her one June day in the little burial plot on the hillside

his rich voice, as he chatted companionably to them, ringing out on the stillness. Marcia took a key from her pocket, unlocked the door and entered. The hall was piled with furniture. A rat scurried across an upper floor. The damp chill of an unused house caught her at the throat as she drew breath. Oh, for the welcoming hall of the Henderson farm-house, theirs for generations, the simple, sweet old rooms, always unchanged, living and comforting as friends because of the memories that lived and moved about them.

Marcia with set lips fought with a window to get it open, then passed into the kitchen and took off the lids of the cold stove they had put up the day before. She tugged open the back door—all the doors resisted her intrusion with groans and shrieking of rusty hinges. They had brought wood and left it there in the shed, but there was no kindling. Marcia got an ax and set to work swinging the implement with a muscular practised arm. The sound echoed out in the barn, and by and by brought Bret to the shed door.

"Here, here, let me," he said jovially, removing his hat from his curly crop of hair and holding out his hand.

Marcia handed over the ax with a brief "All right" and a look of slight surprise. She never asked Bret to help her, but she always allowed him when he offered. She gathered up an armful of wood and, still without having removed her hat and veil, set to work building the fire.

The heat pierced the chill dampness gratefully. Presently there was a savory odor of bacon and coffee. The table by the stove was spread soon with a pink cloth, various eatables found their way out of a carefully packed clothes-basket. Marcia Henderson knew how to pack and how to provide; a versatile capability came easily to her. When Bret, leaving off his whistling, came in flushed and hungry as a boy, he found Marcia in her usual ample white apron, seated at a cozily set table, quite as if they had been established in their new home for a month.

"Marcia," said Bret, seating himself, "you do beat all! You'd make it feel like home if we had to camp out in a cigar-box!"

The tenseness deepened at Marcia's temples and lips. Even if the plant is sturdy, does it not hurt to be torn up from the comforting familiar soil and haled off, all the poor roots wrenched and naked? Marcia's strong hands were icy as they poured Bret's coffee.

"Cheer up," he said to her, smiling into her set face with that touch of quizzical sympathy that endeared him even in his most trying moods. "Perhaps it won't be so bad. Perhaps you'll like it better than the old place. Wait till you get some flowers started, and—"

"Flowers? Where?"

"Why, everywhere. Can't you start flowers anywhere? All you have to do is to look at 'em, and up they jump."

"I didn't bring any slips or seeds."

"Why not?" His face formed a round O of surprise. "You know you can't get along without your flowers."

"I don't suppose I can. All the same, I didn't bring any, and I don't intend to get any."

"You'd better, don't you think?"

"Flowers—here!" Marcia glanced out of the unshaded window across the sodden, unkempt yard and fields bare and ugly in the twilight.

"You aren't feeling right well to-night, are you, Marcia?"



back of Marcia's window. They buried the old people there, too, and Bret's little six-year-old son, and Marcia made the little graveyard all jocund with flowers as the slow years passed, and she lived on and on alone with Bret. There were neither graves nor flowers where they were driving now.

At last Bret turned off sharply to the left into a narrow lane, untraveled, its hummocky sods cut only by the ruts made on their visits of the past few days, for this was their last load. At the end of the lane stood their new home, gaunt, dilapidated, lonely. It had a basement story plastered white; the two stories above were frame, unpainted and sodden with the spring rains. A sagging porch extended across the front, supported on straight, narrow pillar's like stilts. A rickety stair led up to the front door, and a grape-vine, very old and much twisted, grew up over railing and pillars.

Bret reined in his animals, who stood with dejected heads. He jumped out, and Marcia, on the other side, sprang to the ground easily as a man. Like a man, too, she helped Bret carry up their possessions to the porch. Then Bret led the two beasts to the tumble-down barn,

accepted Marcia as he might have accepted a great tree

that shaded and protected him; if the tree had suddenly opened lips and told him what it thought of him, he would not have been more surprised than if Marcia had done so.

"Better get to bed early," he said to Marcia, as she pushed back her chair and began clearing away. "I'm played out."

"It leaks up-stairs," she answered, "and my bed's soaking wet. It didn't leak in your room. You can get to bed whenever you want to. At least one spot is dry."

"That's good. Maybe we could carry in the parlor sofa and fix up a bed."

Marcia set down the coffee-pot and turned suddenly. "For which of us?" she asked.

"Why, for you," he answered surprised, then seeing a look on Marcia's face he had never seen before, a steely gleam in her usually quiet eyes, he stammered, wholly astonished, "Why, for me, if you want, Marcia. I can sleep down here. You can have my bed. I never thought of that. That'll be all right."

"Of course, you never thought of it," answered Marcia, turning again to her dish-washing.

Bret felt that he had done a week of unaccustomed hard work, and done it very good-naturedly, too, and he was tired to-night, and it was pretty hard that Marcia should be cross. "I miss the old place, too, Sis," he said to her.

"You!"

"Yes, I."

"Why did you let it go then?"

"I didn't mean to. I couldn't help it."

"That's what you've always said ever since I can remember. When you burned up my doll-house, you said you couldn't help it."

"And I couldn't either."

"And now that you've taken away my home from me you say you couldn't help it," Marcia went on in the same slow voice.

"I never took it away from you. I never did you any harm, Marcia, and you know it. What did I ever do that was bad?"

"You never did anything that was good either, and as for bad, no, you never did anything bad, that's true, but that's because I wouldn't let you. I set my teeth to keep you from it if it killed me. And it has pretty nearly killed me. If I'd ever let go of you!"

Bret laughed suddenly, an unpleasant laugh.

"And now I can't forgive you, Bret. I can't! I can't! It seems as if I was tied to the old place with strings. They were all still there, for me. I could see Mother sitting in the old chintz rocker by the kitchen window. And Ray's little bed was made up as if he was going to sleep there any night. And you've taken it all, and the graves even, and the flowers I planted on them."

She turned on him, Marcia, the still, the patient, her hands coarsened with man's work were clenched. "I had nothing left," she said in a low voice, "but you and the old place. You've taken that from me, and, .Bret Henderson, I hate you!"

Those were the strangest two weeks of all Marcia Henderson's patient, selfless life. She worked incessantly indoors and out. She hated every inch of the new house—the cramped, musty rooms, the moldy cellar, the sagging porch, the view of brown spring landscape stretching from every narrow window. Yet she scrubbed, scoured, tried the furniture this way and that, even papered and painted the hall. The tangled grass-plot in front of the house she raked clean. She helped Bret to patch up the barn and stables, for she could drive a nail with surer stroke than he.

Curtains softened the staring windows, whose small panes twinkled bright in the sun when the sullen moist weather of that April brightened a bit. "But there'll never be any flowers," said Marcia to herself, regarding the windows. "I couldn't stand flowers now."

The green mist of the willows was deepening into tender green spikes. Along the edge of the lane green things were tugging and pushing up. Always before, that insistent, indomitable life of the springtime had stirred Marcia's heart to joy, however sad and weary she had been. She was a woman to whom the great out of doors and all green growing things talked. She had a way of touching a little pale plant as if it had been a sick child, and she never thought of plucking the first violets. When at last she had searched and found them, she only knelt down and bowed her head until she could feel them brush her cheek.

But this year the reawakening of spring only hurt her, as if it promised the constant renewal of heavy, hopeless years. It is so hard to learn to live with dead love, and Marcia was not used to hating. This benumbed, bitter woman who wore Marcia's clothes and spoke with her voice and went about Marcia's tasks with such ceaseless energy, was this herself, and was this the way she was going to feel now, always?

She stood one day looking out over the valley, across the half-hidden river to the mountains, the other side of which was "over yonder." One reddened hand was twisted tensely into the grape-vine branches. "I wonder what ails me, anyway?" she said to herself. "I never was away from home more than a day before. Perhaps that's all it is. Guess I'm just homesick, only homesick, that's all," and she laughed to herself hysterically.

Of Bret during those two weeks? Externally he lived on with Marcia much as usual. After that one outburst, Marcia



had gone on attending to his wants in her usual capable, comfortable fashion. She was merely a little more silent than of old, although at times she talked briskly enough about ways and means for improving the neglected little farm place. At first after that evening Bret was much quieter too, seeming sobered and more like the man of forty he really was than like the light-hearted lad of twenty he usually appeared. But it was as if a veil had fallen over the frankness of his eyes. After the first few days, Bret's spirits rallied; never had he been merrier, more charming, never so interested in the plans for spring and summer work that Marcia, far better farmer than he, set forth. He was full of enthusiasm, energy. Never before had he been so tender of Marcia, setting himself buoyantly to cheer her gloom with all manner of absurd little jokes and capers of his own, until sometimes the ghost of a smile would hover on her set lips. After all, she thought, Bret would always be a boy, would never grow up; for herself, she had been grown up ever since she could remember, and now, now she was an old woman, at forty. Then there would surge over her again the intolerable pain of this hopeless exile in the valley; the longing for the old sweet places, irrevocably removed from her, until she felt physically sick and dizzy; and it was Bret, Bret, who had done it; all the weariness and hunger and disappointment of the life she looked back upon were due to Bret; sometimes she wished she might never see him again, yet still, with hands that did not forget their old habits of love, she polished Bret's shirt fronts to that shine in which his eye delighted.

If Marcia had not been so benumbed, so absorbed in her own misery, she might have recognized the ominousness of Bret's gaiety, of his enthusiasm for farming, of his unaccustomed tenderness toward herself. For Bret had made a resolution. "If I'd ever let go," Marcia had said, and Bret had laughed; he laughed again whenever he thought of it, and no more pleasantly than at first. Perhaps to Bret as well as to Marcia the fitting from the old home, with all its gentle restraints, almost as of a protecting personality, had done injury. Certainly all sorts of vague desires had been quickened to activity in Bret's mind. Life in the valley was dull, and farming was drudgery, and there were certainly livelier companions to be found than Marcia. If Marcia didn't care about having him around, he for his part didn't care about staying. Bret knew about as much of the city as a country-bred lad of fifteen, and its lure was irresistible. It would be easy enough to draw all their ready money out of the Middleville bank. To do him justice, Bret had rarely drawn money from the bank without Marcia's knowledge; he had simply through his shiftlessness allowed the Henderson farm to sink more and more heavily into debt, and the money had had to be drawn. What would become of Marcia? Oh, she would manage somehow, and besides, if she didn't care, why should he? It would be easy enough to slip off; he did not intend to leave an address or to say good-by. The whole thing would be so simple and easy that he wondered why he had not done it long ago. It was because of Marcia that he had not, of course, whereas now—the adventure was so delightful in prospect that he was almost glad Marcia hated him and so left him free. Yet even while he smiled with grim amusement at that thought, his face whitened and hardened. Bret's adventure had in it perhaps much of the motive that prompts a naughty child who has been punished, to run away; only Bret was a man, and as for a strange city, a child would have been safer there than Bret Henderson.

Although the valley did not know it, lying bare and chill and unlovely under a week of raw, cold rain, Easter was coming to it. The rain of that week before Easter, the cold, unspringlike days, seeming by no means like the children of April, made life all the sadder for the sister and brother. Bret, outwardly all gaiety, inwardly chafed more than ever against the brown monotony and loneliness of existence, was more and more the

daredevil, as in imagination he trod new, enticing, populous and crowded streets.

As for Marcia, she felt that this year even the spring had failed her, that one time out of all the year when she was really happy—happy with the happiness of buds that burst for very joy of it, and of bird songs that pierce the heart with gladness.

So far the surly spring had not allowed her one single little peeping flower. And here was Easter close upon them—Easter!

thought Marcia, there would be no Easter in the valley! On Saturday night, as they went up-stairs, Bret said carelessly, "I'll maybe take Sam and ride over to Uncle Eph's to-morrow morning and spend the day."

"All right," said Marcia indifferently, as she closed her bedroom door. She did not know that Bret hoped she would ask him to stay at home instead, for Marcia did not know, as Bret knew, that Easter would be their last day together.

Marcia sank heavily to sleep, hearing the rain dripping into the tin pail she had set under the leak. She wished as she drowsed off that she might not wake up the next morning, that she might sleep on and forget it was Easter. On Easter morning, before anything else was thought of, she and Bret had always gone together, their arms a mass of flowers, up the hillside at the old place over yonder. There, in the solemn Easter stillness, Bret and she had known at least for that brief hour that they were all the world to each other. But to-morrow there would be no quiet hillside to visit, and no desire to visit it with Bret—"poor Bret," thought Marcia, as she fell asleep.

She slept long and heavily. Suddenly she woke to full consciousness. A blaze of glory filled her room. She slipped from bed and went to the window. Warm little breezes came in and caressed her. She saw a new world. Spring had come in a night. The fields were brown still, but all along the fence-rows there was green. The willows trailed a vivid line right through the brown valley, which seemed more gold than brown in such sunshine. Rainbow drops twinkled on the bare maple boughs before the window; on one branch a robin trilled lustily. There on the apple-tree by the barn was the gleam of blue wings that glistened and were gone. Oh, it was wonderful! And it was spring, it was Easter! The morning was calling her. She hurried into her clothes, slipped down-stairs, was out in it. Instinctively she turned back of the house along a little path, and went swiftly on. Suddenly she stopped, for the path made no ascent—she had thought she was going to the graves! It was Easter, but her hands were empty of flowers, and she was alone, without Bret! She was standing near a slight hollow where once there had been a house. What was that? Surely she was dizzy. She ran her hand across her eyes. There right before her, as if a piece of shimmering cloth of gold had been flung down on the brown meadows, were—flowers! A riot of flame, purple and gold, pointed too like flame tips, the little plot, once a dooryard, was aflame with crocuses.

Marcia looked, her eyes wide, her breath coming and going, her hands grown cold. She stood quite still while minute after minute went by. Some tension within her seemed to slacken slowly, and then give way, leaving her very weak, but infinitely at peace. She looked up at the sweet April sky, then down at the flower-flame at her feet—"Sent!" she whispered, "sent!" and perhaps the little word was a whole Easter anthem.

Suddenly she turned and flew back to the house. He was there in the doorway. Her own eyes flooded with Easter sunshine, she did not notice his. She caught his hand, pulled him with her. "Look!" she said at last. But Bret looked only at her, her face flushed and radiant, touching the petals of purple and gold with hands and cheek. It was his Marcia come back. He had not known until now with what agony he had missed her during those two weeks.

"You feel better now, Marcia, now that you've got some flowers?"

"Yes. I feel better," answered Marcia, looking up.

"It's the flowers," repeated Bret.

"It's Easter," amended Marcia, rising as she spoke.

"Bret, do you have to—" she hesitated, "must you go to Uncle Eph's to-day? Couldn't you drive me—over yonder? They—" she could not bring herself to utter the name of the possessors of her home—"they wouldn't mind our going to the hill for a little while." She had laid one hand on his shoulder. Bret did not move, only his eyes sought her face in intensest question. "I was going away," he said dully. "I was going to leave you, Marcia." It was like a child's instinct of confession.

"Bret!" cried Marcia, her eyes wide, her lips gone white with fear, in one instant understanding all, seeing herself alone, without Bret; shuddering as she saw Bret alone, without her.

"Do you want me to stay, Marcia? You said you hated me."

"Oh, Bret, forgive me. I never meant it."

"Marcia, maybe—do you remember what you said? Well, maybe I can 'help it' if you don't let go." His hard eyes were soft as a child's, his lips trembling and smiling, too, young as a boy's.

Marcia put her strong woman's arms about him, as they stood there. Love that had slept a brief grave sleep had risen triumphant in forgiveness, deathless in patience, to turn bitterness to the sweetness of new life.



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An Egg Luncheon

By V. B. Jacobs

Menu

Salmon Croquettes Potato Balls
Deviled Eggs on Cold-Slaw
Ice-Cream Nest with Jelly Eggs

Souvenirs Amusement
Decorations

Serve simple home-made cookies with this dessert, using the old-fashioned cutters of rabbit and chicken shapes. You can make an oval or other simple shape for yourself by bending a strip of tin and using it for a cutter.

The Table—In the center of the table make a nest of excelsior, or you can cut strips of yellow crêpe paper or plain tissue paper and arrange them like a nest in a shallow basket.

Place in this nest some of the egg-shells tinted daintily with water-color. Should you have any difficulty in making the color stay on and spread smoothly, just wash the shells in soapy water, and you will find the color will then work easily.

In these shells are to be placed slips of paper on which appear a written and numbered list of many curious kinds of eggs. When I tell you these may all be answered by words beginning with "ex," as they depend upon the popular way of pronouncing words beginning with those two letters, you will find it easy to guess those I have selected, and to add to the list or change it after a visit to the dictionary. Here is the list as I used it:

EXTRAORDINARY EGGS

1. A roused egg.
2. A weary egg.
3. An egg substituted for another.
4. An egg on a pleasure trip.
5. A banished egg.
6. A burst egg.
7. A looked-for egg.
8. A put-out egg.
9. An exceedingly nice egg.
10. An egg sent by messenger.
11. A drawn-out egg.
12. A surpassing egg.
13. A precise egg.
14. An elevated egg.
15. An egg to be copied.
16. A tested egg.

These are the answers, which must not be told until everyone has registered the guesses:

- | | |
|---------------|----------------|
| 1. Excited. | 9. Exquisite. |
| 2. Exhausted. | 10. Expressed. |
| 3. Exchanged. | 11. Extracted. |
| 4. Excursion. | 12. Exceeding. |
| 5. Exiled. | 13. Exact. |
| 6. Exploded. | 14. Exalted. |
| 7. Expected. | 15. Example. |
| 8. Expelled. | 16. Examined. |

A ribbon is pinned to the slips before they are tucked away in the shells and laid in the nest. The free ends of the ribbon are drawn to the guests' places and fastened to the little things used as place-markers and souvenirs.

When you wish, perhaps between the last courses, the eggs are drawn from the nest by the ribbons, and the guessing begins.

Dressing the Eggs—If you want an amusing game, or contest of skill and imagination, let your friends try decorating some of the empty shells. Provide paste and paper, string and ribbon, paint and pencils, wire and pins. Allow a reasonable time for trimming the eggs. Then collect them, and arrange the exhibits and number them. Give each person a numbered card, and have them guess what each number represents, and vote for the most artistic creation and the most comical production that appear in the exhibition. Suitable prizes may be given, such as a pretty basket, an egg-shaped darning or a large chocolate egg.

Eastertide

By Rev. Richard Braunstein

IF CHRISTMAS Day is the happiest day of the Christian year, certainly none "has more fine, subtle gladness than Easter." On Christmas morning we celebrate the great fact of being human. At Easter we celebrate the immortal dream, hope of an imperishable life. There clings about the Eastertide, apart from its religious associations, a rare sentiment, a poetic rapture, which hallows it as a festival of the heart of man. Life is in the air, the spirit of renewal pulses everywhere, the "Vernal Ides" are on their way. The breath of approaching life sifts through the trees and grasses, the sound of running water stirs in the wild places, the birds wake songs as they fly, there is everywhere the renewal of the ancient rapture of the earth.

It is not a time for discussion or proofs, it is a season wherein instinct and intuition reign, and they are more of worth than all the deductions of philosophers and scientists. Subtle, too deep for words, is this sense of life beyond, which lays hold upon us.

Bliss Carmen, speaking of the instinct which governs life, its line going forth

in nature and in man, says, "When the vernal sun is warming the earth, and April is spreading up the sloping world with resurrection, by what magic is the transformation wrought? In the dim nether glooms of the deep sea all the fin people have received the summons; the unrest has taken hold of them, the fever of migration; and the myriad hosts from the green Floridian water and azure Carib calms, gather and move; surely and swiftly they come, through the soundless, trackless spaces under the broken whitish day, up to the cool fresh rivers and pools of the north. How did they know the date? By instinct? But what is that? The communication came to them inexplicably as it comes to us, the unuttered word, the presage, the portent. And their brothers the birds, too; they come flying northward through the night. To them, too, the message must have gone abroad. To say that the word went forth among them is to use the simplest and most elementary imagery."

The word has gone forth among us, and there is no proof needed other than this, that in our hearts we feel it to be so.

SUNDAY READING

The Christian View of Easter

By Rev. Charles F. Weeden



THIS old world is still restless. Big harvests and rich gold veins are not all. Men are dissatisfied, even at their best. What they have they want forever. They do not like to think of death as the final chapter. A life after this world will not down. God has planted a great and deep desire in human hearts, and equipped men with powers which never find completion on earth. Where is the key to the mystery of the unseen and unknown? We shall look these spring mornings upon Nature's fair face.

Will Nature unlock the tomb? There is encouragement. The shriveled bulb, the dry seed, the brown prairie, all putting on new garments of white and scarlet and green. As the earth brings forth her bud, shall not the body of man, laid away in the ground, rise to new beauty and glory? It would seem so. But man is neither a bulb, nor a grain of wheat, nor is an Easter lily an angel. We are not satisfied with Nature. We stand at the open grave, and the flowers blossom about us almost unheeded; aye, we lay the wreaths of floral gifts tenderly upon the sacred bier, but the beautiful emblems fail to convince us. Man's heart still sobs out in its sorrow and uncertainty. The stone is still at the sepulcher. The great puzzle is unsolved. We must have something more than sentiment. But science leaps to-day with giant bounds. Science will help. Yet shall we wait for what science has been striving for these many centuries? A wary, sad world waiting for man's wisdom? The great men of science have acknowledged their limitations. They admit that science does not prohibit immortality. Dr. R. D. Hitchcock said: "Go as far as science can, up or down, with spectrum or microscope. She never sets her eyes on the beginnings of things. Life remains still a mystery, and the intuitions of the humblest thinker are grander than the stars shining in their solemn depths." When you look from the silent face of your beloved, up yonder with a great yearning in your heart, the stars are indeed beautiful, but they are distant and cold. This face of "jeweled adamant" only mocks you with sublime thoughts and gives you for the hunger of your soul, not bread, not love, but a stone.

But can a man believe beyond his reason? Is not reason the supreme court of belief? Philosophy asserts the great probability of another life. But the cry is as bitter and heartsore to-day as it was when the confident Socrates drank the fatal hemlock. Men want the facts. Philosophy nods its head wisely and tells us that the stone at the sepulcher ought to be rolled away!

Will history give us no clue? History is recorded facts—things established by competent eye-witnesses. History points to religion, the realm of the unseen and of the future. All the religions of the world hint at some future life. Robert Speer declared that the old-world religions are inadequate without uplifting power. "They represent the search of men for God, but not the search of God for men. They are hopeless as to the future." What has made these old religions seem so backward? Why are they crumbling to-day? Is it not because Christianity teaches the progressive life and is always in the van of civilization? The world does not progress without God and the Bible. To the intelligent man this is fundamental and plain. We sacrifice our prerogatives, our soul nature, when we deny God and interest in the future. At a company where Alexander Dumas was present, they were discussing the existence of God, and a certain general was very scornful on the subject, wondering how people could trouble to discuss such trifles. "For my part," he added, "I cannot conceive of this mysterious being whom they call the good God." "General," replied Dumas, "I have two hunting dogs,

two monkeys and a parrot at home who are of your opinion exactly."

The thought of life after death is no new thing. Aristotle said, "Live as nearly as you can the immortal life." But that was theory. The old religions have speculated about destiny, and it has been a vague hope always in human life, alike in the savage or the philosopher. Easter is a Christian festival, and although "Life is mystery as deep as ever death can be," Christianity takes the mystery of life after death, and makes it clear and real. It is the key to the afterworld. It is the power to roll away the stone from the sepulcher.

We forget sometimes the source of our joy. In this day of Christian civilization, the tendency is to accept the fruits of civilization as the tree itself, to make the crop of apples and of corn the whole plant—the products of Christianity, as the source and power of our religion. Our hospitals, libraries, public parks, schools, courts of justice, churches, homes, personal freedom of life and conscience, a sure immortality—all these are the flowers of which Christianity is the root. A florist put a pink in the lapel of my coat the other day, but the flower did not grow there. We do not find these flowers of modern civilization for the people except where the roots of Christian faith have struck down into human life.

The world by its beauty never sufficiently revealed God. The Christ of Galilee has become the Gardener, not only the One whom Mary saw, turning from her gaze into the empty tomb, but the One who is plucking out of human life the weeds of greed and selfishness, the tough snags of bitterness, discontent and anger, and is planting in their place forgiveness, love of enemies, kindness, gentleness—the flora of Eden. Where there is disobedience to God, He sows submission; where worry and care, confidence and trust; where fear and dread, quietness and assurance; where hesitation and doubt, the flower of faith; where loneliness, the cheer and sense of the friendship of God. When "deep griefs o'erflow," His smile of sympathy and His presence of overcoming power have brought the sunshine of an undisturbed peace. Easter reminds us again that the risen Jesus is preëminently and solely the "Gardener of the city of the dead." Easter tells us plainly that there is no consolation for those that mourn, save as we believe in the risen Lord standing beside the grave of our beloved dead, and we take His wonderful words into our hearts—"I am the Resurrection and the Life. He that liveth and believeth in Me shall never die."

The grave itself a garden is
Where loveliest flowers abound,
Since Christ, our never-fading life,
Sprang from that holy ground.

What men wanted was a man to come back out of the grave and to say there is a life in man that lives hereafter, my body has been dead, but I live. It is perfectly clear that the better Christians we become, the surer and stronger will be the reality of another life beyond the grave. We must try for that absolutely, for if the Spirit of Him that raised up Jesus from the dead dwells in you, He that raised up Christ Jesus shall quicken also your mortal bodies, through His Spirit that dwelleth in you. Here is the secret, the key of the great mystery. Faith is a fact. By faith the Christian says, "I know." It is the only knowledge that will lift us above this world of sorrow and universal darkness. Have you ever read Mrs. Burnett's book, "The Dawn of a To-morrow"? A great financier of London is worn out and done for—the world seemed worn out and done for. This rich man disguises himself, goes to a cheap lodging-house, fears he is going mad, buys a pistol—there will be no to-morrow. He is lost in a London fog, stumbles upon a street waif, a "little rat of the gutter," finds an awakening interest in the poor of the great city, listens to a wretched old woman, who, after she herself had been a castaway, through a good Samaritan at

the hospital has found the religion of cheer. It is a revelation to the great banker. He gives up his pistol and believes, too, that God will answer the heart cry of His distressed children. It is a powerful story, and its force is the reality it makes of God; the present, loving power of God to save a man dead in despair; to save a man that he may see and know the dawn of a to-morrow. Just as the Magdalen stared with astonishment at the glorified face of the risen Master outside the tomb, so we all may believe in His resurrection, the key of our life, the hope of an immortal race and the splendor of an eternal day.

Burden-Bearing

By Orin Edson Crooker

AN AGED, weary-looking woman, with a heavy basket upon her arm, entered the train at one of the way stations. Carrying her burden with some difficulty down the aisle, she found an empty seat of which she took possession. Instead of placing her burden upon the floor or upon the seat beside her, she continued to hold it, shifting its weight now and then from one knee to the other. A working man across the aisle watched her for some time in silence, but at last when he could stand it no longer he reached over and touched the woman upon the arm. "Madam," he said, "if you will set your basket down, the train will carry both it and you."

How much of human nature there is in this little incident! Some people never try to "ease the burden" which circumstance has decreed shall be theirs. They insist on carrying it even when they might temporarily lay it down and ease their breaking backs.

"I believe God intends we shall forget our troubles once in a while," said a little woman who had had more than her share of heartache, but whose face always wore a cheerful look. "It's the only way I get along. I simply must forget my worries even if it's only for a little while." Solomon had no greater wisdom than this.

A man whose business was that of testing scales in a big factory before they were shipped out to the trade bearing the "O. K." of perfect accuracy, once said to the writer that the first twenty years of his experience in this work he tested scales by night as well as by day. "I usually worked all night in my sleep on the scale I was engaged upon when the whistle blew at six o'clock. Now," he continued, "when I lock the door of the sealing room, I leave behind all thought of my work, knowing only too well that it will be there next morning when I return. The result is that I have grown a year younger each year for the past decade."

Rest your burden once in a while. When you pick it up again, you will find you can carry it easier. It may not be any lighter, but it will seem so.

Where There is Life

By Aubrey Fullerton

A LOG of wood that was cut up the other day proved to be dead and badly worm-eaten, its whole interior structure being tunneled with crooked passages left by some sharp-cutting insect. There was not, however, a single insect in the stick; the curious eating of the wood had been done perhaps years before, when the tree had been standing and full of sap, but now that the wood was lifeless and dry there was nothing in it to attract the insects, and they had all disappeared, leaving the marks, however, of their ravages.

Is not that the way in which evil works upon our own lives? Evil influences come only where there is something for them to work upon, some life that they can sap; and if you realize that there is a struggle in your heart, that temptation of any kind is trying to gain a hold on you, you may know that there is some measure of good life in you that is worth your caring for, because if there were no spiritual life, there would be no attempt of the evil one to kill it and honeycomb it.

The worms of sin go only where there is soul-life to kill, and when it is killed, they leave their victim helpless and marked with the conflict.

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I had something to say to women, and naturally, being a woman myself, I wanted to say it.

I wanted to teach women to think for themselves in dress. I wanted to help them to be well gowned and not to make caricatures of themselves, and I wanted to emphasize the fact that, after all, dress is not such an insignificant subject as it seems, for there is much philosophy in it and it really is an index to character.

I am a great admirer of women and there is nothing I like better to do than to help them. Perhaps I cannot help them in any more practical way than just along the line I best understand.

If "The Magic of Dress" will help women to fret less about their clothes, if it will teach them the importance of dressing to fit the scene, and to suit their own individuality, then I shall feel the little book has fulfilled its purpose.

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No. 1984—Double-Breasted Shirt-Waist with Frill

Pattern cut for 32, 34, 36, 38, 40, 42 and 44 inch bust measures. Material required for 36-inch bust, two and one-fourth yards of thirty-six-inch material, with one fourth of a yard for frill



A stylish black-and-white straw hat model trimmed with a lace wing



Flowers and black-and-white tulle form the trimming on this picture hat



Many flower-trimmed small turbans will be worn this spring and summer



An effective trimming for tailored hats is lace banding piped with velvet



No. 1982—Collarless Waist with Large Armholes

Pattern cut for 32, 34, 36, 38, 40 and 42 inch bust measures. Material required for 36-inch bust, two yards of thirty-six-inch material, with one yard of thirty-six-inch material for the frills

New, Smart and Simple Fashions for Spring Easter Street Costumes and Dresses for Morning and Afternoon Wear at Home

Designs by Grace Margaret Gould
Drawings by Lewis E. Bailey

THE question of what is the most fashionable hat is a somewhat disputed one this spring. To be sure, hats are divided into two classes, the tailored shapes and those for dress occasions. Whether they shall have upturned brims with high standing trimmings, or whether they shall be low and broad with flat trimming, depends more on the individual than the actual dictates of Lady Fashion. There are a few fashion features about the new millinery that should be considered, however. They are as follows: Most of the trimming on the new hats is placed on the right side, very much nearer the front than it was the past fall and winter. Many flowers will be used on the summer models. Lace of all kinds will be seen on light-toned hats. Blocked hats seem more fashionable than those of straw braid, though, of course, the latter are always conservative and a good style. The head sizes remain large. No bandeaux are used, and the hats set well down on the head.

SIMPLICITY is the key-note of the new fashions this spring. This fact is emphasized not only in the severe tailored street suits, but in the costumes for afternoon wear and in the new separate waists. Illustrated on these pages are some of the newest and best of the new spring clothes. The tailored suit, patterns Nos. 2001 and 2002, shows the severe straight but not extreme lines of the fashionable spring coat and skirt, while in patterns Nos. 2009 and 2010 is shown a modish afternoon dress, which, though very smart in style, is simple in design. Besides these costumes there are many other attractive designs shown on these pages. They are all of them of the sort that develop quite as well in wash fabrics as they do in cloth or silk. The shirt-waist suit, patterns No. 2011 and No. 2012, would be most practical developed in percale or gingham, while it would also be a smart costume for street wear if made of dark-blue serge and trimmed with black silk braid.



No. 2011—Tailored Waist, Buttoned in Front

Cut for 32, 34, 36, 38, 40, 42 and 44 inch bust measures. Material for 36-inch bust, two and one-eighth yards of fifty-four-inch material, with one-eighth yard of thirty-six-inch material



No. 2012—Three-Piece Skirt, Buttoned in Front

Cut for 22, 24, 26, 28, 30, 32 and 34 inch waist measures. Length of skirt, 40 inches. Material for 26-inch waist, three yards of thirty-six-inch material



No. 2001—Short Coat with Flat Collar

Cut for 32, 34, 36, 38 and 40 inch bust measures. Material for 36-inch bust, one and one-half yards of fifty-four-inch material, with five eighths of a yard of black satin for flat collar and cuffs



No. 1998—Child's French Dress with Yoke

Cut for 1, 2, 4 and 6 year sizes. Material required for 4 years, three and one-fourth yards of forty-four-inch material, with three eighths of a yard of contrasting material for adjustable shield



No. 1958—Girls' Single-Breasted Coat

Cut for 2, 4, 6, 8, 10 and 12 year sizes. Material required for 8 years, three and one-fourth yards of forty-four-inch material, with three eighths of a yard of contrasting material for adjustable shield



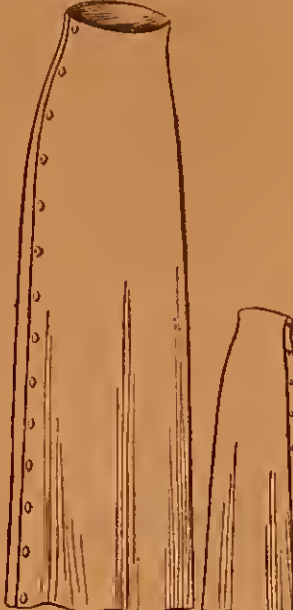
No. 2009—Kimono Waist with Vest

Cut for 32, 34, 36, 38 and 40 inch bust measures. Material for 36-inch bust, one and one-fourth yards of thirty-six-inch material, with one and one-fourth yards of contrasting material and three eighths of a yard of tuck net



No. 1867—Semi-Princess Dress

Pattern cut for 32, 34, 36, 38 and 40 inch bust measures. Material required for medium size, or 36-inch bust, seven and one-half yards of twenty-four-inch material, or four and three-fourths yards of thirty-six-inch material, with one and five-eighths yards of contrasting material, thirty-five inches wide, for the waist portion



No. 1893—Two-Piece Skirt, Buttoned at Sides

Cut for 22, 24, 26, 28, 30 and 32 inch waist measures. Material required for 26-inch waist, four yards of twenty-seven-inch material, or three yards of thirty-six-inch material

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Conducted by Cousin Sally

Cousin Sally's Letter

DEAR COUSINS—
There are so many things about which I want to talk to you that I really don't know where to begin. Where shall it be?
The first thing is Easter, of course! Next Sunday you will all be hearing Easter sermons, and some of you in the far South will be wearing thin summer clothes; and some of you in the extreme North will be wondering why girls put on straw hats at Easter time. In the West, in the East, in the North, in the South, however, you will all be enjoying this most joyous of our spring festivals.
You who live where all the fresh eggs of the great, big United States are produced, will have the best chance of any girls and boys in our country to eat fresh eggs and to dye eggs and to do the thou-

sport in the world equal to putting some tiny dried seeds in properly prepared ground, covering them up and finding them starting to grow into something beautiful or useful after a lapse of some days. And you can MAKE them do it. Spinning tops isn't to be compared to growing potatoes.

I suppose you think that I haven't talked very much on the subject of Easter. Well, it seems to me that the burying of a seed in the earth and the seeing it break the clods apart and grow up into something beautiful and useful is just the best Easter sermon I can listen to. And so, for this letter, I have talked most about growing things and planting things, for that always seems to me the best way to celebrate Easter. Start things a-growing!

A joyous Easter to every cousin of mine.
Affectionately yours,
COUSIN SALLY.

A Decoration for the Easter Breakfast-Table

Diagrams by Virginia B. Jacobs

IS THERE any one of the cousins who doesn't like to do things, to make things that will give pleasure to others? And don't you think that it is more fun when you keep it a secret until the very last moment?

This is just what to do:
First of all, you must get some stiff white paper and also some red paper, which does not have to be quite as stiff as the white paper. Now, on the white paper you must draw the pattern of the hen that you will find in Fig. 1. This should be made about 4½ inches long and 4 inches wide, and is the only hard part of our surprise, but if you are patient, you



The finished hen

sand and one thing with eggs that seem to mean Easter to such a number of folks.

Then, too, you are privileged to live closer to the spring beauties, the hepaticas, the blood-roots, the dog-toothed violets and the violets both purple and white than all the other boys and girls in this country. Are you not fortunate? A walk in the spring woods, on a cool day in April, is worth all the Fifth Avenues that any city ever boasted. No difference whether your home is in Marin County, California, or Dutchess County, New York, or Kennebec County, Maine, or Crook County, Oregon, you have the best things that anyone can get, just waiting for you around the corner of the road. Aren't you a lucky lot of cousins?

I have been thinking about the cousins a great deal the past two or three days. I am wondering if you are not getting ready for that vegetable-garden or that flower-garden, which you're going to tend yourself all this coming spring and summer. I think I shall have to be giving our page over to the gardeners among the cousins very shortly.

Think it over! You can raise flowers, because raising flowers and making places beautiful with them raises our own thoughts and ourselves to be better because of their beauty. Or will you raise vegetables in a businesslike sort of way and show the folks what a clever, intelligent cousin you happen to be even if you're not as old as you will be some day if you just live long enough?

And fun? Why it's more fun than any game you ever played, to make things grow. Some people think it's great sport to throw a ball farther than some other chap or to hit a blown-up bag harder than the other fellow. But there isn't a

The Cooky-Pail

By Mollie C. Maxwell, Aged 12

"MOTHER," she sobbed. "I have come to confess,

And then I must go right to jail,
For it wasn't poor Kitty at all that stole
All that cake from the cooky-pail.

"I knew it was the company's cake,
And I only wanted to feel;
My finger sunk in, and I ate what stuck,
But I didn't quite mean to steal.

"Just a few licks and all was gone;
I ran away awful afraid.
For I knew that cook would never
forgive

If she missed that cake newly made.

"Kitty, as if she sympathized,
Came closely purring by my side;
While cook she stamped and scolded,
Until I was so scared I cried.

"You are the thief," cook screamed,
And her anger knew no pity;
I hesitated, then I whispered,
'No, 'twasn't me, 'twas the Kitty!'

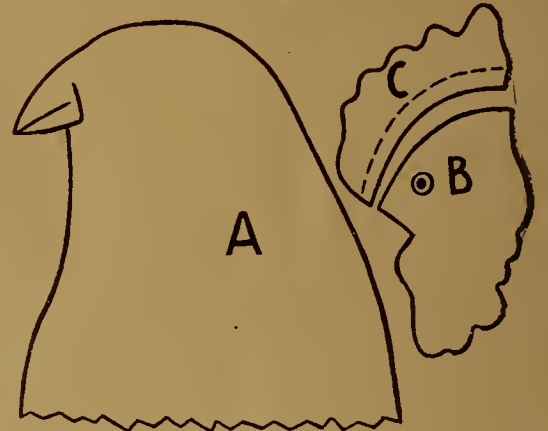


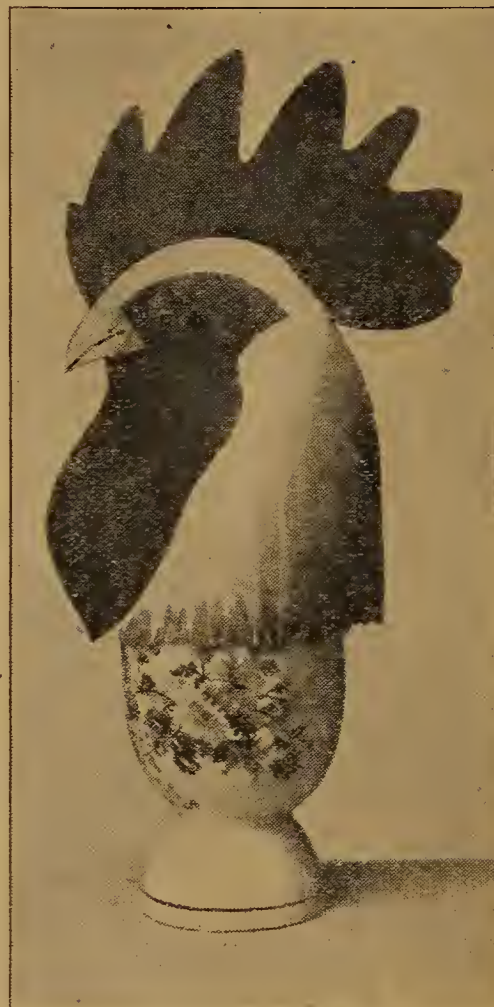
Fig. 1

all surely can copy the diagram very nicely. When you have done this, cut it out carefully and use it as a pattern for cutting more just like it. For every hen or cock that you want to make, you must have two of these pieces.

Before you paste them together you should also draw and cut out of red paper copies of the hen's comb (C, Fig. 1), which should be pasted in the proper position on the top of the head. Then paste the other half of the hen on the other side, so that the comb will stick out from between the two pieces. When pasting the two halves together, be careful to put paste only on the edges and to leave the bottom open. It is now time to cut out two copies of the piece marked B in Fig. 1, using red paper. Paste these, one on either side, on the hen's bill, mark an eye as you see it in the picture of the finished hen, and your work is almost over. If you have a paint-box, it will be a good idea to color the hen's bill with yellow and possibly to try to suggest feathers by little touches of yellow and brown, but this is not necessary. Your hen is now complete.

To make the cock, you must do exactly the same except that you must use the pattern for the cock's comb and throat (Fig. 2) instead of the one for the hen. If you want to make a chicken, it is even more simple: don't use anything but Fig. 1 A, and mark an eye on it. Isn't that easy?

You can use your hens and cocks to cover egg-cups, salt-cellars or anything else that you please. And just think how surprised everyone will be to see them on the breakfast-table and to know that you made them all yourself!



The cock on an egg-cup

"Cook took her roughly by the neck,
And she threw her out of the door;
To-day I went out to find her,
But my dear Kitty was no more.

"She was lying frozen near the pantry,
And had drawn her last iced breath
A-looking through the window
At the pail that had caused her death.

"And so Kitty, who was quite innocent,
Has been murdered by cook and me;
And nobody has punished me yet,
Though I'm wicked as I can be.

"But I'm ready, so call the policeman.
For 'tis time that I went to jail,
To think how I lied and murdered
For a feel in the cooky-pail."

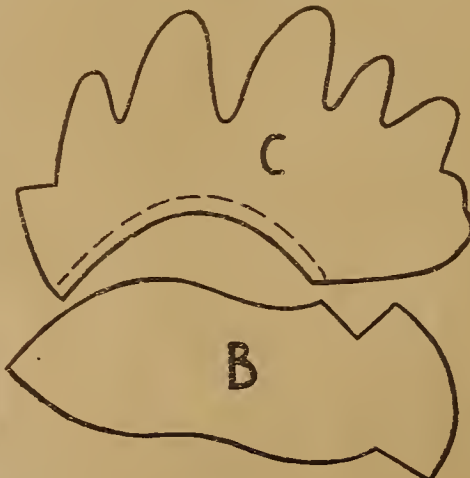
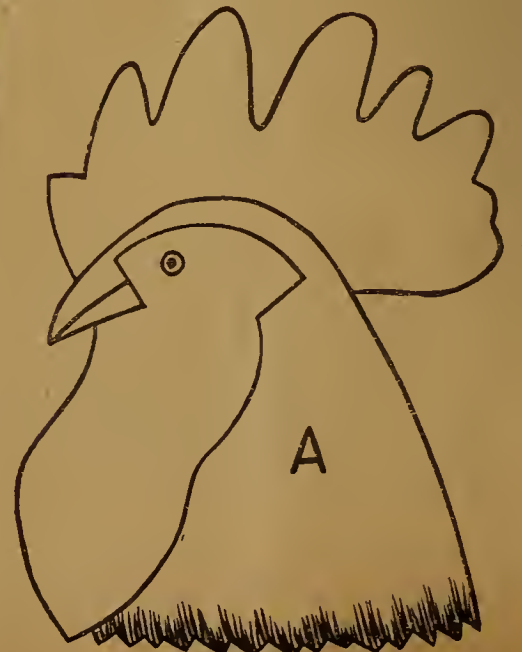


Fig. 2



The finished cock

The Third-Reader Class

The Second Lesson for Beginners in Agriculture

"Written so You Can Understand It"



THE Romance of the Soil, by Edgar L. Vincent. The Secret of the Soil—Strike your spade down into the earth, and cut out a small square, say a foot in size each way. Now let's sit down here, where the sunshine falls warm and tender, and try to count the different forms of plant life that are growing in this little bit of the earth's surface.

Here are a number of blades of grass, such as the men-folks will be cutting in a few weeks for the horses and cattle. How sweet and juicy the stalks are! We like to chew them ourselves. What wonder that the cows and sheep eat them so eagerly! Right in the midst of a tuft of timothy a blade of wiregrass pushes its way. Be careful how you take hold of that. The edges of its leaves are as sharp as tiny saws, and you may cut your fingers on them. Surely this bit of herbage, so much like a weed, has somewhere found in the earth a lot of hard, sharp, stony matter and turned it to good use in building itself up. Here, too, is a stalk of soft, bending clover. Its leaves are not protected with the tiny saws; the clover gathered less of the sharp, stony matter from the soil and air. Or, it may be that close by a stout daisy holds up its head bravely. Not far off three or four real weeds nod and smile up at you, as if to say, "You won't care, will you? We are pretty, if we are not worth so much! Be fair with us! Old Mother Earth did not give all the good things to the grass and the clover!"

And do we not begin to wonder how it is that from the very same soil all these different kinds of plants should grow? Looking out into the world, we see the same thing everywhere. Shrubs grow by the side of giant trees, waving grain and proud corn-plants nod to each other just over the fence; flowers that bend and shrink from the touch of the slightest breeze are near neighbors to stalks of plants that are as firm and unyielding as rods of steel; bushes, the perfume of which make all the air sweet, linger lovingly in the companionship of lowly creepers from which we turn away in quick disdain, so repulsive is the scent which rises from them; plants beautiful, plants ugly, plants rare and choice, and plants worthless and homely, moss and rich clover, toadstool and alfalfa, all taking their life from the same source. How can they do it?

To answer this question men have been patiently studying these various plants under the microscope in their work-rooms; and as they have found one thing after another in the body and leaf of the plants, have given them names which we need to know in order to understand the secret of the soil. In all plants alike they have discovered certain tiny particles, some of them very precious, like nitrogen; some not so valuable, like carbon or ashes, all of which, however, are very necessary to the growth of the plant. Some of these substances the earth holds a very firm grip upon, yielding them only in the minutest fragments; but always she gives, gives enough for the building of every plant, as long as she has it to give. From the soil, in some strange, wonderful way, tree and flower, grass and grain, weed and useful vegetable, gather up and turn to account just the things each needs for its life.

When the soil has given up the best it has for plant growth, with their long, eager fingers these different forms of life reach up and out to grasp in the air and moisture about them something more they must have to bring them to perfection. From the soil, nitrogen and ash; from the air and water, carbon, oxygen and hydrogen. Do these seem big names and hard to remember? Perhaps this may help you. It is a great day when father and the boys out in the field burn the old logs and stumps they wish to get out of the way. When the flames have died down, look at the black coals left among the gray ashes, and think that these are carbon, every bit of which was gathered up by the leaves of the tree from the air which we breathe. Oxygen is one of the lightest things we know of, just a gas in fact, but found everywhere, and so necessary that we must have it with every breath we breathe, or die. This gas when combined with hydrogen, another gas, forms water. While nitrogen, also a gas, found in air and soil, helps to support life, although it cannot do it alone. Four fifths of the air is nitrogen. And ashes are the soft, dry stuff left after anything is burned.

Wonderful old earth! Beautiful secret of the soil! How we long to catch its full meaning! With what zeal do we press on to the mastery of the forces of nature!

By the Rule

A FARM boy got a job in a steel-mill, and his boss gave him a foot-rule one day and said: "Measure me that plate out there in the yard."

At the end of a half-hour the boy returned and said: "The plate is the length of the rule and three fingers over, with this piece of cobblestone, and the stem of my pipe, and my foot from here to there, bar the toe-cap."

The condition of the farm is a pretty good index to the reading table of the farmer.

THE Soil and Its Water, by Paul H. Brown—In our last lesson we began the study of the water in the soil and how it moves. Dissolved in the water are the things that make the plants grow, and you must remember that no matter how rich a soil is, if there is not enough water in it or if it has too much water, the plants will not do their best.

Besides water, the soil needs heat to make the plants grow. No one ever saw plants growing out of frozen ground, and we know that when the sun warms the soil in the spring, the plants begin to grow.

But there is something else in the soil; that is as much needed by the plants as the water and the heat; and that something we call bacteria. I know bacteria is a long word, but you must learn what it means and how to spell it, and when you are a farmer, try to have plenty of bacteria in the soil.

Bacteria are very tiny, tiny plants, so small that we cannot see them unless we use a strong microscope.

They are between the grains in the soil in the capillary water. They are always busy getting plant-food in the soil ready to be eaten by the roots.

There are many kinds of these little chaps in the soil, but the most helpful are those that come from the rotting of plants or animals. These rotting bacteria in time rot all the dead parts of the plants in and on the soil.

They are the helpful part of the manure which is spread on the soil. They are at work also on the tiny bits of rock in the soil. They help to break them up and dissolve them into bits so small that they can float about in the capillary water and be drunk by the tiny plant-roots.

This family of rotting bacteria is the most important one, for if it were not for them and their work, nothing would rot or decay. Our soil would soon be in such a way that we could no longer grow crops from it. The bacteria grow best in soils which are in best state for crops, so that when we take the best care of the soil for the crops we are getting it in good shape for the rotting bacteria. They live in all soils.

There is another family of these small friends which are called the nitrifying bacteria. They live naturally in some soils. In others they have to be planted. When these nitrifying bacteria touch the roots of any of the clover family, such as red clover, white clover, sweet clover, alsike, alfalfa, peas, beans or vetches, they form little bunches on the roots of the plants. These bunches are sometimes as large as a peanut, but usually only half that size and are often as tiny as pin-heads. These nitrifying bacteria live in the bunches on the roots of the clover-plants and gather nitrogen from the air, store it up, and then leave it in the soil. Nitrogen is something a crop must have in order to grow, but I will have to tell you about that at another time.

What is needed besides water to make crops grow? Name the two families of helpful bacteria.

What do the rotting bacteria do to dead vegetation, manure and rock particles?

Where do the nitrifying bacteria live? How do they help the soil?

Mr. Rambo's Whittlings

If at first you don't succeed, find the reason, and try again.

No one knows how sweet rest may be until he has found out what it means to be "good and tired."

It is hard to tell just how mean it is to swipe a watermelon until someone steals the finest one in your patch.

The sport of coasting is soon over with if you are too lazy to climb the hill.

The helping hand is lovely, even if the fist is rather rusty-looking and all covered with warts.

The task never looks so big to the one who has rolled up his sleeves and tackled it.

We laugh when things are funny, and smile when they are lovely.

We break a colt so that we may control it; but we break a bad habit so that it may not control us.

Guessing at the quality of the seed is a poor foundation upon which to build the hope of a great harvest.

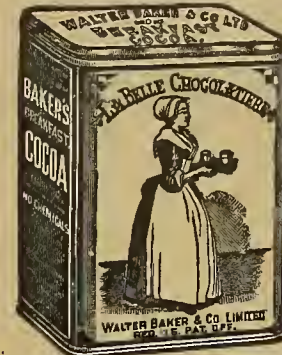
Little things often count big; for instance, the lack of a rivet or a few stitches in the harness causes the loss of a whole day's work in the busy season.



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The Spelling Lesson

Dis-solved Changed from a solid to a fluid through the action of a liquid

Bac-te-ri-a

Ni-tri-fy-ing Treating so as to yield compounds of nitrogen

Veg-e-ta-tion Plant life in general

Frag-ments A part broken off from that which is supposed to be complete and entire



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He Will Be Given to
Some Boy or Girl



Cart and
Harness, Too,
All Complete

"Prince"
Is His
Name

How to Win "Prince"

Good news for our Boys and Girls! Don't you want to get "Prince," the pony shown in the above picture? Well, you can get him and his handsome buggy and harness, too, without spending a single penny of your own money. Wouldn't you love to have "Prince" for your very own? What fun it will be to go driving every day this summer. How you would enjoy taking all your boy and girl friends for a drive. He is just thirty-nine inches high and weighs 325 pounds. "Prince" is truly one of the finest Shetland Ponies ever raised in America. He is a chestnut, with the fluffiest mane and tail, and he can travel almost as fast as a horse. "Prince" is also a splendid playfellow. He is as gentle and kind as can be. "Prince" will be given away on June 15th by FARM AND FIRESIDE, the oldest and best farm paper published. All you have to do to win "Prince" or one of the other elegant prizes is to ask a few of your friends or relatives to subscribe for FARM AND FIRESIDE. There will be hundreds of other handsome prizes given away, too. Altogether FARM AND FIRESIDE offers

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If you want to make sure of a prize right away and become an Enrolled Contestant, don't wait until you get your package from the Pony Man, but start right out and get ten friends each to give you 25 cents for an eight-month trial subscription to FARM AND FIRESIDE. Keep 50 cents for yourself as a cash commission, and send \$2.00 to the

Pony Man, then you will be an Enrolled Contestant and a Prize-Winner sure. Don't Wait!

Hurry Up! Start To-day!

Send Your Name To-day

Write your name and address on the coupon below, and send it to the Pony Man, he will tell you by return mail just how to win "Prince." He will also send you a lot of pictures of "Prince" and the other ponies, together with everything necessary to start right in and win. Among other things he will send you the pictures and names and addresses of other boys and girls who have won FARM AND FIRESIDE ponies, so that you can write to those lucky children and find out for yourself just how easy they found it was to win a FARM AND FIRESIDE pony. Remember, all these things won't cost you a penny and you will not be under obligation to do a single thing.

**THE PONY MAN
FARM AND FIRESIDE
SPRINGFIELD, OHIO**

THE
PONY MAN
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Please tell me by return mail how to win "Prince." Also send me FREE the pictures of "Prince" and the other ponies, and complete information. I am very anxious to get "Prince" so save a place for me in the Contest. I will try to become an enrolled contestant as soon as possible.

Name.....
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As to Your Personal Appearance

By Pearle White McCowan

IT IS amazing how many women will neglect their personal appearance in their own homes. They seem to think that the mere fact of their being at home gives them a license for all sorts of careless and slovenly habits.

Even women who keep their houses in spotless order are not exempt from this detestable habit of personal slovenliness. I have in mind one such, a remarkably brilliant woman in many ways, an old school-teacher of more than ordinary ability. This woman always looks neat and even stylish when she goes out. Her home is well furnished with many of the modern conveniences. It is always in "apple pie" order, as the old-fashioned saying goes. But the contrast between her own appearance and that of her house is incongruous, to say the least. Her heavy black hair is usually coiled unbecomingly into a huge "wad" at the back of her head, while an insufficient amount of pins often allows one or two strands to escape from the original "wad" and hang down in rough, uneven lengths. Her skirt and waist seldom live peaceably together. In warm weather her waist is usually unfastened at the throat, and her apron with a little square "bib," usually with one corner unpinned, only serves to increase her general untidiness.

I have chosen to describe this woman because she is only one of hundreds of others in this same class: Women who know well how to make themselves neat and attractive when they choose, but who either do not take time, or do not think it worth their while to do so, when they are about their work in their own home.

A sensible woman will dress according to her work, of course. She will not don white cuffs and collar when doing dirty work about the kitchen or laundry. But she will also remember that "her best" (in her personal appearance, as in everything else) is due to the ones who love her best—to her own home folks.

Have you not often heard someone remark, when a certain woman was admired for her clothes and general neatness of appearance, "Yes, but you had ought to see her at home"?

One very lovely woman, who is a most competent housekeeper and mother, said, "I have kept house for over twenty years, and, except in a very few cases, where the severe illness of some member of our family made my immediate presence imperative, my husband and children have never seen me outside my bedroom door with my hair uncombed." No wonder the

especial pride of this whole family is in their "mother."

The house dresses for the woman who does her own work are best made all in one piece, or the waist can be finished with a band with buttons sewed upon it, and corresponding buttonholes in the skirt-band. This buttoning may be covered with a belt of like material.

A fleshy woman, who wishes to discard her corset when at work, should wear at least a snug-fitting underwaist of some firm, strong material. If she suffers from heat, the waist may be cut low at the throat, either a square Dutch neck, or the plain round neck. These are perfectly proper for housewear even for the woman who has passed the bloom of youth and whose neck is not so white as "it used to be." They are at any rate much more becoming and modest than the unsightly collar open at the throat and possibly a third of the way down the waist.

A much curled and pompadoured head is as much out of place in a kitchen, at least in the morning, as the untidy one, but a soft parting or a graceful little fluffiness about the face will enhance any woman's loveliness.

And then the apron. All hail to the woman with a good big apron! An apron that covers up most of her dress and makes her look capable and house-motherly. A neat becoming apron cut by a pattern, and made preferably of calico or percale. There are so many more desirable colors and patterns in these materials than in ordinary apron gingham.

And, sisters, let me whisper a secret to you! You may laugh and call it vanity, if you choose, but it is true nevertheless. An abundance of mirrors, one for every room in the house, will help to correct this habit of untidiness sooner than anything else. And be sure, very sure, to have a mirror in your kitchen. A woman cannot bear to look at herself in a mirror and see reflected there a vision of untidiness and disarray. A mirror, placed where she must pass it often in her work, will call to her notice all those little stray bunches of hair and those generous scolding locks, and she will unconsciously fasten them into place, thus keeping herself presentable at all times. Remember this, tidiness of appearance is not only what you owe to your family, but what you owe to yourself. Show me a man or a woman who is habitually slovenly and careless about their home dress, and I will show you a man or woman who is deteriorating.

Two Easter Poems

By Cora A. Matson Dolson

In Nature's Charge

THE hyacinth and lily sleep,
And you and I must sleep as they,
In earth's dark chamber folded deep,
To wait the resurrection day.

But that same force which bids the flower
Rise to the fulness of its bloom,
In God's own time, in God's own hour,
Will reach the stillness of the tomb.

The universe of life is wide,
Its atoms change in place and form;
But never one of them can hide
Too deep for Nature's pulse to warm.

The Coming of the Violet

THE violets come as come familiar things,
As they came back in dim-remembered springs,
To the old wood where childhood knew each place,
To the brown banks that still the brook embrace.

They do not fail us like the inconstant friend
Who pledges liege, yet halts at first mile's end;
They spring from out the clay of new-made mound,
Neglected, sunken graves they carpet round.

Sweetest and bravest where we heed them not,
As though they kept the faith of dreams forgot,
To hold through all earth's changes, leal and true,
And we remember when we see their blue.

Last year they came; they came the year before;
The strong south wind, loud knocking at our door,
Brought in that faint, earth-given, sweet perfume
Belonging only to the violet's bloom.

Sometimes I think, as Mary for our Lord
The precious gift of priceless ointment poured,
So the bruised violet to His wounded feet
Offered itself as burial incense meet.

Certain it is the violet comes again
At time when He arose to walk with men—
Certain as Death who comes to everyone,
Shakes hands with all things mortal, slighting none—
So sure the Easter time, with new hope set,
Comes back and spills for us the violet.

THE GIFT CLUB

Jean West

Secretary



"WHAT do you like best about The Gift Club?" I wrote to half a dozen of our Club members last week, and I do wish you could see the replies which I received! One of the six girls wrote, "It's so hard to tell you what I like best, because everything is so jolly and interesting. I think, though, it's the spirit of good fellowship in the Club which appeals to me most of all."

Another girl said, "Now, Jean West, why didn't you ask something easy? I don't know what I like best, whether it's the gifts that I receive or just the idea of being a part of such a splendid big Club as ours."

The third Club member, a married "girl" in Iowa, wrote, "The beautiful gifts first of all, and then your letters to me!"

And the fourth said, "I like the idea of being in touch with so many other girls all over the country. It's lots of fun! I never belonged to a Club before, and I've been dreadfully lonely at times."

This is the reply that I received from the fifth Club member: "Of course, the prizes and the gifts are all very welcome, Miss West, and they are just as lovely as they can be, but I believe I like the thought of helping in such a big work as yours more than anything else."

And the sixth girl said, "I like my beautiful gold locket and chain more than anything else in The Gift Club. But perhaps when I get the bracelet that I'm expecting, I'll think that is best. The monogrammed stationery which you send us is fine, too, and I'm sure all the girls love it."

So you see I did not learn what I so keenly wanted to know—just what one thing about the Club pleased the girls more than any other. They were enthusiastic about everything!

Perhaps this is the first time that you have heard about The Gift Club. Then I must tell you that I started it last October just after I had returned to Springfield from a trip through the farming country of the Middle West. While I was on that trip, it occurred to me that you girls and women on the farms must get very lonely at times and that it would be a jolly idea to start a club for the purpose of helping you get for yourselves the many little things which you can't afford and which you couldn't get without a lot of trouble even if you could afford them.

And when the Club was started, you should have seen the way the members flocked in! I knew beforehand that a club of this kind was needed, but how much it was needed, I hadn't even guessed. Girls from every State in the Union hastened to join the Club. For days and days it took every minute of my time to write welcoming letters to these new members! But it was such fun! And when the girls got started in the Club work and began to earn our gifts, then it was all the more interesting!

At first our Editor, Mr. Quick, objected to my calling our Club "The Gift Club," because he insisted that it is not altogether a gift Club. But, on the other hand, it is so near giving that no other word seems to fit. Of course, our girls do a little bit of work to get all the fine things that I have for them. But that's the fun of it. It's always nice to work for things for ourselves, isn't it? And judging from the letters that I am now getting from our

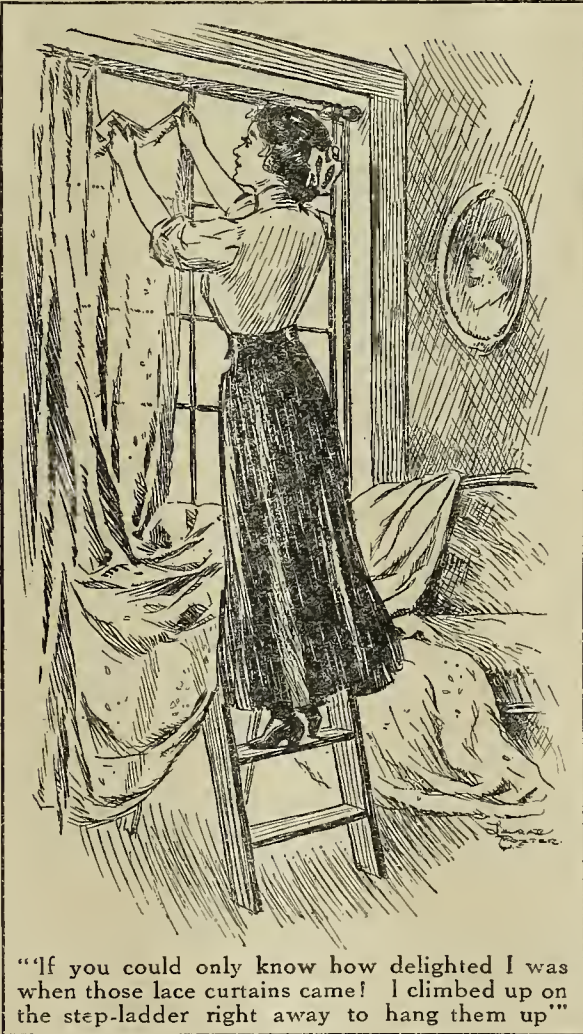
girls in every mail, I know the Club is rightly named. There are no rules, nor dues, nor expenses of any kind in The Gift Club, but the benefits that you will receive by being a member of the Club, oh! that's a different story altogether!

Now I know you are wondering why I don't tell you the Club's secret right away. It's just because I'm a girl myself and I know that every girl loves a secret. We all have a large share of curiosity and I want to raise yours to the boiling-point, so that you will sit down at once and write me to find out all about the Club. I'm never going to tell our secret here in the pages of FARM AND FIRESIDE, so if you ever expect to find out, you'd better write me and not sit there puzzling your brain to guess what it is. The Gift Club is not a puzzle. It's just a plain, straightforward Club that will be a help to you if you will let it.

How would you like to have a friend in Springfield, Ohio, who will do nothing but keep her eyes open for beautiful gifts to offer you and who will send them to you without charge if you do just a little bit of work in her Club? Well, that's exactly what will happen to you when you join The Gift Club. No, The Gift Club is not a mail-order business and it has nothing to do with shopping by mail. It is—

There, I almost told you! Well, it's just a secret so far, but a secret that I shall be glad to whisper to you on paper, if you will let me.

Here are a few letters that I have received from Gift Club girls. They show the sort of feeling that exists in the Club.



"If you could only know how delighted I was when those lace curtains came! I climbed up on the step-ladder right away to hang them up!"

DEAR MISS WEST—

I received the spoons and picture, and I wish to thank you very much, for I think they are both very fine.

MRS. C. C., New York.

DEAR MISS JEAN—

I expect you are wondering why you haven't heard from me, but I have been

busy. I received my spoons and pen and also my clock, and I am delighted with all of them. MRS. M. T., Indiana.

DEAR MISS WEST—

I received my beautiful ring, and I am certainly proud of it. I am only eleven years old. The Gift Club is certainly named right, because it gives you so many nice things.

WINIFRED C. L., South Carolina.

DEAR MISS WEST—

If you could only know how delighted I was when those lace curtains came. I climbed up on the step-ladder right away to hang them up. I think they are beautiful, and I do not see how you can afford to be so generous. I'm going to try for all the rest of the lovely things that you are offering us. We'll keep it up just as long as you will.

ANNA T. J., Michigan.

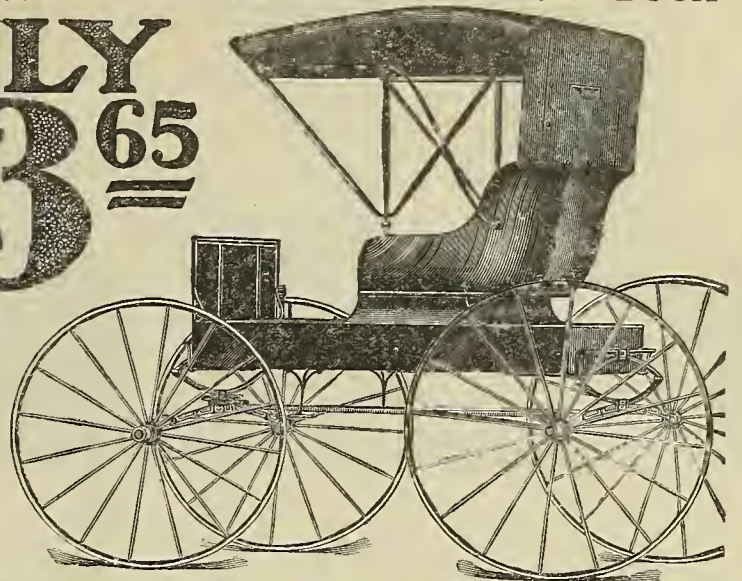
The way I feel about it now, I shall keep up The Gift Club for years and years—it's such a tremendous success! I can't possibly tell you all about The Gift Club in these two columns, but I shall be happy to write and send you a booklet if you are interested, and, of course, you are! How about your curiosity? Has it reached the boiling-point yet?

Jean West

Secretary, The Gift Club, FARM AND FIRESIDE, Springfield, Ohio.

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Positively the greatest, most startling price making the history of the vehicle business has ever seen. A guaranteed top buggy as low as \$29.90; a guaranteed runabout for \$23.80; a guaranteed road cart for \$10.35. The same smashing bargains on spring wagons, road wagons, farm wagons, trucks, etc.

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We sell direct from the factory to you. We cut out all dealers', agents' and jobbers' profits. We aim only to secure one profit and consequently we actually save you from \$20.00 to \$50.00 on any vehicle of any kind.

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400 styles—30 days' free trial and 360 days' approval—choose your style
30 Days —pay factory price
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Factory prices on cook stoves, ranges, heating stoves, gas stoves and furnaces. Every stove shipped same day order is received. Our factory prices will open your eyes on the real cost of a stove. Send for this Free Factory Price Book No. 183 today.

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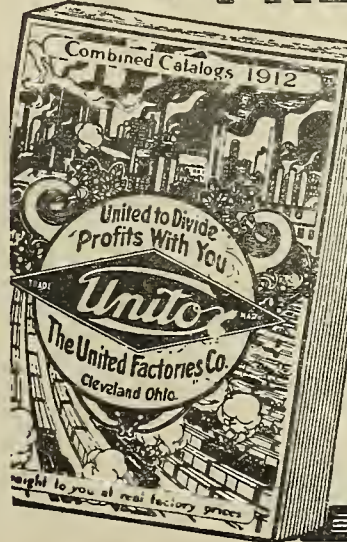
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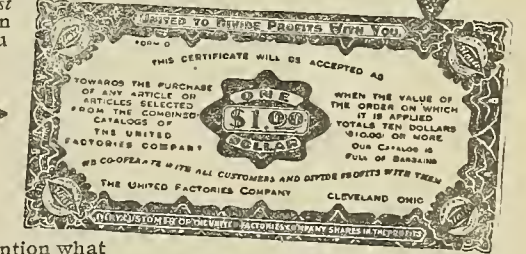
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The United Factories Company Department T-49 CLEVELAND, OHIO

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CREAM SEPARATORS

Save their cost every year of use

If you are milking even as few as two or three cows and are not using a De Laval Cream Separator you are wasting both quantity and quality of cream every day you go without one.

The larger your herd is the greater your loss without a De Laval Cream Separator.

This applies not only to those who have no separator but to those who are trying to get along with some separator other than the De Laval.

The De Laval saves enough over any gravity setting system in butter fat, quality of cream, sweet skimmilk, labor, time and trouble, to pay for itself every six months.

The De Laval saves enough over other separators in closer skimming, in running heavier and smoother cream, skimming cool milk, greater capacity, easier cleaning, easier running and fewer repairs, to pay for itself every year.

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A liberal "exchange" allowance will be made for your old De Laval Separator, or any other make, toward the purchase of an up-to-date machine. If you are using an old style De Laval or any other separator it will pay you to investigate the great improvements in our latest style machines, including automatic oiling.

De Laval Separators are not only superior to all others but are at the same time cheapest in proportion to actual capacity, while they are so much better made that they last from two to ten times longer.

More than a million and a quarter cow owners the world over have found the De Laval Cream Separator to be the best investment they ever made and 98% of the World's creameries use the De Laval exclusively.

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All farm and dairy sizes are made to run by hand, or can be furnished with attachments for operation by gasoline engine or any other kind of power.

We have agents in almost every locality who will be glad to set up a machine for you and give you a free trial, and we have an arrangement with our agents whereby the purchaser, if he desires, may make a partial payment at time of purchase and pay the balance on such easy terms that it will pay for itself out of its own savings.

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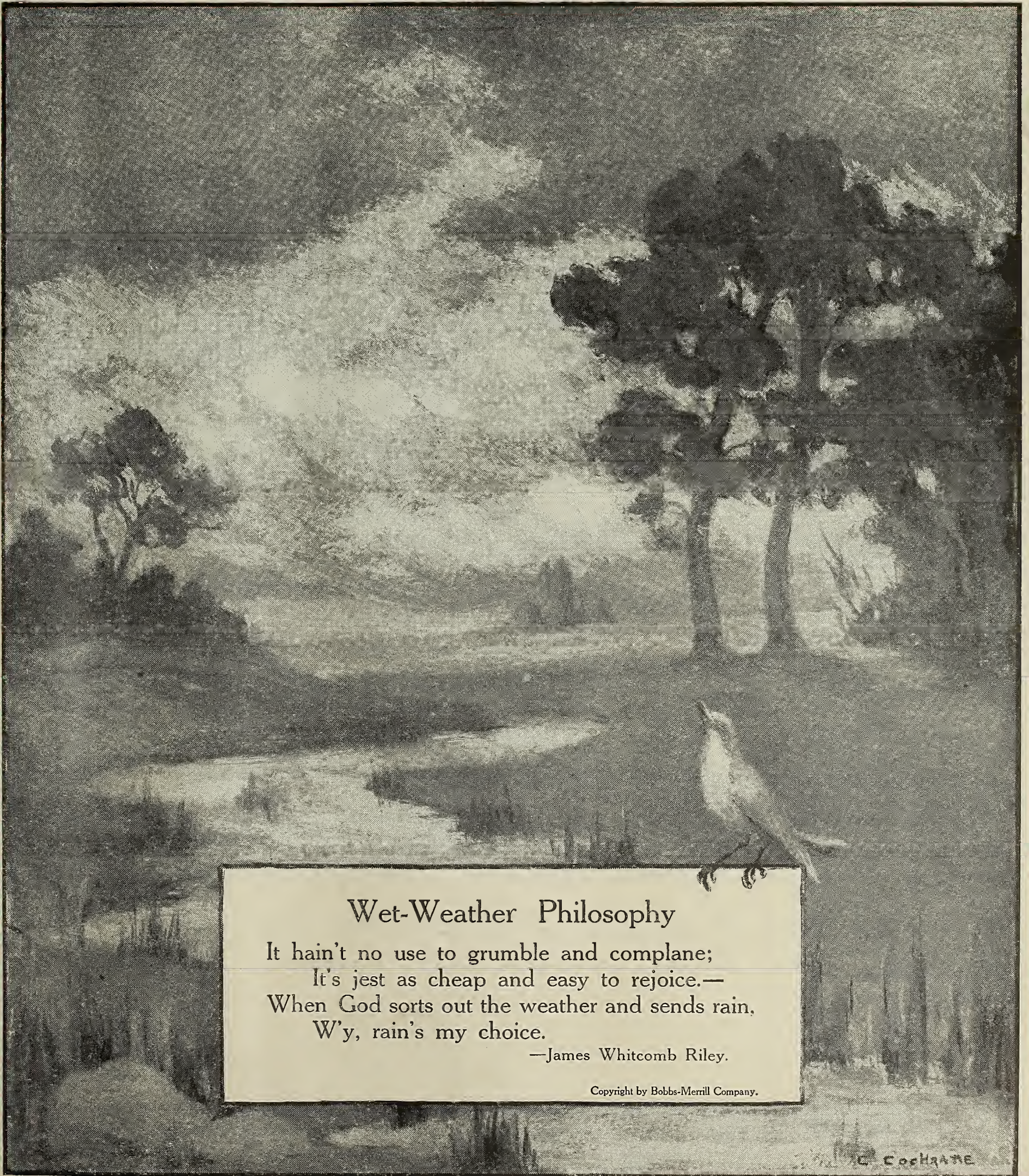
FARM AND FIRESIDE

THE NATIONAL FARM PAPER

EVERY OTHER SATURDAY

ESTABLISHED 1877

APRIL 13, 1912



Wet-Weather Philosophy

It hain't no use to grumble and complane;
It's jest as cheap and easy to rejoice.—
When God sorts out the weather and sends rain,
W'y, rain's my choice.

—James Whitcomb Riley.

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C. COCHRANE

Waterloo Boy

Power that Pays

This engine is a double bargain—a bargain in quality and a bargain in price.

It has always been the lowest priced high-grade gasoline engine on the market and has now been proven the BEST by defeating all other makes in two world's competitions. Two Regular Stock Engines won the gold medals at the International Expositions, Budapest, Hungary, July 1911, and Turin, Italy, September 1911.

The WATERLOO BOY GASOLINE ENGINE has been on the market for over 19 years. Built in one of the biggest factories in the world, with a capacity of nearly 40,000 Gasoline Engines a year.


- Frost proof, starts easy in winter.
- Parts interchangeable.
- Free catalog.



5 Year Guarantee

Waterloo Gasoline Engine Co.
173 W. 3rd Ave.
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SELF RAISING GATE

The gate with a "lift"—helps to lighten the daily load. It lifts itself, swings over all obstructions—no digging away snow or ice. Extra heavy frames of high carbon steel tubing, nearly two inches in diameter; all No. 9 wire filling of Peerless Fencing—close spacing between line wires and crossbars. Double latch and a barb wire top. Every part

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A rust-proof coat. Looks better than paint and lasts ten times as long.

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Get the genuine EMPIRE big wire fence, direct, at wholesale. Save dealer's profits.

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No traveling salesman, small expense, prices low. Everything guaranteed. Free samples by mail. Prices of leading styles freight prepaid to all points north of the Ohio and east of the Mississippi River:

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9	39	22c per rod	36c per rod
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13 CENTS PER ROD UP

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Fences for horses, cattle, sheep, hogs, chickens, etc. Special low bargain prices. We pay the freight.

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Send for catalog and sample.

Brown Fence & Wire Co.
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Get it From the Factory Direct

Sold direct to you at factory prices on 30 days trial. Save the dealers profit. Farm, Hog and Poultry Fence at from

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All wires are heavily galvanized 80 rod spool of ideal galvanized Barbed Wire \$1.55. Write to-day for large free Catalogue showing 75 different styles and heights of fencing.

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FARM FENCE

11 1/2 cts. a rod

For a 26 in. high hog fence; 16 1/2 cts. a rod for 47 inch high stock fence; 23c a rod for a 50-inch heavy poultry fence. Sold direct to the farmer on 30 Days Free Trial. Special barb wire, 80 rod spool, \$1.40. Catalog free.

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100 other styles. Many cheaper than wood—all better. For Lawns, Churches, Parks, etc. Write for Pattern Book and special offer.

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Many designs. Cheap as wood. 32 page Catalogue free. Special Prices to Churches and Cemeteries.

Coiled Spring Fence Co.
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Beautifully and Protect their Last Resting Place.

Cyclone Ornamental Fence combines beauty and lasting qualities: for cemeteries, public parks or private grounds. Strongly built; less costly than wood. Special prices to churches and cemetery associations. Write for catalog.

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With the Editor

A PROPHEET is not without honor, save in his own country. I wonder if it isn't a good deal the same with heroes. We read every year the list of heroes rewarded by Carnegie's Hero Fund—but we don't thrill. Somehow we seem to be losing the ability to thrill. They see so many pictures in books and papers, that when the children go to the circus, the lions and tigers and elephants seem like old acquaintances—and old acquaintances sometimes are lacking in thrill. I hope to look on the Panama Canal before the work is finished, but I know just as well as I want to that it will be an old story. The moving-picture shows brush the bloom off the novelty of everything. Sometimes I wonder if we aren't getting too well posted about everything. Wouldn't it be better—or at least, more fun—if we could believe again in hoop-snakes, and murdered toads making the cows give bloody milk, and the snake's tail living till sundown, and the snapping-turtle's hanging on until it thunders, and the handling of toads making warts, and the knotted string taking them off, and wild men in Amos Wickham's woods, and keeping bees from stinging by holding your breath, and the granddaddy-long-legs' pointing to the cows—and those things, you know?

Wouldn't it be more fun, and wouldn't it be better, if we read fewer newspaper-stories of heroism, and believed more in heroes? I suppose, though, that the Children of Israel had their doubts about David's being any great shakes as a hero. I can just hear them talking about it in front of the tents after David slew Goliath.

"Why, anybody could've done it," says a young Hebrew, chewing a straw and lolling on the tent-rope. "What was there to that, I'd like to know? All he had to do was to keep throwing until he soaked Goliath on the coco. Why, I could've done it! The big lummox couldn't have caught him in a hundred years—and if he'd missed the first shot, he had four more smooth stones from the brook left in his bag. It was a cinch!"

Anyhow, if the Israelites were like us, that's the way they'd have talked in camp after the mighty deed was done by the ruddy-faced stripling who had the heroism to refuse armor and go forth in sublime confidence that God had given him the common-sense idea which had to win.

The people of Trego County, Kansas, started me off on this screed about heroes. I don't suppose there's a hero in all Trego County—but there's something about the people there that makes me think of heroes, anyhow.

ILL tell you about it. Last year was a bad year for Trego County, so far as crops I are concerned—but I suspect it turned out more heroism to the acre than any year they ever had. The drought was so bad that they had to begin feeding in July. A large proportion of my readers don't know what a drought is. They think they do, but they don't. When the wind blows steadily for days so strongly and unremittingly that if you lay a shingle against the side of a house it will stay there until the wind goes down; when you hustle to get out of the wind, instead of into it, to cool off; when the sky is like hot brass for weeks, and the only thing that mitigates its blaze is the film of dust over its face lifted to the upper air by the gale; when the ground grows hard, and the grass will burn in July; when the corn leaves roll up and turn brown, and the tassels whiten and dry, and the silks blow off like dead hair; when you hope for a storm, yet dread it, for fear of hail and wind; when there is grit between your teeth every time you chew—you'll need all the grit you can lay claim to, for you are in the midst of a drought in the Great Plains region. And you'll know what Trego County was up against last summer.

But the Trego County farmers, full of confidence in their wonderful soil, prepared the ground as usual and sowed their wheat—a normal acreage in spite of the drought—all the seed for which they had to import.

They asked and received no aid, local, State or national. The local banks loaned money to many of them at eight per cent. Somehow, they got their land plowed and their wheat sowed.

The winter had been one of the severest ever known there. I don't know whether that was encouraging to them or not; but I suspect that they congratulated themselves while the blizzards were blowing, that the green bug was getting discouraged anyhow.

Something seemed to hearten them up, if one may judge by their behavior. For, in spite of drought and debt and hard winter, the Trego people still possessed the heroism to vote a bond issue of \$25,000 for a county agricultural high school. They believed in their county. They knew its soil to be of almost inexhaustible fertility. They loved their homes. They saw in fancy that wide expanse of plain, scored across by the Smoky Hill Valley, dotted with prosperous farmsteads and spangled with groves and orchards.

But they also recognized the fact that the problems of dry farming, two thirds of the way across Kansas from east to west, present some big questions. They want light and education and expert knowledge. So in the depths of their adversity they calmly went about it to prepare for that training for their children which alone will make a permanent agriculture possible there.

Now I call this finely heroic. Such wisdom, coupled with such enterprise and courage, cannot fail. Watch Trego County, Kansas!

AND while you are about it, watch that long strip of Oklahoma that runs out between Kansas and Texas. It is thickly settled. There are three counties in the strip, all prosperous. The Secondary School at Goodwell has placed itself at the head of agricultural progress in that region, and the people of this Pan Handle are very proud of the school and its influence.

These people will win. Like David, they can't help it. With drought-resistant crops, scientific tillage and ten tons of this heroism to the acre, you can't beat them. And now, brethren of the East, those of you who distrust all new methods—there are a few counties of the sort left,—listen to the tale of Trego County, Kansas, and wake up!

I am more and more convinced of the fact that the neighborhood which makes its schools the best possible will sooner or later find farmers will be most prosperous. Certainly they will be made more happy by the right kind of schools.

There are so many things that we can't do individually, which might be done by a social center such as the school might be made over into. Seed-testing, milk-testing, plot experiments, the testing of new crops, even the keeping of real cost accounts for the farms—all these would be such splendid things for the young folks to do as a part of their education, if helped and advised by the experts in the neighborhood and on the teaching force. Some time we shall see it, I believe.

Robert L. Grier

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FARM AND FIRESIDE is published every other Saturday. Copy for advertisements must be received three weeks in advance of publication date. \$2.00 per agate line for both editions; \$1.00 per agate line for the eastern or western edition singly. Eight words to the line, fourteen lines to the inch. Width of columns 2 1/2 inches, length of columns two hundred lines. 5% discount for cash with order. Three lines is smallest space accepted.



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One Year (26 numbers) 50 cents
Canadian, 1 Year . . . 75 cents

Subscriptions and all editorial letters should be sent to the offices at Springfield, Ohio, and letters for the Editor should be marked "Editor."

Silver, when sent through the mails, should be carefully wrapped in cloth or strong paper so as not to wear a hole through the envelope.

Vol. XXXV. No. 14

Springfield, Ohio, April 13, 1912

PUBLISHED
BI-WEEKLY

Hens, Alfalfa and Pedigrees

A PERFECTLY hardy alfalfa, one which will live through the coldest, driest winters of our most inclement regions, just as buffalo grass and horse-radish do, is something greatly to be desired. A great many of us have believed that such a variety can be developed from the common alfalfa by "breeding."

A true-breeding variety of hens averaging 250 eggs per hen per year is a thing greatly to be wished. We have hoped for the development of such a breed from trapping and breeding from the good layers only.

Raymond Pearl of the Maine Station, after doing this very thing for ten generations of hens, finds that the daughters of good layers are no better layers than the progeny of poor layers. Prof. N. E. Hansen of the South Dakota Station insists that the development of a hardy alfalfa from the common variety is a matter which might be done in ten thousand years, but suggests that this is quite a while to wait.

Pearl shows, however, that by keeping accurate pedigrees of hens and cocks, and breeding from those only which come of laying ancestry, rather than those whose prolificacy is an individual peculiarity, strains of hens may be culled out of the mass which will be high layers. Hansen brings from Asia varieties of alfalfa from which nature has been sifting every plant but the perfectly hardy, for not only ten thousand years, but for hundreds of thousands.

These alfalfa-plants have pedigrees attested by the climate in which they are found. As for the hens, we must no longer rely on haphazard trapping, but must keep as accurate pedigrees as have been kept for the fine breeds of horses, cattle, sheep and dogs for centuries. In other words, we must cease trying to accomplish anything by mass selection, and proceed by individual selection.

The Illinois Bankers' Campaign

THE Illinois Bankers' Association is becoming active in promoting certain movements for the public good, as the association sees the public good. Its first platform plank is better farming methods. Some farmers may wonder at this, but none need do so. Better farming methods will make better business for bankers and enable bankers, as land-owners, to secure more profitable terms from tenants. This is the selfish side of the matter. As citizens, bankers have all the incentives that other men have to desire general prosperity. Farmers should study better methods, no matter by whom nor when such methods are brought to their attention.

The second plank in the platform of the Illinois bankers is agricultural instruction in all the schools of the State. This is good. The highest interests of the farm home are in our opinion bound up in the rural school, and its correlation with farm life.

The third plank is good roads. In view of the fact that it costs as much to carry a ton of produce over one mile of ordinary road as to transport it forty miles by rail, or two hundred and fifty miles by water, the progressive farmer may well cast his lot with the bankers in any well-considered good-roads movement.

These are the matters in which the farmers of Illinois are most interested in the new "pro bono publico" activities of the bankers. The proposals are broad in scope, and wise in general aim. They will, of course, be favored or opposed by the intelligent, according to the way in which they are sought to be accomplished.

Never venture upon an old bridge with team or machinery without seeing that it is firm and safe for heavy weights.

Last July a Missouri farmer sowed oats, corn and millet on a piece of land that had been in early oats. The early oats were used as roughage. The second crop proved highly profitable.

Turnip-seeds scattered among the watermelon-vines after cultivation has ceased, will produce a good second crop on the land.

Pumpkins are not hard on soil, and they will often yield well when planted right in the corn or potato rows; most farmers should raise all their stock can profitably consume.

New Alfalfa for Dry Northwest

THE agricultural world has waited for several years for results from Hansen's importations of alfalfas from the dry and cold interior of Asia. Evidently it is to wait no longer. That Professor Hansen is now ready to send out seed in small quantities to farmers is news

When You See It in the Farmers' Lobby, It's So

SHORTLY after Mr. Taft was nominated in 1908, and long before his election, the Farmers' Lobby made the following remarkable prophesy:

Mr. Roosevelt and Mr. Taft will much better agree at the beginning of Mr. Taft's administration than at the close—always assuming a Taftian triumph at the November polls.

The two will go apart. The difference will not mean that Mr. Taft has been either ungrateful or treacherous, or Mr. Roosevelt overarrogant in his demands. "President Taft"—and in all honesty, too—will be a vastly different individual from "Candidate Taft." Now he is the clay; Mr. Roosevelt is the potter. Now he has hopes; then he will have fears. Now he possesses ambitions; then he will face responsibilities.

Some fine day, should Mr. Taft be in the White House, Mr. Roosevelt—ardent, not keen as to what sure changes ever attend upon "before" and "after"—will enter a protest or prefer a request. "President Taft"—doing his friendly best—will not be able to entertain the one or grant the other. Mr. Roosevelt—doing his friendly best—will not be able to see why. Both men are fine enough to be sensitive, young enough to be angry. And so, in mutual misunderstanding our Damon and Pythias of politics, our modern Jonathan and David, will separate; and what places in politics have known them in their intimacies, their co-partnerships, will so know them no more forever.

FARM AND FIRESIDE claims no supernatural powers in predicting events, but the writers of the Lobby are men who are in the heart of political events and whose insight into national affairs is equal to that of any writers' in the world.

of the greatest interest and importance. To new members of the South Dakota State Horticultural Society he is offering, with a copy of the annual report, a hundred seeds of Cossack alfalfa, said to be worth a dollar. To the man who will take them and propagate the plant, they may be worth thousands.

Professor Hansen evidently believes that in the alfalfas brought home by him there are varieties which will grow luxuriantly and bear good quantities of seed, hardy enough to become wild in all our cold, dry Northwest, and to bless the farmers clear to the very northern limit of agriculture. His platform calls for such results.

Think of it! Through one man's search of the remotest and wildest portions of the world, we are likely to be endowed with a new agriculture. Those who have seen the soil blowing from the Carberry Plains of Manitoba, from fields depleted of their humus by wheat after wheat, and no legume, can understand the sublimity of the work which this one agricultural explorer has apparently done.

To the farmers of the Northwest we recommend the securing of trial lots of these plants and seeds. The men who get the first start in these, and the Grimm alfalfas, and will in that dry climate enter upon the growing of the seed for the market, will find demand for their product soon, in Canada, and all the northern States of the Union. It is a unique opportunity for the enterprising in these sections, perhaps elsewhere.

To Farmer-Loving Statesmen

ALL our congressmen and senators dearly love the farmer. They admit it. Senators, too, since the coming in of the direct election and nomination of members of the upper house, are fond of farmers. They say so.

These gentlemen are engaged in passing in the lower house a lot of measures which they know will be beaten in the upper, or vetoed by the President. All are panting for credit for love of the farmer—so long as it can be evidenced by nothing more substantial than motions.

Let us suggest a law that this Congress might pass which could not fail in either house on an open vote, and which the President would not veto. Such a law would be a quarantine law against pests and parasites from foreign lands. Such a law would have kept out the San José scale, the codling-moth, the Hessian fly, the cabbage-worm, the green bug on wheat, the oyster-shell scale, the horn-fly, the cotton-boll weevil, the gipsy moth, the brown-tail moth, the alfalfa-leaf weevil and many others.

All other civilized nations have quarantine under which plants, seeds and bulbs are rigidly inspected. This is a civilized country, but you cannot prove the fact by the character of its laws on this subject.

Our intelligent congressmen who so dearly love the farmer, may think that all the pests which can get in have already come. Such a notion would be quite on the level of the average congressman's cranial development on scientific questions. But there are still pests which Congress has not let in. The Morellos fruit-worm may come in from Mexico; the olive-fruit worm awaits importation from Europe; there are several scale insects in China and Japan ready to come in with any shipment from those regions, some of them quite as bad as the ones we have already suffered from. The gipsy and brown-tail moths are likely to be shipped into regions where they are now unknown.

Diseases may come in. The potato-wart disease may add to the cost of living already high, and ruin a great industry. It is already in Newfoundland. There is no known remedy for it. White-pine blister rust has landed in Canada—and there are others. They may come in at any time, as did the chestnut-blight.

The need for legislation is plain—to everybody but congressmen and senators. They are so busy loving the farmer that they may be excused for

ignorance of the fact that quarantine regulations against these pests are a part of every civilized body of laws; that experts have for a long time pleaded for the laws, and that the dangers to be guarded against are real, great and imminent. Even while this is in process of writing, some pest or disease may have found lodgment in the United States, which will make harder the task of the farmer, and smaller his profits.

Do we hear any response from Congress? Not as yet. It is too busy going through political motions.

Another "Rain Cover"

LAST year we made a cover of Loveman's beautiful poem, "It Isn't Raining Rain to Me"—and no cover we ever published seemed to touch so many hearts. This year—this issue—we are giving you an interesting picture and another poetic gem. The lines are by Riley. The design is by Constance Cochrane, a student in the Philadelphia School of Design for Women.

We sent out invitations to several art schools asking the students to compete. No professional artist could enter. The result was a large number of designs—all interesting, and some beautiful. We found in Miss Cochrane's picture just that vernal and misty spirit which we felt in the month and the verses. We think it a remarkable piece of work for any artist. It will give our younger readers a glimpse of the work done by students in a good art school.



When Shall We Turn the Furrow to Secure Best Results?

What Experienced Men Have to Say

THE farmer of to-day is sometimes quite at a loss to know just what tillage machine or implement to choose out of the almost innumerable kinds on sale intended for working the soil. But in spite of the multitude of implements and in spite of variety in soil type it still remains for the plow to do most satisfactorily the basic work of pulverizing the soil and covering the sod and vegetable material upon which the best physical condition of cultivated land depends.

So various are the soils and climatic conditions confronting farmers in different sections of our broad domain that we decided to bring together the results worked out by those engaged in soil experimental work in the stations of the entire country, and from these make possible a composite study in plowing and soil-tillage. Comparison of the advantages and disadvantages of fall and spring plowing was taken as the basis of these plowing discussions asked for. Nevertheless, it will be noted that the experiments carried on by the stations have reached far beyond the benefit or injury that may result from fall or spring plowing. These discussions throw some most instructive side-lights on soil science teaching and soil tillage generally, which could not so well have been secured from any other source.

It was to be expected that the finding of some station experiments would exactly duplicate others, hence a few reports received have been omitted, but the recommendations of most vital importance are purposely allowed to be reproduced in a number of the reports. In this way the teachings of the experimental work in different States is emphasized.

The great prairie State, Illinois, the heart of the corn belt, has long been the field of the tillage experimental work of Dr. Cyril G. Hopkins. Hence, J. G. Mosier, who has charge of the soil physics work under this noted authority, is especially capable of introducing this discussion. He has this to say on this important subject:

An Illinois Necessity

Fall plowing is practised to a very large extent in Illinois, especially in the northern two thirds of the State. Early fall plowing—that is, plowing done in August and the first half of September—should not be practised unless a catch crop or a crop of wheat or rye is sowed on the land to prevent loss of nitrogen by leaching. Early fall plowing allows a large amount of nitrification to take place, producing soluble plant-food, and this is liable to be lost from the soil during winter and early spring unless crops are grown to use this and keep it on the land.

Late fall plowing has an advantage, in that it disturbs the eggs and homes of many insects and results in the destruction of a great many of the insect pests that trouble the farmers. Fall plowing, however, should not be practised with the expectation of getting the best results, if the soil does not contain a considerable amount of organic matter. One object of fall plowing is to allow the soil to become thoroughly granulated by freezing and thawing during winter. This will only occur in soils that are rich in organic matter or that have a considerable amount of clay intermixed with organic matter. Such soils will be benefited very much by fall plowing. On the other hand, soils deficient in organic matter will "run together" in the winter and by spring will be in as poor or poorer physical condition than if left unplowed.

Another advantage in fall plowing, if properly treated the next spring, is to conserve the moisture. The fall-plowed land should be disked in the spring in order to conserve moisture to the best advantage. I think in this State that one of the chief reasons for doing fall plowing is that it gives the farmers more time for other work in the spring.

Loss of plant-food by nitrification referred to by Mr. Mosier is the changing of insoluble forms of nitrogen in the soil into a form that is soluble in water and consequently liable to be lost by leaching. Different sources of organic matter are: stable manure, plant or animal remains, such as green manure crops, stubble, plant-roots, forest-leaves, decaying wood, dead animals and insects, etc.

In the State of Ohio somewhat different soil and climatic conditions prevail. Consequently F. A. Welton, Department of Agronomy, Ohio Experiment Station, makes slightly different recommendations. He says:

Neither light, sifty soils nor exceedingly fine clayey soils should be plowed in the fall. The former are subject to great loss by washing, while the latter are liable to puddle, especially if located where little freezing and thawing weather prevails.

Then again, if one is following a rotation like corn, potatoes, wheat and clover, or corn, soybeans, wheat and clover—rotation which permits of the growing of a good catch crop like rye,—then it is probable that the catch crop will do more good than fall plowing. Such a catch crop locks up the plant-food which may become available in late fall and early spring, prevents washing and adds a large amount of humus-forming material to the soil.

With the exception of the above-named conditions, fall plowing is an excellent practice for the following reasons:

First. It makes a more even distribution of labor throughout the year. Moreover, in the fall horses can do more work per day than in the early spring.

Second. Fall plowing favors early seeding, and the Ohio station has found this important for both oats and corn. A difference of one month in time of planting corn has made a difference in yield of twenty-seven bushels per acre. This is an average of five years' work. Furthermore, the quality of the late-planted corn is much inferior to the early. The per cent. of moisture in the late-planted corn has ranged from eight to thirteen per cent. higher.

Third. Fall plowing, through the exposure of a greater surface to the effects of freezing and thawing weather, improves the tilth of soils, especially of those which have a tendency to be tough and heavy.

Fourth. Fall plowing favors the collecting and absorbing of rain and snow, which results in storing up in the soil the maximum amount of moisture.

Fifth. It results in the destruction of many injurious insects, such as the white grub, wireworms, cutworms and corn-ear worms.

There is little loss of fertility through the promotion of nitrification, because, according to King, nitrification does not take place when the temperature is below forty degrees Fahrenheit. Ninety-eight degrees Fahrenheit is required for the maximum rate of nitrification.

The extent of the loss of plant-food by nitrogen compounds in the soil becoming soluble is a most important question. There are many days between the closing in of winter and seed-time that are well above forty degrees Fahrenheit, even in the more northern States.

Then going farther east, Frank D. Gardner, speaking of the State of Pennsylvania and from the agronomy department of the experiment station of that State, makes this intensely practical statement:

Pennsylvania Experiments

An experiment on deep and shallow plowing, combined with spring and fall plowing as started at the Pennsylvania Experiment Station in 1909, embraces eight one-acre plots, four of which are plowed very deep (12 to 14 inches) and four of which are plowed at the ordinary depth of plowing (7 inches deep). Two of the deep-plowed plots and two of the shallow-plowed are plowed in the fall, while the remaining four are plowed in the spring. In 1910, these plots were in corn. The yield of corn and stover from the deep and shallow plowing did not show differences for that year worthy of mention. For the four plots that were fall-plowed, however, the yield of corn was 61.8 bushels per acre, and the yield of stover was 3,332 pounds per acre. For the spring plowing the yields for the corn and stover, respectively, were 57.4 bushels of corn and 3,133 pounds of stover, showing a difference of 4.4 bushels of corn and 199 pounds of stover in favor of fall plowing.

Following the corn, the plots were plowed in the usual manner, and in the spring of 1911 four plots were seeded to barley and alfalfa, and the remaining four to oats. In case of the barley there was a difference of 2.3 bushels in favor of spring plowing, and in case of oats, a difference of .9 bushels in favor of fall plowing. In other words, the difference in case of these small grains are not sufficient to offset the probable error. This, of course, is only one experiment extending over two years and does not give sufficient data for general conclusions.

In view of results obtained by other plowing experiments followed, it seems quite probable that an intermediate depth of fall plowing (10 to 11 inches) might have shown

even better results. Land plowed to the depth of 12 to 14 inches turns up a large proportion of raw, unweathered soil that cannot be expected to be well adapted to plant growth, unless the depth of plowing has been increased gradually.

The corn-belt States have some peculiarities, all their own, as will be seen in the following statement from A. T. Wiancko, of the Department of Soils and Crops, Purdue Experiment Station, Lafayette, Indiana:

In determining the advisability of fall plowing in Indiana, we take into consideration a number of points, chief among which are the latitude in which the farm is located, the topography and the type of soil. Generally speaking, fall plowing may be advised in the northern portion of the State where there is a good deal of winter frost and comparatively little winter rain, while in the central part of the State there seems to be little advantage, other than that derived from the possible greater convenience of doing the work in the fall, and in the southern end of the State, under average conditions, it is best to advise against fall plowing for the reason that there is comparatively little winter freezing to improve the physical condition of the soil and a great deal of winter rain which tends to puddle fall-plowed land very much more than land left unplowed. Another important consideration in southern Indiana is that most of the soil is clayey and easily puddled and injured by winter rains and so may be harder to put in good condition in the spring than if it had not been fall plowed. So much of southern Indiana, also, is hilly, and the danger of washing fall-plowed land during the winter is considerably greater than on land not plowed. Summing up, I would say that in northern Indiana fall plowing would generally be beneficial; in central Indiana it is largely a question of convenience; while in southern Indiana it may be injurious, except on comparatively level, well-drained soils that are not easily puddled.

Turning to New York, we have this statement from E. O. Fippin of the Cornell Station's Department of Soil Technology:

In general, we regard fall plowing as very good practice under the great majority of conditions. In addition to the large saving of time in the spring, results are better upon most soils with the majority of New York farm crops.

Fall plowing on clay is not so desirable when the land has been clean cultivated during the previous season. Absence of vegetable matter in the soil is apt to cause puddling. The other class of soil conditions suitable for fall plowing is very light soil, such as sand and muck, whose natural tendency is to be too loose, and, therefore, not have sufficient water capacity. Fall plowing clears the surface, and the rain and snow during the winter settles the soil so that it is in better shape to receive and hold crops in the spring.

To a degree, fall plowing is a protection against erosion on some of our side-hills. This is true where the land is in sod and of a fairly heavy texture, and also where it is plowed across the slope. Where the flow of water is likely to be such that the water breaks across the land, fall plowing is undesirable. One important reason for fall plowing in certain sections of northern New York is the advantage as drainage. The land is thrown up in beds about two rods in width with a very definite dead furrow between, which serves as drainage. While helpful, such land ought always to be tile-drained where possible.

Call of Kansas

L. E. Call, Department of Agronomy, Kansas Experiment Station, mentions some conditions which are common to few States. His remarks are especially practical for Kansas:

Fall plowing is in general favor in eastern Kansas. It retains snow upon the field that would otherwise drift into fence-rows and low spots and thus, if the moisture was not lost, would be unevenly distributed.

The fall is generally considered to be the most favorable time to plow land deep. The freezing and thawing of winter has a favorable action upon the raw subsoil exposed to the surface for the first time. Just what this action is we do not know, but we know that any detrimental

effect that might result from deep plowing due to the exposure of the raw subsoil is greatly ameliorated by the action of frost during winter. Likewise, there is no better way to improve ground that is in poor physical condition than by deep fall plowing.

Spring plowing for corn, especially deep spring plowing, is not a safe practice in Kansas. There is not sufficient rain, neither is there sufficient time to prepare a firm seed-bed before the crop is planted.

In western Kansas and on exposed fields in central Kansas fall plowing is not advisable, especially on the lighter type of soils. When fall plowing is practised in this part of the State, there is great danger of soil blowing. When blowing occurs, it is considered better practice to list the ground in the fall rather than to plow. When the listing is done at right angles to the prevailing wind, there is little danger of the soil blowing. Fall listing serves much the same purpose as fall plowing in retaining snow and improving the physical condition of the soil.

The suggestion made with reference to listing at right angles to the prevailing wind holds true with plowing at right angles to the slope of the land that is quite rolling to prevent washing by accumulation of water following the furrows. Of course, such a precaution will not prevent erosion where the slope is too great.

Southern conditions present new problems. Lyman Carrier, Department of Agronomy, Virginia Experiment Station, briefly says of Virginia's existing conditions:

Southern and Northern Conditions

We prefer fall plowing on our clay lands when possible to do so. The chief advantage is in allowing us to plow deeper than we would do if we plowed immediately before planting the crop. I am not satisfied that it is the best policy for keeping up the permanent fertility of the land, but there is no question but what we get better crops, such as corn, potatoes and spring oats from fall or winter plowing than we do from plowing immediately before planting-time.

Why cannot a cover crop be grown during autumn in the latitude of Virginia, and turned under late in the fall, thus getting the advantage of increasing the vegetable matter in the soil and winter weathering and settling of the soil?

Horace Atwood, Department of Soils, West Virginia Experiment Station, points out the value of the cover crop.

Where the land is to be sown to oats, it is a very decided advantage to have the plowing done in the fall or winter, for in that case the oats can be put in promptly as soon as the frost is out of the ground, which in the case of this crop is a matter of first importance. It is undoubtedly true that on many of our soils it is better to use a cover crop during the winter season and plow the land just before seeding, for in this case a considerable amount of vegetable matter is obtained, practically without cost, and practically no available nitrogenous substances are washed away in the drainage water during the winter. This matter is of sufficient importance so that in my own practice I seldom plow in the fall or winter, except land intended to be sown in oats early in the spring.

Andrew Boss, Department of Farm Management, Minnesota Experiment Station, gives the standpoint of small grain States:

It is important in most States that the small-grain crops be sown as early in the season as possible. Spring plowing delays seeding and nearly always results in a lighter crop.

In fall plowing capillary attraction is interrupted during the season when no crop growth is being made. During the winter the soil becomes compacted by the rains and snows and becomes sufficiently well packed to again establish capillary connections. Surface cultivation of the fall-plowed land in early spring gives ideal moisture-control conditions, and it insures a dust mulch on the surface and an abundant supply of moisture beneath the growing crop. Fall plowing also is valuable in the matter of killing weeds. Weeds that germinate soon after the crop is removed are plowed under, weed-seeds are covered and germination insured in the spring. The seeds that germinate may be killed by the spring cultivation and the land left in better shape than is possible where spring plowing is followed. There are few

There are few

There are few



crops that do not yield better on fall-plowed land than on spring-plowed land. Exceptional crops and exceptional soils sometimes demand spring treatment, but as a general farm practice, fall plowing is considered by far the best.

Fall plowing as a means of weed-control, as a rule, is not sufficiently considered. Getting many noxious seeds a foot or thereabouts underground and destructive insects near the surface at one operation is a good example of "killing two birds with one stone."

The hilly farm has many difficulties to overcome. Proper judgment as to time of plowing will oftentimes overcome some of these difficulties.

J. C. Kendall, Director, New Hampshire Experiment Station, probably had these hilly farms in mind when he wrote:

Fall-Plowed Land is Warm

Fall-plowed land will be found warmer and can be planted at an earlier date than spring-plowed land, and will hold a larger amount of water, as has been proven by experiments. The breaking up of the soil-grains increases the surface area, and since these soil particles are surrounded by a film of water, the smaller they are, the greater will be the water content of the soil. Soils that are pulverized and mellowed through weathering are also undergoing chemical changes which liberate plant-food. Hence fall-plowed soils would be expected to have more available nutrients for the growing of the crops than the spring-plowed fields under similar conditions.

A spring-plowed land, where the subsoil is cloddy and coarse, cannot supply the crop with the required amount of subsoil moisture, and this accounts for many entire or partial crop failures, especially with our plants having a shallow root system.

There are two conditions under which perhaps it would not be wise to plow the land in the fall: When soils that are very open and porous lack humus. Such soils might leach away part of the plant-food made available through the action of weathering and resulting chemical changes and be lost. Also those soils that are inclined to wash, such as those to be found upon our steep hillsides, and on some types of soils that are inclined to puddle and surface wash.

L. F. Graber, Department of Agronomy, Wisconsin Station, says of that State:

On our lighter, sandy types of soils, where wind erosion and soil washing are matters the farmer has to contend with, a legume or cover crop not turned under until spring will accomplish more for the subsequent crop than will fall plowing. However, on our heavier types of soils, such as the clays and clay loams, where the contour of the land will not permit excessive soil washing, fall plowing has distinct advantages. The loosened and broken surface of plowed land acts as a mulch, which holds the moisture accumulated by heavy fall and early spring rains in the soil, and prevents the great losses through capillarity and rapid surface evaporation prevalent in compacted, unplowed soils. In one of the numerous experiments at the Wisconsin station, which have proven this assertion, the fall-plowed land contained one hundred and ten tons (over an acre inch) more water per acre in May than did the adjacent plot not plowed. Other stations have shown similar results.

The compact stubble-field or sod does not permit easy entrance of heavy fall rains, and often there is much surface water run off, while the loose, fall-plowed soil acts like a sponge in this regard. The escape of water from the soil by evaporation, made possible by capillarity or capillary action—meaning power of fluids to rise by attractive force in small, hair-like channels—is one of the soil facts worthy of much study by every farmer not already familiar with the subject. In this connection, the possibility of holding an additional inch of moisture reserve, above referred to, means a great deal in tiding crops over a midsummer's drought.

These same principles will apply, in part, to all States. A. E. Grantham, Agronomist of Delaware, shows this fact in speaking of the Atlantic Coast soils:

Fall plowing in Delaware, on account of open winters and rather sandy soil, does not give best results. The fact is, we prefer to keep the land covered by a green crop during the winter so as to take up the soluble plant-food, and in that way prevent leaching which would otherwise occur.

We grow considerable acreage of crimson clover throughout the State, and this crop, as you know, is sown in corn at the last cultivation and makes sufficient growth before the winter to thoroughly cover the ground, and this is plowed under the following spring for another crop, or it may be cut for hay and the land put in corn or late potatoes. From what I have observed, I do not think that fall plowing has any decided advantage on our types of soil in this State. Many days throughout the winter the ground is not frozen at all and the winter rains tend to leach away any soluble plant-food that may be in the soil, so we recommend that the land be kept covered with a green crop, such as crimson clover, vetch, or, in case the crop comes off too late, sow rye, and this offers some protection from the loss mentioned above.

Jacob G. Lipman, of the New Jersey station, is unquestionably the authority who should speak when soil bacteriology is up for discussion.

Soil fertility is governed in a large degree by bacteria. Doctor Lipman says:

When the subject of fall plowing is considered from a broad standpoint and with due allowance for the variation in soil and climatic conditions, the following recommendations may be safely made:

1. Fall plowing should not be practised on land that is steep enough to be subject to erosion.
2. Fall plowing should not be practised on light, sandy soil subject to blowing and leaching in the fall, winter and early spring.
3. Fall plowing may be practised to advantage where the land is heavy and poorly drained.
4. Fall plowing may be practised to advantage on low, reasonably level, or gently rolling land, in order to allow the elimination of certain injurious insects. Exception should be made, however, of very light soils as noted above.

It is well known that in heavy land there is relatively slight danger of soluble plant-food being leached out in large amounts during fall and winter. On the other hand, the freezing and thawing, and the better aeration of such soil brought about by fall plowing, are likely to improve the texture and to promote such chemical and bacterial changes as will make for the accumulation of a larger store of available plant-food.

Where the soil is light in character, fall plowing is objectionable, because it makes the land more subject to physical deterioration by wind action. Furthermore, because of the open character of sandy soils, the decomposition of organic matter will go on in them even in the late fall and very early spring where climatic conditions are at all favorable. In this manner much of the organic nitrogen is converted into nitrate and is leached out of the soil. It is evident, therefore, that such land should bear some sort of a cover crop in the fall or winter, preferably a legume, and should not be plowed until early spring.

Charles S. Knight, Department of Agronomy, Nevada Experiment Station, says for Nevada:

What Alfalfa Soil Seems to Need

Fall plowing is quite universally practised throughout the State of Nevada, especially where alfalfa is being replaced by another crop. This gives the alfalfa—which is turned under—plenty of time to decay before the next crop is planted. If left until spring, the alfalfa cannot decay in time for the best welfare of following crop and will remain in the soil in a very loose condition, thus preventing the rise of capillary water for the germination of the seed.

James A. Jeffrey, Department of Soils, Michigan Experiment Station, adds to this:

In the State of Michigan clay soils should be plowed in the fall:

1. That the soils may have the benefit of the freezing of winter.
2. Because of the tardiness with which clay soils come into condition in the spring for plowing, and, therefore, because of the lateness of planting which must result.
3. Clay soils are more likely to puddle in the spring than in the fall, at least such seems to be the common experience. Whether this be true or not, the danger of puddling, or packing, is very great, and, therefore, unless the plowing can be done at just the right time, the soil turns over in lumps, and when this condition exists, no amount of preparation will produce a seed-bed equal to that developed on the fall-plowed soil or upon the spring-plowed soil when the condition for plowing is just right.

Fall plowing for heavier loams, and, indeed, for most loams, is desirable, not so much for the benefits derived from freezing, but because:

1. It permits the earlier planting of the crop, which is very important in the case of the spring grains.
2. What is true of the puddling of clay soils is true, also, of the puddling of the loams. This fact is not so generally appreciated by the farmer as it should be, as is demonstrated by the condition in which the soil is left, not only by the too early plowing, but, also, by the too late plowing of these soils. The result is seen in the first case in the shiny surfaces of masses all over the field, which masses later become small bricks; and in the second case, by a lumpi-

ness which may not appear serious to many, but which, nevertheless, is manifest during the whole growing season upon the crops. The first of these cases could be remedied by the judicious use of the harrow. The latter case cannot be completely remedied by the use of the harrow or other tool.

The results obtained in the preparation of a seed-bed in the lighter potato soils of southern Michigan would almost convince one at times that even these soils would profit by fall plowing.

Excepting in the case of heavy bluegrass sod, fall plowing should be done in Michigan as late as possible before freezing-up time. At least this seems to be the opinion of the average practitioner of fall plowing.

Soils that blow deserve a special chapter. P. B. Barker, writing from the Nebraska College of Agriculture, says:

The lands under cultivation in Nebraska are mostly composed of silt loam, loam and fine, sandy loam soils, and the value of fall plowing depends on the kind of soil. The sandier soils are apt to blow unless the plowing is done very soon

after the small grains are harvested, when the rainfall is heavier. This type of soil is especially liable to blow if the organic matter content is not maintained. There is less trouble from blowing if the plowing is done early in the fall, in order to allow the soil to become firm and compact, especially when the land is disked before plowing and the stubble and other organic matter thoroughly incorporated with the soil.

The advantages of early plowing for wheat and late summer or fall plowing for wheat may be summed up about as follows:

1. Checks loss of soil moisture through evaporation.
2. Checks loss of water through weeds and other plants when they are thus destroyed and not allowed to grow.
3. Permits of deeper plowing, since the soil will have time to settle and thus becoming compact and firm by seeding-time.
4. Allows a larger proportion of rainfall to penetrate the soil and less lost by evaporation and run-off.
5. The processes of nitrification and humification are facilitated.
6. More opportunity to plow when the soil is in the proper condition.
7. Decreases the spring labor.

Alvin Keyser, Department of Agronomy, Colorado Experiment Station, in making the following statements, emphasizes the lack of a definite knowledge for all conditions of soil and climate. In other words, agriculture cannot be an exact science.

Whether or not fall plowing is of value in this State depends entirely upon conditions.

Upon the heavier soils in the irrigated regions, fall plowing is always of advantage. Under dry-farming conditions on the heavier soils, fall plowing is usually of advantage, especially when it can be done when there is some moisture in the soil so that the furrow slice does not break up cloddy or lumpy. In many of the sandy sections where dry farming is practised, fall plowing cannot be done, because of the danger of blowing the soil from fall and spring winds.

The serious loss of the best soil resulting from blowing is emphasized by a number of the reports here brought together. Not alone is this loss of importance to farmers in the semi-arid regions and on light soils prevalent in several eastern States. Enormous quantities of plant-food are lost from loam soils by blowing from the higher to lower areas of farms in every section of country.

L. F. Childers, Agronomist, Idaho Experiment Station, then adds:

The Experience of Idaho

Experiments at this station show that fall plowing is the best practice for this State.

For this there are two very important reasons. The first of which is the storage of moisture. Most all of Idaho which is not irrigated receives its moisture in the winter months, and if the ground is not prepared in the fall, much of this escapes as run-off, or is quickly drawn out of the soil in the wait for it to dry sufficiently to work in the spring. This wait, in the spring, necessitates an enormous dissipation of water, as well as does that occasioned by the fresh-cut furrow slice. In general, it is safe to say that from thirty to sixty per cent. of the annual rainfall is lost to the crop, and that one half of this great loss is brought about by spring cultivation.

Fall plowing, in addition to conserving this moisture, permits early cultivation,

which insures a good seed-bed and warms the soil for early nitrification and germination.

The second of these reasons is the opportunity given the soil to rid itself of toxins by oxidation and leaching, and to build itself up by the liberation of mineral plant-foods. Apparently as much benefit is derived from the aeration, oxidation and general renovation given the soil by plowing it up in the fall and submitting it to the action of the elements, as is derived from all the kinds of its after cultivation.

The toxins mentioned (substances poisonous to plants) promise to become a more fruitful field of experimental study than has thus far been the case. While the soil in arid districts where alkalies abound are more apt to contain these soil poisons, there is good reason to believe that much land everywhere under certain conditions contains some injurious toxic substances. This subject, however, needs much more thought before definite statements can be made.

Fall plowing is likewise upheld by Frank S. Harris, Department of Agronomy, Utah Experiment Station. He says:

Conditions in the Far West

In Utah fall plowing is superior to spring in practically all cases. There are three reasons for this: First, after the crop is harvested, the soil should be stirred immediately so it can be exposed to the free action of the weathering agencies. Second, the early stirring of the soil prevents evaporation of the moisture in the soil during late summer and fall. Third, in sections where much precipitation occurs in the fall, winter or early spring fall plowing permits much of this precipitation to enter the soil and be stored there until needed by plants.

It was observed on a Utah dry-farm that the fall-plowed land contained, to a depth of ten feet, 7.47 acre-inches more water than the adjoining spring-plowed land—a saving of nearly one half the year's precipitation. The land should be left rough throughout the winter, so it may be mellowed and broken down by the elements. The rough land is also better to catch and hold the snow.

By acre-inches is meant the depth of water falling on or supplied to each acre of land for irrigation purposes or otherwise. The 7.47 acre-inches above referred to equals approximately 800 tons more water contained in the surface soil of each acre of fall-plowed land than in the surface soil of the spring-plowed land, area the same.

California is almost a law unto itself in regard to plowing and soil culture, on account of the unusual climatic conditions there existing. A comprehensive discussion of plowing experiments conducted by the California Experiment Station will be published in an early issue of FARM AND FIRESIDE.

But some of the same conditions are indicated by H. D. Scudder, Agronomist of Oregon. He says, in speaking of the far Northwest:

Fall plowing is advantageous throughout Oregon and Washington, as well as perhaps the majority of the northwest States. There is no question as to the great benefits derived from fall plowing as compared with spring plowing. The most important of which in Oregon are the leaving of the land rough over winter so that it is exposed to the weathering action of the elements and in this way mellowed physically and its plant-food increased in availability, and so that the winter precipitation may be quickly absorbed and the surface washing and running together of the surface soil avoided.

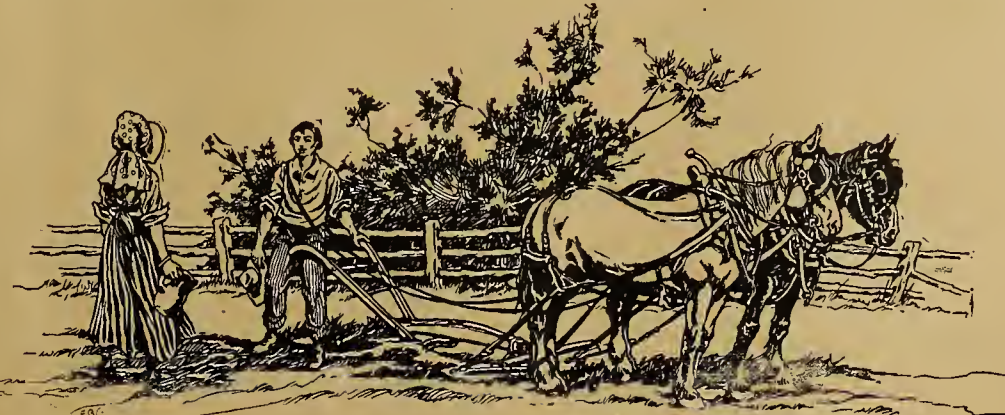
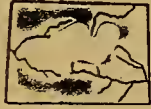
In the dry-farming regions of Oregon absorption of moisture and holding of the snow is one of the greatest advantages of fall plowing. In western Oregon, where the winters are rainy and rather humid, the rough fall-plowed land comes through the season not only mellow, but sweeter and "livelier."

We find that where the soil is dry and hard in the early fall that a much larger area of fall plowing can be done by using a first-class disk-plow of not less than two blades and with about one third more horsepower than is used for ordinary moldboard plowing. By setting the disk-plow not less than ten inches, and using plenty of horsepower, and keeping the plow moving at a little more rapid gait than is ordinary, the best type of disk-plows do exceptionally good work, if there is not too much trash in the ground, and especially if the land has received good tillage and crop rotations such as leave it in good tilth.

By experiments carried out several years at this station we have found that disk-plowing properly done early when the ground is dry and hard gives exactly as good results as the mold-board plowing done later on in the fall when the ground is sufficiently moist for this kind of work. We wish to be fully understood, however, on this matter of disk-plowing, and recommend that the disk-plow be not used at all unless it is used properly.

Present knowledge of bacterial life in the soil has now advanced far enough to make the use of the term a "lively" soil very appropriate. If the bacteria are of the right sort, we want our soils lively, and they will be just that if we properly care for the soils.

[CONCLUDED ON PAGE 19]



How We Whipped Them

The Story of the Rebellion of the Farmers of the Middle West Against the Grain, Coal and Lumber Trusts. A Study in Coöperation
By Edward G. Dunn

THIS is the third chapter of the story telling how the farmers of the Middle West had to fight for their rights. The previous chapters have shown how a coöperative elevator was established, how it started in on its fight against the Iowa Grain-Dealers' Association and the "dummy track" bids. Threats of punishment had been made to the writer of this article, then a farm lad and manager of the farmers' elevator, for the work he was doing in opposition to the line elevators. He thought everything was coming his way, however, when, suddenly, the events given in this chapter took place.

EDITOR.

"I'll give you thirty days to bust in!"

These were the words of the threat hurled at me by the emissary of the Iowa Grain-Dealers' Association when, on the first day of my incumbency as manager of the Burchinal Farmers' Elevator Company at Burchinal, Iowa, I had refused to join the association, pool the trade and agree on prices to be paid the farmers for their grain.

And within thirty days I shipped my first grain to Chicago. My dream of easy success was rudely disturbed. I had been getting grain from the very doors of my competitors as far away as seventeen miles. I had been paying the right prices to everybody. And I had been selling coal to the farmers—members of our coöperative company and others—for from a dollar to two dollars a ton less than the prices given where coöperation had not been adopted. I was carrying everything before me. And suddenly came the returns from the commission merchant in Chicago to whom I had shipped several cars from my fast-filling bins. The handwriting came out on the wall in words like these:

"You are respectfully advised that it will be better for all parties for you to transfer your account to some other member of the Chicago Board of Trade, as we do not care to antagonize the regular dealers in Iowa by selling for an outlaw concern in the grain business."

"Who Will Handle Our Business?"

Transfer to another member? Why, I had shipped to a number of concerns, and they all said the same thing. It these refused, it was plain that all would refuse. "Thirty days to bust in!" Well, the thirty days were not up, but the fine Italian hand of Mr. Wells, as I suppose, secretary of the Iowa Grain-Dealers' Association, had already put on me the Indian sign of "outlaw." When farmers shipped their own grain in cars filled from their wagons, they had been dubbed "scoop-shovelers" and refused the services of commission merchants in the big markets. And now, when they combined and owned their own elevators, they were dubbed "outlaws" and refused the services of the same commission men. And no way was open to sell grain, save through commission men. That was what made matters serious for us.

It looked as if thirty days would be plenty! I couldn't blame the commission men, for the bandits who called us outlaws had them by the throat. How could we expect any commission firm to handle our business, and by that act lose the business of every line elevator and every so-called "independent" in the State of Iowa and of every other State where the National Association of Grain-Dealers had an organization—in short, lose the firm's entire business?

"But there must be some way out," I thought. "There must be some avenue through which we, honestly endeavoring to get out of the toils, can slip our shackles!"

So thinking, I went to Chicago. I began a weary round of calls on commission men. I think I must have been a noted and notorious figure as I trod the corridors of those office-buildings, asking for someone to sell our grain and take our pay for doing so. They all told me the same story—and I knew it was true. It was a matter of bread and butter to them, they said. They depended for their livelihood on the country grain-dealers, and if they sold my grain, they would be blacklisted by the various grain-dealers' associations and driven out of business. How could I urge my case in the face of such conditions as that? George Wells and his association had me by the throat. Some grew impatient with me. I remember especially one dignified old commission man who did so. I suppose I was a little persistent with him—for I was getting desperate. He turned on me, as a bull strikes at a gadfly.

"Young fellow," he cried, "I've been forty years on the Chicago Board of Trade, and I don't need any kids off the farm in here telling me how to run my business!"

"My friend," I retorted, "I'm not here telling you how to run your business. I'm here asking you to do business fairly and without discrimination. You refuse. Well, things are changing in the West. The people on the farms are waking up. The time will certainly come when you will come into Iowa begging for the business of the farmers you now call outlaws. And I'll be there to see it!"

I turned and left his office. I could have cried if it would have done any good. I left four cars of perfectly good grain standing on the track in Chicago unsold, and went home, defeated, so far as that trip was concerned. But when I consulted with the officers of the coöperative company for whom I was working, they encouraged me, they were so full of courage. We resolved to fight it out. There were other farmers' coöperative companies in the field by that time, besides us and the old veteran

at Rockwell, and it didn't seem as if it could be possible that they could keep us from finding a market. It did not seem that such an iniquity could last.

You see, our farmers were quite calm and determined about the matter, though the situation was a very dangerous one for the continued existence of our company. I think a good deal of this feeling grew out of the fact that our plan of organization was just and equitable and fair. This plan is uniform in Iowa, and is practically the same over all the States which have been swept by the coöperative movement. Pure coöperation is not possible under the laws of any of these States save Wisconsin. So we made our companies as nearly coöperative as possible, and for most purposes the form permitted by law is effective. No member has more than one vote in stockholders' meetings, no matter how much money he puts in. He represents his manhood, not his money. So it is one man, one vote. Usually the number of shares is limited to ten for any one man, of \$25 each. A man is not likely to become very greedy for dividends on that sum, and not very much frightened at the prospect of losing it. As a matter of fact, as I have said, I know of no coöperative grain company which its enemies ever broke up, or which failed through dissensions. With the investment limited to \$250, nobody is likely to go into court and wreck the company with litigation when he doesn't like the way the business is done. To the credit of our people, we have never had any trouble. At the end of the year the members take their profits and divide them in proportion, not to their investments, but to the business

the next week. True, we had got our elevator-site, against the opposition of these merry men—though much to their surprise. We had bought an elevator for less, as we thought, than it was worth. We had shot the prices on grain and coal all to pieces over half a county. And we had enlisted Lowell, Hoit & Company and the Eschenberg & Dalton Grain Company on our side. But if we thought we had got through with Mr. George Wells and the Cereal Club, with the Coal Combine, and the Grain Combine, with the Iowa Grain-Dealers' Association and its celebrated "Iowa dummy track bid," we were mistaken.

We Thought We Were Fighting

It was like a foot-ball game—in which the goal of our enemies was absolute dominion over our prosperity, and our goal was fair prices for our year's work. A grim, strenuous game. We had won several scrimmages—hard, gruelling scrimmages. We were tearing their line up for a touchdown, when we met new interference, like a desperate stand on the one-yard line. We found that they were organizing the great Board of Trade of Chicago against us! It seemed rather pitiful—that enormous organization, dominating the grain trade of a continent, organized to crush a few farmers struggling for justice.

The first effort to keep the sellers of grain from acting for us having failed through the defection of Eschenberg & Dalton and Lowell, Hoit & Company, the grain trust proceeded to organize the buyers! It looked as if they might do this, and ruin Lowell, Hoit & Company, Eschenberg & Dalton, and the farmers' elevators all at one fell swoop. Why not? If they could so align the buyers that nobody would buy from these men, we were lost. The combine had driven Tom Morrell and Charles T. Peavey out of the Omaha market in just this way, for handling farmers' grain. Why couldn't they make short work of the farmers' friends in Chicago? If Omaha could be shut to the grangers, why not Chicago?

They nearly got us that time! I was not on the spot, and cannot tell the details of the battle, but the combine failed again. They failed because the farmers' movement was then so small and because Chicago was so large. The city of Chicago buys an enormous amount of feed in small lots, and our commission men sold to the city. The draymen and teamsters were a hard bunch to organize against us, and we sold to them. Such concerns as Marshall Field & Company and the Parmelee Company could not be kept from buying feed where they could get it cheapest, and they took our grain. Then there was a man named Joe Griffin who was the buyer for the American Glucose Company—he and some others of that sort wanted an open market, and he took

the position that he would buy grain from anybody who had it for sale, and he didn't care a whoop where it came from. This saved us. It saved us in two ways. It provided us with a market, and it encouraged the coöperative movement among farmers. During the weeks I have been writing of, thirteen farmers' companies sprang up in the State of Iowa, and by November 1, 1904, there were thirty in the State. It is well for us there were no more, or the local market of Chicago could not have absorbed our grain.

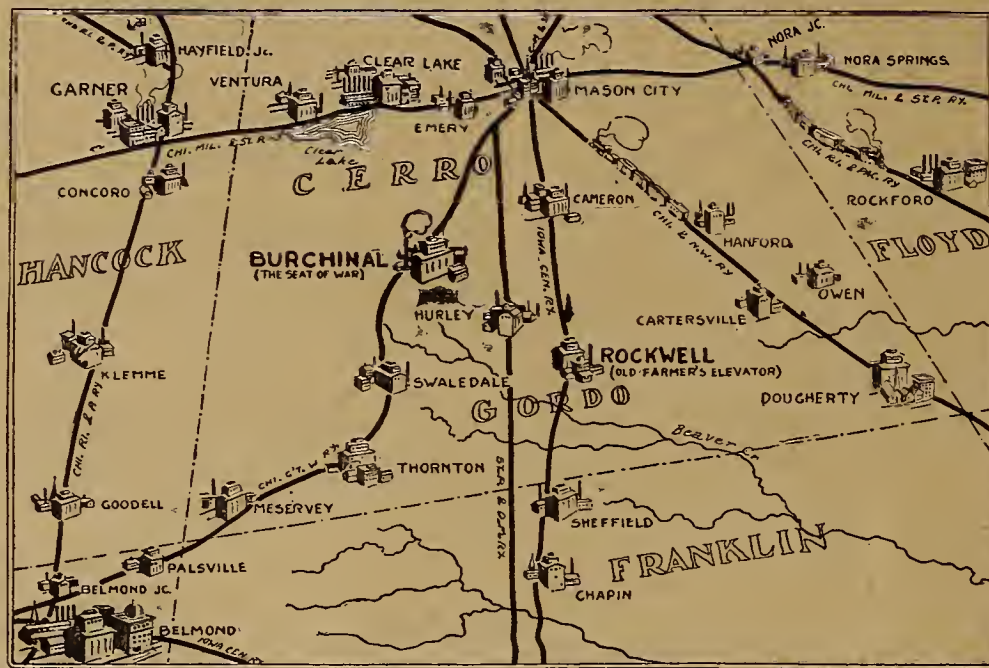
Farmers Need Not Fear to Trust Each Other

All this time Mr. Crall, my competitor, was faithfully doing all he could to aid his masters, the combine. He used to go about among our members telling them that the farmers were going to lose everything they had put into the business and be bankrupt in a few weeks. I suppose he may have believed this. He would call Mr. Wells up on the long distance and tell him the number and initials of every car I shipped and its destination, so that the merry men of the Cereal Club knew almost as much about my business as I did, and every car was spotted as soon as it reached its destination. He wrote letters to our commission men offering to send them his business if they would throw out ours. They sent the letters to me, and I showed them to our coöperators and officers. I told them that it was more their fight than mine, that they had more at stake than I did, and that if they would stand by me, I would put Crall out of business before a year went by. Out of 135 men belonging to our coöperative company, only two ever wavered in their allegiance.

Mine were a good and faithful band of soldiers. But that is true of the men in the farmers' elevator movement in other towns, too. Farmers need not fear to trust each other if properly organized. All the misrepresentations and sowing of distrust never killed a farmers' elevator so far as I know.

But on the Monday after the effort had failed to organize the buyers in Chicago against the farmers' elevators, we awoke to find ourselves firmly established in the terminal markets, but with the bitterest fight of all raging all about us in Burchinal. For having failed all along the line to keep us from gaining ground, they gave the signal to Crall to make the next play. The attempts upon the life of our movement having failed in Chicago and the headquarters of the railways, and in the Cereal Club and elsewhere, the word was passed to Crall to kill it in Burchinal. And back of him was the massed money of the combine. Anyone can see, the odds against us.

[CONTINUED NEXT ISSUE]



Where the battle was fought

they have done with the concern. It is not a money-making proposition, but a plan for getting the right prices for grain, and for getting coal, lumber, twine and other staples at just prices.

We have not the right under these laws to pay back dividends on their trade to people who are not members of the concern—that is, we cannot pay what is called a "patronage dividend." I wish we could. I believe in Rochdale coöperation and the patronage dividends; but under these laws the money of a corporation cannot be given back to those who hold no stock. The corporation laws of all States should be changed so as to permit real Rochdale coöperation.

As a matter of fact, while we were deliberating and resolving on fight, I received a letter from a Mr. W. B. Stickney, on the letterheads of Lowell, Hoit & Company of Chicago, saying that he understood that we had a farmers' elevator company, and that they would like to open relations with us. They had a number of other farmers' companies, he said, that they were doing business with, and named those at Howard, Bement and Mason City, Illinois. The Illinois Grain-Dealers' Association, he added, had blacklisted them for taking this business, but they had decided that they would not quit on account of the black list. So, if we cared to ship to them, they would receive all we might ship, and sell it for us. Talk about your reprieves from hanging! I believe I know how it feels to get one. I was delighted. I wasn't going to bust in thirty days! Maybe my defiance at Chicago wasn't so wild after all!

So feeling, I cleared the tracks in Chicago of my demurrage-bearing cars, and billed Lowell, Hoit & Company four cars of grain that day, and eight or ten within the next few days.

The fight was won—I thought. But it was farther through that patch of woods than any of us knew.

Lowell, Hoit & Company sold all this grain, and stood by their guns in spite of the most strenuous pressure from the organized grain trust. And soon they were not alone. Mr. James R. Dalton, now of Woonsocket, South Dakota, who was a member of the Eschenberg & Dalton Grain Company of Chicago, soon wrote me that his firm, too, had decided to remove the taint of "outlaw" and sell for the farmers. With these two good firms selling for us, we thought ourselves in pretty fair position. And wouldn't anyone have thought so? But I am sure we should not have felt so happy if we could have listened at the keyhole to the conversation when the jolly Des Moines Cereal Club met at dinner on those friendly Saturday nights, and over the dessert voted as to what the farmers of Iowa should receive for grain

Reo the Fifth—\$1,055

It Took 25 Years to Build It

By R. E. Olds, Designer

I have spent 25 years in building automobiles. Reo the Fifth is my 24th model.

I have watched every improvement, all the world over, from the very start of this industry.

I have had actual experience with tens of thousands of cars, under every condition that motorists meet.

All I have learned in those 25 years is embodied in this car. And I know of no other engineer in the business who builds cars as I build this.

My Precautions

What I mean is this:

The need for infinite care, for utter exactness, for big margins of safety is taught by experience only.

Countless things which theory approves are by use proved insufficient.

Splendid cars fall down on little points. The maker corrects them. Then something else shows unexpected shortcomings.

Perfection is reached only through endless improvements. It comes only with years of experience. Were I buying a car I would want it built by the oldest man in the business.

For Example

All the steel I use is analyzed, so I know its exact alloy.

The gears are tested in a crushing machine with 50 tons' capacity.

Thus I know to exactness what each gear will stand. I used to test them, as others do, with a hammer.

I use Nickel Steel for the axles and driving shaft, and make them much larger than necessary. These parts can't be too strong.

I use Vanadium Steel for connections.

One after another I have cut out ball bearings, because they don't stand the test. I use roller bearings—Timken and Hyatt High Duty. There are only three ball bearings in this whole car, and two are in the fan.

I test my magneto under tremendous compression, and for ten hours at a time. My carburetor is doubly heated—with hot air and hot water. Half the troubles come from low grade gasoline, and this double heating avoids them.

I insist on utter exactness, a thousand inspections, tests of every part. As a result, errors don't develop when the car gets on the road.

Costly Care

I give to the body the same care as the chassis, for men like impressive cars.

The body is finished in 17 coats. The upholstery is deep. It is made of genuine leather and filled with hair.

The lamps are enameled. Even the engine is nickel trimmed. I finish each car like a show car.

The wheels are large, the car is over-tired. The wheel base is long, the tonneau is roomy, there is plenty of room for the driver's feet.

All the petty economies, which are so common, are avoided in Reo the Fifth.

My Level Best

This car embodies the best I know. It is built, above all, to justify men's faith in my designing.

Not one detail has been stinted. Not one could be improved by me if the car was to sell for \$2,000.

Reo the Fifth marks my limit. I will yield my place as the dean of designers to a man who can build a car better.

Center Control

No Side Levers

In this car I bring out my new center control. All the gear shifting is done by moving this handle less than three inches in each of four directions.

There are no side levers, so the entrance in front is clear. Both brakes are operated by foot pedals, one of which also operates the clutch.

This fact permits of the left side drive. The driver may sit, as he should sit, close to the car he passes—on the up side of the road. This was formerly possible in electric cars only.

The Little Price

The initial price on this car has been fixed at \$1,055. But our contracts with dealers provide for instant advance.

This price, in the long run, I regard as impossible. It is based on maximum output, on minimum cost for materials.

We have a model factory, splendidly equipped. Our output is enormous. We have spent many years in cutting cost of production. And this year we save about 20 per cent. by building only one chassis in this great plant.

We can undersell others, and always will. But the present price is too low under average conditions. I am sure it must be advanced, and those who delay must expect it.

This car will never be skimped, while I build it, to keep within an altruistic price.

You Can See It

In a Thousand Towns

We have dealers in a thousand towns. When you write us for catalog we will tell you the nearest.

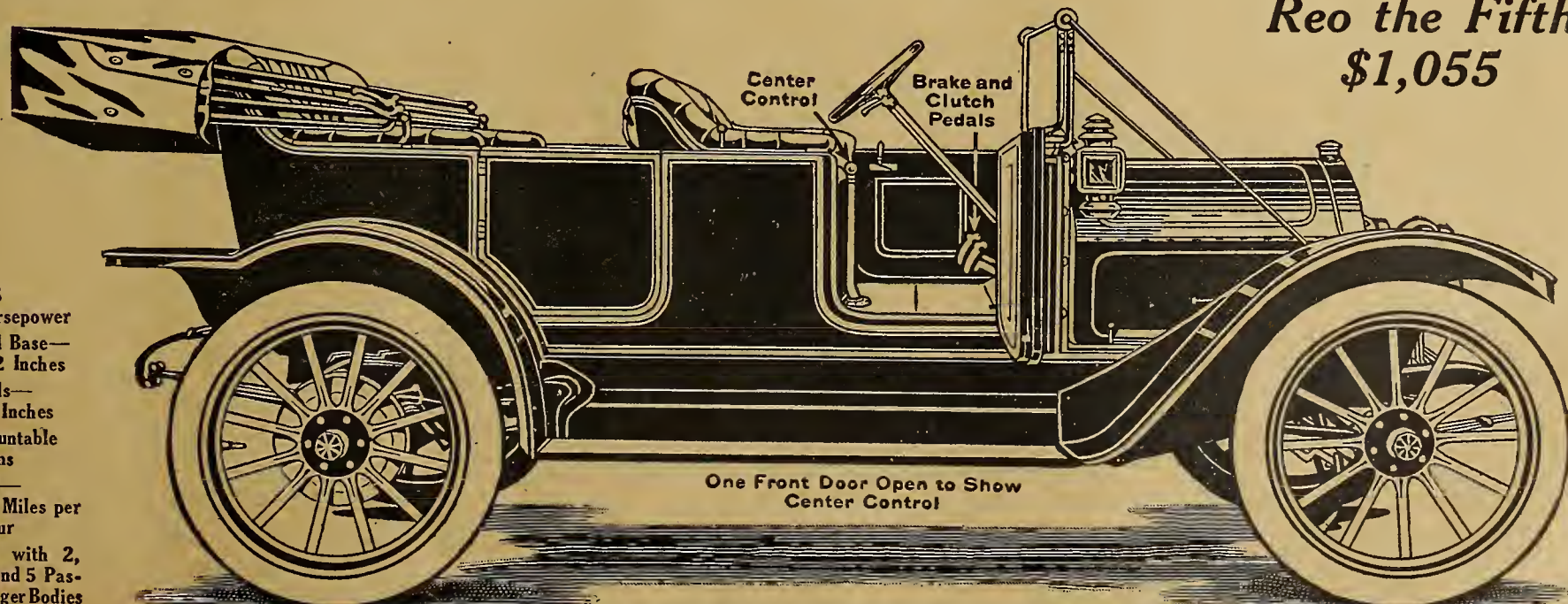
Write to-day for this book. It pictures the various up-to-date bodies, and shows all the interesting facts. The Roadster type sells for \$1,000.

Never was a car in all my experience made so welcome as Reo the Fifth. Men miss a treat who fail to see this car. Address

R. M. Owen & Co., General Sales Agents for **Reo Motor Car Co., Lansing, Mich.**

Canadian Factory, St. Catharines, Ontario

Reo the Fifth
\$1,055



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112 Inches
Wheels—
34 Inches
Demountable
Rims
Speed—
45 Miles per
Hour
Made with 2,
4 and 5 Pas-
senger Bodies

Top and windshield not included in price. We equip this car with mohair top, side curtains and slip cover, windshield, gas tank and speedometer—all for \$100 extra. Self-starter, if wanted, \$20 extra.



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AUTOMATIC JACK COMPANY
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The Market Outlook

Advancing Hog-Market

THE month of March marked an advance in the price of all live stock. A growing scarcity and a continued demand caused the rise. The gradual slow upward movement in the hog-market during February suddenly leaped forward about the middle of March, sometimes advancing twenty-five cents in a single day. Such rapid changes, however, are apt to cause reactions, but they should not be as great as the rises. The present market conditions are favorable to the interests of the large packers, and they will exert their influence to maintain them. This rise in price prompts the middlemen to stock up with meat before additional advances arrive and the packer is disposing of his product at an enhanced value. When the packers' cellars begin to get empty again, they will not support the market as they have recently. This usually comes about June, when the crop of fall pigs is ready for shipment. This year, however, the June run is apt to be small, as there are few holdovers of the heavier classes, as is shown by the light average weight of the current supply, and the severe winter has killed many fall pigs, and the crop as a whole is runty. Cholera in many districts last fall also had its influence in curtailing the crop.

Western Markets are Normal

The comparative number of hogs shipped to Chicago is rapidly falling off. Almost its entire supply is coming from Iowa. South Omaha and Sioux City are the only places now receiving full normal supply. Weather conditions have been more favorable and cholera was absent the past season in the territory tributary to these two cities, and this heavier marketing is the effect. South Omaha, since the first of the year, has moved up to the second largest hog-market in America. This position is apt to be maintained during the coming year, as western Iowa and Nebraska have favorable prospects for a large pig crop, while Indiana, Illinois, Missouri and Kansas have an adverse outlook.

Prime heavy hogs have begun to disappear from the shipments, and the general quality is deteriorating. The broad outlet in the East for the one hundred and seventy to

two hundred pound sort prompts the country to ship these freely. The price range continues to grow narrower until the heavy hogs command but a slight premium over the middle weights.

Provision prices have not advanced as fast as have live hog values and the packers are not pressing their offerings, as they know that before long values must rise.

Additional advances would be favorable to the interests of the large killers, but they are liable to oppose too rapid rises. The seven-cent mark was passed before the middle of March and the prices of last September equaled.

An eight-cent market for April seems to be in sight if the supply continues to dwindle. **LLOYD K. BROWN**, South Dakota.

Sheep Movements

IT is a pleasure just now to watch the movements of the sheep-market after the dreary experiences of the last year or so. Prices are not advancing with great leaps and then stopping to see how their friendly rivals in the cattle and hog lines are getting along, but are advancing steadily, especially in the heavier sheep and ewe lines, where stagnation has prevailed for so long. For these and for yearlings the demand has everywhere been quite lively and prices have arrived at a fairly remunerative mark.

As regards fat lambs, the supply of anything coming under the head of "good to prime" is always less than the demand, and even the culls in this class are meeting with ready sales at good prices, inducing some men, I fear, to be less cautious than is good for them in mixing up too many culls and "throw outs" in the bunches they hope to see graded as "prime."

The following comparisons of prices for some weeks back in some of the leading markets serve to show that, though sometimes too great, and at others too small, a supply has raised or lowered prices temporarily, the tendency has lately been steadily upward.

The experience of publishing a bi-weekly makes it impossible to give latest quotations, which can always be found in any good daily paper; but we can give the general trend of the market as a guide to "look a leedle out" as the time approaches for your sheep or lambs to go to market.

For the eastern market the following quotations are from the *Buffalo Daily Live Stock Record*; and for the west from *The Chicago Daily Farmers' and Drovers' Journal* and from *Cay, Robinson & Co.'s Live Stock Report*. Kansas City and the other leading western markets are generally a few shades below Chicago as Buffalo is above it; but in all of them the tendency is steadily upward, as a little study of these short tables will show:

PRICES OF SHEEP AND LAMBS IN CHICAGO

For week ending	Sheep		Lambs	
	Top	Bulk	Top	Bulk
Mar. 20th	\$5.75	\$5.00 to \$5.50	\$7.95	\$7.00 to \$7.50
Mar. 9th	5.60	4.75 " 5.25	7.50	7.00 " 7.35
Mar. 2d	5.25	4.25 " 5.00	7.15	6.25 " 6.85
Feb. 29th	4.50	3.75 " 4.40	6.70	5.75 " 6.50

This top, on March 20th, of \$7.95 was the highest since 1910, and it possibly might be higher if the supply of them more nearly met the demand of buyers who get tired of hunting for really "prime" lambs and content themselves with a lower quality.

PRICES IN BUFFALO, NEW YORK

	Lambs		Yearlings	Wethers	Ewes		
	Choice	Fair to Good			Prime	Light	Heavy
Mar. 7th..	\$7.35 to \$7.50	\$6.60 to \$7.25	\$4.00 to \$6.25	\$5.40 to \$5.65	\$5.00 to \$5.15	\$4.75 to \$5.00	
Mar. 8th..	7.25 " 7.40	6.60 " 7.15	4.00 " 6.25	5.40 " 5.65	5.00 " 5.25	4.75 " 5.00	
Mar. 9th..	7.40 " 7.55	6.60 " 7.25	4.00 " 6.25	5.50 " 5.75	5.00 " 5.25	4.75 " 5.00	
Mar. 11th..	7.40 " 7.60	6.65 " 7.35	4.00 " 6.25	5.50 " 5.85	5.15 " 5.40	5.00 " 5.25	
Mar. 14th..	7.75 " 7.85	7.00 " 7.65	4.50 " 6.75	5.75 " 6.00	5.25 " 5.50	5.00 " 5.25	
Mar. 15th..	7.75 " 7.90	7.00 " 7.60	5.00 " 7.00	5.75 " 6.10	5.40 " 5.65	5.25 " 5.50	

The \$8 mark was reached on the third Monday in March by four loads of prime lambs—two of seventy-seven pounds and two of eighty-eight. This is the highest point reached since 1884, except in 1905-7, when \$8.50 was recorded, and in 1910, \$10.75. In those years sheep rose in proportion.

It is not necessary to quote western markets, such as St. Louis, Omaha, St. Joe, Sioux City and Denver, as they all follow Chicago pretty closely, and all are steady in demand and rising in prices.

Caring for Spring Pastures

Among the minor, but quite important, acts of husbandry which are apt to be forgotten at this busy spring season is the treating of old pastures by a good harrowing as soon as the snow is off the ground. This should be done crosswise, in both directions. It will tend to promote the growth of the live grasses and to extirpate the dead and winter-killed stuff. Many farmers are afraid to try this, apparently, heroic treatment lest too much of the growing grass should be rooted out; but in England the practice is universal on old pastures, some of which will carry and fatten pretty nearly one three-year-old steer and two sheep to the acre; for over there sheep are not believed to interfere with the grazing of cattle. This harrowing serves to spread any manure remaining on the surface from last fall; opens up and aerates the soil, and tends to equalize

the growth of the grass. Later on the same treatment may, in many cases, be applied to the young forage crops. Spring-tooth harrows are best for this purpose.

Spring-tooth harrows are used by the experts of the Illinois State Experiment Station, and in answer to questions put to them by the *Breeders' Gazette* they highly recommend that implement for the purpose, they having employed it for some years to rid their alfalfa crops from foreign grasses.

At the same time attention should be paid to the clearing of the mouths of drains, as well as open ditches from all obstructions.

After the experience of last year, and in view of the certain high prices of hay and feed-stuffs in the fall, the need for an ample supply of forage crops will occur to every thoughtful breeder and feeder of live stock. The varieties of these best suited to the feeding of sheep, and the times and methods of their cultivation and use, have been lately so fully discussed in *FARM AND FIRESIDE* that it is deemed only necessary here to jog the memories of its readers, "lest they should forget."

JOHN PICKERING ROSS, Illinois.

Cattle-Feeding Paid

IT is under present circumstances hard to see just how this cattle business is going to come out. But everything looks like very high prices. Here in Sioux City we have light cattle in large numbers being shipped to Denver, Colorado, to be turned on the range.

We have had a train-load shipped here from St. Paul, sold here and shipped to Omaha, Nebraska—all at what seems to be, quality considered, very high prices. And yet the country wants cattle and will want them worse as we get nearer grass.

The trend of the fat-cattle market is upward on the medium-weight cattle. As a rule, it is generally June before this happens, but with a shortage everything changes. The cattle-feeder deserves all he can get, as seldom or ever have cattle been handled under more trying weather conditions.

I marketed, on March 16th, forty-six steers, which paid for their feed in good shape. These cattle were bought together and fed together in a separate yard, so that I might get a test on them.

Here is how I figure the approximate value of their feed:

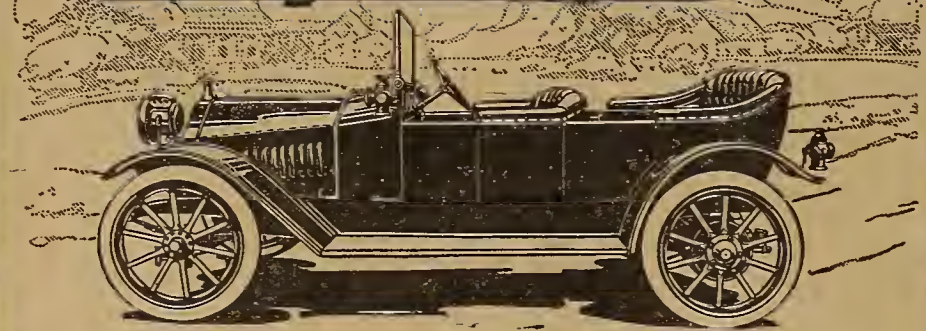
46 steers, cost 5c, weighed 905 lbs., delivered on farm for.....	\$2,082
Interest, 5 months	50
Fed 60 days on shocked fodder, 16 acres, @ \$30 per acre.....	480
Corn-stalks	100
Snapped corn	200
Ensilage, 34 tons, @ \$11 per ton.....	374
721 bu. shelled corn, @ 56c.....	404
Cotton-seed meal, 5 tons, @ \$30.....	150
	\$3,840

Cattle sold for \$7.05, weight 1,192 lbs.
Check received for net sale.....\$3,840

What Crops are Worth When Fed

Those, I consider, are pretty good prices for the feeds consumed. These cattle were bought October 10th and turned into a five-acre hog-lot and fed as above sixty days on shocked corn. They were then turned into the corn-stalks during the day for thirty days, and at night fed, in addition, twelve

Hupmobile



Hupmobile Long-Stroke "32" Touring Car, \$900

F. O. B. Detroit, including equipment of windshield, gas lamps and generator, oil lamps, tools and horn. Three speeds forward and reverse; sliding gears. Four cylinder motor, 3 1/2-inch bore and 5 1/2-inch stroke. Bosch magneto, 106-inch wheel base, 32 x 3 1/2-inch tires. Color, Standard Hupmobile Blue. Roadster, \$900.

Two cars whose name is your guarantee

We refer to the two leading Hupmobiles—the Long-Stroke "32" Touring Car, and the Standard 20 H. P. Runabout.

Both the product of the same engineering skill and the same shop organization that originated the Hupmobile.

Both incorporating elements of value not found elsewhere at the price or near it.

Each the sign and symbol of the highest and best construction of its particular type.

The Long-Stroke "32," with its cylinders cast in one piece, its three bearing crank shaft, its enclosed valves—a motor of extraordinary pulling power and sturdiness and absolute silence, perfectly dust-and-oil-tight.

Multiple disc clutch, 13 inches in diameter.

Three-speed transmission, large enough for a 40 H. P. car.

Each a feature for the equal of which you must go beyond Hupmobile price.

And a full floating rear axle of especially strong construction.

Fifteen thousand owners, the world over, testify to the worth and serviceability, the staunchness and durability, of the Runabout.

It, too, has a unit power plant; multiple disc clutch; and sliding gear transmission.

All the power you will ever need or want and to spare.

If you are in the market for a touring car around \$900, or a two passenger car, around \$750, get in touch with the Hupmobile dealer.

He will show you the actual value in these cars; the value that sets them above other cars of their price.

Write for complete catalog.



Standard 20 H. P. Runabout, \$750

F. O. B. Detroit, with same power plant that took the world touring car around the world—four cylinders, 20 H. P., sliding gears, Bosch magneto. Equipped with top, windshield, gas lamps and generator, oil lamps, tools and horn. Roadster with 110-inch wheel base and highly finished steel box mounted on rear deck, \$850.

Hupp Motor Car Co., 1289 Jefferson Ave., Detroit, Mich.

When Hay Shrinks

IN SPITE of the wonderful popularity of the automobile, and the assumption that the horse is steadily going out of business, the price for good hay is probably higher to-day than at almost any time in the history of the country. At midwinter this season pure hay was quoted at \$1 to \$1.20 per hundred pounds baled, an equivalent of \$20 to \$25 per ton, but shipping hay was down to 65 cents to \$1 per one hundred pounds packed in large bales. Moreover, the market reports indicate a general scarcity of the different grades in New York, with all kinds selling well. This condition is due partly to the closing of canal and water traffic, which always places the producer of such a bulky article as hay at a disadvantage.

We have raised a good deal of hay for the past fifteen years for the New York markets, and during all that time prices have varied and profits likewise. But a question that has always given us a good deal of trouble and thought is the relative difference in fall, midwinter and spring prices. If the farmer could get midwinter prices for his hay, or spring prices, it would seem as if he would make a big thing in hay farming. I have tried holding it for the midwinter and spring market, and have discovered that there are some details not always considered.

One of the most important of these is the question of shrinkage. Like myself a young farmer who had studied the midwinter market reports decided one season to hold all of his hay crop for late winter delivery. The price in the fall was barely \$12 per ton for the top grades of timothy. That looked small compared with \$20 to \$25 per ton for winter prices.

He cut one hundred tons of good hay and stored it away for the later markets. He refused all offers for it, and quietly waited for higher prices. In January hay climbed to \$20 a ton, and a month later as much as \$25 a ton was offered for it in New York. That seemed a favorable opportunity, and he baled it and shipped it to market. Imagine his surprise when he finished baling it to find that his hay had shrunk about 25 per cent. Instead of 100 tons, he could barely get 75 tons, and there was a ton and a half of dirt and chaff under the press.

Instead of getting the highest quotations, he received \$22 per ton for it, and he had to pay by railroad freight about \$40 more for the entire shipment than if he could have sent it by canal-boat before navigation closed. He made on the proposition, but not so much as he expected. If he had sold

it in the fall at \$12 per ton, he would have received \$1,200 for the lot, minus transportation charges and commissions. As it was, for the 75 tons he got \$1,650, minus transportation charges, plus the \$40 extra for rail shipment, and the commissions. This difference of \$400 in favor of the winter shipment was a big consideration, but he had figured on at least double that amount.

The hay-grower must consider this shrinkage in making plans for winter and spring shipment of hay. I have found that hay will shrink all the way from 7 to 56 per cent. in its weight. Of course, some of this shrinkage takes place in the summer and fall, and cannot all be charged to winter shrinkage. For instance, I had one lot of hay that showed a total shrinkage from the time of curing until November of only 3.5 per cent., and another lot that reached 10 per cent. Still a third lot showed, after reweighing, only 7 per cent. in the spring.

What of the Season?

In studying the shrinkage of hay, one must consider the character of the hay and the season. A good many farmers do not weigh their hay before storing, and then again before shipping. Consequently they can only guess at the shrinkage. This is a mistake, for it is impossible to gain a correct knowledge of the amount of loss. I remember one particular instance in a very wet season, when a friend cut 4,700 pounds of clover-hay and kept it for one whole year, owing to the low prices offered for it, and when he reweighed it, the shrinkage had reached nearly 60 per cent. In such a case, it is doubtful if the returns equaled those he would have obtained had he sold it at once after cutting.

Naturally the shrinkage depends a whole lot on the condition of the hay when put into the mow and also on the weather and climate. A very wet, rainy season is apt to make the hay large and succulent. In curing in the field, it does not part with as much of its moisture as it would in dry seasons. Consequently, when weighed at this time, it will show heavy weight, but six months later it will make a large shrinkage. This fact has probably been verified by many.

As an experiment, I cut and stored five tons of fairly good timothy-hay on the twenty-fifth of June and covered it with unthrashed grain for several months until the latter was needed. Six months later, in the middle of winter, it was reweighed and found to have shrunk about 685 pounds, or approximately 7 per cent. of its total weight. That was not bad. In fact, it was good, and paid for the trouble of holding it.

A. S. ATKINSON, New York.

A Steel Shingle Roof Will Save You Money

Edwards "Reo" Steel Shingles Tightcote Galvanized

Outlast the best building you have—save five times their cost of the shingles and keep on putting money in your pocket—you don't have to do any selling work. The orders your neighbors send in, because they like your Edwards roof, COUNT FOR YOU.

This proposition is open right now to the first man in your community who writes for it. You can have an everlasting Edwards Steel Roof, Tightcote Galvanized, on any or all your buildings—and let it make its cost over and over again. You don't promise us anything. If you are the man, write at once, before someone else beats you to it.

Water-Proof, Fire-Proof, Lightning-Proof, Acid-Proof, Rust-Proof

Each and every shingle is dipped in molten zinc after the shingle is made. Each of the four edges is as heavily and as completely galvanized as the two sides. This is the famous Edwards Tightcote process of galvanizing.

Not a particle of the steel is exposed to the weather. Edwards Shingles last three times as long as shingles cut out after the galvanizing has been done, and thus leaving raw edges open to rain and snow.

THE EDWARDS MFG. CO., 408-458 Lock Street, Cincinnati, Ohio
Largest Manufacturers of Steel Roofing Material in the World



Any Man Who Can Drive Nails Can Put Them On

Edwards "Reo" Steel Shingles are made of high grade Open Hearth Steel in sheets 5 to 12 feet long and 24 inches wide. Either painted or galvanized. All ready to put on. Hammer and nails all that is required. Anyone can do it. Can be applied over wood shingles or on sheathing 12 inches apart.

\$10,000 Ironclad Bond Lightning Insurance

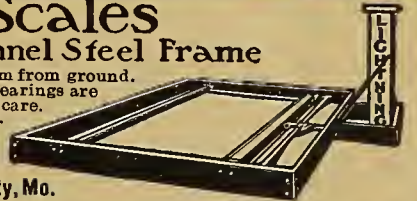
We agree to refund the amount paid in every case where a roof covered with Edwards Interlocking "Reo" Steel Shingles is destroyed by lightning. This guaranty is backed by our \$10,000 Ironclad Bond and stands forever.

Write for our money-making roof proposition right now. Send dimensions of your buildings and we will quote you cost of an Edwards roof, freight prepaid. Write for offer now. Send for Free Roofing Catalog No. 438.

Lightning Pitless Scales New Pattern. Solid Channel Steel Frame

Channels are seven inches which is the height of platform from ground. Levers are octagon in shape giving greater strength. Bearings are Toolsteel. This scale will last a life time with ordinary care. Equipped with compound Beam Free. Furnished absolutely complete except platform planks. Guaranteed accurate and tested to more than its capacity. Write for our prices and description before buying.

KANSAS CITY HAY PRESS CO., 124 Mill St., Kansas City, Mo.



Fortune-Telling

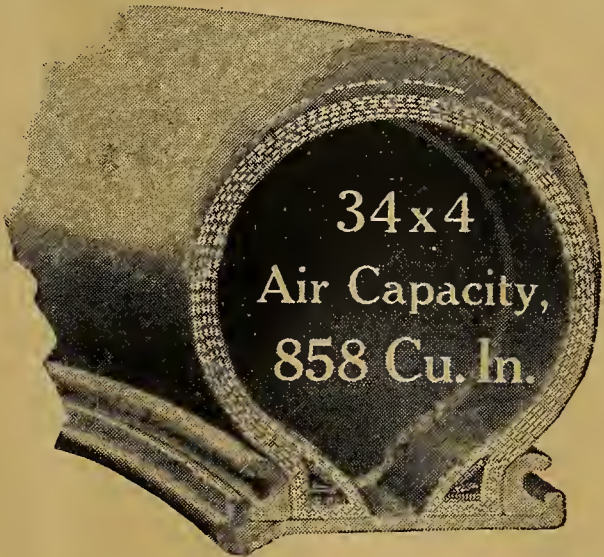
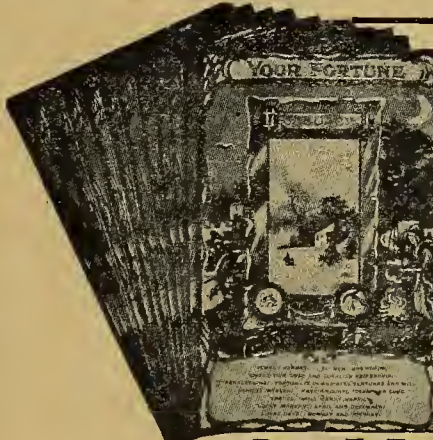
Post-Cards In Sets of Twelve

A DIFFERENT card for each month in the year, showing the birthstone, the sign of the zodiac and a brief horoscope—witches, owls, crescent moons, black cats and all of the Fortune-Teller's paraphernalia. With these cards you can have loads of fun telling the fortunes of your friends. Tell them their lucky and unlucky months and days. You can tell them more about their characteristics than they know themselves.

All for Six Cents

postage. Send us three two-cent stamps, and in return we will send you, post-paid, a complete set of these new Fortune-Telling Cards. Send at once to

Dept. E, Farm and Fireside, Springfield, Ohio



No-Rim-Cut Tire 10% Oversize

This is the Goodyear No-Rim-Cut tire—the hookless tire—the oversize tire.

The tire that cuts tire bills in two.

More than one million have been tested out, on some 200,000 cars. As a result, this tire out-sells any other tire that's made.

Our Patent Type

In the base of this tire run six flat bands of 126 braided wires. These make the tire base un-stretchable.

The tire can't come off, because nothing can force it over the rim flange. Yet it removes, by removing a rim flange, like any quick-detachable tire.

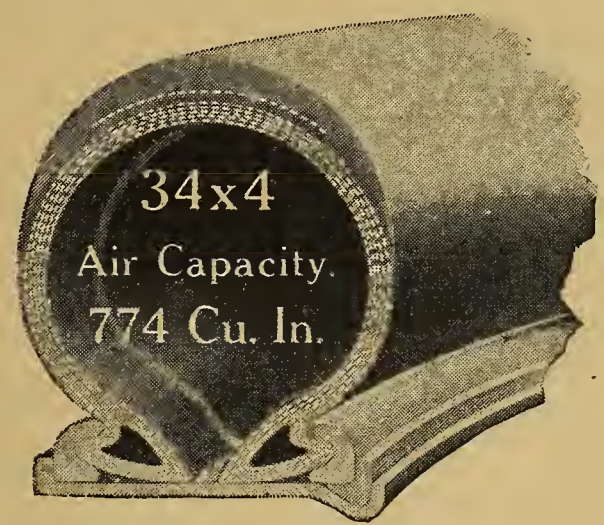
This tire doesn't hook to the rim flanges. So your removable flanges are simply reversed—

slipped to the opposite sides. They curve outward then, not inward.

Should the tire become wholly or partly deflated it rests on a rounded edge. Rim-cutting is thus made impossible.

We control by patents the only way to make a practical tire of this type. That is why the demand for tires that can't rim-cut centers on the Goodyear tire.

Which Tire?



The Passing Type No Oversize

This is the old type—the hooked-base tire—which No-Rim-Cut tires are displacing.

It is on the same rim as the No-Rim-Cut tire, but the flanges must be set to curve inward.

23 per cent of these tires become rim-cut by these curved-in flanges.

Yet these tires—wasteful and worrisome, and of lesser capacity—cost the same as Goodyear No-Rim-Cut tires.

Save 48 Per Cent

No-Rim-Cut tires are 10 per cent larger than these old-type tires. And that 10 per cent oversize, under average conditions, adds 25 per cent to the tire mileage.

They save in addition the ruin of rim-cutting, which is 23 per cent.

Tens of thousands of motorists have proved that these tires cut their tire bills right in two. And the demand for these tires, in the past 24 months, has increased by 500 per cent.

Our 1912 Tire Book—based on 13 years of tire making—is filled with facts you should know. Ask us to mail it to you.

GOODYEAR
No-Rim-Cut Tires
With or Without Non-Skid Treads

THE GOODYEAR TIRE & RUBBER COMPANY, AKRON, OHIO

Branches and Agencies in 103 Principal Cities

We Make All Kinds of Rubber Tires, Tire Accessories and Repair Outfits

Get More Wool Get Longer Wool Get More Money

for your wool by shearing with a Stewart machine because such wool has a longer fibre. Wool buyers pay more for long staple—and you get the longest by shearing with a

Stewart No. 9 Ball Bearing Shearing Machine



This is, without question, the most perfect hand operated shearing machine ever devised. Has ball bearings in every part where friction or wear occurs. Has a ball bearing shearing head of the latest improved Stewart pattern.

Price of machine, all complete, including 4 combs and 4 cutters of the celebrated Stewart quality is

Only \$11.50

Get one from your dealer, or send \$2.00 and we will ship C. O. D. for balance. Money and transportation charges back if not pleased.

Chicago Flexible Shaft Company
134 La Salle Avenue, Chicago, Ill.

Write for big new catalogue showing the most complete and modern line of Horse Clipping and Sheep Shearing Machines on earth.

Poultry-Raising

Feeding the Ducklings

DRY grain is unsuitable for ducklings; they will not eat enough sharp grit to digest it. Whole wheat and cracked corn, boiled together and let stand until cold, will give good results. But they should not be confined to this alone. They should not be fed upon highly concentrated food, because they will not thrive upon it. Some people will feed their ducklings a regular corn-meal ration, with beef-meal or something similar added, and then wonder why they cannot raise ducks.

Don't feed meat or ground bone to ducklings while they are small. Better not feed these at all, unless you know just how much and how often to feed. Corn-meal should always be mixed with something lighter, such as bran or vegetables, either cooked or raw.

Ducks are very fond of dandelions, chopped and mixed with ground grain. Raw cabbage, green rye and clover are also liked. When potatoes are used, they should be boiled, then mashed and mixed with equal parts of bran and corn-meal. If the bran and corn-meal are well moistened before being mixed with the potatoes, the mixture will be less gummy than it would be if dry meal were used. A duck cannot eat sticky feed.

Never let feed become sour or fermented. It should be fresh and wholesome. Fermented food will cause convulsions in young ducks. Therefore, in warm weather do not let feed mixtures stand even from one meal to another.

A good mixture for growing ducks is composed of equal parts corn-meal, bran and middlings moistened with skim-milk. To this add a quantity of raw, chopped cab-

bage or other green stuff. One part cabbage to two parts grain mixture is about the right proportion. As before stated, duck-feed should never be sticky. Neither should it be sloppy; and crumbly feed is not at all suitable for ducklings, except while they are small.

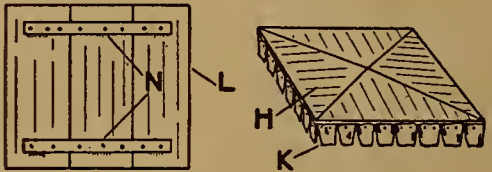
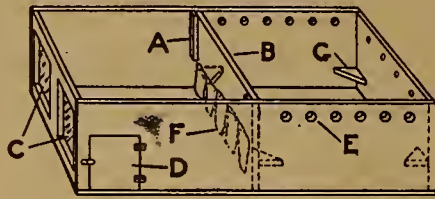
For large ducklings or mature birds the feed mixtures should be moist enough to cling together well, without being sticky. Don't add sand or grit of any kind to the feed. But keep a supply within reach. It is a good plan to put a quantity of clean coarse sand in the water-vessels every day, as the ducklings enjoy nibbling it out of water. Place the vessels near the feed-troughs. A duck stops eating frequently to rinse its beak and hunt for grit. Coal-cinders and oyster-shells should be provided, also some charcoal, although the latter could not be called grit. Don't hatch ducklings too early in the season. They cannot stand the cold. Neither can they endure close confinement in brooders, except at first. Even then they should only be kept there at night or at short intervals during daytime. As a rule, it is best to have the young ducks come out during May and June. For the first few days, feed dry bread soaked in sweet skim-milk, chopped lettuce or onion-tops in tepid water, raw rolled oats moistened a little, or oatmeal bread crumbed fine. DON'T forget charcoal and sand.

ANNA WADE GALLIGHER.

To keep roosters from crowing early in the morning, put them in coops so low that they cannot stand erect or raise their heads. A rooster is unable to crow without standing up and stretching his neck.

Home-Made Brooder

IN THE following way I made a brooder, and I have had great success with it. I used it outdoors last April when six inches of snow fell in three days after I started it. I never lost one chicken. This brooder if made three feet six inches by three feet eight inches will handle 50 chickens in cold weather. That was the size of the one I made from a dry-goods box. I cut the box down to those dimensions and made it sixteen inches deep. I made a cover from some boards I had. I arranged it in two sections. I covered the two sides and the back end with one-ply felt roofing, likewise both sections of the cover. The cover was made so



that each section was 2 inches longer and 4 inches wider than the box. That made each section 3 feet 10 inches by 23 inches. I then divided the box in two parts by nailing on each side a cleat 1x1 inches 10 inches long, at the middle of the box from each end. This is shown in the diagram as A. I secured a board (B) 10 inches wide, that would reach from one side of the box to the other and nailed it in with top even with sides. C represents holes sawed out 1 inch smaller each way than window-glass. I had on hand 9x12-inch panes of glass. D is a door at the side of the box where chicks may run in and out. It is 8x8 inches. E is ventilator holes made with a 1-inch auger. F is curtains to shut out the draft and keep in the heat. It is made in strips 6 inches wide and 8 inches long, lapped over 1 inch and tacked on the center board so that the bottom reaches the floor. G represents four cleats each 6 inches long by 2 inches wide by 1 inch thick. These are nailed in the corners four inches from the bottom of the box. They are for the hover to rest on. H is the hover. This is made 2 inches smaller than inside of brooder and out of 1x2-inch lumber. On top of the frame is tacked oil-cloth. The oil-cloth is cut 6 to 8 inches wider and longer than the frame, so that when it is placed over the hot-water jug it can rest on the pieces (G). K represents curtains made same size as F and nailed all around the frame. L is one section of cover or roof. N are cleats on which the boards are nailed. The cleats easily slip down next to the sides of the box. The jug used is a common two-gallon jug wrapped with several thicknesses of flannel or other soft woolen goods and filled with boiling water in very cold weather and not quite so hot in warm weather. The jug is placed in the middle of the brooder part and the hover is dropped down over. The cover of the brooder may be made in various ways. I merely give my way.

I used a wide piece of board to lay over the crack where both sections came together. When hot water is put in jug, do not put the cork in tight. W. R. NELSON.

SURE HATCH the only perfect Incubator

Uncle Sam's experts have announced the Standard of Perfection for Incubators. Farmer's Bulletin No. 236 says a Perfect Incubator MUST have "air-tight walls; dead air space; strong legs; double doors; nursery and chick tray, smooth top; double disc regulator; etc."

The Sure Hatch is the only machine made that measures up to this Government Standard—that has every feature the experts name and it is therefore the only Incubator that is perfect.

The perfect Sure Hatch will hatch stronger, healthier, thrifter chicks and more of them with less oil, and less care and attention than any other. Has special improved type of hot water heater. Sold direct with only one small profit added to factory cost.

60 days free trial, freight prepaid. 5 year guarantee. Early chicks pay best.

Book free. Write to day.

SURE HATCH INCUBATOR CO., Box 66, Fremont, Neb.



\$7.55 Buys Best 140-Egg Incubator

Double cases all over; best copper tank; nursery, self-regulating. Best 140-chick hot-water brooder, \$4.85. Both ordered together, \$11.50. Freight prepaid (E. of Rockies).

No machines at any price are better. Satisfaction guaranteed. Write for book today or send price now and save time.

Belle City Incubator Company, Box 100, Racine, Wisconsin

Build Your Own Incubator

I WANT to send every poultry raiser my large free book on home incubator construction. As easy as A. B. C. Thousands of leading poultrymen use no other machine. I want to show you how my patented Lamps, Regulation, Thermostats, Tanks, Egg Trays, etc., will save you money, time and worry and give you bigger hatches. Write for FREE book of incubator plans today. H. M. SHEER, Dept. 17, Quincy, Ill.

HURRY UP! To Be Most SUCCESSFUL

Send name on postal for offer of our new Poultry Lessons free to every new customer. Get Gilcrest's big book FREE and also his facts about his SUCCESSFUL Poultry Lessons given to buyers of

Successful INCUBATORS and BROODERS. Start right for biggest profits. Write to Dos Moines Incubator Co., 51 Second St., Des Moines, Ia.

YOUR HENS YOUR FARM YOUR MONEY

The Story of 25 Years with Poultry and Farmers and Fanciers will help many Farmers get more eggs—better prices; make more and save more money; tell things few folks know on making money with hens. Find out about America's Largest Line of Incubators and Brooders, and get six poultry chapters written by Robert Essex himself—it's all in our Free Catalog—Write today. Address Robert Essex Incubator Co., 83 Henry St., Buffalo, N. Y.

MORE MONEY IN POULTRY

Our large 1912 catalogue tells how in words and pictures. It is FREE. Stock and eggs of all leading varieties—land and water fowls. Incubators and supplies at lowest prices. Booklet, "Proper Care of Chicks"—10 cents. Royal Poultry Farm, Dept. 180, Des Moines, Ia.

Foy's Big Book MONEY IN POULTRY AND SQUABS

Tells how to start small and grow big. Describes world's largest pure-bred poultry farm and gives a great mass of useful poultry information. Low prices on fowls, eggs, incubators and brooders. Mailed 4c. F. FOY, Box 10, Des Moines, Iowa

FIFTY VARIETIES pure bred chickens, ducks, geese, and turkeys. Northern raised, hardy and fine in plumage. Prize-winners at the world's largest shows. Lowest prices on stock and eggs. Incubators, Brooders, and Poultry Supplies. Large illustrated Catalogue mailed for 4 cents. C. M. ATWOOD, Box 21, Dundee, Minn.

50 Best Paying Varieties Pure-Bred Chickens, Ducks, Geese, Turkeys, Eggs, Dogs and Incubators. All at Low Prices.

Send 4c. for my book which gives reliable information worth many dollars to you. W. A. WEBER, Box 936, Mankato, Minn.

MONEY MAKING POULTRY

Our specialty. Leading varieties pure bred chickens, turkeys, ducks and geese. Prize winners. Best stock and eggs. Lowest prices, oldest farm, 27th year. Fine catalog FREE. H. M. JONES CO., Box 54, Des Moines, Ia.

43 VARIETIES poultry, pigeons, geese, turkeys, dogs, incubators. Missouri Squab Co., Dept. X. X., St. Louis, Mo.

"BRED-TO-LAY" Poultry Pays. 31 Varieties; Incubators, Brooders, Poultry Supplies. Big Catalog 4c. HARRY E. RUBLE, Box 9, Albert Lea, Minn.

Think of it! Uses Only One Gallon of Oil to a Hatch

Requires Only 1 Filling of Lamp

Lamp is underneath, in the center—thus most even temperature is kept all the time in egg-chamber. Oil tank holds 4 to 8 quarts—automatic trip cuts down flame at burner when egg-chamber gets too hot. No waste, no excess heat—so only 1 gallon oil is needed.

X-RAY INCUBATOR

—has 2 double-glass panels on top. Thermometer always in sight. Tank has to be filled just once—not every day. Write TODAY for Big FREE BOOK NO. 52—Learn all about only incubator made on right principle. Shipments guaranteed same day order is received. We pay freight.

X-RAY INCUBATOR CO., Wayne, Neb.

IOWA NEW GALVANIZED GATES

Let me ship the gates you need for 60 days free inspection and trial. Save from \$50 to \$250 on your gate purchase. Iowa Gates are made of high carbon steel tubing and large stiff No. 9 wires. Rust proof—wear proof. Write for my special proposition today. Complete galvanized frame, also painted gates cheaper than ever before. Jos. B. Clay, Manager., IOWA GATE CO., 47 Clay Street, Cedar Falls, Iowa

The Indian Motorcycle

Have on your farm a vehicle that's always ready for immediate use.

THE Indian Motorcycle brings your farm nearer to town—nearer to anywhere you want to go, for business or pleasure. It will go wherever a bicycle can go and requires no more accommodations.

You need no mechanical skill. A few minutes' acquaintance with the Indian's simple control devices enables you to master it. Any speed from 4 to 50 miles an hour. Complete control assured at all times by a twist of the wrist. The Indian has covered over 30 miles on 1 pint of gasoline.

The Free Engine Clutch enables you to come to a standstill without stopping the engine and to restart without running or pedaling.

14 Important Improvements in 1912 models. Prices reduced \$50.

4 H. P. Single Cylinder, \$200
7 H. P. Twin Cylinder, \$250

On sale at 1,200 agencies throughout the country. Send a postal for free 1912 catalog.

THE HENDEE MANUFACTURING COMPANY
(Largest Motorcycle Manufacturers in the World)
827 State St., Springfield, Mass.
Chicago Denver San Francisco London

Rubber Roofing

ANYBODY CAN LAY IT.

Warranted For Twenty-Five Years. FREIGHT PAID To Any Station East of Rocky Mountains, except Texas, Okla., Colo., N. D., S. D., Wyo., Mont., N. M., La., Ga., Ala., Miss. and Fla., on all orders of three rolls or more. Special Prices to these States on request.

ONE-PLY Weighs 35 lbs., 108 Square Feet, \$1.10 per roll.
TWO-PLY Weighs 45 lbs., 108 Square Feet, \$1.30 per roll.
THREE-PLY Weighs 55 lbs., 108 Square Feet, \$1.50 per roll.

TERMS CASH: We save you the wholesalers' and retailers' profit. These special prices only hold good for immediate shipment.

Indestructible by Heat, Cold, Sun or Rain.

Write for FREE SAMPLES or order direct from this advertisement. Satisfaction guaranteed or money refunded. We refer you to Southern Illinois National Bank. CENTURY MANUFACTURING COMPANY, Dept. 270, East St. Louis, Ills.

Farm Notes

Economy

(The Thrifty Farmer to His Wife)

By Berton Braley

THE times are mighty stringent, and we've got to plan the way to keep expenses just as low's we can;

I need a better mower than the one I've got, And I'll have to get the fencing for that pasture-lot,

And the hog-pen must be lengthened—it is far too small,—

And we'll need another silo for the corn next fall;

So I cannot put that stove in which I promised you,

And you'll have to make the old one do!

There's forty head of cattle that I sure must buy,

And I need more land for pasture now that feed's so high,

And I'll build a new addition to the cattle-shed—

There's a lot of heavy outlays looming up ahead;

So I guess we cannot visit with our boy in town,

And we'll have to give up buying you that black silk gown.

Yes, I thought we'd put in plumbing and a force-pump too,

But you'll have to make the old well do.

I'll need another helper when the summer's here,

So you see we'll have to figure very close, my dear.

To bring the ends together makes my old head whirl,

And I guess you'll have to do without the hired girl.

I'm fixing up the horses in a brand-new place;

That barn they used to stay in is a plain disgrace—

So, although the kitchen's leaking and the rain comes through,

You'll have to make the old roof do.

NEXT year I'm going to buy you everything you need,

And we'll have a car to ride in and some books to read.

LAST year I made that promise—and I meant it, too—

But so many things have happened that I've changed my view,

And you'll have to make the old stuff do!

Reclaiming the Waste Places

WHEN we bought our farm, one of its greatest drawbacks was an unsightly marsh just below the garden and directly between the kitchen-window and the road. It was thickly overgrown with flags and cattails, and afforded a secluded home for sundry weasels and mud-turtles, which levied almost nightly tribute upon our chicken-coops.

After a year of forbearance we determined to drain this hole. I did the work myself. It was necessary to dig thirty rods of ditch, most of the way about four feet deep. This was my first attempt at this kind of work, and while it improved matters, it could hardly be called a success. There was very little fall to the outlet, and I was too inexperienced to get all that there was. The result was that my tile just went into the hole, but not deep enough to allow for cultivation. However, we were able to



Wasted land

plow and subdue most of the marsh, and got a very good crop of corn around the edge of it. The next year, I dug the tile up and hired a good ditcher to relay them. This time we managed to get into the lowest spot about a foot deep. I plowed the land early in the spring and worked it into perfect condition, using an Acme harrow and carrying off all trash and roots.

Potatoes were planted the first of May. They made a fine growth and were a pleasure to look at all summer. However, the blight struck them and cut the crop short. I had only forty bushels of marketable potatoes. These sold for \$60, owing to the scarcity of early potatoes, and I still have \$5 worth of seed.

About the middle of July, before I was quite ready to dig the potatoes, I planted half the patch to cabbage, planting between every other row of potatoes. In this way

the yield was 2,000 head of cabbage, which are selling readily at fifty cents per dozen.

I dug the potatoes the last of July, and after cultivating my cabbage thoroughly, as well as the rest of the land, I sowed turnips on the whole thing, broadcasting the seed, but taking care not to plant closer than a foot to the cabbage-rows. We have pulled the turnips, and have three hundred bushels of fine roots. They are quoted on the Detroit market at sixty cents per bushel.



Turnips and cabbage follow early potatoes

Calling it forty cents to allow for transportation, they would bring \$120, making a total value of this three fourths of an acre of \$265.

The cost of tiling, not counting my own labor, was \$20. C. R. ROSS.

Watch Your Onion-Seed

OF ALL the different operations necessary to produce an onion crop we think that of getting sure seed is a little more important than any other.

We have been raising onions for the last seven years on what might be termed as upland ground. We have had seed trouble and have lost a lot of money by being duped by unscrupulous dealers. The first cost is not the serious part of the deal. It is the loss of a crop or even a part of one.

Last year we put out six and one-half acres on a sandy soil and had excellent stands all the way through. That was because we knew the seed. We went to the farm where the seed was produced and saw what methods were followed in curing, grading and in keeping the different varieties separated from each other.

Onions may fall into three classes as to kinds: red, yellow and white. There are by far the most of the last two kinds raised. The reds are not an inferior onion in any way, yet for some reason the vegetable-buyers in our city markets avoid them.

In our market we do not have much call or use for any kind of whites. Yellows are our best and surest. Of the two sorts of yellows—Southport Yellow Globe and Flat Yellow Globe—the best is the Southport. More of them are produced than of any other kind, and in a good many cases there is some advance in price in favor of the Southport Yellow. The Prizetaker is another variety of the light yellows. It is a fair yielder, and under very favorable conditions gets to be big in size. Its failing is in its keeping qualities. Breeding will in time help that I believe, but we who do not produce our own seed can hardly afford to continuously try out seeds. There is another of the light-colored class called Giant Gibraltar. These are an imitation of the Southern Bermuda, which are shipped into northern markets in crates. The Gibraltar is a mild onion and it is big if given any reasonable show at all. Its objection is its softness. We have tried it two years and the last time produced nearly forty-five bushels from a row one hundred and ten rods long, not a wonderful yield, of course, but it shows what this big sort will do.

R. E. ROGERS.

Keep a level head this year, especially in political matters. Not that we are not to be up and doing to get the best possible officers—that every loyal patriot will do—but let's not get rattled over it and think it is better to burn red fire and whoop and "holler" than to keep the weeds out of the corn-field. Vote right, lift at the wheel of good government, but remember every duty to home and the old farm.

What to Do for Fistula

HORSES afflicted with "fistula of the withers" very frequently need an operation. The hair should be clipped off the affected parts and the skin thoroughly cleansed with a two-per-cent. solution of coal-tar disinfectant or carbolic acid. Then probe to determine exact course and depth of each pipe.

Each pipe and pocket then should be laid open by means of a sharp, clean scalpel, to insure perfect drainage. At the same time diseased tissues should be cut out.

Next swab the wounds thoroughly with tincture of iodine, and at once pack all cavities full of oakum saturated in a mixture of equal parts of turpentine and raw linseed-oil.

Use the tincture of iodine twice a week, and each day renew the dressing of oakum, turpentine and oil after perfectly syringing out pus with a large quantity of two-per-cent. solution of coal-tar disinfectant.

In bad obstinate cases a qualified veterinarian should be employed, and he will give hypodermic injections of autogenic or polyvalent bacteria in addition to the local treatment. A. S. ALEXANDER.

Three Important Facts

concerning the much-talked-of

United States Tires

The first fact

United States Tires are made as no other tires in the world are made. The co-operative method employed in their manufacture is unique in automobile tire manufacturing.

Here is the method:

In four of the largest and best-equipped tire factories in the world there are at work today four corps of tire specialists, each of which formerly made a brand of tires which ranked among the world's best tires—Continental, G & J, Hartford and Morgan & Wright.

Each body of men formerly put into the tire of its particular manufacture enough of quality, enough of strength, enough of actual wear to cause the tire to become a front-rank tire—a tire that easily competed with all other single-factory tires.

Now—

In the same factories today these same tire specialists are at work building tires not only as good as they know how, but—and mark this—as good as their knowledge, plus the knowledge of three additional corps of tire experts, can make them.

Or, to put it another way—

It is precisely as if the motorist, desiring an ideal tire, should contract with four leading tire manufacturers to build a tire that would actually combine every element of strength and every secret of manufacture known to the four companies.

It is inconceivable that such a method of tire manufacturing should not produce a grade of tires that is distinctly better than could possibly have been produced by any one of the factories working single-handed.

The second fact

You can buy United States Tires in any style you prefer.

Three styles of fastening—Dunlop (straight side), Quick Detachable and Clincher, and six different treads—Plain, Bailey, Nobby, Chain, Type Course and Steel Stud.

If you are convinced that a certain style of fastening or tread can best serve your purpose, you can not only get it in a United States Tire, but—what is even more important—you can get it in a tire made as only United States Tires are made.

Thus the motorist who clearly recognizes our claim to his patronage on the basis of manufacturing methods is enabled to take advantage of our tires regardless of personal choice in the matter of fastening or tread.

The third fact

United States Tires cost no more than you are asked to pay for other kinds.

This opportunity to secure extra value without extra cost has naturally appealed to motorists who are wedded to no tire but the most economical tire it is possible to buy.

There is every indication that the spring season will witness thousands of motorists putting on one, two or more United States Tires for the first time—motorists who are convinced that, at the same price, tires made by our co-operative method most certainly should give exceptionally large mileage returns for their investment.

Knowing as thoroly as we do what our four-factory method of manufacture means in the production of superior grade tires, we frankly invite every motorist who, without prejudice, is looking for a full return on his tire expenditure, to use United States Tires as either partial or exclusive equipment during 1912.



Tire-by Satisfied,
thank you

America's Predominant Tires

at no greater cost than other kinds

SOLD EVERYWHERE

United States Tire Company, New York

THE farmer who knows the plain truth about paint is not at the mercy of either paint fakirs nor fake painters. He knows what to ask for in his specifications and how to get what he specifies. The "Handy Book on Painting" gives in concise and practical form the plain facts about the most durable of all paint, made from

Dutch Boy Painter

Pure White Lead

When competent help isn't handy, the farmer who understands paint can do a pretty good job himself, especially on the small painting, such as fences, sheds and tools.

Ask for Farm Helps No. 212, and if there are children in your family or your neighbor's family, ask for the Dutch Boy Painter's Book for the Children.

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A brand new, well made, easy running, easily cleaned, perfect skimming separator for \$15.95. Skims one quart of milk a minute, warm or cold. Makes thick or thin cream. Thousands in use giving splendid satisfaction. Different from this picture, which illustrates our low priced large capacity machines. The bowl is a sanitary marvel and embodies all our latest improvements. Our richly illustrated catalog tells all about it. Our wonderfully low prices and high quality on all sizes and generous terms of trial will astonish you. Our twenty-year guarantee protects you on every American Separator. Western orders filled from Western points. Whether your dairy is large or small, get our great offer and handsome free catalog. ADDRESS,



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CENTURY HOUSE PAINT, in 1-gal. cans, Any Color. Terms cash, - - Per Gallon, \$1.20

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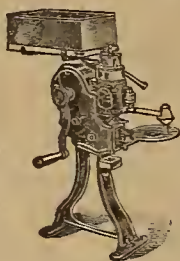
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The Two Greatest Prizes of 1911 won by the U. S. CREAM SEPARATOR

At the California State Fair the Interlocking U. S. Cream Separator was given the highest award over six competitors.

Read the State Fair Manager's Letter Sacramento, Cal., Dec. 1, 1911. Replying to yours of the 29th will say that the Vermont Farm Machine Co. was awarded the first prize on best cream separator at the recent State Fair, the second prize being awarded to the DeLeval Dairy Supply Company. C. ALLISON TELFER, Mgr.



The largest butter prize of the year—The \$500 Cup offered by the Northern Pacific R.R. was won by A. G. Scholes, Townsend, Mont., with creamery butter made from U.S. Separator cream.

These Are Its Usual Performances Three years ago at the Alaska-Yukon-Pacific Exposition, the Interlocking United States Cream Separator was awarded the Grand Prize over all competitors.

If you care to go back ten years, the U. S. Cream Separator won the World's Record in 50 consecutive runs at the Pan-American Exposition.

Prices for Farm sizes \$25 and up according to guaranteed capacity

VERMONT FARM MACHINE CO. Bellows Falls, Vt. Distributing warehouses everywhere

Live Stock and Dairy

Calf-Cholera Treatment

HITHERTO there has been no effective treatment either for the prevention or cure of that dread malady commonly termed "calf cholera" (scours or dysentery); but now we can announce confidently that there is good promise of being able to both prevent and remedy the disease. To German investigators we are indebted for the new agent by which the disease is controlled. It is called "polyvalent dysentery serum" and is chiefly used as a preventive, but also has proved effective as a remedial agent. It is used to treat the new-born calf, and the dose is given by means of the hollow needle of a hypodermic syringe, which is inserted under the skin. The dose for a new-born calf is ten cubic centimeters as a preventive and twice that amount is used as a cure, where a calf has contracted the disease. In Germany they also have what is known as "polyvalent germ-free dysenteric bacilli extract," with which cows and ewes are immunized against the disease. The pregnant cow is given a ten-cubic-centimeter dose with hypodermic syringe six weeks before calving-time and a second dose of twenty cubic centimeters is given in ten days. This prevents the new-born calf from having scours. It is not infallible, but remarkably effectual in a majority of instances. Experiments carried out in Germany, with herds where the disease had been prevalent despite every possible precaution, resulted in the prevention of dysentery in 91.63 per cent. of the calves born. Only 6.04 per cent. died, and all of the 2.33 per cent. which fell ill with the disease were saved by use of polyvalent dysentery serum.

In a noted Wisconsin herd of pure-bred dairy cows all of the calves were dying soon after taking one or more drinks of milk from their dams. Every method of treatment failed. Prevention was not had by scrupulous disinfection of the stables and disinfection of the navel stump of each new-born calf. At the suggestion of the writer, "polyvalent dysentery serum" was obtained from the Pasteur Laboratories of America and each new-born calf was given, at birth, a ten-cubic-centimeter dose with hypodermic syringe. Two calves already affected and about to die were treated with a twenty-cubic-centimeter dose in the same way. A few additional doses were given, and these two calves made a perfect recovery. The treatment absolutely prevented the disease in all of the new-born calves treated. It absolutely stopped the losses, and the results have seemed incredibly wonderful considering the terrible mortality from the scourge. The supply of serum has become exhausted, but it is expected that a new supply will soon be forthcoming, and we understand that the polyvalent dysentery bacilli are also to be imported.

It is a Germ Disease

The form of scours termed "calf cholera" is a germ disease, and the navel at birth often is the place of entry of the germ into the system. It also may enter by way of the mouth. Knowing this, it is of the greatest importance to provide a sanitary place for the reception of the new-born calf. The box stall set apart for the purpose should be cleansed, disinfected, whitewashed, perfectly ventilated and properly sunlit. Planing-mill shavings are the best and safest bedding-material. Just as soon as the navel-cord (umbilicus) is severed at birth the stump of the navel should be saturated with a 1/500 solution of corrosive sublimate, and the application should be repeated twice daily until the navel is perfectly healed. This prevents infection by way of the navel, and that not only tends to prevent scours, but it also prevents navel and joint diseases (pyemic arthritis). To prevent infection by way of the mouth, the udder of the cow should be washed with a one-per-cent. solution of coal-tar disinfectant before the calf is allowed to suck for the first time, and the washing should be repeated twice a day for a week or ten days. It may be added that to give the calf a strong constitution and insure its full development in the womb, the pregnant cow should at all times be fully nourished with mixed rations, and her surroundings at all times should be as sanitary as possible. A. S. ALEXANDER.

The Horse Stumbles

STUMBLING in horses is due to several different causes. Often it is natural to the horse—that is, is caused by his natural temperament and his way of going—and in such cases cannot be cured, but can almost always be greatly helped. Have the horse shod often, and don't let his feet get too long. Neglect of this is a frequent cause of stumbling. Feed plenty of oats and not very much corn. Changing from a corn to an oat diet will sometimes work an almost entire cure. If you do this and also attend to the shoeing, you will see an immediate improvement—though an entire cure, in a confirmed stumbler, is rare. D. BUFFUM.

MANY A GOOD FARM HORSE IS RUINED

By standing in a wet, sticky coat of hair. Experience proves that the coughs, colds and other troubles that affect horses in the spring, can be avoided by clipping off the winter coat before the spring work begins. Clipping improves the appearance of horses, they bring more if offered for sale, they do better work too, because they dry out quick, rest well and get more good from their feed. The easiest, quickest way to clip is with a

STEWART Ball Bearing Machine

It clips horses, mules and cows without any change whatever.



About the udders and flanks of all cows should be clipped every three or four weeks so the parts can be kept clean when milking.

Complete \$750

Get one from your dealer or send \$2 and we will ship C.O.D. for balance.

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PREPARE FOR SPRING WORK



The Busy Season Need Not Worry You when you use Ventiplex Pads in your horse collars, because your horses are always free from sore necks and shoulders.

Ventiplex Pads are made of porous, ventilated fabric, which allows a free circulation of air under the collar and keeps the neck cool and dry. Your team will not hesitate to throw their weight in their collars, because their shoulders are sound, and will do more work.

Better than other kinds at the same price. Do not accept a substitute—ask for Ventiplex and insist on getting it.

Patented Sept. 20, 1910. Sold by big and little dealers. Write for our instructive folder. We also make the famous "Stay-On" Blanket. Burlington Blanket Co. DEPT. 56 BURLINGTON, WIS.

INDIGESTION Causes more trouble and loss of horseflesh than all other diseases combined.



Heaves is not a lung trouble. Book with full explanation sent free.

NEWTON'S Heave, Cough, Distemper and Indigestion Cure Guaranteed Death to Heaves. It prevents Colic, Staggers, Scouring, etc. Blood Purifier. Expels Worms. GRAND CONDITIONER. Cures Colds, Coughs, Distempers. A veterinary remedy of 20 years' sale. 50c and \$1.00 per can. Use large size for Heaves. At all Dealers or direct prepaid. THE NEWTON REMEDY CO., Toledo, O.

THIS O.I.C. Sow weighed 932 lbs. AT 23 MONTHS OLD. IONIA GIRL.

I have started more breeders on the road to success than any man living. I have the largest and finest herd in the U. S. Every one an early developer, ready for the market at six months old. I want to place one hog in each community to advertise my herd. Write for my plan, "How to Make Money from Hogs." G. S. BENJAMIN, Masonic Bldg., Portland, Mich.

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One Price—One Quality—Now 50,000 best Columbus Buggies ever made—exactly alike—one quality—one price—of-fered this year direct at only \$1 factory profit on each to us. We've reorganized whole factory to make this. 5 weeks Free Trial—2 year guarantee. Satisfaction or money back. Write. Big Facts Portfolio Free. Columbus Carriage & Harness Co. 2021 So. High St., Columbus, O. \$50

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Try wheels 30 days for heavy hauling on roughest roads. If wheels are as represented, pay balance. If not, back comes your \$4. Write for Free Measuring Device.

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Made in one piece! All sizes, to fit any axle. Save 25% of draft. Thousands sold. Owners delighted. Life-savers for men and horses. Book Free. Empire Mfg. Co., Box 923, Quincy, Ill.

Can Heaves Be Cured?

HEAVES, or emphysema of the lungs, is incurable, when fully established, but the distress may be very greatly relieved by proper feeding and management and use of medicine. The disease is brought on by overfeeding on coarse, dusty, bulky or nutritious hay and working the animal when digestive organs are distended with such food. Tendency to the disease is considered hereditary.

Wet all food. If drinking-water is soft, use lime-water to wet the food. Do not feed any bulky food at noon when there is work for the horse to do. Give the drinking-water before feeding. Do not work the horse soon after a meal.

Feed wetted oat-straw in preference to hay in winter-time and make the horse live on grass in summer. Bright corn-fodder, also, is a suitable food for an idle horse in winter.

Feed a mixture of four parts of whole oats and one of wheat-bran, wet, and allow some ears of corn at noon. Keep the bowels active. To that end feed carrots, if obtainable.

Night and morning give half an ounce of Fowler's solution of arsenic, after a few smaller preliminary doses, and gradually stop the medicine as soon as horse appears to be able to do without it.

Do not breed from a mare or stallion afflicted with heaves. A. S. ALEXANDER.

and for sale besides. Not only will it be cheaper, but it will be vastly better. Furthermore, it will prove another link toward binding the heart of the children to their home. For what is more subtle and powerful in its influence than taste and smell? "Mother's fried ham and eggs—My! I can taste them still. Never tasted a steak one half as good even when broiled at the finest hostelry in the country. And our own home-made sausages and bacon—um, um, weren't they great!" Remarks like these are not at all uncommon out of the mouths of the great and successful men of the times. Bacon at 16 to 22 cents pays the farmer a great deal better than hogs sold whole at 6 to 9 cents. Do you know that if you attempt to sell nice home-cured hams, shoulders, bacon, home-made sausage, etc., such as we all used to feast on at home years ago, you will be all sold out before you know it? Just intimate to good liverers that you have some of the old-time, good-flavored, home-cured meats, and the store will be gone all too soon. After supplying half a dozen families one season, if you wish to greatly increase your sales the following year, mention it to your customers and they will recommend the meats where you will get good prices and almost unlimited sales.

There is some work in it, to be sure, but the work is not heavy nor any more taxing than dozens of other things that bring in no money. A most delicious ham is made



Sheep are and will be profitable. Markets all point that way

Why are Hogs Sold?

FIVE million dollars a year spent for meat that might have been raised on the farm, and the money kept at home, is Kansas' record. And it is a mistake. It shows we are "advancing backward" in some things. The good old butchering days of our fathers ought to return, and with them a full knowledge of how to cure the meat in various ways, so when the "fresh" was gone, we should have some of the finest, most appetite-satisfying meats on hand the year round. Kansas has awakened, and the State agricultural college is leading by putting in a killing and curing plant, where all students may learn this useful art from start to finish. What the grain-growing farmers of the West have done the milk-making owners of eastern farms have followed, and to-day there are thousands of farmers' families that never see a home-cured ham or taste a rasher of bacon or a slice of salt pork that is not got from the meat-dealer. Having to spend money for meat, many families lack a sufficiency of this sinew-making food, and who may say that not a few failures to make good on the farm are due to lack of the meat which stimulates?

Every farmer ought to make his own meat. At present many are buying it at 35 to 50 per cent. advance above the cost. How many who raise more pork than they need ever cure what they have to sell? "There is so much work about it, and it brings just as much in the hog as it would cut up and cured, anyway," they assert with such assurance that one is almost convinced they are right. But are they? For answer, go into any market, and buy or price a ham, shoulder or strip of bacon. The last bacon I bought I paid 20 cents per pound for, and on reaching home found I had but 15 ounces to the pound. While at the market, don't fail to price salt pork, lard and a choice loin of fresh pork. Salt pork at 12 cents, lard 12 to 16 cents and 16 to 22 cents for choice fresh loin is "just ordinary." I bought a juicy loin for my table last week that weighed only five and one-half pounds, that cost me \$1.12.

I am led to speak of this after hearing the conversation of a man who gathers city swill, and learning what his pen of porkers returns him. He said, "I sell the loins and some of the other dainty parts to private customers, and I get about as much for them as I would get for the entire pig if sold to the market-man. We kill only two or three at a time, and my family use the plucks, trimmings, feet, etc., and make up the lard, salt the pork and cure the hams, shoulders and bacon. Then we have a delicious lot of meats in the cellar to eat and to sell the year round.

"I always get nearly twice as much for a hog cut up and cured in this manner as if sold whole, and my family is fed without cost."

The loss sustained by a single farmer who does not raise nor cure his meats is by no means inconsiderable, but when we view it by entire counties or States, the total loss exceeds belief. The time has returned when it will not only pay every farmer to raise his own meat, but to cure it for family use

with very little call for time and labor, and without a pickle, as follows: After trimming smoothly, lay the hams on a board and rub carefully all over with the following mixture: Salt, three parts by measurement; sugar, one part, and one-half teaspoonful of saltpeter, well mixed together. Rub every other day for three times if under eight pounds in weight, and five times if weighing up to 14 pounds. Then string them and smoke with light and frequent smokes where they will not get heated, using the cobs of sound corn or hickory chips. Do not hurry the smoking process and do not continue it long enough to give them a dark and dirty appearance. Make them a handsome bronze brown. When nearly brown enough, slice off some and have a square meal. If not quite smoky enough, the palate will tell at once. Don't use smoke extract. Do not be afraid to put your individuality into each ham and slab of bacon. Then it will sell, and sell well. HOLLISTER SAGE.

Never deceive or play tricks on an animal that trusts you implicitly, for confidence once shaken can never be regained.

TRADE

in your old separator
on account of a new
DE LAVAL
CREAM SEPARATOR

38,796 Users did so Last Year 26,569 in the U. S. Alone

It's come to be an accepted fact that DE LAVAL cream separators are as much superior to other separators as other separators are to gravity setting systems, and that an up-to-date DE LAVAL machine will on an average save its cost every year over any other separator.

Aside from the actual saving in more and better cream and butter and in time of separation and cleaning, easier running, greater durability and less repairs, there's the pride, comfort and satisfaction which none but the owner and user of a DE LAVAL machine can feel in his separator.

In consequence thousands of users of inferior and worn-out separators of various makes take advantage every year of the educational allowances which the DE LAVAL Company continues to make and trade in their old separators.

APPLIES TO OLD DE LAVAL USERS ALSO

While all this applies particularly to the users of inferior separators it applies likewise to the many thousands of DE LAVAL machines 10 to 25 years old. They are not worn out and are still superior to other new machines of today, but there are so many improvements embodied in the modern DE LAVAL machines that these old DE LAVAL users can well afford to make an exchange and soon save the cost of doing so.

SEE THE NEAREST DE LAVAL AGENT

He will tell you how much he can allow on your old machine, whether a DE LAVAL or some other make, toward the purchase of a new DE LAVAL. If you don't know a DE LAVAL agent, write to the nearest DE LAVAL office giving make, number and size of your present machine, and full information will be sent you.

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DR. HESS STOCK TONIC

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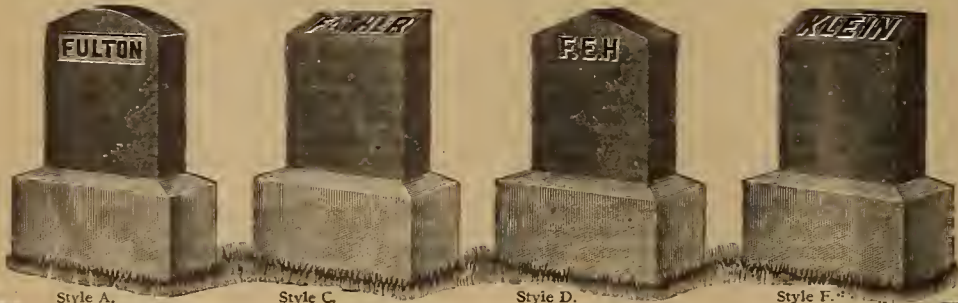
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Garden and Orchard

Destroying the Peach-Borer



Male

THE peach-borer is uniformly spread over all peach sections of the country. It is a pest native to this country, known at least for one hundred years, and before the introduction of the

peach by Europeans its principal hosts were the native plums and cherries.

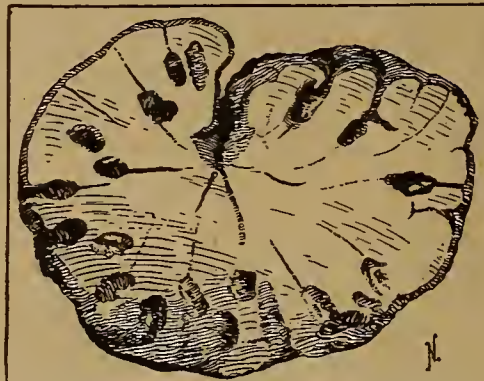
During the summer months a little wasp-like moth deposits her eggs on the trunk of the peach-tree, usually not higher than one or two feet from the ground. The individual moth can live only a day or so, but may in that time lay six or seven hundred eggs. These eggs hatch in a week or ten days and the larvæ immediately start crawling downward, along the deepest cracks of the bark. At this time the larva or borer is not over one sixteenth of an inch long, so it is very hard to detect. When the borer reaches the moist soil, it eats its way through the outer layers of the bark, leaving behind a gummy mixture of sawdust and dirt.



Female

Its principal feeding is done in the actively growing bark next to the wood. If in a young tree, the borer may work its way downward into the roots or it may circle around the trunk, causing certain death—by girdling. At best it hinders the sap-flow, causing a stunted tree. Sometimes one finds from fifty to seventy-five borers all in one old tree-trunk. The tree might be alive, but doesn't amount to much.

By late fall the majority of the borers are more than half grown, although some, hatching very late in the fall, are still so small they cannot be seen. The borers live in a passive state during the winter, but just as soon as the sap-flow starts upward in the tree they again begin feeding. Sometimes the egg is laid so late that growth of the larva that year is practically nothing. It lives over the winter, however, and feeds all the following year. The next year this individual probably pupates before the rest and is the first to appear as a moth. A



This shows the work of the round-headed apple-borer. The work of the peach-borer is not much different

borer developing from an early-laid egg will be larger in the fall and appear as a moth earlier the next summer than later laid eggs. This explains then why the moths keep appearing throughout late spring and summer, even though the individual lives for at best two days.

There are many kinds of washes and mechanical protections used to combat the peach-borer, but in general they are of doubtful value. The oldest, most reliable and now most universally accepted method is the "digging out process" or "worming."

If the orchard is badly infested, the "worming" should be done at least twice a year—in late fall and again the following May or June. The older larvæ may be dug out in the fall, but the tracks of the younger borers cannot be seen before the spring examination. If both wormings are done carefully, but few will escape. First dig away about eight inches of soil from the base of the tree. Rub away the gummy excretions, and crush the very young larvæ with a stiff brush. Use a sharp knife to dig out the borers and if possible cut with the grain rather than across it. After the early summer "worming," mound up the trunk with dirt to a height of six to eight inches. The new brood of larvæ will thereby work higher up through the trunk and the labor in digging them out later on will be greatly decreased.

When once under control, it is a comparatively simple matter to prevent the borer from doing much harm, but thousands of orchards are being destroyed right now, simply because of the lack of the three or four careful "wormings" to get the orchard "under control."

After digging larvæ out in spring, spray the exposed trunk (dirt having been taken away from about the trunk in the operation) from the ground to about twenty inches high with 1:10 lime-sulphur (winter spray formula) and arsenate of lead (one pound to five gallon mixture) about July 10th and August 1st; repeat the spraying of trunk as poison has weathered off; that, you see, will be pretty hard on the young larvæ crawling down to the "moist" trunk—at the surface of the ground. A. J. ROGERS, JR.

Here's Your Tomato Program!

GARDENING as well as other departments of farming is undergoing a gradual revolution. Concentration, intensive cultivation, specialization, etc., are relatively "new" terms in farm language. Yet the man who knows what they mean, and applies that knowledge daily, carries off the prizes at every fair, has the best-looking farm and owns an automobile.

The wasteful methods of the days gone by have been especially noticeable in the garden. The tomatoes are easily the most important garden crop; at any rate, they are the best paying crop, giving the biggest returns for space, time and money invested. The old method of growing tomatoes was decidedly wasteful. Plants were set three feet apart each way, the vines made a rampant growth, spreading in all directions, and most of the plants' energies were devoted to growing big plants instead of bearing a lot of fruit as they should. Letting the plants spread over the ground caused the vines to shade the fruits and blossoms. Few fruits were well developed, few ripened evenly and many remained green until frost, when they could only be used for tomato pickles.

Now comes the specialist who applies intensive cultivation. Two thousand eight hundred pounds of fruit from 1/80 of an acre, 200 dollars' cash profit from a patch 40x60 feet, 60 bushels of fruit from 100 plants—those are true experiences of men whose word is as good as gold. How was it done? The story may be condensed into two words: *staking* and *pruning*.

Until rapidly increasing land values and higher taxation obliged the farmer to get the most out of every acre, methods of planting and cultivation were rather loose. Now, we not only see two plants grow where one grew before, but the two are much better plants than the one ever was. And it all started when men stopped long enough chasing idols to stoop down and study nature's methods and plant habits.

The tomato-plant is naturally of vining or climbing character. Give it a stake to climb on, and it will reach a height of eighteen or twenty feet in one short season of four months. Stop that growth upward by trimming the plant, and you are throwing its strength back into the fruits which will not only develop better, but be more numerous. So we get to tying tomatoes to stakes, which enables us to plant them two by two feet apart instead of three by three; and we cut off many of the useless vines and encourage production of more and better fruit. Here are the methods which, if applied, will double the returns from your tomato-patch:

On well-manured clay soil set out sturdy plants, six to eight inches tall, in rows two feet apart each way on Decoration Day. Three cultivations a week apart make them fill the space between the rows with healthy, thrifty vines. Then a strong, five-foot stake is driven to each plant and the number of vines on each plant is reduced to the three strongest. These are tied to the stakes with raffia. Some of our friends, with bigger patches, drive strong posts twenty feet apart, all along the rows and connect these posts with three to four lines of strong wires, placing them one and one half to two feet above each other. To these wires the vines are tied with soft twine.

From that time on the plants should be tied to the stakes or wires at least once a week until they reach the top of poles or the top wire. Then cut off the tops of vines without regret and throw the strength back into the plants and fruit. Go over the plants carefully each week and do two things: cut off any side-shoots that develop around the base of the plant and along the three main stalks, and prune out the many "suckers" that will develop at the leaf-joints all over the plants. Both side-shoots and suckers are developed at the expense of the fruit that is being set and developing.

Usually, by August 15th, the plants have "set" all the fruits that you may hope to see matured before frost in the Eastern and Middle Atlantic States. After that date watch two other points: cut off all blossoms that form, and give very shallow cultivation only. The ideal instrument to use in the tomato-patch late in the season is a narrow, stout rake. With it you are less apt to damage the many fine feeding roots, which a close examination will reveal slightly below the surface all around the base of plant. With the approach of cool nights it will pay to hasten the fruits to maturity by applying a liquid solution of nitrate of soda. Dissolve one pound in fifteen gallons of water. A quart of this solution poured at the base of each plant will work wonders.

More attention should be paid to marketing the crop. Our farmers know the importance of "grading" apples, pears and other

fruits. But tomatoes are brought to market "just as they grew." One or two ill-shaped or spotted specimens will spoil the looks of a bushel basket which, if properly picked over, would bring from fifteen to twenty cents more than ordinarily. Pick your crop several times a week, and market only fruits that have the firmness of apples. Pick the purple sorts when they are light pink, and pick scarlet tomatoes when they are light red. Here is a list of a few money-makers among tomatoes. These sorts are "Standards" that have made good in all sections of the country and that may be depended upon to yield profitable crops in normal season:

Bright-red sorts: Sparks' Earliana, earliest; Chalk's Early Jewel, second early; Stone, main crop; Coreless, late.

Purple sorts: June Pink, earliest; Beauty and Globe, second early; Trucker's Favorite, main crop; Ponderosa, largest late.

Dwarf sorts: Dwarf Champion, early purple; Dwarf Stone, bright red main crop; Dwarf Giant, late, large purple.

ADOLPH KRUEH.

Don't talk so much about what you are going to do, but do it; or some listener will quietly capture the cream while you are describing the skimmer.

Selecting Spraying Machinery

AT SEVERAL horticultural society meetings this season it was apparent that the growers present, as well as the salesmen representing the spray-machinery manufacturers, were not being offered certain opportunities for mutual profit, which might easily have been arranged.

To the grower one of the most helpful things about our horticultural society meetings is that he can there "get a line on" styles, prices, etc., not of one but of many machines, chemicals, etc. Many growers are, however, reluctant to lay themselves open to the attacks of the aggressive salesmen by asking very many questions or appearing personally much interested in any particular line of machinery or goods.

To the salesman a meeting of this kind offers a chance to display his wares to many growers in a few days of time. But the expense of so doing is generally considerable, and as a general thing he cannot get personally in touch with more than a part of those present.

If, however, it were so arranged that on a certain hour the representative of the A. Company (for instance) could have the platform for ten minutes to demonstrate by talk, or blackboard, or lantern slide, or small working model the superior advantages of his machine, to be followed in the next ten minutes by the representative of the B. Company, followed by the representative of the C. Company, etc., with the privilege to each at the end of having two minutes for refuting any misstatements made by any of his competitors regarding his machine, several results would be achieved:

- 1st. Every salesman would have a fair and equal chance to call his line to the attention of everyone present.
 - 2d. Every grower would have the opportunity of learning facts about the various machines, which he could not learn by personal questions without offering himself as a "prospect" to every salesman present.
 - 3d. Every salesman would probably derive benefit not only from his own talk or demonstration, but also from that of his competitors. The cumulative effect of advertising is well known. Continual reiteration with slight shifts in the agreement spell success in selling all lines of goods.
- In nearly every horticultural society meeting are a number of men who need sprayers but have no idea of buying. The arguments of the first salesman in such a discussion might not interest them, nor might the second, third or fourth succeed in creating any impression on them, yet the fifth salesman might say something to get their attention. They might discover the sprayer being discussed would profitably help out in the care of their orchards. Then, after the meeting, they might get a catalogue of number five and incidentally of numbers one, two, three and four, also. Some might buy of number five, but others might decide eventually for number one, or number two, or number three, or number four, even though salesman number five did first interest them.
- 4th. Every grower present would also be benefited, even if indirectly in some cases. From several trained salesmen, speaking one after the other and each keenly alert to hold the audience, facts regarding machinery and sprays and methods, of value to everyone, would surely be brought out.

Furthermore it is an axiom in commercial fruit-growing that every spray rig brought into a community helps every orchardist in that community; and the more spray rigs, the more prosperous the fruit-growing section. So that if by such an arrangement a few more machines could be introduced into the section than would otherwise be purchased there, the whole neighborhood would be the gainer.

NAT. T. FRAME.

Fighting Weeds in Spring Onions

A READER in Washington would like to grow early green onions by sowing seed in fall, but finds that the weed growth in the Pacific Coast region, owing to mild and equitable winter temperature and heavy rainfall, is too much for him. I am also having trouble with weeds in my beds of the Vaugirard and White Portugal onions started from seed at end of July or first of August. Some of these weeds keep green all winter just as the onions do, and in that excessively rich ground start into a tremendous growth very early in spring, often, completely hiding the onion-plants by the time we get ready to pull and use them. In part of the beds I have tried heavy mulching so as to smother the weeds between the rows. I may try spraying with a solution of iron sulphate. Yet the most promising way seems to be to use land that is free from weed-seeds, and compost that is in the same condition, or commercial fertilizers only.

Our friend's method of growing his home supply of green onions is the following: Digging a flat trench three or four inches deep and about a foot wide, then putting in two inches of manure, then a sprinkling of earth, then the seed, which is prepared a few days in advance by mixing it with moist earth, and when the white sprouts appear, sowing this in the trench and covering about an inch or so of fine earth on top. Thus the onion-seeds will get the start of the weeds. Our friend thinks that Red Weathersfield is a good variety for this purpose. It is true that it is a sturdy, strong growing sort, but I would not want it. The finest onions, and most hardy for wintering or early planting, are those already mentioned: the Vaugirard and the White Portugal, or Silverskin. They are mild, sweet, tender—in fact, delicious as we grow them.

T. GR.

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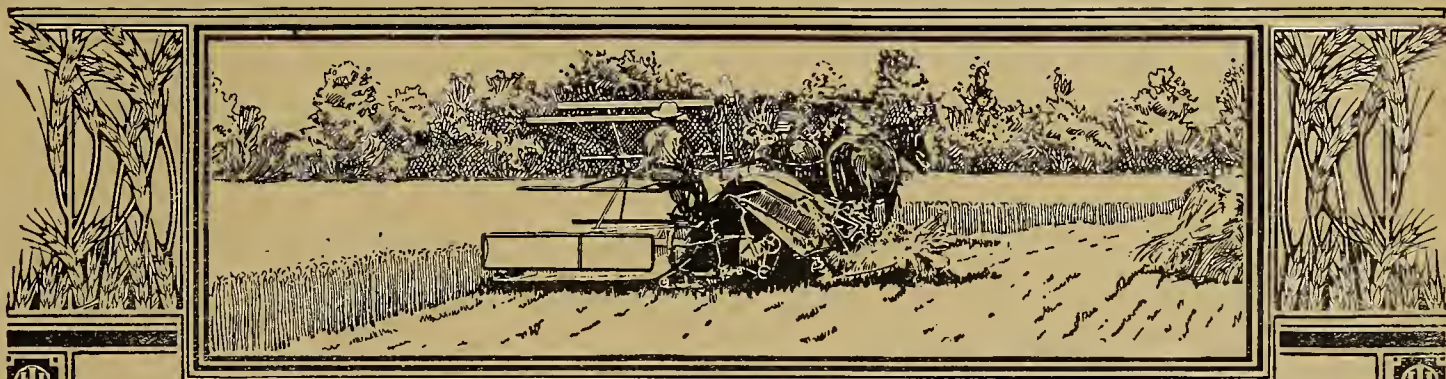
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Fortunately the farmer's reward for his work in the wheat fields is reasonably sure. Scientific preparation of the soil and seed bed, rotation of crops, selection of seed, and the use of high grade farm machines, have made a good crop almost an assured fact. For work of such importance the best machines that can be made are absolutely necessary. The harvest time is short; every minute is important; delay is intolerable and expensive. The choice of machines to harvest your growing crop is your most important duty. Make your investigation thorough and complete and you will decide that the harvesting machine for you is one of the world-famous I H C line:

Champion Deering

McCormick Milwaukee

Osborne Plano

One of these will meet your harvest conditions better than any other machine made, because they have been developed in just such fields as yours. Improvements have been added year by year until I H C machines are practically perfected. They cut equally well, short, tall, standing, down, or tangled grain. They have been simplified until anyone can handle them safely and efficiently.

Because the harvest time is short and delay expensive, and because accidents to farm machines can never be foreseen, we have been careful to provide a stock of interchangeable repair parts where you can lay your hands on them at once if they should ever be needed. In choosing your harvesting machine do not overlook this most important feature. A day's delay on ac-

count of a broken part may cost you more than the price of a new binder. When you buy an I H C machine you buy it with the assurance that any needed part is no further away than your dealer's place of business.

This service does away with all unnecessary delay in the field and assures you a full harvest garnered in good season. This fact in itself is a strong reason for the purchase of an I H C harvesting or haying machine or tool.

The experience of many farmers for many years points to one of these machines as the one best buy for a man whose profit lies in the successful harvesting of a small grain or hay crop. I H C machines have been tested thoroughly under every harvest field condition, and have made good in every test. You are not asked to make any experiments, the experimenting has all been done. You take no risk, I H C experience has provided against all risks. With an I H C machine you are safeguarded against all harvesting chances except those of the weather, and very largely against them.

Of next importance to the choice of a machine

is the buying of binder twine that will work without waste or trouble in that machine. Here again we have arranged to supply your needs with the best twine that can be made. Take your choice of seven brands—Champion, Deering, McCormick, Milwaukee, Osborne, Plano, or International, all made in four grades—Sisal, Standard, Manila, and Pure Manila.

See the I H C local dealer and discuss with him the machine and twine you should buy. It is his business to help you decide right. You can rely on what he tells you about I H C machines. If for any reason you prefer to have us do so we will send you catalogues. A post card will bring them.

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Fish Bite like hungry wolves any kind of weather if you use Magic-Fish-Lure. Best fish bait ever discovered. Keeps you busy pulling them out. Write to-day and get a box to help introduce it. Agents wanted. J. F. GREGORY, Dept. 72, St. Louis, Mo.

Headwork Shop

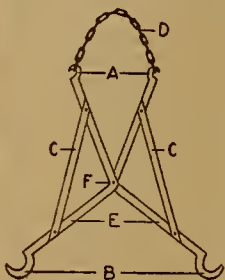
Keen Kinks and Pertinent Points

Ice and Wire Fences

OFTTIMES during winter there will come a short warm spell or rain that will fill ponds or low places with water. Before this has time to drain off, it may turn cold and freeze thick ice. If a wire fence happens to run through one of these low places, the ice will, of course, freeze about the wires. As the water goes down, the weight of the ice near the fence is suspended on the wires; and, if very thick, may be heavy enough to break the wires or tear them from the posts.

At such times a farmer should keep an eye on the fences, and if one is threatened, the ice should be broken from it so as to relieve the strain. P. C. GROSE.

Self-Spreading Hog-Hanger



ANYONE handy with tools can make one for you. I took two strips of old buggy tire thirty inches long. I drew out the ends and bent them (AA), then I drew out the other ends and made hooks (BB), then I bent the strip in the center to make the hooks A and B about two feet apart.

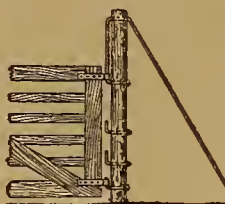
A light strip (C) eighteen inches long was secured and a hole put in each end. Then holes in E were made. CC are merely braces. A hole (F) in the center of E was made. All were bolted together. F was made just tight enough to allow movement. A piece of chain (D) was hooked into A. B was hooked into a hog's leg. The chain, fastened in some secure place, held all.

RAYMOND MAYHEW.

Clean Paint-Buckets

A QUICK way to clean paint-buckets and have them bright and new is desirable. When all paint is removed from the pail, take a few handfuls of yellow clay. With your hand or a cloth, as you wish, swipe the bottom and sides two or three times. Repeat this operation. In less than three minutes you have a bright, new, clean bucket. S. T. RAY.

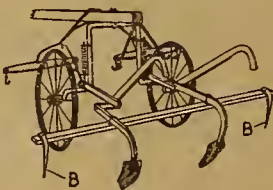
Up with the Gate



THOSE who open many gates during the winter know what a nuisance it is to dig out such places after every snow-storm. A good remedy for such cases is seen in the sketch above. The gate proper is made like any other one, but the hinge at the top of the post is made to slide on a rod as shown; the lower hinge has the choice of three positions. When there is snow on the ground, the gate is raised, placing this hinge on the middle or upper position. This allows the gate to swing free of the ground and the snow. J. P. VOLDEN.

This Marker Saves Time

IT IS customary in many sections to plow furrows with the cultivator, letting one shovel always follow the open furrow. This illustration shows a very simple appliance, which, if made to any riding or walking cultivator, will enable the owner to plow four straight furrows each round. Take a one-by-four-inch plank as long as four furrows are apart, have the blacksmith



bend two irons (B) and bore a hole in the flattened end. Have the irons so long that they will scratch about one inch deep in the soil when the shovels are lowered. Screw these irons to the plank at each end. Fasten the plank to the beams of the cultivator with wire, and you are ready to work. If no irons are to be had, wood pegs will do. In making the irons fast to the board, care must be taken to have them just right as far as distance apart is concerned. The hooks will mark alternately, up one row and down the other. One man does the work of two with two teams marking the old way. The illustration is here simplified to bring out the idea. The principle can be adapted to any cultivator. A. T. PFEIL.

Handy Links

FIG. 1 and Fig. 2 show two links which will come handy for those who use log chains. Link No. 1 is to be used in case of an accident. If a link breaks in a log chain, all you have to do is to put in this link. It will save a trip to the blacksmith shop or the tying of a knot in the chain.



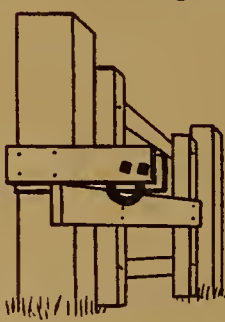
FIG. 1

Link No. 2 is used to hitch a team of horses in the center of a log chain when both ends are fastened. This will keep the clevis from slipping to one side or the other. The links are about five inches long. That, of course, depends on the size of the chain. F. W. BRIARD.



FIG. 2

Hog-Proof Latch



ONE of the best farm latches, I think, is made by nailing a one-by-four securely to your gate the height you want the latch. Then to the gate-post nail two one-by-fours together and to the post, leaving enough space between the pieces for a ring. Any ordinary ring will do. Bolt the ring between the pieces about four inches from the post, and two inches behind the ring put in another bolt. You now close the gate and the latch will push the ring up, letting it fall behind as the latch passes. The back bolt keeps the ring from rising and your gate is secure. Mr. Hog cannot throw this gate. WILL HAMILTON.

Barb Wire Marker

THE best device I have yet found for a "garden-marker" is a piece of old barb wire which has been in use until the coil is well taken out. After the ground is well rolled or dragged, the barb wire makes a plain mark by being pulled back and forth by a man at either end of the ground that is to be marked. This is quickly done, and does away with stakes, lines and unnecessary tramping back and forth over the ground. B. F. WAMPLER.

Cucumber-Bugs Leave

TAKE the upper head of a flour or sugar barrel, and bore a half-inch hole through every other stave half-way up. Set the barrel in a hole, leaving the top about ten inches above the level of the garden. Manure and put rich soil all around the barrel in which to sow the seed. Fill the barrel with fresh horse-stable manure well rammed down. As soon as this is done, sow the cucumber-seed and daily pour enough of any kind of water into the barrel in order that the liquid manure will flow out through the holes in the staves directly to the roots of the plants. If more plants are grown than needed, they can be transplanted. I have never been troubled by insects since I have followed the above plan. W. M. KING.



Allows Short Turns

THE pieces of strap iron always found on the double-tree of a lister or plow become bent and soon break as the result of one end of the long double-tree running into the ground. To overcome this difficulty, fasten the singletrees to the doubletree by a short chain, as shown in sketch. JESSE RAHN.

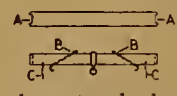


Kills the Bugs

EVERYONE is familiar with the little striped cucumber-bug. Many remedies have been tried and failed. I take ordinary fertilizer from the cow-stable, make a liquid of it and spread it on and among the vines. It not only destroys the pest, but promotes the growth of the vines. F. S. REED.

A Modern Whiffletree

A NUMBER of years ago while cultivating corn I noticed the big stalks would slide along on the tugs till they struck the iron on the end of the whiffletree, and broke. It was then I got the idea of bending the tug around the end of the whiffletree. I was surprised how easy the stalks would slip by without breaking down. That was in Michigan. In this Washington country no corn is grown, but hundreds of dollars' worth of fruit-trees



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are broken, some ruined, in the same way. To prevent this in my own orchard, I made another short whiffletree. This is my recipe: Take a good stout stick. Mine is a little wider than the tug. Cut a notch about half the depth of the thickness of the tug in each end (AA). Put on an iron band and ring for draft. Bore two holes for hooks (BB). Have hooks about five or six inches from the end. Then fasten on a good stout stringer strap (CC) to hold the tug in the notch. Be sure to slope the wood on the end up to the tug notch so when the tug strikes a tree and turns up a little the wood point don't hit the bark. J. C. MAYNARD.

A Cheap Fuel-Saver

COAL, at this writing, is eight dollars a ton in North Dakota. It takes five tons to run me through the winter without the soft-coal radiator which I figured out. With it only three tons are required. Sixteen dollars a winter is saved thereby.

Get a tinner to make a double T-joint of stove-pipe (Fig. 1), two elbows and two or four joints of common pipe (Fig. 2). Use a damper in the center of Fig. 1 and one above if desired. When center damper is open, the heat goes straight up. When closed, it goes through the radiator.

LOWELL S. WEBSTER.

Wagon-Tongue Spring

THIS plan is of a wagon-tongue spring I have used for three years. An old buggy spring is needed. Take it apart. Turn bow sides down. Stick B is 1 1/2 x 1 1/2 x 8 inches long. Fasten the springs on one end with bolts to fit the hole in the spring (C). A shows two rods 11 inches long with a hook on one end and a nut on the other. Bore two holes through stick B. Put the hooks up. Place one bolt 5 inches long through at C. Raise the tongue up high. Hook the two hooks on the tongue rod. Screw the one-half-inch nuts to the height of tongue desired.

C. M. DECK.

A Milking Aid

TAKE a three-fourths-inch rope about ten feet long (any old rope will do). Tie the ends together, and drop it over the cow's back just forward of the rumps. Let it hang down over the legs just above the gambrels. The cow will never try to switch her tail. When through milking, hang the rope on a nail ready for the next time. I have never seen a case where this is not a perfect cure. Let anyone who has a cow that switches her tail, try it.

CHAS. G. SIMONDS.

A Hand Pile-Driver

WHEN a lot of small posts are to be put up for a wire fence, try this method. Take a fairly heavy round block of hard wood, and fasten an iron band around one end to prevent it from splitting. Fasten two stout handles to the block with some log screws, as shown in sketch. To drive the post, first make a hole with an iron bar. Set the pointed end of the post in this hole. Then have a man at each handle. Raise the block over the post, and let it down quickly on top of the post. Two or three blows will drive the post.

ABNER B. SHAW.

Basket Berry-Picker

THE handy berry-picking device here explained is original, and has been used in preference to any other on my berry farm for the past twenty years.

Buy or procure from your grocer some baskets, such as early tomatoes are shipped in. Cut strings about two inches wide from muslin or some strong material, and tie into the openings on one side. These are to be tied around the waist of the picker, which leaves both hands free to pick. These baskets hold two quart berry-boxes, and they are just where you want them all the time. The baskets can be made to last longer by covering them with cloth. E. M. JENKINS.

An Easy Way

TO MOVE a large harrow through a gate that is not as wide as the harrow, take two two-by-fours about two feet longer than your harrow, stand them on their sides about three feet apart. Then take three two-by-fours and spike one about two feet from each end and one in the middle. Take a chain or wire, and fasten on one end. To load the harrow on the sled, leave the harrow flat. Let the teeth down as flat as you can by pushing the levers forward. Take the sections one at a time, and tip them forward till the lever rests on the ground. After you have done this, pull up your sled one foot from the harrow. Then take sections one at a time, and tip them back on sled. After this is done, take the eveners, and lay it on top of the harrow, and away you go. Use the same number of horses on the sled as on the harrow. The center clevis is all you need to change. Any boy can take a sixteen or eighteen foot harrow any place. The old way is to load it on a wagon and have the whole family to help you.

C. HENRY.

Buggy-Wheel Pulley

TAKE a buggy-wheel, and saw around the dotted lines, as shown in Fig. 1. A represents the hole drilled through the hub for a key. B is a block sawed in the shape shown in the diagram and placed on the end of the spoke. A hole is drilled through the block for a screw.

Use old rubber belting for the rim. Tack it on the blocks any width desired. The block you start to tack belting on must be some wider than the others so as to give room to make the two ends meet together.

Fig. 3 shows the blocks screwed on the spokes. Fig. 4 shows the belting tacked on complete. This pulley can be made any size desired and can be used in a great many ways on a farm where there is machinery used.

ROBERT REED.

A Handy Tool-Box

MAKE a box six or seven feet long, two feet wide and one foot deep. Take the axle of an old buggy, and bolt it in the center of the box. Then put the wheels on, and make a hook out of a half-inch iron rod. Bolt the hook to one end of the box that it may be hooked behind a wagon. Put the lid on hinges and a lock on the lid. You can then leave it anywhere on the farm.

JAS. G. ALLISON.

Bottle Fountain

MOST drinking-fountains are made of metal or earthenware, and you cannot see at a glance how near empty they are. I make mine from clear glass bottles, and thus can see when they need refilling. Take a bottle of the desired size, and with a small piece of iron tap one side of the neck from the inside out until you chip away enough glass to form a notch between one-fourth and one-half inch deep.

Now drive three stakes into the ground as shown in the illustration. Inside the stakes place a small dish. A cover to a glass fruit-jar will do. To set the fountain up, fill the bottle with fresh, clean water, place your hand or finger over the opening, then invert bottle and place between stakes with neck in dish.

V. L. DALLY.

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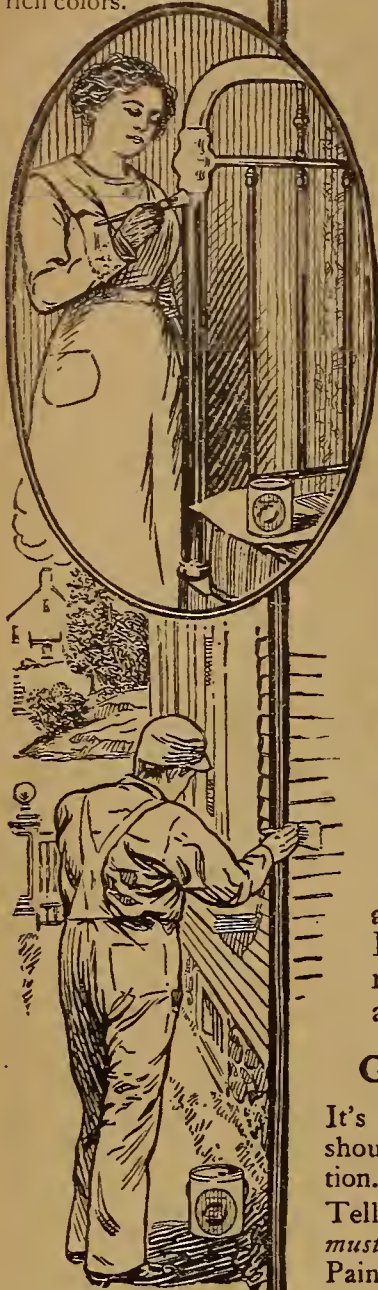
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Farm Notes

The House Wren

THE wren is one of the wild birds that favor the vicinity of man's dwelling, if nesting-sites can be found, in preference to the woods.

A box, five inches in size each way, with an inch hole near the top, if nailed on the house under the outer edge of a porch roof, will be preferred to one in a tree down in the garden; it may be but a few feet from the door, the members of the family may pass in and out and they will not be disturbed thereby, provided there are no cats to annoy them.

Do not look into their home; this worries Jenny, and she will scold for several days afterward whenever the guilty person approaches her nest.

And how Sir Christopher does sing! All day long he is bubbling over with music and making the air ring with his gushing songs; then, suddenly he will stop and fly away



after a meal of insects. There is method in his hunting; he will follow a row of vegetables, first on one side, then the other, until he finds a worm. It is surprising the quantity and variety of worms and insects that these birds will carry to their young in a day, and they keep it up for the two weeks that the young remain in the nest. Then, two and often three broods of from five to eight are reared in a season.

The day that the young leave their nest the box should be cleaned and sprayed or dusted, when the old ones will prepare it for another brood.

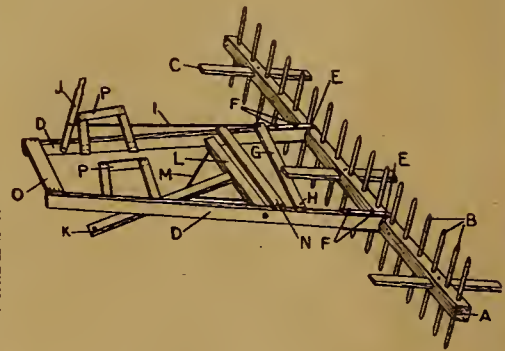
Wrens arrive about the first of May and the last brood leave early in September. Sixteen weeks of delightful wren music, with no trouble save that of putting up a nesting-box. Isn't it worth it, children? Try it once and you will always put up a wren-house. Think of the many injurious worms that have been destroyed by your work!

H. W. WEISGERBER.

A Self-Dump Stalk-Rake

THE stalk-rake herewith illustrated overcomes the disadvantage of having to dump the old-fashioned, cumbersome rake by hand, thus saving some of the hardest work on the farm.

The frame of the rake should be of native lumber if possible, to withstand the heavy strain and to add to the lasting qualities.



A, roller-beam, 14 feet long, 6 inches square, with two bolts in each end to prevent splitting.

B, rake-pins to fit in roller-beam, 2 inches in diameter and 4 1/2 feet long, toe-nailed to the beam to prevent loosening. These should be about 10 inches apart, beginning 4 inches from the ends of the beam, and should be slightly sharpened at each end. They ought to be made of hickory, but good tough oak or elm will do.

C, 2x4 timber, the same length as the above pins, with 3/4-inch bolts through the center. These, also, should be tough and well seasoned, as they help break the shock caused by the tripping and unloading of the stalks.

D D, main frame, 2x6 timbers, 12 feet in length, fastened to the roller by iron straps or bands (E E) made of wagon-tire or like material. These may be detached by slipping out the two bolts (F F) from the straps of iron, when the whole device can be easily loaded or put away in the implement-shed. The straps allow the 6x6 timber to revolve in a notch which is mortised clear around the timber. The front end of the frame should fit in between the standards, on the bolsters of the wagon, at a point 16 inches from the front end of the frame. The rear end of the frame should be about five feet wide.

G, 2x4 strip, one end being stationary, with a bolt (H) through it, which will admit

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of the other end moving, a 1/2-inch rod (I) extending from it to the trip-lever (J) in front.

K, 4x5 coupling-pole, for fastening the rake to the wagon.

L, 4x4 roller, into which the coupling-pole fits.

M, braces, made of wagon-tires or heavy strap-iron for strengthening the coupling-pole.

N, 2x4 brace, well spiked to the frame to prevent it from spreading.

O, 2x6 at front end for the same purpose.

P P, brackets for attaching a spring seat to the frame.

While this rake will require four horses to pull it, a lad ten years of age can operate it, not only efficiently, but with perfect safety, and without any hard work. Then so much greater an area of stalk-field can be raked with this device than with the hand-dump rake that one can hardly make a comparison between the two. The old-fashioned rake requires a stop to unload stalks, a heavy lift, a start to pull the rake over the dump of stalks, then another stop to let the rake down.

M. COVERDELL.

The Greater Art

By E. M. Rodebaugh

NOR with the brush and pigments everlasting.

On canvas permanent as very time; Nor with the point on metal smoothly finished.

Which shows each slightest line; Nor yet with pen on page so fair and perfect (A child may tear, the slightest flame destroy);

These do not bring to other child of nature The greatest joy.

But he who takes God's living, breathing creatures,

Studies their inclinations, their desires; Works with their offspring, breeding for his uses,

New dams and sires; He is the artist who breeds up a species,

God's own co-worker, doing man's best part;

His is the work deserving of our praises, His is the greater art.

Two ways to ruin a boy on the farm: let him live without any work, or make him work all the time.

When to Plow

[CONTINUED FROM PAGE 5]

The Everglades State needs special attention, for the soils are peculiar. John M. Scott, Department of Animal Industry, Florida Experiment Station, says:

Late fall or early winter plowing is very important in Florida for two or three reasons. First, our winter season is very likely to be dry. It is, therefore, important to have our plowing done early enough in the fall to retain as much moisture as possible. It is also important to do this plowing while the ground has sufficient moisture to hasten the decay of all vegetable matter that may be plowed under. If the plowing is delayed until late winter or early spring, just before the planting season begins, the following crop is very likely to suffer from lack of moisture, due to the fact that the small amount of moisture in the soil when plowed will be entirely taken up by the vegetable matter plowed under. Then, too, the vegetable matter will not have time to decay and be of any value to the growing crop.

After the plowing is done, it is very important that the harrow be kept busy, so as to form a good earth mulch and in this way retain as much of the soil moisture as possible.

The most of our soils are quite sandy and are benefited by the addition of as much vegetable matter as we can get. It is, therefore, very important that cover crops or "volunteer" crops be utilized as soil-improvers, plowing them under in the fall and early winter.

We also advocate deep plowing. That is, from year to year the land should be plowed a little deeper than the previous year, and in this way increase the soil depth.

H. J. Patterson, Director, Maryland Experiment Station, gives the following results of deep and shallow and fall and spring plowing for corn:

EAR CORN

Plots	Yield per acre in 1910		Yield per acre in 1911	
	Corn bu. shelled	Fodder lbs.	Corn bu. shelled	Fodder lbs.
Plot 1, plowed 13 in. deep, fall of 1909	58.2	2,745	41.3	4,200
Plot 2, plowed 7 in. deep, fall of 1909	52.7	2,552	37.7	3,500
Plot 3, plowed 13 in. deep, spring 1910	42.2	2,211	44.6	3,605
Plot 4, plowed 7 in. deep, spring 1910	36.7	2,168	28.6	3,140

For 1911 crop the land was plowed the spring of 1911 with the ordinary two-horse plow to the depth of six or seven inches.

SILAGE CORN

4 acres, plowed 12 in. deep in Nov., 1910—yield in August 13,593 lbs. per A.

4 acres, plowed 7 in. deep in Nov., 1910—yield in August 10,179 lbs. per A.



This corn was planted the first of May and had but one rain from time it was planted until it was harvested. The season was exceptionally dry and hot, which accounts for the low yield.

Those results tell their own story.

William P. Brooks, Director, Massachusetts Experiment Station, gives the common New England ideas and practices in saying:

There are certain crops, among which the onion is one of the most important in this section, which do better when the land is fall-plowed than when it is plowed in the spring. There are certain other crops which will do equally well when the land is plowed in the fall, provided it is thoroughly worked with disk-harrow in the spring. For all such crops fall plowing should be the rule unless conditions are such that it is attended with important disadvantages.

The advantages of fall and spring plowing may be briefly summarized as follows:

1. Heavy soils are much improved in texture by plowing in the fall.
2. Certain crops, among which the onion is one of our most important, do better when land is plowed in the fall.
3. Certain insects may be in part destroyed.

But, on the other hand, land should not be plowed in the fall without carefully considering whether if this be done injurious consequences of any kind would follow, of which one of the most important is erosion under the action of heavy winter or spring rains and melting snow.

In closing, the remarks of J. L. Hills, Director, Vermont Experiment Station, are interesting as a brief summary:

Fall plowing in these latitudes is apt to be the better procedure on heavier soils. In the lower latitudes it is doubtless a more ideal condition to occupy such soil with a crop throughout the late fall, winter and early spring, in order that fall and spring rains and thawing winter snows may be the better held and that there may be less soluble plant-food

lost. This consideration holds here, but not to the same degree.

It is probably true that these last statements, in general, apply to all States and all soils. What has been said merely proves the platitude of the platform speaker to be true: "Study your conditions."

If you have reason to believe that any department of your farm operations is losing you money, be brave enough to get right after it. If it cannot be righted up and placed on a profitable basis, cut it out and bear on somewhere else a little harder to make up.

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GARDENING

By T. GREINER

Onion Observations

A READER in Marshfield, Wisconsin, complains that his Prizetaker and Ailsa Craig onions (which he found to be nearly identical) made mostly big necks instead of good salable bulbs, and asks what variety or varieties I would suggest to plant in that locality for winter market. It is not the general nature of the onions named to run to scallions, although I sometimes have a small percentage of mine grow big necks. The trouble was most likely in the season, which was very wet, combined with a plentiful supply of humus and possibly an excess of nitrogen in the soil. Careless seed-growing will also increase the tendency to make scallions. In onion-growing we have to avoid an excess of water, especially in strong soils. If the land is well provided with humus and nitrogen, the application of potash and phosphoric acid in liberal doses is liable to be of assistance in making good bulbs. Among the best varieties for winter market we have Round Yellow Danvers and Southport Yellow Globe, the latter now taking the lead in many of our onion sections. They are excellent keepers. I am growing Prizetaker, Giant Gibraltar and Ailsa Craig, only in the new fashion of starting seedlings under glass, and transplanting them later to the open field. Any of our large seed-houses will furnish you good seed.

Grape Pruning and Support

A grape-vine can stand a good deal of abuse and yet bear some fruit. But we ought always wait until the sap is about ready to run before pruning the vines. This should be done while the wood is perfectly

dormant, so that the wounds can dry over, and avoid excessive bleeding. Vigorous-growing varieties must be pruned closer than weak growers. The inexperienced grower usually leaves far too much wood on the vine. The simplest way of training is the so-called Kniffin system. Set strong posts, well braced, and string two wires, one of them two to three feet, the other five feet, from the ground. Train two arms, in opposite directions, on each wire. This answers the questions of a Missouri reader.

Privet for Hedges

An Ohio reader inquires about privet for hedges. It would not be easy to find a finer hedge-plant than California privet, although the top growth sometimes suffers some in localities with very severe winters. The younger and smaller plants, they also being cheaper, will do very well for starting a hedge. To make a nice and close one, they may be set a foot apart in the row, in two parallel rows, eight to twelve inches apart. California privet is easily propagated from cuttings, like currants or gooseberries. The cuttings are usually made in the fall (November), tied in bundles and buried top side down over winter, then planted in nursery rows in spring.

Lima Beans in the East

A Maryland reader says that they have in that State the climate and the soil to grow Limas in perfection. Then why not grow them? They are usually a paying crop. The first essential for success is a warm and very rich soil, well supplied with humus. I use mostly the larger pole varieties. All of these do well here if rightly treated. In the Southern States the small Sieva may do better. I cannot do much with the bush Limas here, unless the Henderson Sieva. It is each grower's place to find out which of these forms is best suited to his local conditions. An inquiry at a neighboring gardener's may tell the story. Get together, occasionally, you people interested in these matters. In our local markets, Limas are most in demand green-shelled. We have no call for ripe (dry) Lima beans. Sometimes we sell them to private consumers in the pod. The shelled usually bring from fifteen to twenty cents a quart, retail. Never plant until the ground has become quite warm in spring. It is also useless to plant on poor or hard soil. The soil should be abundantly supplied with humus and with plant-foods. If it is the least bit acid, use lime or wood-ashes.

Tea Roses in Spring

Hybrid tea and tea roses need careful protection during winter in the Northern States. They are only half hardy. If left outdoors, they need high banking and covering with evergreen boughs or other coarse litter, or they may be wrapped in excelsior or marsh-hay. In the spring, this covering is to be carefully removed, and the beds or ground around the plants just as carefully dug over. Little, if any, pruning will be required. If roses are to be potted, nothing much better could be found for potting-soil than a compost made from sods cut from an old pasture well rotted and broken down, perhaps with the addition of a little old sheep-manure. This in reply to questions asked by a Massachusetts lady reader.

For the Plum-Curculio

The curculio seldom does much damage in big plum-orchards. It just may do some required thinning of the fruit. It is the single tree or the few trees on the home grounds that suffer. Plant your trees in the chicken-yard. That will help, especially if during curculio-time you occasionally "jar" the tree or trees when the chickens are around to pick up the insects as fast as they fall to the ground. Do this in the cool of the morning. Hold a little block of wood to the body of tree, or to a big limb, and strike a few sharp blows against it with a hammer or mallet.

Lime for Gardens

Should the vegetable garden be limed? If so, how and when? asks a Virginia reader. Yes, occasionally; always if soil is sour. Almost all our vegetables like an alkaline soil. Potatoes will grow and be free from scab in soil that is a little acid; but they hardly ever give as big a yield as they do in alkaline soil. Strawberries, blackberries, most raspberries, blueberries, etc., can stand some soil acidity, perhaps prefer it. For the general run of vegetables lime is good. Apply about a ton of stone lime, slaked to a powder, per acre, or double that quantity of air-slaked (carbonate of) lime, or of powdered raw limestone. The best time to apply it is in the fall, and the lime should be well worked into the soil.

A farm with plenty of hickory, walnut, butternut, chestnut and sugar-maple trees has always a source of future income.

The new orchard should be situated on some north-side slope, so the buds will not start too early in the spring and be frozen.

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Crops and Soils

A Neglected Fodder Crop

MANY dairymen and feeders of sheep and hogs, of the more northerly States, are neglecting a valuable fodder crop—the Canada field-pea—to take the place of clover or alfalfa when these staple legumes fail. Carefully cured at just the right stage of maturity, Canada peas grown with oats furnishes hay that can hardly be improved. It is highly palatable and is so rich in protein that considerable wheat, bran, middlings and similar concentrates can be saved by its use.

If the peas are sown without the oats and allowed to ripen, the grain ranks well with linseed and cotton-seed meal as a balancer of corn and barley for feeding lambs, hogs and dairy cows. Pound for pound, the grain of Canada field-peas contains twice as much protein as corn, wheat or barley, and over three times as much as Kafir or milo grain.

Among the feeds commonly grown in this country only soy-bean grain and linseed and cotton-seed in meal form carry a heavier protein content than do Canada field-peas.

Dairymen and feeders of calves and young cattle generally favor sowing a mixture of three or four pecks of Canada peas and five or six pecks of clean, heavy oats per acre, drilled to a depth of two inches in a well-prepared seed-bed. Sheep and hog feeders drill about six pecks of the peas per acre and harvest from twenty to thirty-five bushels of peas per acre. The Rocky Mountain States, Washington and favorable sections of the Northern States farther east occasionally harvest higher yields. The thrashed straw, carefully cured, ranks in feeding value about with timothy-hay.

The pea and oats mixture is cut when the peas are just beginning to form in the pods and the oats in the milk stage. The cutting and curing is very similar to clover or alfalfa. The feeding value of well-cured oat and pea hay is nearly the same as good red-clover hay, but on account of the crude protein content of the field-pea being of the same chemical composition as the casein of milk, the effects produced by this feed is more beneficial than clover-hay, particularly for calves, lambs and cows and brood-mares giving milk. Cured crops of pea and oat hay harvested by several experiment stations and by farmers under average farm conditions show that from 2,500 to 5,000 pounds of this excellent fodder can be produced per acre.

Grown for a soiling crop as a means of supplementing scant pastures in time of drought, or to assist in carrying a heavy stock on limited pasturage, peas and oats can fill an important place in a way that many supplementary crops fail to do on account of the early seeding possible with this mixture.

The writer has grown and fed this field-pea and oat mixture with much satisfaction both as hay and as green feed to cows in milk and to horses, colts and calves.

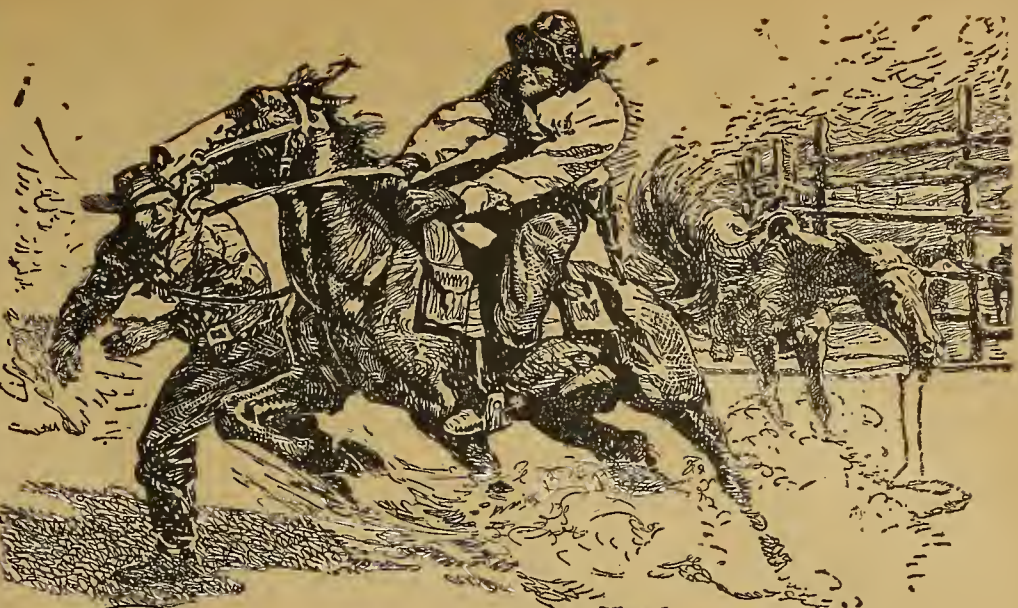
The initial cost of field-pea seed is a serious hindrance to more general growing of this crop, but the expenditure is justified in many cases, particularly when it is considered that seed can be saved for succeeding years by allowing enough of the crop to ripen each year for seed for the following year.

The culture requirements of field-peas grown with oats or alone are easily met by any thorough-going farmer. Deep fall plowing, early and adequate spring tillage and seeding at the earliest possible date are prime essentials of a heavy yield. The soil should contain sufficient fertility to grow a heavy crop of clover or wheat and must not be acid nor water-logged.

If peas have not been grown recently on the land, it will pay to inoculate the soil with two hundred to three hundred pounds of dirt per acre taken from a field on which peas were grown the previous season, where root nodules were known to have developed. Harrow immediately after broadcasting the dirt. Such inoculation not only increases the yield of the first crop of peas, but insures greater nitrogen enrichment of the land through development of root nodules on the roots of the peas the first year grown.

There are several varieties of Canada field-peas that may be counted on to give good results—namely, Golden Vine and Prussian Blue are good medium late varieties and Mackay a late variety. When purchased from seedsmen, the chances are that the varieties named will be more or less mixed. Quotations by reliable seed-houses now range from \$2 to \$2.50 per bushel. By combining orders farmers in any neighborhood can generally get some reduction in price below regular quotations.

The Canada field-pea can be made to do for northern sections and areas in high altitudes what the cow-pea and soy-bean and velvet bean are for the most resourceful farmers in southern and middle latitudes, particularly in the way of insuring a supplementary fodder crop of high protein feeding value to tide over short pastures or drought-reduced hay harvests. B. F. W. THORPE.



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MOVEMENT: Regular 16 size. Lantern pinion (smallest made). American lever escapement, polished spring. Weight, complete, with case, 3 ounces. Quick train, 240 beats to the minute. Short wind, runs 30 to 36 hours with one winding.

Every watch is fully guaranteed by the manufacturers and by FARM AND FIRESIDE.

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How to Get the Watch

You can get this dandy watch and fob very easily. Write a postal-card to the Watch Man. Tell him you want to get this watch and fob without spending one penny. He will be glad to help you get your watch. This is a chance you must not overlook.

Thousands of delighted boys have secured their watches this way with the help of the Watch Man. You can do it, too. Any boy that really wants one can easily get this fine watch. But how will the Watch Man know about you if you don't tell him?

Write a Postal To-Day to THE WATCH MAN

FARM AND FIRESIDE, Springfield, Ohio

Here is Your Chance to Win a Pony



This is "Prince"

How to Win "Prince"

Good news for FARM AND FIRESIDE Boys and Girls! Don't you want to get "Prince," the pony shown in these pictures? Well, you can get him and his handsome buggy and harness, too, without spending a single penny of your own money. Wouldn't you love to have "Prince" for your very own? What fun it will be to go driving every day this summer! How you would enjoy taking all your boy and girl friends for a drive. He is just thirty-nine inches high and weighs 325 pounds. "Prince" is truly one of the finest Shetland Ponies ever raised in America. He is a chestnut, with the fluffiest mane and tail, and he can travel almost as fast as a horse. "Prince" is also a splendid playfellow. He is as gentle and kind as can be. "Prince" will be given away on June 15th by FARM AND FIRESIDE, the oldest and best farm paper published. All you have to do to win "Prince" or one of the

other elegant prizes is to ask a few of your friends or relatives to subscribe for FARM AND FIRESIDE. Altogether FARM AND FIRESIDE offers

A Prize for Every Contestant

You simply can't lose. You are guaranteed a prize sure if you just get started, and you won't have to invest a single cent of your own money. FARM AND FIRESIDE is one of the oldest farm papers and has a reputation for honesty, extending over thirty-five years, so you are absolutely safe in accepting this promise.

Send Your Name To-day

Write your name and address on a letter or postal card, and send it to the Pony Man; he will tell you by return mail just how to win "Prince." He will send you a big free package containing a lot of pictures of "Prince" and the other ponies, together with everything necessary to start right in and win. The Pony Man also will send you pictures and letters from boys and girls who have won Ponies and other prizes in previous FARM AND FIRESIDE Contests. Remember, all these things won't cost you a penny and you will not be under obligations to do a single thing.

Dear Pony Man:

Please write and tell me how to win "Prince." Also please send me the free pony package and the pictures of "Prince" and the other ponies. Then write your name and address very clearly. Next, address your letter or postal to Pony Man, FARM AND FIRESIDE, Springfield, Ohio, and put it in the mail to-day. Don't delay.

Start Now

If you want to make sure of a prize right away and to become an Enrolled Contestant, don't wait until you get your package from the Pony Man, but start right out and get ten friends each to give you 25 cents for an eight-month trial subscription to FARM AND FIRESIDE. Keep 50 cents for yourself as a cash commission, and send \$2.00 to the Pony Man; then you will be an Enrolled Contestant and a Prize-Winner sure. Start To-day.



"Prince" loves girls and boys

Three Pony Outfits
Five Hundred Grand Prizes
\$3,000.00 in Cash

Every year FARM AND FIRESIDE holds a Pony Contest. Hundreds of Boys and Girls have won Ponies and other handsome prizes, from this popular paper. Every energetic Boy or Girl ought to take advantage of this liberal contest. The Pony Man guarantees that you will get the fairest kind of treatment, and you have a splendid chance to win one of the handsome prizes. The prizes also include a Gold Watch, Victor Talking-Machine, Bicycle, Shotgun, Sewing-Machine, Camera, in fact about everything any boy or girl could wish for. You are sure to win one of the prizes if you just start.

THE PONY MAN, FARM AND FIRESIDE, Springfield, Ohio



The FARMERS' LOBBY

Politics and Oleomargarine

By Judson C. Welliver

THERE may be plenty of nourishment in oleomargarine, but please accept my testimony that there's no happiness in it. Not for a congressman confronted, as they all are right now, with the solemn question of whether they're going to support or oppose legislation to give oleo a better chance in the markets.

You can't run old Boss Brindle against a packing-house without getting up something of a scrap. Brindle may be a trifle to the shadows when it comes to campaign funds, and there's no doubt about the packing-houses having plenty of money to pay postage bills and other expenses of accelerating public opinion. But Brindle, nonetheless, is quite a finisher, and the popular uprising for her is liable to make the campaign predictions of the oleo managers look as funny as will some of the oracular predictions now being put forth about the Presidential situation, by some of the amateur political Warwicks who are so thick in this town of Washington on the banks of the Potomac.

Presidential Booms are Thick

WHICH makes me think that if I hadn't decided to write about oleomargarine, I should be tempted to write about this Warwick business. The king-makers are so thick their arms and legs can be discovered during business hours sticking out of windows of half the office-buildings in the burg. Presidential booms are so thick that no man is safe on the streets, lest he be captured unawares and have one forced on him.

In fact, I heard a story about this Warwick stuff that was so good that it's going to be interpolated here.

Colonel John Hannan is one of our most experienced Warwicks. He is the secretary to Senator La Follette, and has been in politics so long that they do say that when he first began to talk he said "politics" where the normal baby says "papa," and "mimeograph" where the natural infant would say "mama."

Anyhow, John has been Warwick for a long spell, and always getting away with it. He nominated La Follette for governor, and elected him; three times, in fact. Then he decided that his man would be a bully senator, and accordingly elected him to that job. He conceived a grouch against some aspects of our government, and arranged to have his senator fight them. Latterly, he has seen clearly that La Follette is the right man to be president, and accordingly has been engaged in nominating him. He has worked very hard and earnestly.

In the processes of getting La Follette nominated, Hannan went out to Chicago the other day. He told me about it thus:

"I stopped at the La Salle hotel; went to bed late at night, and rose early. There was an awful riot out in the corridor, as if one crowd of people were pulling down the house and another was putting it up again. I got into my duds and looked out. Darned if they weren't putting up a lot of banners and pictures right next door to me, and when I investigated, I learned that the Cook County Roosevelt headquarters was being opened. I went down-stairs and said to the clerk:

"Old man, I've always stopped at your house, and it's usually been pretty decent. But you know I don't like these politicians, and I can't get along with 'em. Now, they're just opening a political headquarters for somebody named Roosevelt, right next room to mine; can't you move me away?"

The Hotel Clerk Would do His Best for Me

THE clerk was nice about it and called a bellboy. He had me transferred two floors up, and it seemed all right. I went out on some business, and coming back in the afternoon, found another bunch of carpenters and decorators and window-trimmers working on both sides of my room. It developed that they were opening a Taft headquarters, and I realized that there was no chance for me on that corridor. So I went back to the clerk again.

"I'm an amiable, long-suffering person," I said to him, "but the fact is that I just can't get along with these politicians. They get on my nerves. The Roosevelt headquarters chased me out of 413 this morning, and now the Taft outfit has started a right and left flank movement, simultaneously, to force me out of 617."

"The clerk scratched his head and moved me down one floor.

"Early in the morning I was wakened, and the same old hammering and ripping was on. I looked out, and found over the next door to mine a banner: COOK COUNTY ROOSEVELT CLUB.

"When I got to the clerk, I was in a bad frame of mind; but he saw me first and beat me to it.

"'Awfully sorry,' he began, 'but those chaps put it over on me. They had a contract for that room that I had forgotten.'

"'Well,' I said, 'can't you put me, say, two doors away from a headquarters? I've told you about how I hate politics and politicians. Isn't there just one corridor somewhere in this house where I could be planted with reasonable assurance that they wouldn't catch me?'"

"The clerk looked at me pityingly and replied: "'Friend, do you know that there are fifty-one headquarters of various kinds in this hotel right now? Fifty-one—count 'em—fifty-one; and I wouldn't dare guess how many contracts might have been made for additional ones since I was last on watch.'"

And that's the way it is with Washington. Colonel Hannan was talking about Chicago; but it's the same sort of a story in New York and Washington. Washington is so full of 'em that there have been stories of the banks having difficulty getting hold of enough small denominations of money to pay off the rolls.

But this being an oleomargarine piece, it would be inappropriate to go farther into consideration of the means for lubricating the political wheels. We are going to consider the lubrication of our daily bread and the wherewithal to achieve it.

Oleo is Being Recognized

THERE isn't any doubt that the high prices of butter of late have had to do with some revulsion of feeling in favor of oleo. The fight is on, and there has never been a time when it was so apparent as right now that the final settlement of the issue will be made on lines distinctly broader than those that have marked the limits of former considerations. There are unquestionably some new elements in the situation, and the cost-of-living question is one of the most important, probably quite the most important, of these. There are a lot of people in this country who insist on lubricating their staff for the descent of the esophagus, and they haven't the price to buy butter. They have been assiduously plied with the idea that oleomargarine would be cheaper; perhaps would be the means of making butter cheaper. The dairy people will make a great mistake if they refuse to recognize that the ancient prejudice against oleo as a substitute, a fraud, a delusion and a snare is weakening rapidly. In the first place, oleomargarine is better, on the average, than it used to be. It is not necessary to have it colored, or to palm it off as butter, in order to sell a vast amount of it. True, there is a great amount sold fraudulently as butter, and the frauds ought to be stopped. But there is a good deal more sold frankly as oleomargarine, and it is a serious question whether the time has not come when the legitimacy of the business will have to be recognized.

The present bill by Representative Lever of South Carolina proposes to stop frauds and substitutions, and put oleo in a position that will compel it to seek its place in the markets honestly, on its merits. As the law stands now, a dealer can buy a tub of oleo that has not been colored, and another tub that has been colored, and on which the tax has been paid. The present tax is one-fourth cent per pound on the uncolored and ten cents on the colored article. Note now the procedure. Mr. Dealer has the two tubs standing side by side. He sells a few pounds out of the tub of colored oleo—sells it as butter, as likely as not. Then he refills that tub from the other tub, first coloring with an ordinary butter-color the uncolored stuff.

A revenue sharp comes along, suspicious that this substitution is going on. The dealer is arrested. In court it is found impossible to prove whether the particular sale on which a complaint is based was of the originally colored stuff on which the tax of ten cents had been paid, or of the originally uncolored stuff that Mr. Dealer himself tinted up to meet the demands of the market. Actual experience in conducting prosecutions is that the courts and juries expect this particular point to be settled beyond uncertainty; it must be proved clearly that the particular pound sold in the particular instance under complaint was of the substituted stuff. That usually just can't be proved to a certainty.

Folks don't commonly commit crime without first convincing themselves, by some cheering sophistry, that it isn't really crime; or if it is, that it ought not to be; the law's wrong. Mr. Dealer convinces himself on that point, and begins to mix the one-fourth-cent with the ten-cent stuff. It sells just as well; is, in fact, probably just as good.

Then human nature gets in another of its funny strangle holds on the moral processes. Mr. Dealer finds it easy to this point, and he wonders why he should give the consumer the benefit of all that nine and three-fourths cents' difference in price.

"I'm taking the chances of violating this fool law," he reasons with himself. "I can't take 'em for nothing. So I'll just soak the consumer for the same price, or about the same price, that he would have to pay if he were getting the ten-cent tax article. He's still getting his 'butter' cheaper than if it came from a creamery, and it's just as good for him." And so the price of the practically untaxed substitute goes up to about the level it would reach if the tax had been paid.

The Present Law is Bad

THERE'S the working of the present law, in many cases. Let's see what it accomplishes. It makes a law-breaker of the dealer, it doesn't protect the real butter, it gives the consumer bogus butter without letting him know it isn't genuine and it denies him even the privilege of the economy it ought to insure.

So the new Lever bill proposes that oleomargarine must be put up in packages of one to five pounds, every package sealed and an internal revenue so affixed that it must be broken in the process of opening the package, just as the stamp is arranged on a cigar-box. This seal positively must not be broken by anybody except the consuming buyer. On the package must be placed, by indenting the letters in such manner that they will remain plain, wording to indicate clearly that the content is oleomargarine. With these protective provisions, Mr. Lever would let the makers use color in oleo and would let them off on the tax. This might be amended to impose a small tax, but in any case it would be much less than the present ten-cent impost. Advocates of the Lever bill insist that it would make the business respectable, let the user know what he was getting and give the poor people, who want oleo and want it as cheap as possible, a chance to save something on it. Under the Lever measure, the breaking of the revenue seal while in the hands of a dealer would be prima facie evidence of fraud; it wouldn't convict him, but he would have the burden of evidence to prove he didn't intend to bunco somebody.

Representative Haugen of Iowa has a bill to prohibit coloring oleo in any circumstances; whether the maker or the dealer does it, he would make it criminal and inflict severe penalties. There is just one difficulty with that proposition that puts it out of consideration: it couldn't pass Congress. There are too many people who want the privilege of cheaper gastronomic lubricant.

Why Not Have Pink Butter?

THERE is another class of people who want the "tintometer test" put into the law: they would require that oleo be painted some hideous and unusual color so that there could be no mistake about it; yellow would be taboo, but cerise, or royal purple, or Alice blue, or Helen pink, or elephant's breath would seem all right to these folks. Anything to make it perfectly sure it wasn't butter. Sky-blue butter would be rather a novelty, and might lend itself to the color-schemes of some of the ladies' luncheons; but probably such a sharp differentiation would go hard with general consumers. This scheme of requiring a distinctive and entirely different color is a good deal like the Haugen plan: its fatal defect is that nobody would vote for it; that is, not enough people to pass it.

These are some of the aspects of this question which are worth thinking about, especially on the part of farmers who have a keen concern as producers. There's no denying that some of the things about the oleomargarine propaganda injure delicate sensibilities.

But the fact remains that something is going to be done about it, and the present law is going to be changed before long. The farmers will not get everything their own way in the new one.

I have tried to suggest various views, with the design of enabling everybody concerned to see all sides; and I have some twenty grade Jerseys myself.

The Unassignable Treasure

A Story of the California Foothills

By Ray McIntyre King



HE hobo limped wearily up the interminable reddish slopes of Yankee Hill. His dusty blanket roll had been strapped across his drooping shoulders, when, at day-break in the California Sierras, he had shuffled out of his night lair in a manzanita tangle. It was now mid-afternoon, and the man was consumed with a fever and racked with a pneumonic cough.

He said in his heart as he toiled up the grade that his time had now come. Why strive to evade or elude death? He said it without fear or hope. Once he had watched a fellow traveler on the brake-beams slowly burn until the charred thing fell to the track. Once he had seen a boulder come bounding down a mountain-side and crush the laborer at his side. In his thirty years as a tramp workman on the highways and enterprises of the West he had seen many a man meet a tragic and violent death—had seen without a qualm of personal fear, for his philosophy was the philosophy of the hobo: fatalism!

And now he was convinced that his time had come. Why not creep under the nearest pine and die like a dog in the rank ferns? But, no, he could not die alone. He must find a cabin, if cabin there be, up those stiff, interminable grades. In his extremity he had strong within him that other belief of the hobo: that organized society would care for him. Nor was his confidence in Providence and humanity misplaced.

At the very next turn in the grade, he came to a little cabin in a clearing. A sunbonneted woman was hoeing in a slanting garden patch. Above her, on the up-tilting landscape, a man was mending a fence about an Angora-goat pasture. He looked ever longingly valleyward over the woman's head, over the pine tops, to a blue hole in the greenvistas; looked longingly in distorted fancy through that blue hole in the pines, to luring towns and cursed town things far below. Then he would see the sunbonneted woman, and hastily, shamefully, he would abjure the blue hole with its haunting, siren visions. That represented his temptation; the woman, his salvation.

The dying hobo stumbled up to their gate and thankfully did all he had strength and sense enough left to do—collapsed.

When he awoke days later, he felt the unaccustomed springiness of a bed of civilization beneath him. The woman was bathing his hands and face. He knew it must be the woman by the deftness and gentleness of her touch, although he had not strength enough to open his eyes to make sure. Evidently he was still alive. The seven devils in his chest seemed very much alive. Oh, yes, he was about to die. He remembered vividly. He remembered without fear or hope. Who would fight off death? Not this hobo.

But in spite of passivity and acquiescence, he did not seem to die. Instead, he thought, thought, thought, connectedly. He fancied it must be the clarity of vision that precedes final dissolution.

After hours, days, of thinking and dozing, at last he opened his heavy, rheumy lids and looked straight into the woman's kind, honest eyes. He made a fumbling movement toward his breast. He had missed the weight of something he had through months of wearing grown accustomed not to feel.

At first the woman asked if he complained of his poultices and plasters, but when he still shook his head weakly, she comprehended.

"Oh, the little bundle you wore!"

She slipped her hand under his pillow and produced a greasy, knotted wad of red handkerchief. He saw the knots had not been untied. Of course not—he knew she was a lady.

"Yours," he whispered. "Bury me and you can have the rest."

"Oh, dear, no," and the woman laughed cheerily. "You are going to live to spend your money yourself. I don't run any cemeteries up here on Yankee Hill. Why, man, you are going to feel fine as a fiddle in a few days."

Her cheerfulness made him childishly angry. What right had she to interfere with the inexorable decrees of his fate? That was the woman of her! For woman in the abstract Tom Springer, hobo, had a profound contempt. The more he thought about her interference with his fate, the angrier he became. For the first time in his life he had had a premonition that he was about to die, that his time was come, and he had always had absolute faith in his premonitions.

This woman sought to prove his most infallible to be foolishly fallible. He would die in spite of her. He would justify himself to himself. He would begin by making due funeral arrangements. Also, it occurred to him suddenly, this would be a good chance to get rid of his embarrassing treasure.

"Untie it," he commanded hoarsely.

The woman obeyed. Into her blue calico lap fell the contents of the knotted handkerchief—rings, brooches, earrings, a precious handful of baubles! The jewels flashed with that unmistakable brilliance of genuine gems. The surprised woman gloated over the treasure a moment, then she raised questioning eyes. She scented a crime.

"Where, and how—" she demanded.

"No murder, no robbery," retorted the sick man petulantly. "Do you think I'd lift a finger for such trash?"

"But how—" insisted the woman.

"It was this way," he explained, brightening at the prospect of telling his story. "I was snoozin' alongside the track in, say, Colorado, when a special thunders past me. I glimpsed a Pullman window wide open and a woman in a pink silk kermony and a bushel o' false hair. She was a-tossin' a glass o' water out. I hears something a-tinklin' down on the gravel close by me where the water hit, and thinks I, I bet, ol' lady, you've slung out your false teeth by mistake! I looks around, and found—all that stuff! You can have it. It ain't no good to me. My time has come!"

The woman saw that he was telling his story under the sense of impending death, and she believed him. Fascinated, she fingered the glittering heap in her lap. She tried the rings on her slim, sun-browned fingers and mentally calculated the probable value of the gems, which seemed a fortune to her. Accident had made it all hers for the taking, and she was poor, and life for her on Yankee Hill promised only poverty of purse and long bare years. A cabin in this clearing, or a fortune—which? She drew in her breath sharply.

"You—you beautiful things!" she half whispered. Then she drew herself up determinedly.

"But why didn't you sell them?" she queried. She wanted time before she made her decision.

"Couldn't," answered the sick man wearily. "I tried it. I put three States between me and—and—Colorado, and I waited two years. I cached all but one diamond ring, a little fellow, and I tried to sell it. The police-gobbled it and had me held up for months trying to connect me with some crime somewheres. An' 'twas

of wholesome exercise was on his thin cheeks. The woman pondered and fingered the jewels, while the sick tramp dozed fitfully. Once he roused a moment to say to her with petulant insistence, "Keep 'em, lady, keep 'em! I don't want 'em no more."

Up the slope the woman's husband chopped cheerily, steadily, and every tree he felled symbolized to him and to his wife, not only a physical, but a spiritual triumph.

As she watched her husband, the woman's large brown eyes softened and glowed, suffused with the light of some high resolve, some hidden spiritual content. A cabin in this clearing, or the hobo's treasure—which? Only one thing stood between her and the acceptance of this accidental fortune, but that one thing to her loomed large as her universe. It was her duty to her husband, the one soul that marriage had given into her keeping and for her eternal accounting.

When she saw that the sick man was quite asleep, she quickly retied the jewels in the greasy red rag and gently slipped the precious wad under his pillow.

A few days later, as she was feeding broth to the sick man, he renewed the subject. He knew now that he was not going to die at once. While somewhat resentful for the shabby trick his presentiments had played him, he accepted the inevitableness of continued existence with his usual philosophic apathy. If he couldn't shuffle off, he would continue to shuffle on.

"I found that darned wad under my pillow," he said fretfully. "Thought I told you to take it! It's your'n."

The woman presented the spoon to the blotched, puffed lips and smiled. When she had finished feeding him and had rearranged his pillows, she sat in her little rocker beside the bed and serenely inspected her uncouth convalescent.

"I have concluded," she began, "that Providence had a purpose in flinging that jewelry in your way. Maybe, now, it was meant to be your saving. Maybe it was meant you couldn't get rid of it no matter how you tried. Maybe it was designed that you should have to live up to it, first, before you can see what to do with it. You know if you would brace up and live decent, really live up to those beautiful things, it would soon come to you how to dispose of them to your advantage."

"Sometimes," continued the woman softly, "things like riches—and folks—are given to us for our own saving. Most things in life are meant not to shirk, but for us to make the best of! Now, I believe there is only one way for you to get rid of those jewels, and that is to clean your mug, as you call it, and your heart and your life up by right living, and then it will come to you how to get rid of your treasure to your own advantage."

Her gentle philosophy fell like refreshing rain on the parched soul of Tom Springer, and seeds of good, long buried there, began to germinate. Presently, he reached out a shaky hand and touched the woman's calico sleeve reverently.

"That's all right, lady," he said. "Maybe some notion like that has kept you from taking the jewelry?"

"Maybe," she nodded brightly. "You see, I don't want to be rich. So long as we are poor, we'll stay right here and work hard for a living. And hard work is mighty good for most of us, don't you know?"

Uncomprehending, he stared at her. "Ye-es?" he faltered, and delicately forbore to press her with further questions.

A six-month later it was Tom Springer, erstwhile hobo, who leaned on a hoe in the clearing garden. Higher up the slope a sunbonneted woman and a man were watching a flock of Angoras browsing amid the madroños and manzanita.

An old mountaineer going up the red trail halted his horse at the gate. After he had quenched his own and his horse's thirst at the well always hospitably free to the traveling public, he retailed freely to Tom all the latest Yankee Hill gossip. "And how's she making it with him?" he queried, indicating the pair up by the goat-pasture.

"Huh?" answered Tom with pretended density. "She brought him up here with delirium tremens," the old gossip lowered his voice carefully to explain. "Reforming him, you know," he shook his grizzled head doubtfully.

"Well, she's doin' it, all right!" retorted Tom Springer loyally. "He'll go back to it!" gloomed the old gossip mounting and riding away. "I bet he'll not," maintained Tom.

That very day Tom Springer found an opportunity of speech alone with the woman.

"Lady," he began in much embarrassment, "ye remember them jewels? It has just come to me one way to get rid o' them. You write down to the chief o' police of the city and tell him all you know about them. He'll find the owner all right, all right."

"I just knew if you kept yourself straight for a while, you'd think of that very thing," she cried delighted. "A man, when he comes to himself, will do the square thing every time!"

"Maybe," assented Tom, awed by this woman's large and lovely faith in humanity. "Maybe. And, lady, if you're willing, I'll commence on that corral and cowshed. That job ought to keep me straight a month or so longer."



"The woman fingered the jewels long and thoughtfully"

summer! I'd not 'a' cared if it had been winter, but 'twas summer and a buggy calaboose. I finally broke away. No more o' that for me, thankee! Lady, do you see this mug o' mine?"

The tramp turned his coarse, whisky-sodden face for her inspection. The woman smiled patiently.

"Well, that mug keeps me from selling them things. Once I worked on the section and bought me a suit o' fine clothes. If you'd a put a false face on me, I'd a passed for a preacher, I was that respectable. I stepped in and showed a jeweler a breastpin and asked him to name his price on it. He excused himself, and spoke to his clerk. When I saw that clerk a makin' for the telephone-booth, I made for the door. No more police investigatin' for me! I lit for the jungles, and just in time! I might a passed 'em off on a pawnbroker, but he wouldn't 'a' give me nothing for 'em. I ain't had much call for money, nohow, trampin' from one job to another. I've always earned more money to spend than was good for me, anyhow. I've no more use for money. I'm goin' to die. My time has come!"

The woman fingered the jewels long and thoughtfully. Often she wiped her dry lips. Often she raised her eyes to the little window from whence she could see her husband swinging his ax right cheerily on the upper slope. His shirt was open at the throat and the flush

My First Hundred

By Isaac Levi Totten



I AM just an ordinary farm laborer, and, at the present time, I am just one hundred dollars rich. I had nearly a hundred once before—that was before she came. Yes, I have a little girl. I've been married five years to one of the sweetest little women that ever sat across the table in any man's home.

We lived in the city when she came. I remember the day as though it were only yesterday. Forty dollars "Doc" Wadding taxed me. That's city life for you every time. Of course, it did go hard with my wallet, and I couldn't help thinking of what a jump prices had taken, even in the medical profession. She's worth every cent she cost, though; I wouldn't take forty million dollars for her to-day. Here she comes now to have me read to her about "Little Boy Blue" and "Curly Locks."

No, I didn't lose my job in the city; I was never out of work while I lived there. One of the valves on the pump of my circulatory system refused to work properly, and that put me out of commission, or I suppose that I would be there still, with the hundred as far away as it was when I left. Like all the rest of my class, I wasn't prepared when the rainy day came. Just why I wasn't prepared isn't so very difficult to explain. Twelve hundred and fifty dollars a year was my salary—a little less than a hundred and five dollars a month. All of it disappeared as fast as, and a little faster than, it appeared. I suppose that I should have saved, and no doubt I could have done so on that salary, had I thrown off that desire to live in as swell a neighborhood as my associates and to appear as prosperous as they were trying to appear. There are a few in the middle class in the city who do save, but I never did, nor do I now, envy them their existence.

The flat that I had in the city was nothing fancy, yet it cost me thirty dollars a month. Do you know though, I always paid the rent willingly, and often wished that some of my old-time associates down in the country would drop in to see how swell I lived. Did you ever feel anything like that? Of course, I could have lived where rents were cheaper; but the neighborhood would have been less desirable, and I am not of such a nature that I can derive pleasure from mingling steadily with those whose tastes are so much different from mine.

It was necessary that I appear as well dressed and as prosperous at the office as the rest of the force. No shiny, baggy, threadbare suits and soiled linen were permissible. Even on the street and in the cars I had the feeling that I must appear prosperous, although I seldom came in contact with anyone but strangers.

We paid just as much for our little girl's English go-cart as did our neighbor, who couldn't afford one any more than we could. We also had to get a mountain-goat robe for her, equal to the one our other neighbor, who could afford it, had for their baby, even

though we had to get ours at an instalment house and pay two prices for it—that is the impression spirit every time. There is a feeling about spreading it on a little, though, that is rather pleasing. But what is the use of going into any more details about city life; it's the same old story over again, and I wouldn't have had a cent more than I did when I left the city, if my salary had been three times as much as it was.

After Doctor Lemon, the heart specialist, had thumped and pounded and listened to the action of my pump with his stethoscope, he did a bit of artistic sketching on my anatomy with a blue pencil, then stepped back, cocked his head like our canary and said: "That's the size of it." So it was. I had always imagined that I was big-hearted; but never knew before that possessing those qualities would interfere with one's working mechanism. It did though. The specialist said that I must take a two-weeks' rest, and maybe a longer one. There was no doubt I needed it.

pay anything for fuel; get half the milk from three cows; half the chickens and eggs, and I am provided with a garden-patch of sufficient size to raise enough truck for the family, and some to sell, besides. Not so bad, is it, when you think about the prices one must pay for all these necessities in the city? Of course, I have to work about as hard here as I care to work, and sometimes I have imagined, along toward the close of an extra hard day's work, that I would surely drop. My endurance is not as great as that of a man possessing a right-working pump.

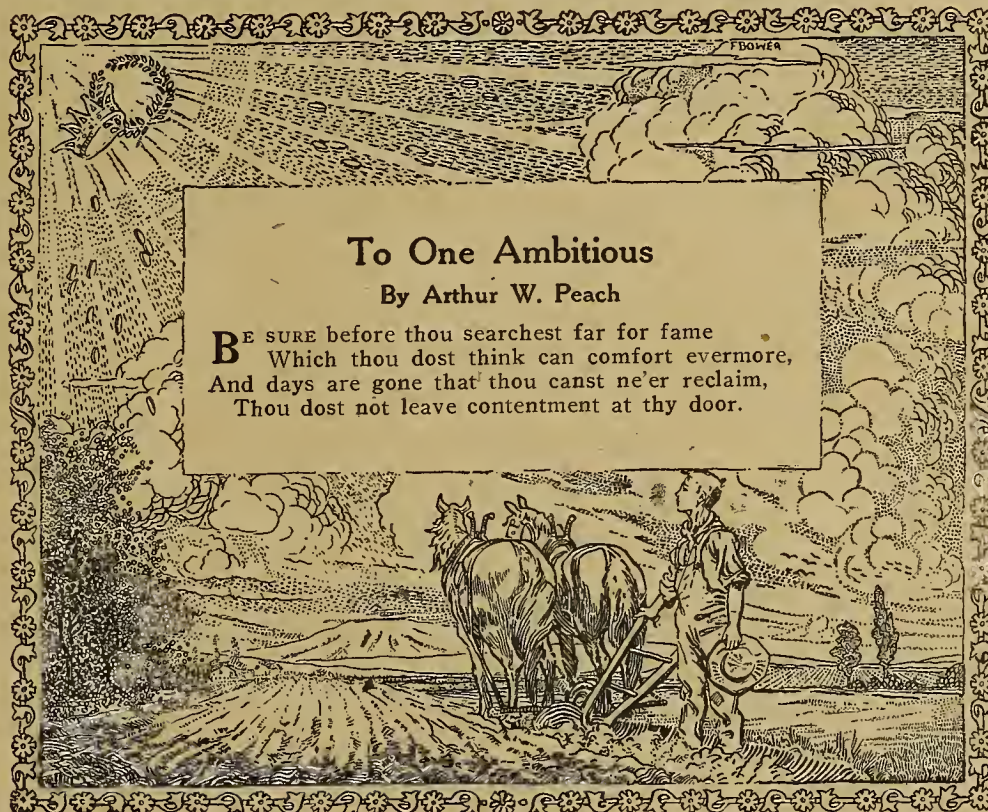
At four-thirty every morning I roll out and feed four head of horses; then comes the currying and the cleaning out of the stables. After that light exercise, I feed about eighty head of hogs in four different pens. It is breakfast-time when I get the hogs fed, and I am always ready for it, too. Breakfast over, I milk three cows, pump water for the hogs, feed two calves and do a few other chores; then I am ready to begin my day's work. When the day's work is done, I take some more light exercise similar to that of the morning. Do you know that a man gets awfully tired putting in the time from four-thirty in the morning until long after sunset in the evening? But, in spite of the hard work, I like to live and work on the farm better than in the city. I wouldn't exchange places to-day with any city toiler of my acquaintance who works only from eight to five.

After the first two months here, as I said before, we began to climb upward toward our hundred. At the end of the third month we found that we had eleven dollars over and above our expenses. Out of my pay for the fourth month, we saved sixteen dollars. Think of that, and I couldn't save a cent in the city out of a monthly salary of one hundred and five dollars. We live better out here than we did in the city, too; but there are the cows and chickens that go right on helping out with their good work whether I work or not.

I asked my wife the other day what she thought some city dyspeptic, who eats from the arm of a chair in a dairy-lunch room, would give for my appetite. She said that she didn't know, but she was positive he would get his money's worth, whatever he paid.

At the end of the next six months we rounded out the even hundred. There was something that seemed to draw us toward the hundred as though it possessed magnetic power.

Here comes the little girl to ask for a penny, but she will not get one until I have earned some more money. I want to keep that hundred just as it is, and add more to it, so that I can stock up a farm in a few more seasons, and be my own boss. You see, I am determined to stay away from the city. I have fallen in love with the freedom of real life where I can shout, sing or whistle without restraint. The absence of that nerve-racking strain here appeals to me and mine. I used to like the city, even though I wasn't permitted to say my prayers in the flat unless it was so specified in the lease; but now, when I look back and see the narrowness of custom in the city, and the effects of the law of impression, I am for the land of the farmer.



To One Ambitious

By Arthur W. Peach

BE SURE before thou searchest far for fame
Which thou dost think can comfort evermore,
And days are gone that thou canst ne'er reclaim,
Thou dost not leave contentment at thy door.

When the two weeks rolled around, I went back to work; but I couldn't stand it. The specialist's second advice was that I should give up the city work entirely, and take a good long rest. That was very encouraging, surely. No money on hand and none to come in when the work stopped. What did I do? I did the only thing that I possibly could do under the circumstances. I drew the ten days' pay I had coming, packed bag and baggage, and went down on the farm to my wife's folks—to the very ones I had always been glad to have come to see how swell I lived in the city. Maybe you think that didn't take some of the wind out of my impression sails. Part of our furniture was stored in a spare room of the farmhouse and the rest in the loft over the cow-stable. My condition was such that it was practically impossible for me to go to my own parents' home; they lived at too great a distance from the city. Did you ever think what you would do under similar circumstances? It is pleasant to think that you would have to do a little sponging, isn't it?

The pure air of the country, the wholesome food, the good water and the absence of that city nervous tension was the medicine that I needed to put me on my feet again; yet I recuperated slowly. It was nearly a year before I could do anything like a man's work. When I finally reached the point where I was able to take up my own burden again, my wife and I decided that we would not go back to the city. She said, "If the city is not the place for a sick man, it isn't the place for a well man." And she is right.

The following advertisement appeared in the want ad. column of a daily we received on the farm:

WANTED: Man with small family to live in tenant-house and do farm work. Address X. Y. Z.

I decided to answer the advertisement to see what kind of a proposition I could get. As to the requirements, it was doubtful whether I could fill all of them. I knew that I could fill two of them anyway; my family was small and I could live in a tenant-house. In regard to doing the farm work, I was not so sure; but, if I got the chance, I was determined to try.

My letter answering the advertisement brought a reply, and it didn't take very long after that to get in direct touch with Mr. X. Y. Z. The result was that I landed the job.

It took every cent I earned the first two months to pay expenses. After that, however, my rise from poverty began, and time gradually dimmed my receding days of misfortune.

My services for that portion of the day made between chore-times are valued at one dollar. I have, up to the present time, averaged about twenty-two dollars a month—quite a difference between that and a hundred and five dollars, isn't there? But, I get a whole lot more in addition to the money that doesn't make the twenty-two look so bad after all. I am provided with a house that our four-room-flat furniture gets dizzy in trying to fill the rooms. I don't have to

The Watchman

By Caroline Stern

WATCHMAN, what of the night?
The sky, in northern crimson drest,
Should flash the coming of a guest
To reveling creatures east and west.
Watchman, what of the night?

All's well without, all's well!
The dew reflects the dim starlight,
The firefly gleams a moment bright;
I hear faint voices of the night.
All's well without, all's well!

Watchman, what of the night?
Within the storm-rack gathers fast;
Ideals of the sacred past
Are shattered by the howling blast.
Watchman, what of the night?

All's well without, all's well!
The crowned darkness keeps her state,
The solemn hours inviolate
Move silent in the march of fate.
All's well without, all's well!

Yea, heart, all's well without.
The silence of th' eternal Will
Absorbs in calm immutable
Our fevered pulse of good or ill.
All's well without, all's well.

Have you had any trouble with a neighbor? What's the use! You are both sick of it. Go down and sit by his side, on the sunny side of the old stone wall. Get up close to him, and tell him you are sorry. Say it as if you meant it, and mean it! But do more than that. Watch for a chance to do him a good turn. That will go a thousand times farther than anything you can say. Lift the big corner of his heaviest load. The snow melts, not in the frost, but in the sunshine. Just try it.

The Call of the Home

By Gertrude Mercia Wheelock

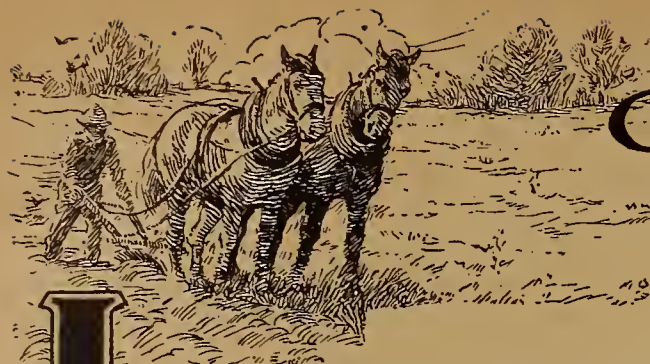
THE city charms with its pulse and throb,
Its surging and seething crowd;
And the heart is stirred by the measured beat
Of its turmoil long and loud;
The charm is there of a life that thrills,
With its throngs of young and old,
With its strife and stress for a higher place
In the markets of shimmering gold.

But the wind sings low at eventide
When the fret of the day is still,
And calls me away to the old farm home
Whose light shines over the hill.
In fancy's dream I am lulled to rest
By the sounds of the woodland night;
And I catch a glimpse of the dear old rooms
With their halo of welcome light.

Oh, I weary much of the busy mart,
Of the quenchless thirst for gain,
Of looking on at the toil and tears
That are spent in the field of fame;
For its winding ways are fraught with woe,
And I shrink from the ceaseless glare,
From the crude, harsh notes of its ruling tone
That bids for the chaff and tare.

And the wind sings low at eventide
When the fret of the day is still,
And calls me away to the old farm home
Whose light shines over the hill.
Like music sweet to my weary heart,
Come the tones I have loved the best;
And I follow fast where the fancy leads
To its haven of perfect rest.

Straighten up! Look at the blue sky and the green hills once in a while. Keeping the eyes fixed on the gray earth all the time makes a fellow color blind. Away yonder is the cure for weak eyes and weak hearts.



Caleb's Bargain

By Mary K. Ward.

Illustrated by Edward L. Chase.



I WOULDN'T go. I wouldn't do it," Caleb Field's wife said when he talked of going upon the Willow Brook Farm. "I wouldn't have anything to do with Jack Dorkins."

"But it ain't Jack Dorkins I want, it's the farm," Caleb said. "There ain't no land anywhere that'll grow such crops as them meadows, and in five years my brother Sim made enough money there to go off and buy a place of his own."

"But that was when the farm belonged to Jacob Larkins," said his wife. "After he died, Jack Dorkins bought it, and he's another kind of a man, and you'll find things different."

"I guess them meadows is just the same as they always was," Caleb replied, "and it's the meadows I want; it ain't Dorkins."

"But it's the man that's the life of a thing after all," Luella said. "Them meadows won't grow crops unless they're cultivated, and when Sim was there, Mr. Larkins and he worked and planned together, and Sim always knew Mr. Larkins would deal straight and square; but Jack Dorkins is different, he gets into trouble with folks, and they call him underhanded, and them meadows won't be the same when you get Jack Dorkins with 'em."

Caleb laughed and said that meadows were meadows and he'd have papers made out straight and strong telling what he should do and what Dorkins should do, so that if there were any trouble he could fall back upon the law; but still Luella, his wife, was fearful and said, "Don't go to talking about the law; sure, and my father always said it was more crooked than the most crooked stick that ever grew, and the best thing an honest man could do was to keep out of it."

Caleb laughed again and stood up tall and strong and said the law was made to protect an honest man and, so long as he dealt fair and square, he had no need to fear. Luella had been proud of her husband, standing up so straight and strong, and she said nothing more against his doing as he thought best; and Caleb went on and made the bargain with Jack Dorkins for the Willow Brook Farm for five years straight half and half right through, with the owner to furnish tools and repairs, and the tenant to care for the stock and till the soil in a husbandlike manner. They had papers made out by Justice Hicks, and Luella went with Caleb, and, though she sat at one side with Mrs. Hicks, she heard every word the men said, and she could not see why the bargain was not tight and strong and as it ought to be.

When the fields were still spotted with patches of snow, and the sun was shining warm, and the sap was flowing in the trees, and the horses went ankle deep in mud and slush, they moved to the Willow Brook Farm in the upper meadows district. It was a lonely place away from the highway, with broad fields sloping toward the river and a brook bordered with willows flowing by one side, but they were too busy to think of aught but their work. Luella made improvements in the yard and garden, and Caleb plowed and seeded and planned for a big yield in the four years to come, for he said, "I've got the farm tight and sure for five years; this year I'll seed, in the other years I'll harvest."

"Perhaps next year we can get a piano for Elsie," her mother said a little wistfully. "A second-hand square one wouldn't cost more'n a hundred dollars."

"If I get a good catch with the timothy, we'll make it sure next fall," said her father.

Elsie was twelve years old that spring and lithe and strong. Her father called her pretty as a girl and smart as a boy, and her mother said she was so careful and thoughtful that she always felt at ease when the younger children were with Elsie. She fed the chickens and tended the cattle, but the colt Gypsy was her especial pet. Many love-tokens, like pats and lumps of sugar from Elsie and rubbing noses and soft whinnys from Gypsy, passed between them, and her father promised that in two years more, when Gypsy would be four years old and broken to the harness, Elsie should drive her herself, alone.

Jack Dorkins, the owner, came occasionally. He had an expression gray and dry like a parasite, and Caleb was always glad when he went away.

"I'm glad I've got writings so, if Dorkins goes to making trouble, I can hold him right down to his bargain," Caleb said one day to his wife.

Luella made no reply, but in her thoughts there was a vague feeling of anxiety.

The second season Caleb laid plans for a big crop, but one day in hoeing-time the hired man Jim fell into a rage and quit. Caleb said he had treated him square and the man had picked the quarrel himself, and Luella said he would have to mend his temper if he were to get along in the world, but Jim went to the next town and got bigger pay working for a man who had been partner with Jack Dorkins. The ill luck followed Caleb. He could not find anyone to take his place. He toiled early and late, and Elsie helped and sometimes Luella, but the work piled up against him, and the hay was ripening, and there was no one to help harvest it. Inwardly he fretted because Jim had gone to work for Jack Dorkins' partner, and thoughts of dark suspicion of Jack Dorkins would go chasing through his mind; and because every night his body ached with weariness the dark thoughts grew and rankled the more.

One day Caleb heard of a man in the next town, and that evening he drove over and engaged him to come on the morrow, but the next day the man sent word that he had found a better place and was

going to work with Jim for Jack Dorkins' partner. The next morning Jack Dorkins came and demanded of Caleb why he was not cutting the hay. Caleb, being worn with anxiety and overwork, gave a petulant reply. Jack Dorkins flushed dark, and raised the stick that he carried in his hand, and said a nasty word. The sudden sense of wrong welled up in Caleb, his face grew white and his eyes dark, his clenched fist went up and out, and then he turned and went into the house to his wife, and left Jack Dorkins with blood upon his face.

"What is it?" cried Luella, frightened by her husband's look, and she ran to the window and saw Jack Dorkins going home across the fields. Then she turned to Caleb.

"Caleb," she said, in a voice full of pain and fear, "what have you done?"

His wife's look and tone killed the passion within him, but hardly could he hold himself with weariness and pain, and he stretched himself upon the lounge, and turned his face toward the wall.

"Elsie," said Luella, turning to the children who were looking on, "take Midget and Johnny and go and see what needs at the barn," and when she was alone with her husband, in a voice full of a woman's love and yearning, she said, "Now tell me, Caleb, what is it? What have you done?"

"He demanded why I didn't cut the hay," said Caleb, all weak and white, "and I told him to tell the reason himself, and he said what would make any man mad, and I hit him on the jaw."

"You hit him!" cried his wife.

"Any man would," said Caleb doggedly. "He had a stick in his own hand, but I hit him first."

"Oh, Caleb, what if he should turn us out!"

"Turn us out? He can't do it. I made him give papers for five years, and I've got the law to fall back upon."

"The law! Oh, man, don't you see the law is agan you now? He's got the law agan you."

"No, he hain't," said Caleb doggedly. "Any man would 'a' hit him if he'd sassed him like that. I'm glad I did it, and I'll do it again."

In the strength of anger he arose and started to go out, but Luella restrained him, fearful, saying, "Stop! you ain't fit to work to-day. Take the team and carry the calves to your brother Sim, and get him to come back with you and help cut the hay."

"I shan't run away. I'm going out to work," said Caleb, but again his wife restrained him, saying, "You ain't fit to work nor to meet anybody. Go and rest a day and get Sim. I know he'll come if you tell him all about it."

Caleb listened to his wife and went, and the second day he would come back with help, and Luella and Elsie would do the chores while he was away.

It was before noon that Jack Dorkins came and a man with him, and he had not washed the blood from off his face.

"Where is Field?" he demanded.

"He's gone away," said Luella curtly, for the sight of his face made her fearful and angry.

Jack Dorkins and the man turned and went out beside the field, where stood the grass full grown and dry that should have been cut a week ago. Luella saw them there, and she would have gone and told them that Caleb would return the second day with help to cut the hay, but that the blood upon his face made her afraid.

That evening, when Elsie and her mother were in the barn, Johnny Hicks came and told them that he had heard Jack Dorkins telling his father that afternoon that Field was not doing the work as it ought to be done, and the next day he was going to start to get him out and harvest the crop himself.

After he had gone, poor worn-out Mrs. Field broke down completely, and sank down on a pile of hay, and

poured forth her woes, saying, "He did it on purpose, he did it on purpose so he could get the law agan us, and get us out, and have all we've worked for this last year. There is no use in trying to have anything anyway, the more we earn, the more there'll be to pounce on us and get it away," and the overwrought woman swayed to and fro, moaning, "There ain't any use trying to work and have anything anyway."

"We must get word to Papa," said Elsie, coming to her; but her mother only moaned, "We can't, it's too far to walk, and he's got the horses, and we hain't any telephone, and the neighbors won't help, because Dorkins has been all 'round and showed his face, and they think Caleb's done something awful."

"I can go with Gypsy," said Elsie.

"No, you can't, you can't," said her mother quickly.

"Yes I can, too," said the girl determinedly. "She's three years old and she's been harnessed twice, and she'll do anything I want, and I never'll get my piano if I don't," and Elsie's lip trembled, and she would have cried herself if she had not been so intent on driving Gypsy.

"She'd run away, and throw you out, and break the harness, and smash the cart, and you might meet an automobile, and then you'd surely get killed," said her mother, gaining cheer in cataloguing dangers.

"No, I won't either," said Elsie, "and I can go the hill road, and then I won't meet automobiles. Now I'm going to catch her and put on the harness."

With gentle pats and lumps of sugar Elsie so cajoled Gypsy that she quietly submitted to being harnessed and hitched to the cart, and triumphantly Elsie climbed in.

"Oh, I don't like to have you go," said her mother tearfully.

"See how quiet she is," said the girl. "I know I can drive her all right."

"You must be sure to keep an eye on her every minute, and put on your jacket before you start, and here's the best whip."

The shadow of the whip and the waiting made Gypsy restive, and she dashed out of the yard with Elsie's mother calling after, "Look out for the automobiles, and be sure and go the hill road."

Elsie was too intent on her enterprise to hear. At first Gypsy went quietly. Then on a down grade she broke into a run. Elsie braced herself in the swaying cart and clung to the reins. She narrowly escaped collision with a passing team, but kept in the road until in the midst of a long hill Gypsy suddenly stopped and looked around, as if to ask how much longer this thing was going to last. Then Elsie unchecked her and let her rest and browse. The daylight was now gone, the fireflies flitted and the young moon glimmered through the roadside trees. The stillness was broken only by the hum of an insect or the cry of a bird. Elsie never before had been out alone in the night, and she clung to Gypsy as if for protection. Then she stopped to think where she was, and saw that she had missed the turn and taken the automobile road.

"Gypsy," she cried as she clung around her neck, "we're in a very bad scrape. We are on the automobile road, and I promised Mama I'd take the other; but if one comes along, you won't be frightened and get cranky, will you?"

Under the influence of Elsie's soothing voice and touch, Gypsy looked very quiet and sober, and doubtless she had good intentions. Presently they both were rested and started on. The lights of the houses were now out, and the watch-dogs barked as they passed. For a while Gypsy walked slowly, stopping now and then to toss her head and look around, when a steer, suddenly crashing through the near-by underbrush, startled her into a run, and she dashed down the road with Elsie's hand firm on the reins. At this moment there was a rumbling noise, a weird trumpet blast, and from around a curve two balls [CONCLUDED ON PAGE 34]



" . . . for a few seconds she sat half stunned beside the road "

The Home Interests' Club

The Present-Day Problem of Married Women and Money

By Margaret E. Sangster

APRIL is the loveliest child of the year. With her sudden changes of mood, her sunbeams and showers and the swift rushing of her exultant life, April is the symbol of the youth of the world. Helen Hunt, in an exquisite poem, spoke of the sweet uncalendared spring rain, and often as the drops fall and the sun shines through them we think again of a beautiful verse in an old song, a song written ages before the Christian era: "For lo the winter is past, the rain is over and gone, the flowers appear on the earth and the time of the singing of birds has come."

On an April day there was a full meeting of the Home Interests' Club. Older members who had been house-bound during the cold weather, coming back to take their places, new members enrolling themselves, and everybody on the qui vive for the consideration of a subject that makes a practical appeal to women married and single.

Shall the Wife Be a Wage-Earner?

The first contribution to the meeting was made by Mrs. Madison, who stated the case in a few emphatic words. "The home," she said, "cannot be successfully carried on without an income. This we concede at once. On the farm there is less occasion for the constant spending of ready money, than in the village, town or city, where supplies must be continually bought and brought in from the outside. Still, the farm itself must rest on a cash basis, and the question of the wife's privilege to be a wage-earner is not very different in its aspects whether she live in the country or in town. Is it a question of convenience merely or of justice or of the permanent peace and happiness of the family? Last month we talked of domestic finance in a general way. This month we shall touch upon a particular phase, a phase about which most of us have definite opinions."

"Pardon me," said the next speaker, a fine intellectual-looking woman with a serenity of manner and ease of attitude that were attractive, "if I take the initiative in our discussion. I have observed in this club that there is frequently an embarrassing pause in the early part of our meeting very much like the silent waiting with which we are familiar in the mid-week meeting of the church. After the opening exercises, when the pastor sits down, leaving the prayer-meeting at the disposal of the congregation, nobody wants to speak first. I made up my mind before I came that I would speak first to-day if I could. I think I have something to say, and whether you agree with me or not, several of you will have something to say when I sit down. Let me give you a leaf from my personal experience. Before my marriage I held the position of buyer for a large book and stationery store in New York. The firm paid me liberally, sent me to Europe every summer to make selections and gave me their confidence to an extent that was complimentary to my judgment and business ability. I was able to put something by each year in the savings bank, but on marrying I made over my entire little capital to an invalid sister. I do not mind saying to you who are here, because I know I am not alone in my situation, that, although we live in a beautiful home, though I ride in a motor-car and wear expensive clothing, I literally have not the control of a single dollar. Whatever I buy goes on a charge account. My husband looks over the bills and blue pencils here and there, before paying them, whatever he regards as an unnecessary purchase. If I am out of postage stamps, I must ask him to bring them home for me, and it is fortunate for me that I do not have to patronize the electric railway, as I never have small change. If to-day I could take my old position and earn my old salary, I should be a much happier woman, and my husband, little as he dreams it, would be a happier man. I am rusting daily, losing heart because I am spending my time to poor advantage and also because I am not respected by my children or servants as I might be if I were not so evidently a dependent."

Another Woman's View

"I endorse every word that has been said." The little lady who now spoke was well known in the community. She had been a kindergartner and had successfully started the wee ones of the neighborhood. Several years before she had become the wife of the head bookkeeper in a woolen mill. As few affairs are secrets among neighbors, the amount of her husband's salary was pretty well known. Everyone knew, also, that Mr. X. spent money lavishly on his personal indulgences, while it was more than suspected that very little money passed through the hands of his wife. She did not tell anyone there that she never had hired help except for a little while after the coming of a new baby, but there was not a woman present who required information on that point. Mrs. X., a frail little body, had been seen to shovel snow and break paths during the winter, and had hung out her washing in plain view on freezing days, took care of her own furnace and scrubbed not merely her front door-steps, but the steps of her cellar. Mr. X. was a good fellow among men, declared that he must appear well dressed for business reasons, and for the same reasons never hesitated to subscribe liberally for any public object. He was popular to a certain extent, but there were not a few husbands who would have been ashamed to treat their wives as he treated his, and women held him in no little contempt. When a man has money to spend for manicuring, it does not seem fair that a man's wife should personally clean the cellar. Mrs. X. went on to say that she looked back with longing to the days when she taught, and she declared her intention at the first opportunity to accept a vacancy and again practise her profession of teaching. "I have decided to do this," she said, "for the sake of the children. If I can earn enough money to pay for hired help all the time, my home will not suffer and I shall be able to give the children a much better start than they can have when their mother is wearied to the last drop of her blood and the last edge of her nerves by doing work too hard for her, work, too, that could be as well done by a strong young woman who could be installed as housemaid."

Divided Interests

"May there not be reefs and shoals against which we should guard?" said the doctor's wife. "I am perhaps not the one who should protest against wage-earning on the part of a wife, having had only the most agreeable experience myself. I keep my husband's books, send out the monthly bills, receive payments as they come in, receipting for them and depositing the money in the bank. The doctor is so busy that he is glad to

be relieved of all financial care, and we are, in the fullest sense of the word, partners. The spending is my share, or shall I say the administration? The doctor and I are in perfect agreement on everything that concerns our business, and if he is rapidly rising in his profession, as I am sure he is, I modestly take a little credit to myself, for in our home there is no division of interests. It would be folly for me to earn money. I do much better for my good man by taking care of what he earns. Every wife surely has enough to do in being a home-maker, without adding to her many occupations that of carrying on a business within her doors or outside of them. Understand that I am not opposed to the perquisites that fall to the farmer's wife. The money for butter and eggs belongs to her by traditional right, just as the wedding fees are always handed over by the minister to his wife. My daughter Sue tells me that she has resolved to marry only a minister or a doctor. She thinks it must be very nice to have these windfalls. She complains at times that daddy always sends her to mother when she is in need of money, and she does not regard mother as the open-handed being daddy would be if he held the purse. What I want to say, if I can make myself understood, is that there should be community of interest in every home."

A Danger-Signal

"Speaking of reefs," said Mrs. Elderbury, "there is a danger that some of you young women apparently overlook. Let us take the case of a wife and husband, where the wife, being specially gifted or endowed with genius, eclipses her husband and sets him at a disadvantage by earning more money than he does. Perhaps she is an author and writes charming fiction which she sells to the magazines. A bright thought comes to her, she shuts herself up in her room, and after a day or two of steady work finishes her story and despatches it to the editor with whom she is a favorite. She understands that the arrival of her story will be hailed with delight in the office of the magazine. Before the week ends, the mail will bring her a satisfactory check. By twenty-four hours or forty-eight hours of work she may secure as large a sum as a very capable husband in an ordinary situation can earn in a month. The temptation on his part is to discouragement or inertia. If Marie can earn so much at so little cost to herself, why shall not Francois do less himself and lean on her? I know more than one family in which a gifted bread-winning wife has reversed the proper order of things and atrophied the bread-winning powers of her husband. You will say that one cannot expect celibacy and spinsterhood on the part of a man and woman who love one another merely because the woman is to go on earning money in her own way. I have seen the happiest results where husband and wife remained true comrades while both were wage-earners, but the instances have been exceptional. Two artists, two poets, two whose work complements one another, may do very well by continuing their individual occupations, but generally speaking it is not the happiest nor the most ideal existence. Sometimes rivalry creeps in. Neither is willing to be overshadowed by the work of the other. This state of affairs, too, is apt to be interfered with if children are born to the pair. It works very well so long as they remain childless, but is hardly well suited to the ordinary family."

In Summing Up

"One thoughtful woman said women find it hard to forget the personal equation. We are very apt to look at facts as they are related to ourselves. We have not enough breadth. I look upon woman as the equal of man. A woman presiding over her home as wife and mother is entitled to support. She ought not to feel obliged to take care of her home, adding to her daily work another which falls upon broader shoulders and tougher sinews than hers. If it be a pleasure to her to earn a little pin-money, and she can do it without sacrificing anything material to the comfort of her daily life, the privilege should not be denied her. The wife who can paint a picture or write a story may do so, I fancy, without invading her husband's self-respect, if he be the right kind of man, and she may secure the needed time for herself by paying out of her own earnings the wages of one or two extra maids. There ought to be a fixed understanding in such a case about the limitations and obligations of both sides."

Another speaker gave it as her conviction that if a man were crippled or ill or otherwise infirm, or if he had a knack for housekeeping superior to that of his wife, he might stay at home and let her earn the support of both. There could be no possible objection to this, she thought, if the husband were an invalid and the wife strong and well. The able-bodied comrade of either sex should be the one to bear the heavier load. Somebody laughingly expressed a doubt as to whether any man could be a better housekeeper than any woman. The speaker told the story of a couple whom she had intimately known. The wife was a pretty, dainty and inefficient person. Her husband not only earned a good income as superintendent of the public-school system of his county, but every day prepared the breakfast in the morning and the supper at night, and always cut out the children's frocks and, in reality, had a finger in every pie. This wonderful man might have taken a prize for bread-making. He combined in himself the best qualities of both sexes.

When a little ripple of amusement awakened by the mention of this angelic and exceptional husband had died away, the discussion of the afternoon was brought to a close. The last speaker was the principal of the high school. She expressed the sentiments of the majority by saying that the one thing most to be sought in every case was the permanence of the family bond and the contentment of every member of a household from the oldest to the youngest. As a rule, she doubted whether women who were mothers as well as wives, should enlist in the ranks of wage-earners. She thought they could not do this without incurring the peril of neglecting children in the most impressionable period of life. She could see no reason why the childless wife should refrain from earning money if she so wished. Letters from readers are welcome.

It isn't just the thing to tell a boy or girl that life on the farm is all sunshine, all brightness, all happiness. That is not true of anything in the world; but you can be honest and say that there are just as many things to cheer, comfort and bless right on the old place as anywhere. What is in the heart tells the story. When the heart is right, all is right, no matter where you are.

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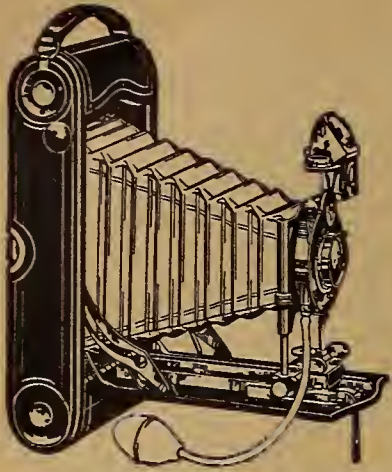
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A Plea for the Garden

By William Johnson

ONCE there was a hired man who said he sometimes got so interested in the chores that he forgot to milk the cows. Somewhat similarly there is an occasional farmer who gets so interested in his crops that he forgets about the garden. Maybe his wife has visions of crisp lettuce and sugary peas, and asks him to plow the garden so she can plant it.

She is apt to get a reply tuned like this: "Plow the garden! Great snakes, Mary, where's my time to think of gardens? See all that land to get ready, all that grain to sow? Notice any extra days stuck in the calendar this spring for monkeying with gardens?" And he hurries out to the field as though delay were the unpardonable sin.

The garden? Oh, it gets plowed after a while, dragged and planted; probably comes up and worries along until real hot weather strikes it, then the few vegetables that succeeded in adapting themselves to an eleventh-hour preparation are worn out trying to get down to sea-level for moisture.

But there are farm gardens good to look at, clean kept and well cared for, long rows and generous beds of everything the soil and climate will favor. And how such a garden does set a farm off. It gives it an individuality. Looking at it, you are convinced that here is a man farming because it is his work, not merely working because it is his farm. The farmer and his family surely deserve the cream of life. Intelligent work is the separator from which it comes, and the farmer who neglects giving a few turns for the sake of a good garden will get less of that cream than his wiser neighbor who flaunts a garden in the face of his living expenses.

The grain-fields are Nature's smile, but the garden is the dimple in her chin. Aside from being a pleasant relief to the family appetite, there are more real wonders in a well-kept garden than in any museum on earth. Next time some trouble sets its claw into your soul, study some of them out by way of

forgetfulness. Fuss around your plant pets a bit, pull a weed here, stir the soil a little there—and think. In five minutes you will move out of the shadows, and your way will stretch out across the to-morrows, clear as it ever did. Try it and see. The man who could look down a row of ripe tomatoes, smooth as velvet, red as the flush of life, and hang onto a worry is queerly built. There is more than a mere matter of enticing fruit to contemplate; a miracle is laid before our eyes. "Huh!" some skeptic may say. "Like to know where the miracle is; just plant the seed, lay on the care and you get the goods. It just grows, that's all."

Sure, it just grows, but growth is too large a word to fling lightly. A tangle of law and force lays behind it that our keenest wits cannot entirely fathom. Where were those tomatoes and other vegetables when you plowed the garden? Locked in tiny seeds and soil-grains, scattered through air, water and sunshine. Growth called them together, wove the food we need in a beauty we should love, and scatters it in any corner the man with the hoe and seed-packet may indicate.

The garden adds a finishing touch to the farm's appearance. Sometimes when the green cucumbers tempt us too far, we may think the finishing touch is a bit too personal, but facts to the front, the farm

Both were attractive farms in general, with neat fences, fields and buildings. But one of them had a pronounced garden success laid out along the road, while on the other, a weedy failure was squeezed into an obscure corner. That latter farm had more pretentious buildings and bore every other indication of thrift and industry, but somehow they did not create as pleasant an impression as the other farm did. That little weedy patch was a marring factor. The other garden with its straight, clean rows pleased the eye. The plainer buildings back of it looked better, to me at least, than the more stately ones did: the farm was a neat whole, nothing overlooked. A mental picture was aroused of a painstaking, genial owner, who was after bigger things in life than just board and clothes. The mental picture of the other owner was different, just a good farmer who stuck to his farming, never losing five minutes for a garden or any kindred frivolity—take care of them when there was nothing on hand that had a ready money look. Are the pictures true? Yes, in this case and in many more.

So do not neglect your garden. People are measuring you to an extent by the size and quality of it. Straws—and gardens—show which way the wind blows. Take time to prepare a good piece of land; a half-acre is plenty for an ordinary family.

Lay it out in a long strip that may be worked without turning. Plant the stuff so that a horse-cultivator may be used. One of those hand-cultivators with seeding-attachment is a handy investment. It does the hoe's work in a fraction of the time, and plants may be worked with it considerably before the horse-cultivating stage. This early work is what connects a garden with the table at an early date. That is what you want. Those hot days ahead will come easier if your blood is cooled with crisp, fresh vegetables. You will go to your work with a snap and a swing that will leave finished jobs behind you at a lively clip.

You want the kind of garden at which passers-by will stop to look in admiration.



The kind of garden at which passers-by will stop to look

with a good garden makes one with the other kind look like strawberries without cream. I passed two farms in particular last summer which emphasized that fact.

The Household Department

Conducted by the Fireside Editor

Bread-Raising Cabinet

By Archibald Owen

THE bread-raising cabinet, shown below, will prove its worth to the thrifty housewife who prides herself in being a good bread-maker, if she is willing to give it a trial. The cabinet is simply a box large enough to admit the pan containing the sponge. It is heated by a hot brick which has been previously heated on the stove. A thermometer, which hangs on the inside, enables the

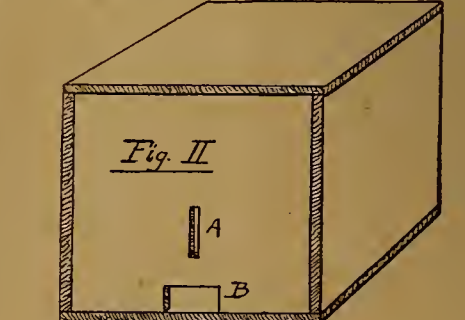
tion is twenty-one inches square by twenty inches deep (inside measurements).

Fig. I. is a sectional view and is almost self-explanatory. AA are the sides, B the bottom and C the lid, D is a shelf on which the bread-raiser (J) rests; it is placed four inches above the bottom (B). This shelf is made of slats one and a half inches wide by three eighths of an inch thick; they are placed one and one-half inches apart. F is the thermometer used to register the temperature inside the cabinet. G is the thermometer window. It is simply a slot, the size of the thermometer, cut in the side (A). A piece of window-glass should be fastened over this slot to prevent the heat from escaping. Drive a small nail above this slot, and hang the thermometer on it, with face outward. H is the brick which furnishes the heat for the cabinet. This brick should be heated before starting to mix the sponge. If preferable, a flatiron may be used instead of the brick. I is the opening for entering brick; it should be large enough to allow the brick to enter freely. J is the bread-raiser containing the sponge.

Fig. II. shows a perspective view of cabinet. A is the thermometer-window. B is the opening for entering hot brick.

Fig. III. shows a slide for handling the hot brick. For the sake of simplicity, this

slide is not shown in position in the other illustrations. T is the tongue; it should be made the same width as the opening (B, Fig. II.) and long enough to reach the center of the cabinet. The extreme end of T should be covered with asbestos paper to prevent the hot brick from burning it. The head (H) should be made one inch larger than the opening (B, Fig. II.). The manner of fastening the tongue (T) to the head (H) is clearly shown in the illustration.



The temperature of the cabinet should be kept between ninety and ninety-five degrees. If it gets too hot, raise the lid a little.

There are some professions which a man may master and become perfect in, and when that happens, he is dissatisfied and will want to enter something higher and more difficult. But farming is one of the professions in which a man never reaches perfection. The more perfect he gets in the art of farming, the more satisfied he will be in it. WILLIAM J. BURTSCHER.

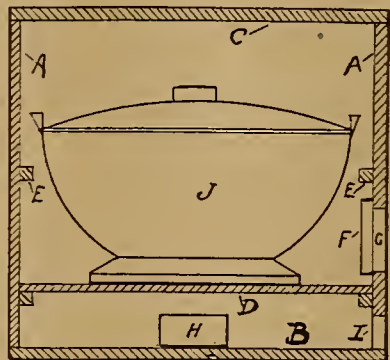


Fig. I.

operator to maintain a steady and uniform heat at all times. The cabinet is simple in construction and can readily be made by any boy who is handy with the tools, or, if a carpenter is employed to make it, the cost will not be great.

The material required to construct the cabinet can be secured from store-boxes, which are always free for the asking. The size of the cabinet shown in the illustration

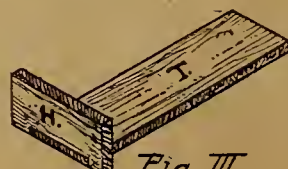


Fig. III.

Patterns You are Sure to Need

Showing Children's Clothes and a Costume Suited to Many Materials

Designed by Miss Gould



No. 1741
No. 1742



No. 1788



No. 2000



No. 1999



No. 1955



No. 1791



No. 1769

No. 1741—Peasant Waist with Revers

Pattern cut for 34, 36, 38, 40 and 42 inch bust measures. Quantity of material required for medium size, or 36-inch bust, one and five-eighths yards of thirty-six-inch material, with three eighths of a yard of contrasting material for chemisette. Satin is used a great deal with wash fabrics this season. It would be effective on this waist for collar and cuffs



No. 1741
No. 1742

No. 1742—Flounce Skirt, Buttoned in Front

Pattern cut for 24, 26, 28, 30 and 32 inch waist measures. Quantity of material required for medium size, or 26-inch waist, three and one-half yards of thirty-six-inch material. This is a good model for wash fabrics, because it is so simple

No. 1788—Yoke Play Dress with Bloomers

Pattern cut for 2, 4, 6 and 8 year sizes. Quantity of material required for medium size, or 6 years, five and one-fourth yards of twenty-two-inch material, or three and one-fourth yards of thirty-six-inch material, with one-half yard of all-over embroidery

No. 2000—Child's Drawers and Waist

Pattern cut for 1, 2, 4, 6, 8 and 10 year sizes. Quantity of material required for medium size, or 4 years, one and one-fourth yards of thirty-six-inch material, or two and one-eighth yards of twenty-four-inch material. This is an especially good pattern for a child's combination

No. 1999—Child's One-Piece Rompers

Pattern cut for 1, 2 and 4 year sizes. Quantity of material required for medium size, or two years, two yards of twenty-seven-inch material, or one and one-half yards of thirty-six-inch material. For play-time, rompers are very satisfactory

The dress pattern, No. 2003 and No. 2004, shown in the center of this page is an especially attractive one, though very simple in style. It may be developed in any of this season's wash fabrics or silks



No. 2003
No. 2004

No. 1955—Boy's Panel Dress with Knickerbockers

Pattern cut for 1, 2 and 4 year sizes. Quantity of material required for medium size, or 2 years, four and one-fourth yards of twenty-four-inch material, or two and three-fourths yards of thirty-six-inch material. Use gingham or chambray for these knickerbockers

No. 1791—Girl's Coat with Wide Collar

Pattern cut for 2, 4, 6, 8 and 10 year sizes. Quantity of material required for medium size, or 6 years, four and one-half yards of twenty-seven-inch material, or two and five-eighths yards of forty-four-inch material, with one yard of all-over embroidery

No. 2003—Collarless Waist, Buttoned in Front

Cut for 32, 34, 36, 38, 40 and 42 inch bust measures. Quantity of material required for 36-inch bust, one and one-fourth yards of thirty-six-inch material, with one and one-fourth yards of contrasting material, one-half yard for girle and one yard of lace banding

No. 2004—Seven-Gored Skirt, Buttoned in Front

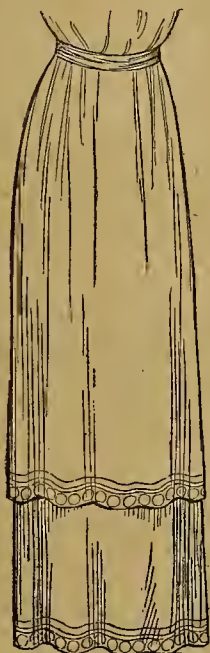
Cut for 22, 24, 26, 28, 30 and 32 inch waist measures. Length of skirt, 40 inches. Quantity of material required for medium size, or 26-inch waist, four and three-fourths yards of thirty-six-inch material, with two and one-half yards of lace banding, three and one-half inches wide, for trimming



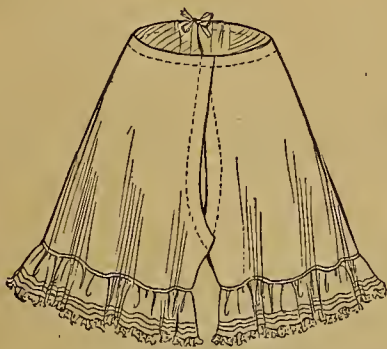
No. 1769

No. 1769—Double-Breasted Wrapper, High or Low Neck

Pattern cut for 32, 34, 36, 38, 40, 42 and 44 inch bust measures. Quantity of material required for medium size, or 36-inch bust, nine and one-fourth yards of twenty-seven-inch material, or seven and one-fourth yards of thirty-six-inch material. If the flounce is used, an additional one and three-eighths yards of twenty-seven-inch, or one and one-eighth yards of thirty-six-inch material, will be required. The cut at left of caption shows the high-neck wrapper

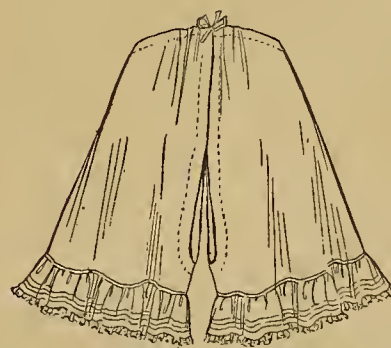


No. 1806



No. 1932—Open Drawers Fitted without Darts

Pattern cut for 22, 24, 26, 28, 30, 32, 34 and 36 inch waist measures. Material required for 26-inch waist, four and seven-eighths yards of twenty-two-inch material, or two and three-fourths yards of thirty-six-inch material. When ruffles are omitted, two yards less of twenty-two-inch material, or one and one-fourth yards less of thirty-six-inch material, will be required, and four and one-half yards of embroidery



This illustration shows the back view of pattern No. 1932, which is a very simple model to make up. There are no darts, for the drawers are so cut that they fit smoothly over the hips. They may be made with or without the ruffles. Very pretty ruffles may be made of dotted or cross-barred dimity finished with narrow lace edging and a few fine tucks. Where the ruffles join the drawers, the seam may be covered with a feather-stitched narrow band

No. 1822

No. 1806—Skirt with Long Tunic

Pattern cut for 22, 24, 26, 28 and 30 inch waist measures. Quantity of material required for medium size, or 26-inch waist, six and one-fourth yards of thirty-six-inch material. This is a very good pattern for thin summer fabrics; cotton voiles, marquisettes and the sheer wash fabrics would all develop attractively in this model. The bottom of the skirt and tunic may be trimmed with wide embroidery, braid or silk bands



No. 1806

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We will gladly send, without charge, the pattern for any one of the attractive designs shown on this page, if you will get one of your neighbors who is not now a reader of FARM AND FIRESIDE, to give you his subscription for one year at our Special Club-Raiser Rate of 35 cents. Send us the money and the name of the new subscriber, and we will give you as a reward for getting the subscription any one pattern shown on this page. Send to FARM AND FIRESIDE, Springfield, Ohio.

No. 1822—Six-Gored Walking Skirt

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No. 1822

How Mrs. Robinson Makes Soap

It is an easy matter for any woman to make pure white soap for all household uses. Soap that's better than the best and cheaper than the cheapest you can buy.

Mrs. J. T. Robinson, of Bloomington, Neb., has written us a letter telling us just how she makes soap:

Pennsylvania Salt Mfg. Co., Philadelphia, Pa.
Dear Sirs:—I have a recipe which I think is less trouble for making hard soap from scraps of bacon rind and refuse grease than any other. I have used your Lewis' Lye for thirteen years and used this same recipe. I can make two large kettles of hard soap in two hours after it is prepared the night before.

Now, in regard to recipe, it just includes scrap meats, such as bacon rinds, etc., which farmers' wives accumulate and claim to have so much trouble to work into soap. Soap is much easier made from oil. My recipe falls with other Lyes—can use none but

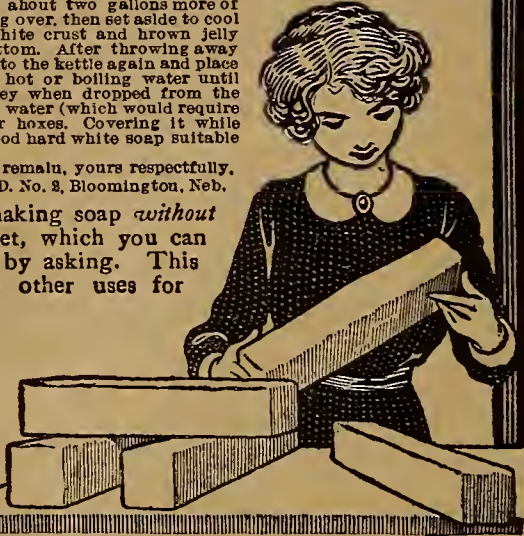
Lewis' Lye The Standard for Half a Century

First, I prepare my soap the day before. Pour two gallons of water into an iron kettle and empty three cans of Lewis' Lye into it. Let cool an hour, or longer won't matter. Then place on the stove and throw in fourteen pounds of scraps. Let this boil until every particle of the meat is dissolved. Add about two gallons more of water from time to time to keep from boiling over, then set aside to cool until the next day. Then skim off the white crust and brown jelly together, leaving the sediment in the bottom. After throwing away sediment and washing kettle, put all back into the kettle again and place on stove and boil two hours. Then add hot or boiling water until soap becomes the consistency of thick honey when dropped from the stick, being careful not to add too much water (which would require more boiling.) Then pour it into moulds or boxes. Covering it while cooling adds to its quality. This makes a good hard white soap suitable for washing or scrubbing.

Wishing you success with this recipe, I remain, yours respectfully,
MRS. J. T. ROBINSON, R. F. D. No. 2, Bloomington, Neb.

The regular Lewis' recipe for making soap without boiling is given in our free booklet, which you can get from your grocer or from us by asking. This book also tells of the many other uses for Lewis' Lye around the home.

PENNSYLVANIA SALT
MFG. CO.
Manufacturing Chemists
PHILADELPHIA



Another Lesson in Irish Crochet

By Evaline Holbrook

EDITOR'S NOTE—The Irish crochet patterns which are illustrated on this page are of the simplest possible execution. In none of them is a padding thread used, and their development is entirely within the powers of the woman who knows no more than the most ordinary forms of crochet.

Many enthusiasts are asking FARM AND FIRESIDE for new patterns and ideas for this most fascinating work. The present rage for Irish crochet makes it possible for any woman to make for herself many articles of real lace. The only hindrance lies in the fact that some of the stitches are so very different from ordinary crocheted lace that the experienced needlewoman frequently was puzzled by their seeming intricacy.

In the present series of lessons Miss Holbrook endeavors to make plain all the difficult stitches.

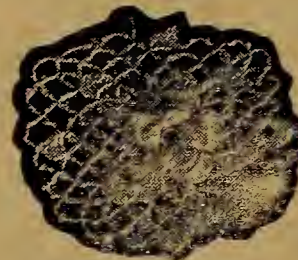
To obtain full directions for making these Irish crochet stitches, here shown, send six cents in stamps and a stamped and self-addressed envelope to Evaline Holbrook, care FARM AND FIRESIDE, Springfield, Ohio.

Miss Holbrook will be pleased to answer any inquiries from our readers in regard to Irish crochet. For an immediate reply, enclose a stamped and self-addressed envelope with each request. It is Miss Holbrook's desire to make her work helpful and practical, and all inquiries will be answered promptly.

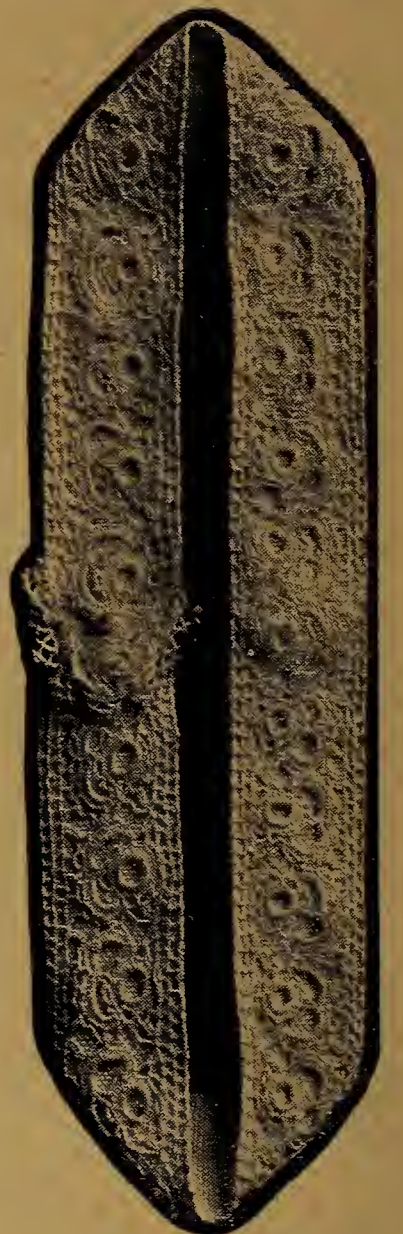


A Crocheted Jabot

The lower part of this jabot is made of three motifs or medallions tacked together. They are made alike, their only difference being due to the difference in size. They may be used separately as dress-trimmings.



Rose Medallion



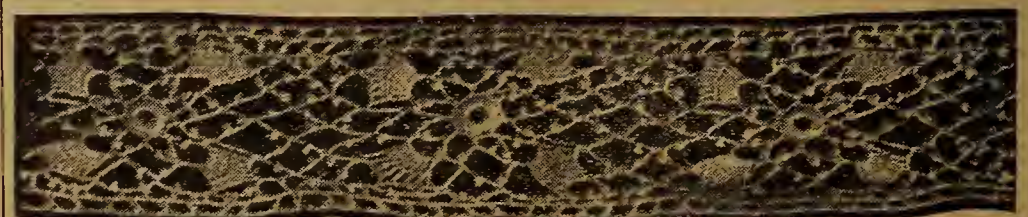
A Crocheted Belt



Pointed Irish Edge



Baby Irish Edging



Irish Insertion

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If I Had a Little Girl
By Cora A. Matson Dolson

I wish that I was big folk
And grown up, just like you,
And had a little girl like me—
I'll tell you what I'd do.

And I would give my little girl
The nicest things to eat:
Ice-cream and candy, peanuts, too,
And cake and pie and meat.

I'd let her stay up every night
As long as anyone,
And wouldn't say, "We'll go to bed
With birds and with the sun."

I'd let her wear her nicest dress
And go barefooted, too;
And that is every single thing,
I think, I'd have her do.

SUNDAY READING

"Dummy Display"

By Eliot White

A SHORT time since I had occasion to make a purchase in a certain New York City drug-store. It was toward the close of a winter afternoon, and the lights had been turned on in the show-windows. As I was about to open the door, I paused a moment, interested to watch the hurrying procession of people passing on the sidewalk, just beyond the broad plate-glass window. It was the "rush hour," and the near-by subway entrances, elevated-railroad stairs and surface cars were all drawing the crowds of workers as powerful magnets attract scattered metal filings to heap about their poles.

This moment's pause, with my hand on the door-latch, let me see what I should otherwise have missed. The lights in the window, as they shone across the back of a great pile of candy-boxes below, revealed these words stamped on them where they could not be seen from the outside: "Dummy Display"!

Very tempting the boxes had looked at first, tied with the bright ribbons, and announcing in gilt letters "So-and-So's Ideal Confections," or something of the kind. And so many of them, too, it seemed that the passing throngs could have turned aside here to buy, for some time, without exhausting the supply.

And now to find they were empty, for all their fresh ribbons and gaudy lettering! "Dummy Display"! What a brief declaration, and yet how completely it disclosed the boxes' "character"!

I could imagine how delighted the crowd outside would have been if the storekeeper had called to them, "Help yourselves to my candy, good people, free of charge!" A stampede would have followed to secure the boxes, for a city throng does not wait for a second invitation to secure "something for nothing."

And then I could picture the disgust of those who were first to grasp the boxes, when they felt them empty, and turning them over read the telltale inscription I had just seen from inside the store, "Dummy Display." Ribbons and all, the hollow containers would have been flung into the gutter and trampled underfoot, and indeed the storekeeper might have counted himself fortunate if stones had not begun flying from unseen hands in the crowd and broken his window in revenge for the hoax.

As I left the store and joined the sidewalk procession on my homeward way, I thought again and again of the showy, empty boxes, until their concealed motto came to have a meaning applicable to much more than store-windows.



For is it not true of all kinds of articles we buy in good faith, that some of them are honest, and prove in use what their appearance promised; but some of them—all too many, we are ready to say—turn out to be little more than "Dummy Display"? These were evidently made to sell, not to give the buyer satisfaction; they fall to pieces, or fade, or split, or decay, or otherwise confess themselves frauds and impositions. The unfortunate owner perhaps uses the expressive phrase about himself that he "got stuck," and his feeling of injury is increased when he thinks of the maker of the article somewhere chuckling over his ability to palm off, as good value, what he all the time knew was at least half "Dummy Display."

But at any rate such deceptive dealing works out its own final destruction, however slowly. The cheating seller, no matter what he furnishes, will sooner or later be branded as an imposter, whose "goods" would better be called "bads," and he will be shunned accordingly.

We might well wish that this process were quicker than it is now, and that the fraudulent dealers could at once be separated from the honest. But doubtless this is another case of the parable of the "Wheat and the Tares," where both must grow together for a time till the inevitable Day of Separation. And so the honest learn to keep honest, not just because it pays, but because "It's better being true than false."

Now not only does this apply to things bought and sold, but we regret to acknowledge how frequently people themselves are more or less "Dummy Display." Things to wear—fabrics, ornaments, jewelry, and the like,—what almost unlimited opportunities people can find in these to "bear false witness"! On the other hand, what confidence we at once begin to feel in a person whose taste is shown in honest apparel, no matter how simple!

But it is when we come to human character itself that we must confess "Dummy Display" to appear in its worst possible form. The boastful, whose claims have no real support on the shifting sands of their inborn cowardice; the pretenders to affection, whose soft manners and persuasive words mask a greedy longing to gain evil control over the trustful; the mock religious, who, as the Apostle wrote long ago, use their "piety" for a "cloak of maliciousness," and after "worshiping God" on Sunday grind the faces of those in their employ, by oppression and greed, for the next six days; the domineering, who are bland and ingratiating among strangers, but who throw off their masks in their homes and compel those bound to them in closest relationships to obey their whims, and submit even to cruelties and indignities; these, and in fact all other kinds of hypocrites and dissemblers are, among their sincerer fellow men and women, exactly what the finely beribboned candy-boxes were stamped in the druggist's window, "Dummy Display." Indeed, they are worse than the boxes, for these were only empty, while deceitful hearts are full of harm.

Ah, what a relief it is, after discouraging contact with any of the "Dummy Displays" of life, to find once more the trustworthy and genuine among our fellows! How much more precious true friends become when we have found in bitter disappointment the possibilities of insincerity! And finally, how inestimably worth while this hard discipline teaches us to count our own opportunities to renounce the falsehood of life, and embrace its shining truth!

Now, there is that old friend who moved out of the neighborhood a year or two ago. You said when he went away, "I'll write to you," but you haven't done it. He feels bad about it. Get out your pen, ink and paper, and send him a good long letter, filled to the last corner with the story of the old home since he went away. You never will know how much joy that will bring him. And some day you will get a letter back that will be laid away as one of your choicest treasures.

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Department M



OUR YOUNG FOLKS' DEPARTMENT

Conducted by Cousin Sally



The Children's Flower-Garden

By Samuel Armstrong Hamilton



HOW many of the children who read this department have a garden for their very own? I am sure that all would like to have, and so you should. Even the poor little boys and girls in the city who belong to the School Garden League, have little garden-plots in the parks and vacant lots, and fine gardens they were, when I saw them in New York, last summer. There is no reason why the children in the towns, and on the farms, where land is plentiful, should not have them, and I know that if you ask father or big brother to read this article, they will see that you get a plot for your own use, and in addition will have it manured and dug for you. But do not let them rake it, for there your own work begins! Boys over ten can usually dig their own, of course.

A good size for a boy or girl from eight to twelve years is a bed eight by twelve feet. There should be a walk or path all around it, and it should be at least ten inches above the walk so that the water will drain from it easily. Have the soil covered with well-rotted manure and dug deep down to the subsoil, three feet at a time, and, standing at one end, with the rake in hand go over it with a "chopping" motion, as though you were chopping the soil with the rake, which is what you will be doing. This breaks up the tight clods, and makes the soil mellow, and the raking easy. At the corners of the plot, drive stakes so that their tops are ten inches above the walk, and draw a string tight between them. This will be the level for the bed when raked fine. Beginning at the left, rake the soil as fine as sand before trying to form the top of the bed. When it is fine,

In Fun

By Laura Spencer Portor

I've run away from everyone;
I've come down here to hide
With the dear flowers, and grass and birds,
Here in the meadow wide.

And by and by my nurse will say,
"Where can Matilda be!"
And when she's looked, and looked, and looked,
She'll worry dreadfully.



And she will call, and call, and call,
But all the while I'll stay
Here where the bird sings, and the grass
And flowers sway all day.

I'll let her call the whole long day,
I'll play I have not heard.
Oh, no, I *sha'n't*, dear flowers and grass!
You *know* I won't, dear bird!

Forcing Bloom

By Rose Seelye-Miller

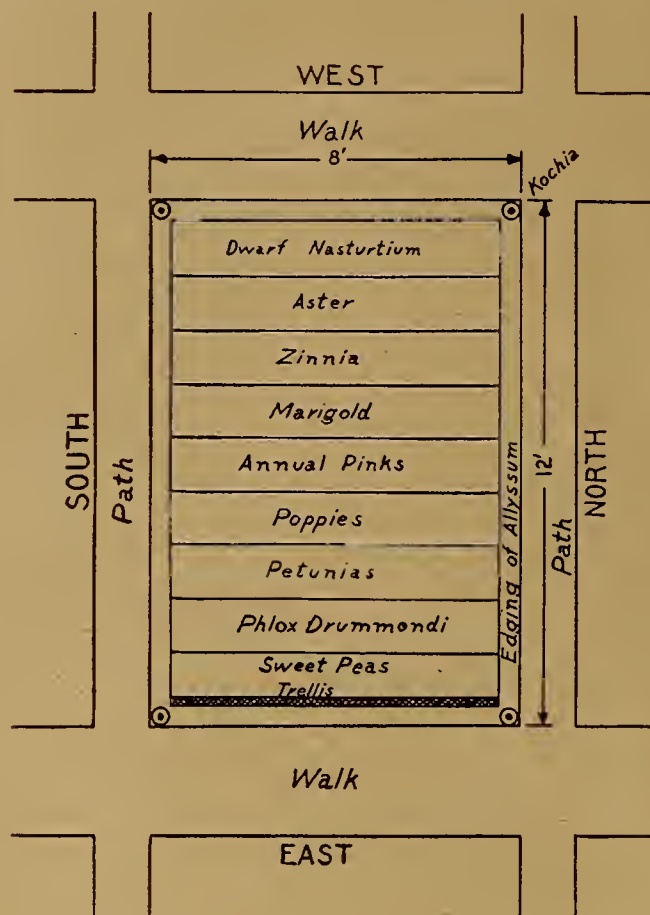
BRANCHES cut from apple, pear, plum, cherry, lilac, snowball, flowering currant, etc., may be brought into very early bloom by placing them in water near a sunny window, or a warm stove-pipe, or radiator. Very large branches may be cut, and the buds will expand and come into bloom in a few weeks, thus giving one the beauty of the bloom at a time when it is novel and highly appreciated. The branches thrust into water and placed near a window do not bloom quite as quickly as those placed near a stove-pipe or radiator, as they receive less heat, but the window-grown plants are stronger.

Some may argue that the cutting of branches from fruit-trees is a waste, but all know that only a small proportion of the blossoms ever mature to fruit, and all the branches desired for forcing will not make any practicable difference with the income of the fruit.

level even with the top of the string. As a further guide, tie stones to either end of a piece of string ten feet long, and stretch it across the string between the posts. The stones will hold it tightly in place, and it can be moved toward you to give you the level of the top of the bed as you advance with the raking. When the first three feet, or "land," is done, others should be dug and raked.

The digging should not be done until the soil is "mellow," which you can tell for yourselves. Take a handful fresh from the ground, and squeeze it tightly. If it stays in a ball, it is too soon to dig. If it partly opens like a wet sponge when squeezed, it is ready for digging. It is better too dry than too wet. Have three stakes driven in one end of the plot so they will extend four feet above the soil for the sweet-pea vines, and dig a trench a foot deep between them for the seed, which will be the first thing planted.

Of course, children, you will want to plant your own garden-plot yourselves. It would not be *your* garden if



you did not; and you will want to weed it, and finally pick the flowers; certainly no one will get the chance to do that! We will begin at the east end of the garden, and plant the sweet peas. These should be of the *Spencer* type, and of such colors as you prefer. Lay the seeds in the bottom of the trench in a double row, four inches apart, and three inches apart in the row. With your small hoe, cover the seeds with half an inch of soil, and then walk along in the trench to press them down very solid, and you will get good germination. You can run strings along between the stakes at any time before the first of May, for their support. When the vines get two inches above the top of the trench, with your hands fill the soil in about them, not quite to the top, and tread solid about them.

Now, children, as all the seeds will need pressing down, and tramping them down would mar the appearance of the bed, ask father for the loan of a piece of board six inches wide and eight feet long for this purpose, for the other flowers.

We next plant the *phlox Drummondii*, which are beautiful annual flowers, dwarf and of many colors. Plant a few of each color together—not mixed—in little "drills" or shallow trenches two inches deep, and four inches apart, as, when so planted, they are more easy to weed than when planted "broadcast," or every-which-way. Drop the seeds two inches apart in the drills, smooth them level with the hands (you see you must get your hands in the soil to make a good gardener), and lay the board along the drill, and walk evenly over it, which will make a good contact between the soil and the seed, and make it grow better and more surely.

In the next space we will put *petunias*, which should be planted differently from the phlox. Make a tiny hole every foot across the bed (making two of them) with the small end of the hoe; half an inch deep will be about right. In these drop four seeds of the *petunia*, and scarcely cover them, and press with the board, pouring a little water on afterward. These seeds are hard to germinate in the open ground. When they come up, let the best one remain and take out all others.

The *poppies*, which we will sow in the next space, are a hardy race, and do best when sown broadcast. Take what you can hold between the thumb and two fingers of the hand, and with a circular motion *toward* you, release the seeds one at a time. If you find this hard to do, try it with sand, first, and you will soon learn. When planted, lay the board down and walk over it, then move it and repeat until all the poppy-seeds have been pressed in. When they come up, thin them to four

inches apart, and they will shade the weeds so that they will not bother you any more after the first weeding.

The *pinks*, which are to be planted in the center space, should be planted in the little drills, but do not make them more than half an inch deep, and barely cover them with the soil, using the hands. Four inches apart is about right, dropping three seeds. They are to be thinned out to one, when two inches high.

The *marigolds*, which are one of the finest of all annual flowers, require deeper planting, say about an inch, and they should be planted in drills a foot apart, say two rows across the bed and two inches apart in the drill. Cover, and press with the board, real hard. When they are an inch high, thin out to four inches, and when three inches high, to a foot, and keep the soil well trod about them, but *do not do it after a rain until the soil is nearly dry*.

The *zinnias*, *asters* and *nasturtiums* are treated the same. Plant in drills four inches apart, and thin to eight inches when three inches high. Make the drills a foot apart. This will, when blooming, make the spaces solid masses of colors of these flowers.

Now, children, one of the greatest pleasures that a gardener enjoys is selecting his own seeds, and I want you to do this. Get father's seed-catalogue, hunt out the flowers named, and select your own colors. Write your order on the blank enclosed, and send to him with a *money-order* for the cost of the seeds.

I am keeping the edging of the bed to the last. This should be six to eight inches wide, and may be of *sweet allyssum*, or, if preferred, *coleus*, or *alternanthera*, all of which should be sown broadcast, and well pressed down. When they get two inches high, thin to two inches apart, as they are intended to be thick.

I am sure that you will find the work of the garden a pleasure—not to speak of the joy of the beautiful flowers all summer, for all those varieties that I have named above will bloom throughout the whole season!

The Secret

By Laura Spencer Portor

It's just a little lovely bunch
Of flowers that I got,
When I was way off yonder
In the big, old pasture-lot.

They're growing there so many;
But no one knows, you see;
Only the sun and birds and clouds,
And the butterflies and me.



I picked and picked; you'd never guess
I'd taken them at all.
There were such lots it did not show;
Then I heard someone call.

And I ran home. So no one knows,
The secret yet, you see;
Only the sun and birds and clouds
And butterflies and me.

Queerly Shaped Arrow-Heads

By Beatrice M. Parker

THE ordinary Indian arrow-heads are triangular in shape and as flat as it was possible to get them. There have been discovered, however, a number of very curious arrow-heads in New York and New Jersey. These are spiral in shape, and scientists seem to think that they were shaped in that way so as to get a rotary motion and increase their effectiveness. The arrow-heads are rather crude in form, and yet they show that the Indians had some idea of the meaning of rifle-barrels, and probably they tried to copy the effectiveness by making their arrow-heads spiral in shape and slightly grooved so as to increase the twisting motion.

The Third-Reader Class

The Third Lesson for Beginners in Agriculture

"Written So You Can Understand It"



THE Romance of the Soil, by Edgar L. Vincent. Drawing on Nature's Bank—Would it not be delightful if the mail should bring you some morning a letter from a dear friend saying: "I have put in one of the banks of your town a sum of money to use just as you like. The little book I hand you with this letter will show you the name

of the bank in which I have deposited the money, as well as the amount. I am also enclosing some checks that you are to fill out when you would like to draw some of the money. Sign, and present at the window of the bank cashier."

How your heart would bound at the thought of having so much money, all your own, and how thankful you would be to the kind friend who gave it to you! But if you kept drawing out this money, even were the amount each time very small, unless you put back as much as you drew out, or someone did so for you, there would surely come a day when the man at the bank window would say when you passed in your check, "I am sorry to tell you, but your money is all gone now. I cannot honor this check!" And you would go away sad.

This is just what happens when we keep on drawing on Nature's bank without in some way putting back something to take the place of what we used up.

Now, every plant as it grows takes something away from the locked-up fertility. Some plants take a little more of one thing than others do, but all take little bits of different things. For a time after they began to be farmers, men did not pay much attention to this wonderful fact in nature. They were just glad they had the bank-book, with permission to draw as they might wish; and they did not stop to think that there ever would be a day when their checks would be handed back to them unpaid. They went on just as though the source of supply were to be unending.

How could it be that it would make the earth any the poorer, just by growing crops of corn or wheat or any kind of vegetables? And yet these things, through the little roots they send down into the earth and through the leaves which all plants have, surely do draw up in a most wonderful way every year many pounds of the elements we have found to be stored away in the earth. For example, a man who kept a careful account of his work and the effect it had upon the soil, found that a crop of barley grown on the same land for a number of years drew out of the soil on an average 18.3 pounds of nitrogen every year when he did not add any mineral fertilizer to the soil. Other crops took varying amounts from the soil, but perhaps the most surprising result was that reported from growing beans. This crop took from the earth 31.3 pounds of nitrogen every year. Other things were at the same time taken out of Nature's bank, such as water in great amount, phosphoric acid and potash.

And this is what has been going on ever since our farms began to grow crops. And there came a time when men found to their surprise and not a little to their sorrow that they could not get as much corn and wheat and vegetables from an acre of land as they once did. The yield of hay, also, was much smaller than it had been. Thinking of this, they remembered the warning which had been given them so long ago, that they were to do something beside sow and reap and gather into barns; they had a duty to do in the way of keeping the land rich. It was not enough to fill out the checks and hand them in through God's great window. They must put something back into the earth's storehouse. They must till and care for the soil.

So now this is one of the most important things the farmer of our day has to do. He must study the soil, he must know the nature of the crops he grows and what they need to bring the best harvests, and he must understand the best methods of caring for the land of his farm. And there is no more fascinating, no more inspiring, no more profitable thing in all the world than to master the vast possibilities of this old earth of ours.

THE Soil and Its Water, by Paul H. Brown—In my last letter to beginners I told you you were soon to learn something about nitrogen. Nitrogen is one of the things which makes up the air, and yet most plants must get it out of the soil. It is the nitrogen in the soil that makes the strong, healthy, green growth of the crops. If for any

reason the plant-roots cannot get nitrogen out of the soil, the crop loses that rich, green, "growthy" look of healthy plants.

Long before much was known about chemistry, the ancient farmers learned that crops grown after clover were larger and better than others. About fifty years ago a German scholar found out why it was. He learned that there was more nitrogen in the soil after a crop of clover had been grown on it than before; and later it was found out that the little white balls, or "nodules" on the clover-roots are the homes of bacteria which gather nitrogen from the air and leave it in the soil for the crop of the next year. But after clover had been grown off and on for a good many years, it would hardly grow on some fields, and the land was called "clover sick." Really the clover was not sick. The soil was in such bad shape that the little nitrogen-making bacteria could hardly grow. Now why was this? People, then, did not know. But they found out that if they mixed lime into the soil the clover would grow. But why was it? It is only since you can remember that even the great scientists have learned the cause of it.

Now I am trying to tell you about it so that you can understand. Any growing crop takes up from the soil certain things as food, but in taking this plant-food it finds some mixtures that it cannot use, and these are thrown off by the little roots and left in the soil. This mixture left in the soil is often harmful to the next crop of the same kind.

No two crops need just the same kind of plant-food mixtures, and so don't throw off the same things; but the mixture that oats leave in the ground would be harmful to the next crop of oats, or wheat to wheat. But what oats leave is not harmful to wheat.

Now all of our crops throw off these mixtures which they cannot use and they are all different, yet most of the grain crops leave a tiny bit of acid in the soil. Now it is only since you boys and girls have been going to school that our great scientists working in the Department of Soils at Washington have really found out about this acid. They have named it Dihydroxystearic acid. Do you suppose you can remember that name? That compound acid is left in the soil by many of our crops, and when there is quite a little of that acid in the soil, it hinders the nitrogen-making bacteria in their growth; and when they don't grow well, the clover doesn't grow well, either. So the nitrogen in the soil gets low, and that makes all the crops small and weakly. What we must learn to do is to prepare the soil so as to get rid of this acid so the bacteria can grow, then the supply of nitrogen will be put back in the soil. We have learned that lime helps to break down this acid compound. I will tell you about that another time.

See if you can answer these questions:

What is nitrogen?

How do crops look when there is not enough nitrogen in the soil?

How can we put more nitrogen in the soil?

Why is a soil "clover sick"?

What does lime do?

It has been disclosed by the thermometer that registers the temperature, that five o'clock in the morning is the coldest hour of an ordinary day in all seasons.

Wireless telephoning from trains in rapid motion has been tried and found to be a real success in England and France.

Scientists and naturalists who have closely observed the spider weaving a web, declare a single spider of certain species is able to weave considerably over two miles of web.



The Spelling Lesson

Per-mis-sion The act of permitting or allowing; consent

Fer-til-i-zer A material for fertilizing land, as guano manure and phosphate of lime

Fas-ci-na-ting Exercising an influence that charms or bewitches

Phos-phor-ic Pertaining to or derived from phosphorus

Di-hy-drox-y-ste-ar-ic

Sci-en-tist One versed in science



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- 17. Baby Carriages.
- 19. Sewing Machines.
- 24. Underwear Samples.
- 27. Baby's Dress and Toilet.
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The Second Mother

By Alice M. Ashton

I DO hope she will be kind to the child," sighed one of the mothers, doubtfully.

"I do hope everyone will have the good sense not to interfere," returned a companion, emphatically.

"Why, what can you mean?" demanded several at once.

"Why, I mean," returned the woman, earnestly, "that there is seldom an instance of a child and a second mother (I do not like the word step-mother) where people do not interfere."

"My sister-in-law struck the key-note one day while visiting me. It was one of those trying days—everything had gone wrong, and the children proved the 'last straw' when they came home to luncheon. As I watched them trudging away to their afternoon school, my conscience smote me.

"I have been very impatient," I confessed. "What can you think of me?"

"Oh," she laughed, "it is all right, as you are their own mother—but if you had been a step-mother?" Her look was eloquent.

"How true that is. Who ever thinks of sympathizing with a child over its mother's impatience, except in extreme cases—and who ever fails to do so in the case of the child and its step-mother?"

"Mrs. B—— and little James have never had a fair chance to get on together. His nurse had filled his little mind with prejudice before his new mother came. And the whole town has taken sides, as it were.

"Who is that at your house?" asked one mother of little James.

"It is Janet G——," answered this five-year-old baby, "and I wish she'd go away!"

"That irresponsible remark has been repeated and distorted a hundred times. Mrs. B——'s friends have taken it back to her in varied forms. And unless she is a very sensible woman, such things are going eventually to affect her feelings toward her step-child.

"What can be more deplorable than questioning a little child about private affairs, or putting unkind ideas into its innocent mind, or repeating its unguarded remarks?"

Some of the mothers present had the grace to look uncomfortable.

"I feel very strongly about this," continued the little mother bravely, "because I have suffered much from just this cause."

"When my second mother came, I found it difficult at first to call her 'Mother.' This difficulty was increased a hundredfold by knowing people were listening and questioning!

"Is your step-mother good to you?" I was asked many times. One day I chanced to feel a little injured about something—and what child does not feel thus toward even its own mother occasionally,—and that question took root in my mind!

"Your husband is very fond of his child," people said to Mother. "She is a picture of her poor mother!" And they enumerated my childish charms. My second mother was a kind-hearted and impulsive woman, with a strong underlying jealousy which all this aroused.

"People alternately carried to her my most innocent remarks as having covert meanings, and advised and sympathized with me!

"Eventually we became estranged, and for years I was deprived of my home, and my parents' care and protection. Father did the best he could for us all, but it broke his heart!

"At last circumstances brought us together, and she has been a real mother to me ever since.

"All this misery was caused by the uncalled-for interference of outsiders.

"Do we ask children impudent questions about their own mothers?"

"Do we rush to a child's own mother with its every shortcoming?"

"Why should we expect a second mother to exhibit more patience or tact or love for a child than its own mother did?"

Caleb's Bargain

[CONTINUED FROM PAGE 22]

of light flashed into the road. Gypsy reared, turned, and leaped across the roadside ditch. Elsie screamed and was thrown out, and the colt and cart were held entangled in the underbrush and fence beyond.

"Hi there, something spilled," came from the automobile, as it came to a stop and the two men got out and went back.

"Here's a girl," said one, and they helped Elsie out of the ditch.

"Mama," she cried, and burst out crying.

"Is your mother hurt?" said one of the men, turning quickly to look for her.

"Was your mother with you?"

Elsie shook her head, still boo-hooing.

"Who was with you?" said the man. The colt was plunging and thrashing in a way to demand attention.

"Nobody," said Elsie between her sobs.

"You out alone with that rig at this time of night?" said the man sharply. Then turning, he said, "John, let's see what we can do for that horse."

They went to Gypsy and tried to disentangle her, but their efforts made her the more frantic. In an instant Elsie was at Gypsy's head.

"Stop hurting her," she cried; and, more deftly than the men, she undid the buckles and loosened the straps. Gypsy struggled and plunged and crawled out free, and they stood in the road together, the girl and the colt. For a minute the two men looked at them, then the elder said, "Did your father send you off with that rig at this time of night?"

Elsie shook her head. "He warn't home."

"Did your mother send you?"

"She said I'd get killed with the automobiles," said Elsie, beginning again to cry.

"Well, I'm going to take you home to your mother," said the Judge smiling a little.

"No, no," cried Elsie, clinging to the colt.

"I'm going on to get a piano."

"Get a piano," said the man; "you won't find a piano in the woods at this time of night."

The suggestion of ridicule brought Elsie to her senses.

"I know that," she said, "but there's a lot of trouble, and father's got to be home in the morning, or else he won't have money to buy me anything, and he took the horses with him, and we don't have any telephone, and so I started with Gypsy to tell him to come home right away. My father is Caleb Field, and we live on Jack Dorkins' farm, and I want to go to Uncle Sim's in Canton."

"Oh, well, we'll take you to your father, if that is where you want to go. Come get in. John, you lead along the colt, and we'll leave him at the first barn-yard," said the Judge. He was getting interested. He knew Jack Dorkins, and during the ride he got the whole story from Elsie.

It was not long after midnight when Elsie reached her Uncle Sim's, and before day-break Caleb and Sim started with their teams. In the morning before the dew was off the grass the musical click-click of two mowing-machines resounded over the meadows and up the banks. Jack Dorkins thought he heard it and went out on top of the hill

to see if it were true, and he smiled a sinister smile and patted the wound upon his face when he saw the machines mowing the grass that belonged to himself and Caleb Field.

In the twilight that evening Caleb and his wife and brother rested on the porch in sight of the field, with its center of standing grass and its clean-cut border.

"It's mighty lucky Elsie and the colt came out so well as they did. Elsie'll be over her shake-up in a day or two, and the colt wasn't cut so bad as I'd thought she'd been."

Caleb's pipe puffed intermittently, but he said nothing, and Sim went on, "When your year is out, you'd better throw up your lease and get out. The longer you stay here, the poorer you'll be."

"You made money here," Caleb stammered. "I know I did, but 'twas different with Jacob Larkins. We never wasted time hating one another, we never got to suspecting one another so that we had to have writings. He used to say that if a man wanted to be mean, writings wouldn't hold him. We dealt square and worked together to pull the dollars out of this farm, and we did it. But you'll never make anything here with Dorkins. Your riled-up temper will settle over everything like dust in a time of drought. Just look at that tobacco out there. That alone is enough to keep a man in a swearing condition from the time you put in the seed until you take it off the pole in the fall. No man can raise tobacco and fight a landlord at the same time and do both of 'em well."

Sim paused and looked at Caleb. Some way he seemed all shrunk up. Luella was at his side. Her expression of sorrow and disappointment was upheld by one of peaceful strength. Perhaps it was because she restrained herself and did not say, "I told you so." Neither of them said anything, and Sim went on pitilessly, "You see, Caleb, Dorkins has been all around and showed himself, and everyone knows about your scrapping yesterday morning. Folks won't forget it, and, what's worse, you and he won't forget it, either. You are going to spend the energy you ought to spend in bringing out the surplus profits hating one another. Things won't grow and bad luck'll keep alongside of you all the time. You'd better get out and go somewhere where you like folks and can trust 'em."

Caleb did not have to leave the Willow Brook Farm after all. The Judge, whose automobile upset Elsie on her errand, enjoyed a good story when it came his way. He put a notice of the accident in the local paper and privately gave an account of it to his friends with the salient points brought out in a way to make it interesting. Under the Judge's rendering, the story did not make Jack Dorkins any more popular, and in the fall he accepted an offer for his farm and sold it subject to lease. The new owner and Caleb worked together harmoniously, and the earth seemed to respond to their touch, the winds and rains to yield to their will, and Peace and Abundance came hand in hand and abode at Willow Brook Farm.

Madam!

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The liquid bubbly lather of Jap Rose Soap comes from the vegetable oils which soften the water as thoroughly as they soften the skin. The ease and abundance with which the liquid bubbles spring from Jap Rose causes thousands to like it from the first. But the skin improving effects make them prize it more highly the longer they use it.

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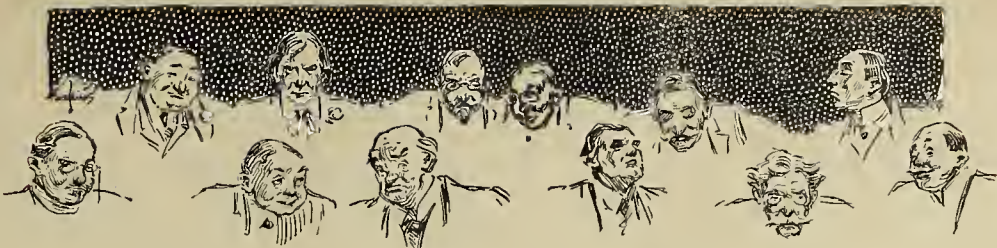
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Poultry Success gives every month pointers and ideas for producing eggs and raising fowl that means success. It is edited by the best authorities on Poultry in America. It is filled with secrets of feed mixtures, quick growing chicks, ideas that men hesitate to part with. Poultry Success has one motto—Make the hen attend strictly to business. It is invaluable to the poultry raiser.

ORDER TO-DAY

You should send in your order to-day, because our special prices with the above publishers expire April 30th.

Farm and Fireside
Springfield, Ohio



Tried by His Peers

By Bolton Hall



"I AM so glad that you are back from that horrid jury. You won't have to serve again this year, will you, dear?" murmured Mrs. Brownstone to her liege lord.

"No, thank goodness. But it was not so bad this time. I never served with a more intelligent, congenial set of fellows in my life."

"You don't always say that of a jury."

"Indeed, no; this was remarkable in that respect. One was a lawyer, one a physician, one a broker, one a preacher, one an editor, one a teacher, one a contractor, two were real-estate men, one an actor, one a man of leisure and myself. It was a picked lot, you might say."

"I should say it was," assented Mrs. Brownstone.

"Who was the criminal?"

"Oh, a fellow you couldn't understand, my dear. I didn't myself. He couldn't read or write, and hadn't had much of a chance at any time, his lawyer claimed. One can't really understand much about such people. They're so different. But the law's the law, so we brought in a verdict of 'guilty.'"

"What did he get?"

"Ten years, I think."

"Did he seem to mind?"

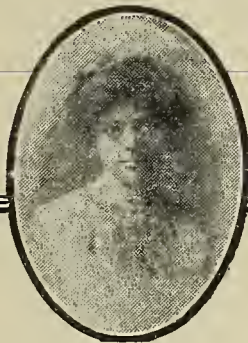
"Why—er—yes; come to think of it, he seemed a good deal broken up. However, one can't help that sort of thing, and the jury itself was a fine body of men. Never enjoyed myself better."

Mrs. Brownstone looked up as if she were going to speak, thought better of it, and stood quietly looking into the fire. Mr. Brownstone yawned, apologized to his wife, who had not noticed the slip, picked up his paper, and settled comfortably into his easy chair with a keen appetite for the news of the day.

Some people suppose that they are thinking over a proposition when they are merely collecting their prejudices against it.

THE GIFT CLUB

Jean West



Secretary

IT SEEMS to me this morning there are more jolly letters from our Gift Club girls than ever before! My desk is overflowing with letters bearing our beautiful monogram. Here are just a few of them. Read this one:

DEAR MISS WEST—
How can you think of such charming things to give us? I received that beautiful bracelet and the handbag, and both are lovely. I certainly am glad that The Gift Club was started, and I am not going to stop until I get every one of the gifts that you have offered us.
M. K., Louisiana.

And here's another:

DEAR JEAN WEST—
I received my presents all right and was very delighted with my locket and chain. I think it is fine that all the girls are so interested in the Club. I'm glad I did not delay in joining.
NETTIE L., North Carolina.

DEAR MISS WEST—
I have received the beautiful clock, and I never can express my thanks for it. It was very stormy that day, and when a knock came at the door, my father opened it, and a boy handed him the package. My father started to open it and handed me the paper piece by piece to tease me. And then came the clock, and I was so delighted!
CHARLOTTE F., New York.

DEAR FRIEND—
The leather handbag came to-day, and I must say that I was very much surprised to see what a beauty it is. I do not know how to thank you for such a beautiful gift. I think The Gift Club is simply fine and, as I've said before, I have only one regret, and that is that I did not join long ago. Your gifts are all so nice, I hardly know which one to select.
MRS. C. M., Ohio.

Be sure to read the next letter!

DEAR MISS WEST—
I received the toilet and manicure set O. K., and to say they were lovely would not be half expressing it. I just can't tell you how delighted I was when

I received them. The surprise you sent me was just dandy. Our Club is perfectly lovely and I'm glad I joined, although I did not have much confidence in it. I am now sending for that little gilt clock. I always had a great desire to earn things for myself and now that I've learned how I am quite sure I shall always be a member of the Club.
M. M. R., Ohio.

Don't miss this one:

DEAR JEAN WEST—
How perfectly grand my manicure-set and child's three-piece set are! You said you had a great surprise for me, and my nice, pretty box of stationery was a glad surprise for me. I am going to give my little niece the child's piece. And, oh, the picture is just beautiful! Hurrah for The Gift Club, and for Miss West! I am so glad I belong. Thank you ever so much.
DOLLIE, Texas.

There! Isn't that a splendid letter? But there are many more just like it. I wish I had space to show them all to you. Here's one more:

DEAR MISS JEAN—
Your letter, also picture and embroidery-set, received. How can you send me such a nice corset-cover and center-piece and the patterns, just for no trouble at all? I am sure all the girls, as well as myself, would like to have one of your pictures for an extra present to work for.
L. S., Indiana.

If you are not yet a member of The Gift Club and have not written me to find out how our girls earn their wonderful presents, I'm sure you will do so now. Your curiosity must have reached the boiling-point by this time. Just a line of inquiry on a postal card will bring you a prompt reply. Write to-day before you forget it.

Jean West

Secretary, The Gift Club,
FARM AND FIRESIDE,
Springfield, Ohio.

HOW TO TELL

"Cravenette"

REG. U. S. PAT. OFF.

RAIN COATS



This circular registered trade mark is stamped on the inside and a Silk Cravenette Label is sewed at the collar or elsewhere.

"None Genuine Without Them"

The Cravenette Proof is applied to many kinds of cloth suitable for men's, women's and children's outer garments in light, medium and heavy weights for all seasons of the year, and are for wear in rain or shine.

"Rain will neither wet nor spot them."

Keep you warm and dry in cold weather, cool and dry in hot weather.

They contain no rubber, have no disagreeable odor; will not overheat or cause perspiration.

For sale by leading dealers in Men's, Women's and Children's Clothing.

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Cravenette Co., USA
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B. Priestley & Co.

BRADFORD, ENGLAND

A postal to the New York office of B. Priestley & Co. 100 Fifth Ave., will bring interesting booklet.

SAFE & SURE INVESTMENTS

Are the only kind we offer. We sell no speculative securities of any kind—nothing but high-grade

Municipal Bonds
Many of them Tax-Free
The same kind which the U.S. Gov't finds good enough as security for

Postal Bank Deposits
But instead of the 2% the Postal Banks pay, these 4% to 5%
Bonds yield from 4% to 5%
Write for Free Circular

New First Nat'l Bank, Dept. 10, Columbus, O.

AGENTS! BIG PROFITS

The only stropper that stropps any razor diagonally

Brand's patented Automatic Razor Stropper. Automatically puts a perfect edge on any razor, OLD style or SAFETY. Big seller. Every man wants one. Write quick for terms, prices and territory.
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WASHING MADE EASY



Wash and Wring by Power

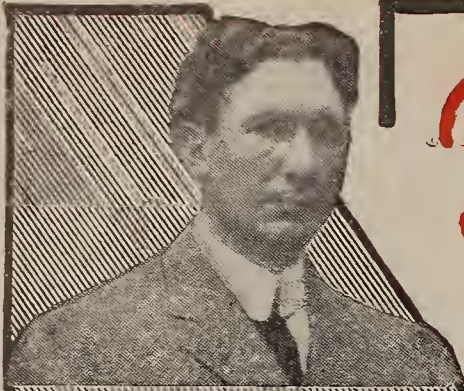
Roanoke Power Washer and Wringer

Save Health, Strength and Nerves

Will do your washing easier, quicker, more thoroughly and economically than any other washer. It cleans more carefully than by hand. It is the only practical, efficient washer with movable power wringer which slides along wash stand and wrings from either wash tub or rinse tub. It is the only two tub power washer made. The friction drives save clothes and machinery. No cogs, chains or sprockets to get caught in. Runs by gasoline engine or electric motor. Recognized as best washer made.

Write for FREE interesting booklet "Washing Made Easy" and name of our nearest dealer.

ALTORFER BROS. CO. Dept. 444 Roanoke, Ill.



H. C. Phelps
President

Phelps' Best Book

Now Ready—Shows Biggest Selection of High Grade Buggies in America

—The Split Hickory Vehicle Man—

Over 150,000 Split Hickory Vehicles Now Giving Most Satisfactory Service

—Over 150,000 Celebrated Split Hickories Sold Direct In 12 Years Proves Positively That Phelps' Way of Selling Vehicles Is Best.

—His Big 1912 Book Shows More Buggies Than 25 Big Town Dealers Could Show You

Phelps prints for you in his book a big map of the U. S. and Canada, showing exactly where over 150,000 Split Hickories are being used. Can and does tell you the names of the owners—probably dozens near you, if you wish to see or write to them.

Phelps' prices are printed in his book right beside every Split Hickory Vehicle—and full line of high grade harness—so you can figure exactly what your made-to-order Split Hickory will cost you, if you keep it after 30 days' road test. Get this book whether you buy of him or not.

If you cannot be absolutely satisfied Phelps don't want you for a buyer. But he wants you for a new customer—to satisfy you at his risk, or not a cent's cost to you.

Try any Buggy Phelps Makes on Hard Roads

30 Days FREE

Return It If Not As Represented
—Guaranteed Two Years If You Keep It

Don't get Split Hickory Vehicles mixed up with any other buggies made—they're entirely different. Higher grade—better style, better trimmed, better painted, longer lived, easier running—that's because they're made to order, just as you want them, when you want them. Why buy a common buggy and pay more for it?

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H. C. Phelps The Ohio Carriage Manufacturing Co.

Pres. Station 23, Columbus, Ohio

Largest Factory in the World Selling Vehicles Direct to Consumer.

PHELPS—the only manufacturer in the United States making vehicles in large quantities to order for individual users—highest grade made—trade-marked Split Hickories—has just finished his 12th annual Big Book and wants to send you a copy.

In His Factory—Phelps stands right over every one of his jobs in the making, and knows that the best materials and expert workmanship go into it.

In His Book—Phelps tells you in his own experienced words, about values—and Phelps knows—and how to avoid weak spots in buggies. He stands right by his Split Hickory jobs, and points out in photographs the parts you ought to examine. Shows you in colors and photographs on page inserts in his book 3 feet across, just exactly what he makes and what he puts into every Split Hickory.

On Your Place—Phelps stands right back of any Split Hickory and you can test it on your own roads behind your own horses 30 days at his risk, and then have two years' guarantee if you keep it.



FREE!

Postage Paid On This Big Book If You Send Your Name On a Postal

Here is one of 125 New Styles—Guaranteed 2 Years. All Shown in this Big 1912 Style Book.



Don't You Want a 30-Day Free Road Test of this Auto Seat Buggy

125 Styles Shown In My Book Made In My Own Factory to your Order Save \$25 and Up On This Buggy

Two Years Guarantee

1912 Model Auto-Seat Split Hickory Special

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4

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THE NATIONAL FARM PAPER

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APRIL 27, 1912

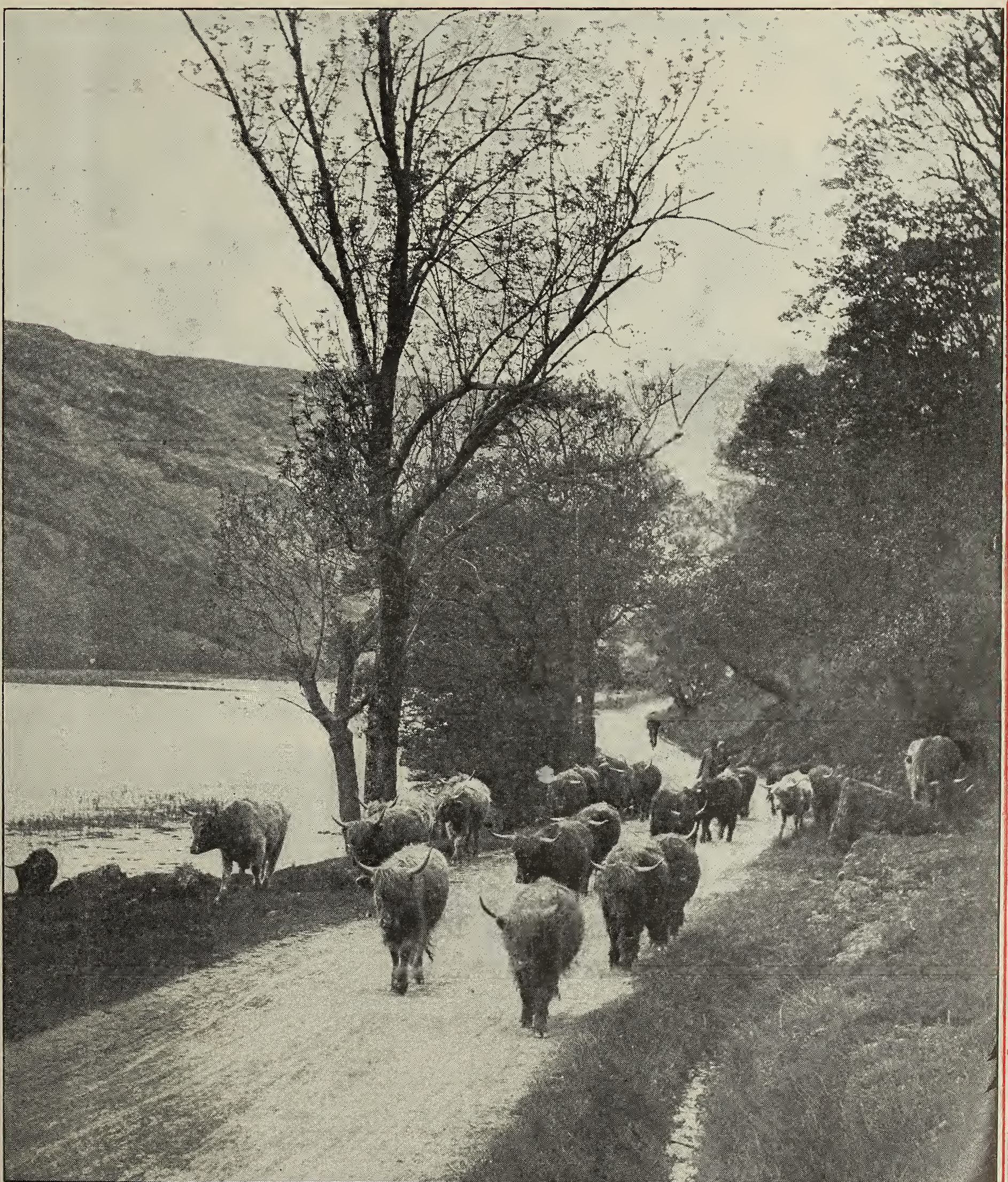


Photo by Levick, N. Y.

Highland Cattle by Loch Lubnaig, Scotland

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and be compelled to pay to your landlord most of your hard-earned profits? Own your own farm. Secure a Free Homestead in Manitoba, Saskatchewan or Alberta, or purchase land in one of these districts and bank a profit of \$10.00 or \$12.00 an acre every year.

Land purchased three years ago at \$10.00 an acre has recently changed hands at \$25.00 an acre. The crops grown on these lands warrant the advance. You can



60 ACRE FARMS IN WESTERN CANADA FREE

by cattle raising, dairying, mixed farming and grain growing in the province of Manitoba, Saskatchewan and Alberta in Western Canada.

Free homestead and pre-emption areas, as well as land held by railway and land companies, will provide homes for millions.

Adaptable soil, healthful climate, splendid schools and churches and good railways.

For settlers' rates, descriptive literature, "Last Best West," how to reach the country and other particulars, write to Sup't of Immigration, Ottawa, Canada, or to the Canadian Gov't Agent.

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Get the genuine EMPIRE big wire fence, direct, at wholesale sale. Save dealer's profits.

Big Factory, Big Sales, 23 Styles

No traveling salesman, small expense, prices low. Everything guaranteed. Free samples by mail. Prices of leading styles freight prepaid to all points north of the Ohio and east of the Mississippi River:

Wires	Inches high	Medium Weight	Extra heavy (all No. 9)
9	36	25c per rod	36c per rod
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Special rates beyond this territory.


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ORNAMENTAL FENCE

Our handsome All Steel lawn fence costs less than wood and is much more durable. Write for Special Prices and free Catalog showing 25 designs. WE CAN SAVE YOU MONEY.

KOKOMO FENCE MACHINE CO.
421 North St. Kokomo, Indiana.



BROWN FENCE

13 CENTS PER ROD UP

RUSTPROOF • BULLSTRONG • PIGTIGHT

Fences for horses, cattle, sheep, hogs, chickens, etc. Special low bargain prices. We pay the freight.

Ornamental Lawn Fences and Gates

Send for catalog and sample. Brown Fence & Wire Co. Dept. 21 E, Cleveland, Ohio



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Durable. Gives your place a distinctively prosperous appearance and increased value. We also make tubular steel Farm Gates. Free books.

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Dept. 17, Waukegan, Ill.



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Get It From the Factory Direct

Sold direct to you at factory prices on 30 days trial. Save the dealers' profit. Farm, Hog and Poultry Fence at from 11 1/2 CENTS A ROD UP.

All wires are heavily galvanized 80 rod spool of ideal galvanized Barbed Wire \$1.55. Write to-day for large free Catalogue showing 75 different styles and heights of fencing.

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Heavily galvanized. Sold direct to farmers at manufacturers' prices. Also Poultry and Ornamental Wire and Iron Fences. Sidetrack dealers' profits. Catalog free. Get Special Offer. Write.

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Fence and Gates make your home more beautiful and more valuable. Strong, durable, handsome, easily erected. Our new catalog and prices will interest you. We pay freight.

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Increased Horse Power

Humor your horses by properly padding their collars and they will repay you with better work. Ventiplex Pads are the kind to use, because they are made of ventilated fabric, which allows a free circulation of air under the collar. This keeps the shoulders dry and cool, preventing galls and sores.

You can use your horses every day. Ventiplex Pads wear longer, prove more satisfactory, and cost no more than other kinds. You will be glad you bought one.

Most dealers have them, but if yours has not send us his name and we will forward a sample quickly. Patented Sept 20, 1910.

Our folder will interest you. It is free for the asking.

What is your address? We also make the famous "Stay-On" Blanket.

Burlington Blanket Co.
Dept. 56 Burlington, Wis.

With the Editor

THIS isn't a newspaper, but here's some news. A lot of retailers have met at Des Moines, Iowa, and organized a coöperative storekeepers' association—just as if they had read one of these editorials in which such tactics have been suggested.

This ought to interest all of us—for we all use the retailer as a help in our business. Anything he does to cut out middlemen saves us the trouble. If he doesn't do it, we will have to. This Iowa coöperative organization may not succeed, but there is no reason why it shouldn't if it is properly managed.

A lot of loose thinking is done, and more loose talking, about the middlemen. Some people think that the middleman can be entirely eliminated. When we can transfer goods by thought waves, he can—and not before. There are middlemen and middlemen. For the most part, the mail-order house is a middleman—though they do some of their own manufacturing. But they make oceans of money by acting as middlemen between the consumer and the manufacturer. In any scheme for cutting out the middlemen entirely, the mail-order house would go with the retailer. In fact, the mail-order house would go first—for as between the two, if we had to get along without one, poor as many of the retail stores are, we should have to keep them and let the mail-order house go.

We could hardly get along doing business entirely by mail. No sensible person ever thought of such a thing. The mail-order houses of the country have never thought of it. If all the business were to be thrown on them, they couldn't handle it. They would be scared stiff at the thought of trying it. Only retailers when in a panic will apprehend so impossible a situation.

OUR goods come to us by several possible ways. Our readers everywhere have thought about these various methods of getting commodities. The ordinary way is by three or more steps, with three or more profits, thus:

- MANUFACTURER to WHOLESALER to RETAILER to YOU.
- There may come in here selling agents, brokers, and the like, every one making the chain longer, and piling up profits.
- Or the chain may consist of these links: MANUFACTURER to MAIL-ORDER HOUSE to YOU.
- And here the number of selling agents, and the like, may be more than we think in some lines.
- Or the chain may be: MAIL-ORDER MANUFACTURER to YOU.

In this last case, it looks as if the middleman were eliminated. But, as a matter of fact, where goods are produced in Ohio, and used in Illinois, there just must be middlemen, whether we can name them readily or not. The goods have to be brought to the notice of the consumer by someone. And then they have to be carried to him by someone. And in most cases they have to be held in stock in large quantities and dribbled out by someone to the consumer as he needs them. This is the retailer's job, and the job he is falling down on. It is for the purpose of doing this better, as I understand it, that the retailers are trying to coöperate at Des Moines. More power to their elbows! If they succeed, they will make the life of every farmer easier. If they don't succeed, some other retailers will. For that the retail business of the country is going to be wiped out by any competition, no matter how honest or how able, doing business at arms length, is incredible.

I can imagine a state of universal coöperation in which the people would do their own retailing and buy directly of the manufacturers. But in such a case the retailer would still exist as the agent of the coöperative society. I wish all such efforts at coöperation well—but I should very much regret any sudden general movement in that direction. It would fail because of lack of merchandising knowledge. The fellows who are doing the merchandising now are the ones who must continue to do it. I only wish they knew their business better. The better they do it, the better it will be for me. If they would bring to the business the highest kind of ability, it would make trading a whole lot easier for all of us. I wish there were a John Wanamaker, or a Marshall Field, in every small town—on a small scale.

THESE Iowa retailers may not be Wanamakers or Fields, but they have a big idea. They may slop over in handling it, but then again they may not. We shall watch them with interest. Their idea is precisely this: They want to establish a shorter chain of this sort:

- MANUFACTURERS to RETAILERS to YOU.
- Now this is about as short as it can be made without more readjustment than we are likely to get for a long while. Life is too short for quarreling, and I have no quarrel with anyone—least of all with the retailer. Bless his soul, he needs help, not hindrance. But I can tell him this: Either under the Des Moines plan or some better plan, he had better get a wiggle on himself. He is a useful citizen—let him understand that he must be more useful, or his usefulness will peter out—and he with it.

But he will not peter out. He comes of too good stock. I have seen the retailer on the very front peak of the firing line of civilization everywhere. He goes with the pioneers, and makes life possible for the permanent settler. Without him this nation could not have been developed. He is an institution. Even under coöperation he would only change to another name and a slightly altered function. I have tried to sting him into activity in these screeds of mine. If he doesn't function at his best, he makes me trouble.

I have to do for myself what all my life long I have been depending on him to do for me. So when he begins to show signs of being a real merchant, whether in the Des Moines way or otherwise, I breathe easier.

THE retailer is wont to complain of the mail-order house as a "vampire." I don't join in this harsh expression, for the mail-order house is merely doing a necessary work which the retailer ought to have kept in his own hands. But it is a more or less significant fact of natural history that the vampire sucks no blood except from victims which are asleep. Out at Des Moines they are stirring, whether they are awakening or not. Retailers serve consumers. Sometimes they serve well, sometimes ill. We may find out that there are too many of them. Too many servants make any business expensive. In the case of the retailer, others are offering their services. They should not complain. They should compete. That's business.

Robert L. Quick

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ABOUT ADVERTISING

FARM AND FIRESIDE does not print advertisements generally known as "readers" in its editorial or news columns.

Mention FARM AND FIRESIDE when you write to our advertisers, and we guarantee you fair and square treatment. Of course we do not undertake to adjust petty differences between subscribers and honest advertisers, but if any advertiser in this paper should defraud a subscriber, we stand ready to make good the loss incurred, provided we are notified within thirty days after the transaction.

FARM AND FIRESIDE is published every other Saturday. Copy for advertisements must be received three weeks in advance of publication date. \$2.00 per agate line for both editions; \$1.00 per agate line for the eastern or western edition singly. Eight words to the line, fourteen lines to the inch. Width of columns 24 inches, length of columns two hundred lines. 5% discount for cash with order. Three lines is smallest space accepted.

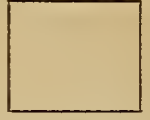
FARM AND FIRESIDE



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 Entered at the Post-Office at Springfield, Ohio, as Second-Class Mail Matter

A BLUE MARK

In the square below indicates that you are an old subscriber and that your subscription expires this month. Renew by accepting one of our offers before they are withdrawn.



SUBSCRIPTION PRICE
 One Year (26 numbers) 50 cents
 Canadian, 1 Year . . . 75 cents

Subscriptions and all editorial letters should be sent to the offices at Springfield, Ohio, and letters for the Editor should be marked "Editor."

Silver, when sent through the mails, should be carefully wrapped in cloth or strong paper so as not to wear a hole through the envelope.

Vol. XXXV. No. 15

Springfield, Ohio, April 27, 1912

PUBLISHED BI-WEEKLY

A small house on an acre of ground set in fruit is a home worth having. Do you have one?

Ducks in the garden will devour many bugs, slugs and worms, and cannot scratch. Guinea hens, also, are useful in the garden.

A Voter's Problem

THE Farmers' National Committee on Postal Reform keeps open headquarters at Room 52, Bliss Building, Washington, D. C. It has done very useful work in the present campaign for parcels post—one of the most impressive national campaigns in which the farmers of the nation have ever engaged. This committee is now circulating a pledge, the signers of which promise not to vote for any candidate for Congress who does not publicly define his position on parcels post, and whose record does not show active support of the farmers' demand for a "real, genuine parcels post or postal express."

This pledge calls for the sinking of its signers of all other issues in that of parcels post, and the abandonment in many cases of party affiliations. There is no reason, however, why farmers should not make such a pledge. Party issues are to farmers of little importance compared with parcels post. The most effective demonstration of the strength of this just demand would be the hides of a goodly number of pussy-footed congressmen and senators nailed to the agricultural back fence. If the farmers cannot elect congressmen and senators who are for parcels post, the next best thing would seem to be to beat those who are not for it. The campaign made by Professor Henry through the farm press for an expression of desire on the part of farmers has resulted in a flood of R. F. D. letters such as many of our Washington hired men have never received before. A few hundred thousand pledges on file in the Bliss Building would tend to keep the matter vividly in the legislative mind. Those of our readers who desire to go on record may receive blanks for the purpose by applying by letter to the above address.

Midsummer Silage

WHERE cows in Wisconsin were fed on silage as a supplement to pasture in midsummer, it was found that they did better than when fed on such early soiling crops as green clover, a mixture of peas and oats, sweet corn, sorghum or field-corn. The cows liked the silage better than the early soiling crops. More corn-silage per acre can be grown than of any of them. It can be put up and stored with more economy. It can be fed with less bother. "A consideration of all the factors involved indicates," says Doctor Russell, "that the farmer can well afford to have corn-silage available for summer feed up to the time the corn crop reaches the milk stage, when he can perhaps better afford to feed green corn than to continue feeding silage."

In other words, the silo enables the farmer to unite the qualities of succulence and maturity in the best feeding-plant in the world—corn. Moral: Build a silo if you have stock enough to justify it.

Some men throw away a barren farm in disgust because they never tried to study out some crop, grass or fruit that would suit the soil.

The seeding of the lawn will change the appearance of the farm and help advertise the products coming therefrom. Their market value will, at once, rise.

To Moisten Arid Climates

AN OKLAHOMA professor is said to be at work on the problem of furnishing showers to the arid West. We hope he will succeed, but we are harassed by doubts. We remember how General Dyrenforth of the United States Army almost solved the problem of rain-making—but not quite. His scheme—in which some good public money was squandered—was that of exploding bombs in the clouds to make them give down. It always rains after great battles, said the General, and inasmuch as the most striking thing about big battles is noise, why noise will do the trick! Dyrenforth was pronounced Dyrenforth by many people from then on.

The Oklahoma savant's scheme is as plausible as the army man's—just about. He argues that inasmuch as

leave the highest peaks for scenic purposes, and cut down the rest of the ranges. Do we lack the equipment? To the pessimist who asks this question we merely reply by asking what better use can be made of Colonel Goethals and the Panama digging-tools when the canal is finished? Let the Oklahoma professor answer.

Bee-Keeping Process

THE apiary industry in the United States is seriously threatened, and something like a crisis confronts bee-keepers. Two infectious diseases are carrying off the colonies by thousands: American foul brood, which is doing its worst in the West, and European foul brood, or black brood, which is a very serious menace.

These plagues are likely to put out of business the rule-of-thumb bee-keeper, who just lets the colonies take care of themselves, uses old-fashioned hives and does not study his business. This means that honey will be made scarcer and higher. The progressive amateur who studies his bees carefully will be able to meet the diseases, and so will the specialist. It can be successfully combated by intelligence and careful study. These skilful apiarists will make more money on account of the foul brood, just as skilful orchardists make more money on account of the wiping out of the unskilful by scale, insects and moths. The more pests, the more profits, for those who know.

The Department of Agriculture has issued bulletins on this subject which apiarists would do well to procure. One is "The Treatment of Bee Diseases," by E. F. Phillips, to be had of the Secretary of Agriculture, Washington, D. C. The Colorado station at Fort Collins has a bulletin on American foul brood. Bulletin No. 14 of the Technical Series of the Bureau of Entomology at Washington is entitled "The Bacteria of the Apiary with Special Reference to Bee Diseases" and contains a full discussion of the subject. Each reader should write his own state college and experiment station.

There is a good deal said each spring of the killing of bees by the poisonous sprays for the codling-moth on fruit-trees. Many of the losses laid to the spray no doubt come from foul brood. Some, however, do result from the spraying of the blossoms too early. If the spraying is done when it should be, there is no danger of injuring the bees. And this merely emphasizes the point that strict

study is needed before trees are sprayed. Study the bees, the blossoms, the sprays, then if something goes wrong, you will be better able to tell why.

Prepare for Short Pastures Now

THE soiling crop cannot be evolved when the drought is on. Nor can the results of overstocking be avoided after the grass is gnawed to the soil. Pastures which are once grazed too short have to be given time to recuperate. A grass-blade three inches long will grow four times as fast as one an inch and a half long. All these things call now for foresight in the owner of every pasture. Midsummer will come, and with it heat and drought. Cow-peas, Canada field-peas, sown corn, sorghum, soy-beans, velvet beans, oats, millet—all these should be considered according to latitude and longitude. Corn is perhaps the most universal soiling crop, and it is a good one; but a legume will enrich it and help the land. Every farmer knows what soiling crop his particular situation indicates as best for him. The chief thing is not to neglect the matter.



cold is what condenses the moisture in the clouds, all that is needed to bring the rain down on the just and the unjust alike is cold. Liquid air is very cold. By carrying containers of liquid air into the atmosphere with aeroplanes, and squirting it into the dry-eyed space, the rain-maker will cause copious showers.

It sounds well. And while we are about it, there are other schemes we may as well try out. The arid West is arid because the mountains—the Sierras, the Coast Ranges and the Rockies—have got ahead of the Oklahoma professor and cooled the air when it passed over them. Why not prevent this cooling by covering the western slopes and the summits of the mountains with stoves, so as to keep the air warm and preserve its moisture? This will obviate the excessive wetness of the climate of the coast regions of the Pacific Coast, and give the dry-farming regions more rain—if it can be done. All that is needed is a few millions of orchard-heaters, and oil to run them.

Or let us lower the summits of the mountains. Why has nobody started the agitation for that? We can

How We Whipped Them

The Story of the Rebellion of the Farmers of the Middle West Against the Grain, Coal and Lumber Trusts. A Study in Coöperation

By Edward G. Dunn

THIS is the fourth chapter in the story of coöperation among grain farmers of the Middle West. The concluding chapter will appear next issue. EDITOR.

ON JUNE 16, 1903, the farmers of the vicinity of Burchinal, Iowa, held their first meeting for the purpose of discussing the formation of a coöperative elevator—a meeting of which I was chairman. On July 26th, I think it was, we organized. For the next five weeks we were fighting the railway for permission to build, and won much more quickly than other farmers' companies were able to do, by reason of our banker-president's personal interview with Mr. A. B. Stickney, President of the Chicago Great Western Railway. On the eighteenth of August we bought the elevator of the Iowa Elevator Company, a line concern with sister establishments all along the line. On the nineteenth we opened for business, with myself as manager. On the morning of the same day I was asked by my competitor, Mr. Crall, to join him in the Iowa Grain-Dealers' pool. In the afternoon of the same day, a representative of the Iowa Grain-Dealers' Association came on the train and warned me that if I did not get in line, join their gang, pool the business and buy at prices fixed by their false and fraudulent "dummy track bid" for Iowa, he would give me thirty days to bust in. It was on August 29th that I found that the grain I had bought at fair prices from the farmers could not be sold on the Chicago market because we were "an outlaw concern"—that is, we were not members of Mr.

George Wells's Iowa Grain-Dealers' Association—and went to Chicago to try to avert ruin. It was during the winter of 1903-4 that we escaped the danger of having all the buyers organized against us in Chicago, after two commission firms had bravely come to our rescue. And it was after the failure of that attempt that the signal was wigwagged to Mr. Crall from Des Moines to kill us in Burchinal.

The Monday after the attempt to ruin our commission merchants failed, Crall raised his price for oats, from a cent to a cent and a half a bushel over mine, though I was buying at a price from two to three cents higher than farmers were getting where the Iowa pool was undisturbed by coöperation among farmers. Crall was very conspicuous on the principal street-corners of the little town bragging to the farmers about what he was going to do and what he was doing. He was playing the game of trying to bribe my coöperators away from me by higher prices. He even tried to make our people believe that I was not paying what I could if I desired.

"I never made so much money in my life," said he to a group of farmers in my hearing, "as I'm making right now!"

"Well," said I, "if you're making money now, old fellow, what have you been doing, in the name of heaven, for the last five or ten years?"

"Never mind, Ed," he sneered, "you'll know a lot more about the grain business before you get through with me than you know now! It can't be learned in a day, Ed. It takes lots of time!"

This was one of the most dangerous crises in our stormy career, and if the farmers had not been steady-minded and wise to the tricks of the Grain Trust, we might have been beaten—but only two of my one hundred and thirty-five members ever sold to Crall. All that summer the farmers' elevators were subjected to this unfair and dishonorable competition. Sometimes it would be Crall who would be bidding up prices to a point where there would be a loss on the grain, and sometimes it would be the opposition elevator at Thornton, or some other near-by town. I suppose all these losses were taken care of by the combine, and saddled on the farmers of localities where coöperation had not loosened their bonds.

The Farmers' Companies Were Winning

The farmers' movement went on growing. It couldn't be stopped. The Dougherty people had finally got their site for a building, and went into business, and other coöperative elevators were established at Ardale on the C. & N. W., and at Ventura on the C. M. & St. P. In fact, some thirty were organized by this time in the State, and the meetings of the Cereal Club at Des Moines must have been pretty profane gatherings occasionally. All of these farmers' elevators were having the same troubles, and the Cereal Club no doubt had to take care of the losses incident to paying more than grain was worth to break up the farmers. But so far as I know the farmers stood firm, and none of their companies were broken up.

This grew monotonous for those bearing the losses, and finally unbearable. One fine day in May, 1904, we learned that Mr. Crall had traded his business for a Kansas farm, and was going "back to the land." He went, and I hope he sees things differently by this time. I don't know what he got for the business, but I know that in that same gladsome springtime I bought for our coöperative company, from the Kansas Land Company, Crall's entire plant, elevator, lumber-yard, coal-

sheds and all, except the stock on hand, for \$1,450, or about one fourth what it was worth. The stock on hand we took at seventy-five cents on the dollar. So far as Burchinal was concerned, we were completely victorious. I do not think any sympathy need be wasted on Mr. Crall and men like him. If he had been willing to go on buying grain on a fair margin, he might have been making a living there yet, for we never paid more for grain than would yield a fair profit on the work.

The Work of Two Years

Those who have been reading this history will remember that the Iowa Elevator Company, which had sold us our first house, was a line concern owned by members of the Pease family of Minneapolis and Fort Dodge, Iowa. After we had farmers' coöperative companies organized at all the stations from Mason City to Carroll, with the exception of Meserby, Mr. Pease came to see me one day. I had at one time informed him, as well as other competitors engaged in unfair competition, that if they did not cease such tactics, I would organize more coöperative companies. They believed me to be yielding and laughed at me. But Mr. Pease, with a farmers' house in every town on the line but one, now saw things in a different light. The farmer looked more formidable to him than in the old days when the "scoop-shovelers" were thrown out of the terminal markets, and when I was wearing out my boots in the corridors of the commission merchants' offices at Chicago, begging someone to sell our produce.

"I think," said Mr. Pease, among other things, "that we are all foolish to keep up this warfare. Don't you?"

"Not at all," said I in a self-contented way; "at least so far as we are concerned."

"Well, it seems foolish to me," said he. "Isn't there some way in which we can all get together amicably and stop it?"

"Mr. Pease," said I, "there was a time when we were fighting for our lives against the meanest sort of attacks on the part of you and your associates, when I might have been willing to compromise. But that day is over. Within two years, Mr. Pease, I will put you off the side-tracks of the Chicago Great Western Railway—broke!"

In about two years he went off the tracks and out of business.

You see we were beginning to feel the lust of victory—now almost within our reach, as it seemed. I thought I saw how to make a revolution out of our rebellion. All we had to do was to go on organizing until we controlled the grain business through coöperative houses, and we could break the trust forever. If the farmers will only organize other lines of business in similar ways, they can control distribution as completely as they now control production. Lowell Hoit & Company and Eschenberg & Dalton, now the recognized agents of the farmers' elevators on 'change, saw the opportunity, and in the fall of 1904, I resigned my Burchinal position to work for Eschenberg & Dalton. Mr. Stickney, whose letter in the time of our direst extremity telling me that Lowell Hoit & Co. were willing to sell our grain, still worked for that company. Nominally, he and I were grain-solicitors for these two Chicago houses, but, really, we were field agents for the organization of farmers' coöperative elevators. Mr. C. G. Meserle of Gowrie was secretary of an organization of farmers' elevators which we had formed for mutual assistance, which organization had been

formed at Rockwell, the town where the mother farmers' coöperative elevator of all had been organized, in November, 1904. In February, 1905, we held in Mason City the first annual meeting of the Farmers' Grain-Dealers' Association of Iowa. It was a memorable occasion. One hundred and sixty-seven companies were represented, and our spirits were high. I was a happy man, you may be sure. From that time on the defeat of the Grain Combine became a rout. Eight hundred men attended the convention, but in the next annual meeting there sat 2,650 men, representing 250 farmers' elevators. Every commission firm in Chicago was there, begging for our business, including one firm who had once fired me out of their Chicago office, the manager practically saying that he didn't want any kids off the farm telling him how to do his business, and to whom I had said that the time would come when he would come into Iowa begging us to do business with him. That time had now come. This great meeting was at Fort Dodge. The solicitors for the commission houses which had once refused to sell our grain, on the ground that we were outlaws, hired the best rooms in the hotels, piled the tables with free cigars for the farmers, and filled the bath-tubs with bottles of beer and whisky! The men who had most reason to congratulate themselves were Eschenberg & Dalton and Lowell Hoit & Company. If the movement had not won, they would have been ruined. I am glad to be able to say that Eschenberg & Dalton went out of business in October, 1907, voluntarily, and that their last month's business was the largest they had ever done. Lowell Hoit & Company are still on the Board of Trade, and I suppose do as large a receiving business as any firm on the Board. The farmers have stood by their friends of their dark days.

Before closing I must tell about our troubles in the coal and lumber and twine business, and then I am done. I tell these things because I want to impress on farmers the fact that the uses of coöperation are not confined to grain alone, nor to any few products.

Long before we bought out Mr. Crall I found that I had incurred the displeasure of the Coal Combine. All the wholesale companies refused to do business with me. We had money, but it did not seem to be good in the coal trade. There was in Peoria a coal and coke company which employed as a solicitor a friend of mine of long standing, one Charles Smith. I bought some coal through Charley. I sold it at a cut of a dollar a ton. My competitors deepened the cut to \$1.25. They told the people that coal had gone down! It had—in Burchinal.

I handled two thousand tons that year, at a profit of \$570, and slashed the price all through that region, as I have told in a previous article. All our elevator companies handle coal. It is safe to assert that the coöperative movement has cut the price of coal all over Iowa a dollar a ton on bituminous and two dollars on anthracite coal. But in the large cities the price has not been affected, though we have sold coal from Burchinal right into Mason City.

The next week after we got the Crall lumber-yard a traveling man called and sold me four cars of lumber, in ignorance of the fact that we had rebelled. His house found out that we were not in the Lumber Combine and cancelled the order. For two years we were unable to buy lumber, save through certain men called scalpers in the lumber trade. We paid these scalpers ten dollars a car to buy us lumber. We were at a disadvantage, because we had to take lumber in solid cars—that is, not mixed—as it came from the mills. These scalpers were men in the lumbermen's association, who would buy for themselves and divert the shipments to us. Sometimes it had to go such a roundabout

way as to make the freight much higher than direct shipments would have been. In this way we succeeded in getting all the lumber we could sell, and were actually able to cut the price of lumber on the common and dimension stuff, from seven to ten dollars a thousand. The same excessive prices are paid in non-coöperating localities still, I am sure, where conditions as to mills and the like are similar to those in Iowa.

In June, 1905, a representative of the Northwestern Lumbermen's Association called and offered to remove the black list if I would maintain established prices and not sell outside the limits fixed about Burchinal by their pool. I told him that some of my members lived outside that deadline, and I couldn't very well refuse to sell to them! Well, he said, I might sell to my members outside the line, but if I did I must pay a commission of ten dollars a car to the lumber-dealer from whom I had taken a victim! I refused, and he left with the threat that I would never buy from any reputable dealer. I never did unless the scalpers were reputable. By 1907 there were twenty-five or thirty of our concerns handling lumber—there are ninety-three that handle it now—and P. J. Seippel of Dubuque, Iowa, began selling them openly. The lumbermen's association began a fight on Seippel, but the fight failed, and now every lumber concern in the country is selling the farmers' yards. But I think they are all paying a penalty to the opposition yards, all except Seippel.

The Elevators Sell Many Things

Most of our elevators sell other things besides coal and lumber—such things as flour, feed, twine, machine-oil, binding-twine, machinery, brick, tile, wire, nails and staples. They do not all handle all of these, of course. The International Harvester Company refused to sell us twine, but in 1904 an independent jobbing concern, the Hargrove people, jobbing for the Ludlow Twine Company, began to sell it to us at a saving to the farmers of two and one half to four cents a pound, and the International came in and now sells us twine.

And so it has been with all the products we have desired to handle for the farmers' benefit. The larger concerns, afraid or stubborn enough not to come our way, later fell in line and without further urging from us. Each particular company which hesitated in taking up with our proposition and then came over with us has found it beneficial to believe in us and in the principles we represent. And as a result the last few years have been pleasant for us in the work we have been attempting to do. We can look back at the hard times that were ours and laugh. We can feel a pardonable pride for what has been accomplished.

The fight is won in Iowa. It is won all over the Midwest and Northwest grain regions. It has been the biggest fight ever made in this country by farmers, and it has been successful. The Iowa Grain-Dealers' Association is now dead, but Mr. George Wells is secretary of a similar organization, The Western Grain-Dealers' Association. His teeth, the Cereal Club, may still meet over its viands, but if so, it devours cereals, rather than cereal growers. We are not outlaws, now.

I say the fight is won; but that is not quite true. There are many regions of the nation into which it has not extended. These should be redeemed. And the last step in organization has not been taken at all. The explanation of that last step, and the description for the benefit of my readers not yet freed from the Grain Combine of our methods of organization, I leave for another chapter. The story applies to any state where grain is ever sold.



A Good Living From Three Acres

By E. I. Farrington



WHAT can be done with a little land when intensive methods are followed and when a good market is close at hand is illustrated by the experiences of O. R. Shearer, who lives in a suburb of Reading, Pennsylvania. Mr. Shearer has three acres in all, but only a little over two acres can be cultivated. There is an excellent brick house and the usual outbuildings, and the little farm cost him \$3,800 fifteen or sixteen years ago. Five hundred dollars was all he could pay down, but the mortgage which covered the rest was paid off within a comparatively few years.

Mr. Shearer was brought up on a farm and knew how to grow crops and how to market them. It was impossible for him to make any money in this way at the start, however, for the land wouldn't grow anything but weeds. He did the wisest thing possible under the circumstances in buying a little milk route and six cows. He was forced to purchase all the grain for these cows of course, but his object was to redeem the land, and the manure was husbanded with the greatest care. A flock of one hundred hens was next secured and the eggs sold to the milk customers, while the droppings helped to enrich the soil. In two years it was possible to begin growing market crops, and then all but one of the cows were sold. The hens were kept, however, and have contributed not a little to Mr. Shearer's success, for, besides selling eggs to a private trade, he regularly disposes of several hundred chickens in the spring at a high price.

A 240-egg incubator is started in February and is filled several times during the spring. All of the chickens, except enough to replenish his stock of laying hens, are sold when they weigh about two pounds. Barred Plymouth Rocks are kept exclusively and a strain has been developed which produces a large number of eggs, comparatively—about 140 a year from each hen, on an average. Mr. Shearer's figures show a profit of at least one dollar a hen every year. It is not unusual for him to get fifty cents a pound for his spring chickens when they are broiler size.

A Good Market is Handy

The fact that he is very close to his market is one of the secrets of his success. He paid fully as much as the property was worth simply because he realized this great advantage. Many of his best customers were developed from the families to whom he delivered milk when he first bought the little farm. The acquaintanceship made then stood him in good stead when he began to market garden produce, for he was able to work up a private trade with but little difficulty. After that it became a simple matter to find a good market for much of his produce at the high-class stores.

These advantages of location and friendship would not have won success for him in the long run, however, if he had not raised and marketed only quality products. He realized early in his work that when serving a private

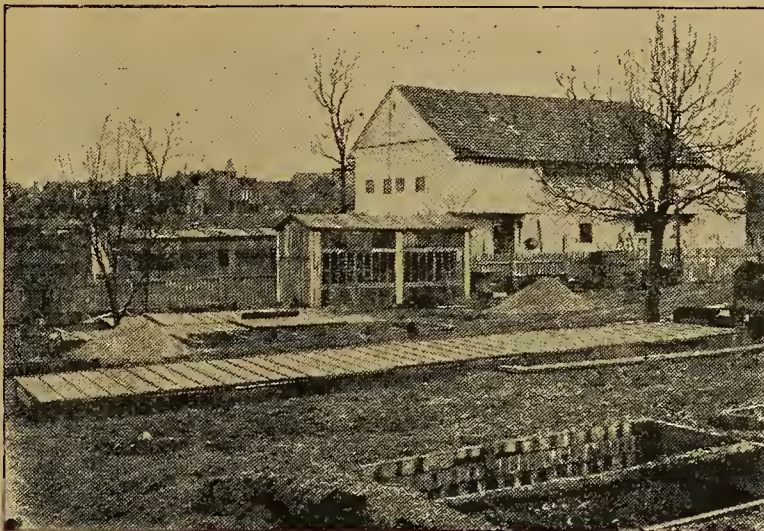
and high-class store trade it is foolish to handle anything but the very best. He gets a cent or more above the market price for all he sells, and that is how he is able to clear \$1,200 a year or more from a little over two acres. He does all the work on the little place, but keeps a horse to use when cultivating the crops and to haul his produce to town.

Celery and lettuce are Mr. Shearer's big crops, but he also raises onions, beets, endive and asparagus, as well as tomato and cabbage plants, large numbers of the latter being sold to other farmers. In some years he also sells a good many celery-plants. Mr. Shearer's methods are interesting, especially as they relate to the celery crop, which is highly profitable. The seed-beds are prepared by sowing clover and oats in the spring. These are mowed in June and used as litter, after which the patch is thoroughly cultivated.

After every rain from the middle of July to the middle of August plants are set out. Level culture is followed, the ground being kept very smooth, and nitrate of soda, muriate of potash and bone-meal are applied to promote growth.

Mr. Shearer uses much commercial fertilizer now, but mixes it himself, believing the practice of buying ready-mixed fertilizers to be too expensive for him.

Mr. Shearer has celery to sell from the first of Sep-



Hotbeds help make intensive farming a success

tember to the following spring. The celery is stored where it is grown. A pit about eighteen inches deep and eight feet wide is made and a frame made of planks put around the top of it. The frame is banked around with the earth removed from the pit, and after the celery has been put in, the boards used to cover the pit are buried under about a foot of soil. According to Mr. Shearer, this plan serves his purpose admirably, and



Pieces of old carpet make the poultry-quarters comfortable

the celery keeps as well as when more expensive methods are adopted. He finds an extra advantage, too, in the fact that the soil is stirred to a much greater depth than under ordinary cultivation, and as the celery is stored in a different place each season, a new spot is improved every year.

Vegetables and Poultry Pay Dividends

Hotbeds and cold-frames are relied upon to start vegetable-plants of various kinds. The lettuce and beets are allowed to mature in the frames, in order to get an early crop. When it becomes desirable to grow some crop particularly fast, one sash is placed over another, thus securing the advantages of the double glass sash, although, it must be admitted, at greater expense.

Lettuce is a profitable crop, and from five to eight thousand heads are grown each season. Endive is also a good crop in the Reading market, bringing five cents a head, and five or six thousand heads are grown each year. Onions and beets are staple and profitable crops.

The rows of vegetables grown in the open ground are run as close as possible and still allow room to use a horse in cultivating them. Mr. Shearer believes in continuous cultivation in order to get quick growth, but he also believes in getting it done in the easiest way, and so employs a horse, even though he has but little land.

The income from vegetables and poultry is increased by the sale of fruit from about one hundred trees of various kinds, including apple, cherry, peach and pear trees. After making vigorous warfare on the San José scale, the owner now has these trees in good condition, and they produce abundantly, the cultivation which the vegetables get evidently helping them. The trees are scattered over the little farm, and the rows of vegetables are grown between them.

The buildings on Mr. Shearer's place are not elaborate, but are built for service. The poultry-houses have open fronts, this style having been adopted after Mr. Shearer had read about the experiments in poultry-raising conducted by Professor Gowell at the Maine station. The refuse vegetables go far toward feeding the hens. The eggs and poultry can be sold to the same people who buy the vegetables. The combination is a good one, although one which could not be made so successful on a large plant which did not cater in part, at least, to a private trade.

Training Corn for New Conditions

By L. H. Smith

THE question has been proposed as to "the best means of starting with corn, the seed of which is not acclimated, or is being moved to a location where soil conditions are different."

Before attempting to answer this question, it may be well to state that our usual advice is directed against this very thing. For the general corn-grower we believe this is the safest advice, yet recognizing the possibility of improvement through the introduction of some out-

side variety that may be better than anything grown at home, the question, as stated above, is a fair one and an important one.

We all know, of course, that a variety of corn that yields well in one region may not thrive in another under a different set of soil and climatic conditions.

A fine illustration of this principle was given in an exhibit by the Nebraska Experiment Station at the last National Corn Exposition. The exhibit was so arranged as to represent the results of a test made at the station farm at Lincoln, Nebraska, in 1909, of planting seed from different sources. The average yield of five standard varieties produced from seed obtained from Illinois, Indiana and Ohio was 34.8 bushels per acre. Four standard varieties, the seed of which was produced within fifty to sixty miles of the station, gave under the same test 40.4 bushels. Finally, the average of several lots raised from seed secured from neighboring farmers gave 43.7 bushels. Here was an advantage amounting to nine bushels per acre as an average for the home-grown seed over that imported from a long distance.

In deciding upon the variety to grow, therefore, it is generally safer to procure seed from the home farm or from a neighbor who is known always to give care to the selection of his seed-corn, rather than to send off for some new varieties with no known records or anything to recommend it other than perhaps a fancy name and a fancy price.

This statement, however, is not meant to discourage in the strife for improvement the trying out of new sorts, but rather to urge the importance of proceeding cautiously in this, testing out such new introductions first in a small way. In other words, it is well to follow literally here the Scriptural injunction, "Prove all things; hold fast that which is good."

With this understanding of the matter, then, let us return to the original problem and consider what is the best means of bringing in a new and unadapted variety.

All plants have a remarkable power of adjusting themselves to their environment, and corn seems to be particularly responsive to climatic adaptation. As illustration of this, we have only to consider how the corn

belt has gradually widened by pushing its boundaries farther and farther northward. The older residents of Minnesota and South Dakota recall the time when these States were not reckoned among the corn-producing States; in fact, it was generally considered that corn could not be grown to any extent in this region. The report for 1910, however, gives nearly four million acres as the area now devoted to corn in these two States of the Northern Zone. [CONCLUDED ON PAGE 11]



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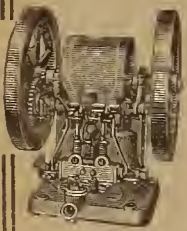
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Saving the Sewage for the Garden

By H. C. Bradley, University of Wisconsin

ONE of the big problems that confronts this country is the maintenance of soil fertility. We cannot hope to go on forever taking off crops from the land and turning the sewage which those crops yield into the ocean. The phosphates, sulphates and potassium must eventually disappear from soils which are steadily cropped, and unless the deficiency is made up the crops themselves will cease to grow. At present we make up this deficiency by stable manure and artificial fertilizers; but no one can deny that this partial return to the soil of its essential constituents is but putting off the day of reckoning to a future generation. The only permanent plan for preserving soil fertility in this or any other country is to return to the land everything essential to plant growth which the crops themselves remove. And the only way to accomplish this is to return sewage to the soil, for human sewage is the final form to which all edible crops are brought. The ninety millions population of this country every year eliminate 90,000 tons of phosphoric acid, 90,000 tons of sulphuric acid, 90,000 to 135,000 tons of potash, 9,000 tons of magnesia, 900,000 tons of organic material, of which about 300,000 tons is valuable nitrogen in its most available form for plant-food. Of this total approximately 300,000 tons mineral and 900,000 tons organic material, a small part, is returned to the land by cesspools and similar devices for disposal, but the vast bulk of it is poured directly or indirectly through our rivers into the sea, from which we can never regain it. And such devices as the cesspool bury the material at such a depth that it becomes practically unavailable to the shallow-rooting food-desiring plants.

The problem of soil fertility thus becomes ultimately a problem of practical sewage disposal, and we may confidently assert that at no far distant time this problem will have to be faced and solved if our land is to maintain its productiveness and increase its yield of food materials to meet the needs of a growing population. Any attempt, therefore, at a solution now has a certain general interest in pointing the way toward the final solution. It is for this reason that I shall briefly present the main features of the plan which we have adopted for conserving our home sewage. This system is recommended.

The solution offered here is applicable to any house or group of houses situated on sloping ground and having sufficient adjoining land for a vegetable-garden in which the sewage may be impounded. In our case, some sort of private disposal was necessary, for the city sewer mains were not quite within reach.

A cesspool is at best but a temporary makeshift. It has to be renewed every few years, thus making it in the long run an expensive system. As has been said, it contributes little or nothing to that part of the soil which most needs it, the upper two feet.

Better Than a Cesspool

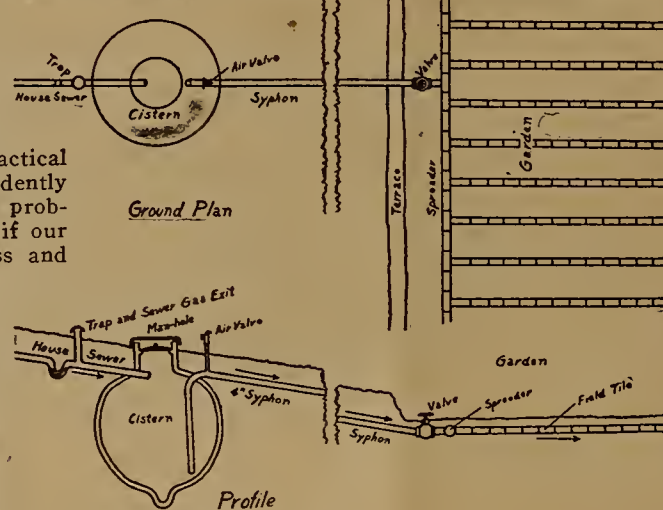
Instead of the cesspool, we dug and cemented up a large cistern or tank some fifty feet from the house on the down-hill side. The cistern is provided with a covered manhole in case repairs or cleaning out should be needed later. The entire house drainage is conducted to this cistern which holds about 1,000 cubic feet of water. From it a four-inch pipe, in the form of a syphon, runs to the foot of the hill where the garden is located. This garden was originally a sand-pit dug into the side of the hill. We have simply leveled off the bottom and terraced the sides, making a fairly level area of fifty by sixty feet. As can be imagined, the soil is extremely light and is therefore well adapted for rapid disposal of the drainage from the tank. It is equally well adapted for the rapid growth of rootlets if it can be rendered fertile, and is, of course, easy to cultivate. The four-inch syphon is controlled by a valve at the foot of the hill and opens into a spreader, which in turn delivers it to parallel rows of field-tile drain-pipes laid loosely end to end. The lines of field-tile, two feet apart, are covered by six to eight inches of soil. The grade is just sufficient to carry the water out to the extreme ends, which are closed by cement caps, thus preventing the sudden bursting out of the sewage to the surface at open ends. When the system is working, all of the tile-drains are filled, and the sewage seeps out into the surrounding soil quietly, spreading in every direction, irrigating and enriching as it goes. Unless the valve at the foot of the syphon is opened too wide, there is nothing on the surface to indicate the process except a gradual appearance of moisture as the water spreads underground. If the valve is opened wide, the water may break out here and there and overflow the

surface; and in severe winter weather, when it is advisable to empty the system rapidly, this sometimes occurs. In summer we leave the valve open all of the time so that each additional inflow of sewage from the house produces an equal outflow to the garden, and the plant requires no attention from May till late October. In winter the valve is kept closed till the tank fills. The air-vent is then opened to allow complete filling of the syphon, closed again, and the valve in the garden opened a turn or two. In the course of an hour the contents of the tank has all run out and the system needs no further attention for several weeks. We have found that the cistern fills in about two weeks in summer on the average, while in winter it requires three to six weeks.

The time required varies with the number of persons in the house and with the rainfall, since a portion of the roof area drains directly into the sewer.

It Irrigates and Enriches

The fact that such a system irrigates and enriches needs no demonstration. The sewage materials which enter the tank are gradually brought into almost perfect solution by the action of the bacteria that are always present. The water therefore contains nitrogen in the form of ammonia salts chiefly, phosphates, potash,



soda and magnesia, all in soluble form and consequently immediately available for the plants. The natural question which arises, however, is whether such irrigation of food-plants by sewage is safe. No one would wish to install a system which at any time might cause an epidemic of disease amongst his family and neighbors. The possibility of such a thing must be removed before the system can be considered a success. And there are recorded cases of typhoid directly traceable to contaminated vegetables.

In all of such cases, however, we find either a direct surface application of fresh human excrement to the vegetables, or washing of them with water from a contaminated source. The case is very different where the sewage stands for weeks at a time and is then filtered through the soil before it reaches even the rootlets of the plant. It may be stated with certainty that there is no danger in such a system. If typhoid-germs were introduced into the cistern from the house, the chances of their survival of the fermentation process in the tank is slight, for a seven to nine day stand in water is almost always fatal to typhoid-germs. Their chance of filtering through the soil from the pipes to the plants is far less, for the soil is sure and rapid death to such bacteria as require absence of oxygen. And finally the passage of bacteria from the soil into the juices of plants and so up into the leaves or fruit is impossible. Leaf and fruit crops, such as lettuce, corn, beans, etc., are as safe in such a sewage-disposal garden as though there were no sewage there. Root crops theoretically might become contaminated superficially, but the possibility is so remote that it may be absolutely ignored. If surface sprinkling of vegetables with the sewage is not resorted to, the sewage garden is as safe as any other.

Not only is the sewage from the cistern as it flows into the garden drains disarmed of its pathogenic bacteria, but it has largely lost its resemblance to sewage. Practically all solids go into solution during the fermentation—paper and fecal material entirely vanish. The offensive odor of sewage is also lost in the process, so that the fluid delivered to the garden is practically without odor or offense, clear or slightly opalescent like an extremely dilute soap solution. The passer-by seeing such water flowing from a pipe would never suspect its origin.

The real test of efficiency of the disposal plant in a northern climate comes in winter. In this region we not infrequently have temperatures of ten to twenty below zero for many days at a time, and temperatures averaging well below freezing for several months of the year. The ground freezes in November to a depth of several feet, and the frost does not come out of it till April or even May. Is the plant workable during this long winter period? Our own experience answers this unqualifiedly in the affirmative. A light mulch of leaves or marsh-straw is thrown over the garden late in November and the valve in the garden protected by a box of excelsior or straw inverted over it. When the cistern is full, the box is turned over, the valve opened and the sewage runs in at a rapid rate. It comes warm from the fermentation of the cistern, melts its way out into the frozen soil with great ease, perhaps runs out on the surface here and there, and in a short time disappears except for a hollow film of egg-shell ice. The pipes empty themselves so rapidly that we have never seen the slightest indication of their clogging with ice. The light mulch or the snow which may be present protects the soil long enough for the whole charge to be disposed of before the soil again freezes. It is doubtful whether the mulch is at all essential, but we have used it to make doubly sure of the result.

The points which appear to me essential to the success of this type of system are: (1) a small plot of land below the level of the house, (2) a drop of from eight to ten feet between the house and this plot and (3) a light, porous soil. If the soil is heavy clay, it would have to be lightened with sand to insure rapid seepage in winter. Given these three conditions and the efficiency of the disposal plant is assured.

Does the system pay? In our case, emphatically yes. We should have had to dig a cesspool and renew it every few years or lay pipes several hundred yards to the city lines. Not only that, but we should have had to manure the sand-pit garden heavily and often to make it productive of vegetables, and a vegetable-garden was to my mind almost as necessary as the house itself. As it is, we have a permanent system

installed, and with the few hours a week I can give to the cultivation of the garden, we grow some astonishing crops. For instance, sweet corn was planted early last summer and grew so rapidly that before the last of June it stood higher than my head and well tasseled out. Other crops grew rapidly, too.

The Cost is Not Great

The actual cost of the system need not be large. Compared with a bricked-up cesspool, renewed every four years, the expense would certainly be equalized in the course of a dozen years, aside from the earning capacity of the garden. Assuming the cistern is made somewhat better than the average brick cesspool, the main difference in the initial cost would be the four-inch iron syphon pipe to the garden, the valve, the sixty feet of glazed, bell-jointed sewer Ts and approximately one thousand feet of field-tile drain-pipes, and the labor.

For the average farmer with his many acres such a system would hardly appear attractive. Some there may be who with less or more costly land and more intensive methods, would find such a disposal system a valuable asset in the long run. But for the busy suburbanite with an acre or less of land, a taste for making garden, but with limited time for such pleasures, the system is especially designed. By careful planning he can get a rapid and continuous set of crops throughout the growing season, and the profit and delight which comes to the gardener whose crops are rich and fruitful.

EDITOR'S NOTE—Dutch experts have calculated on behalf of the sewage-farm project of the city of Amsterdam, Holland, that to fertilize an acre of land cultivated in the "most soil-impoverishing" crops will take the sewage from about a hundred persons. Professor Bradley's experience in fertilizing about one fourteenth of an acre of pure sand by using the sewage from a single dwelling would seem to indicate that this waste would go much farther in the ordinary garden soil than the European figures would lead one to expect. It would probably keep an ordinary garden supplied with fertility, and in part with moisture, and at the same time destroy a possible source of danger to health, by converting sewage into useful produce. This is true conservation.

French investigators assert that the loss of nitrogen from sewage in the process of purification in the soil is 16.36 per cent., and in purification in septic tanks 60 per cent. The nitrogen goes off in the air.

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Here is a car with a powerful, silent, smooth running, thirty-five horse-power motor. Here is a car that seats five large passengers comfortably. The upholstery is of good leather, hand stuffed with fine hair. The body is finished in our famous dark Overland blue and the wheels in battleship gray. The transmission is of selective type, three speeds and reverse—fitted with the fine F. & S. annular bearings which are used on the most expensive cars in the

world. The frame is of pressed steel and has a single drop. The crank and gear casings are of aluminum. The front axle is a one piece, drop forged I section fitted with the famous Timken bearings. The tires are 34 x 4—quick detachable. The handsome massive lamps are finished in solid black with brilliant heavy brass trimmings. Self starter \$20 extra.

The Overland center control is the one proven and practical location for both operating levers. The method enables you to operate the levers with the left hand, which gives you free use of your right hand for driving. It gives you the use of the right hand fore door, as well as the left hand fore door, which is impossible if a lever is placed one side or the other. You can get in or out of either side. It is easy to handle—no stretching out or reaching. Any one can manipulate the levers without a particle of effort.

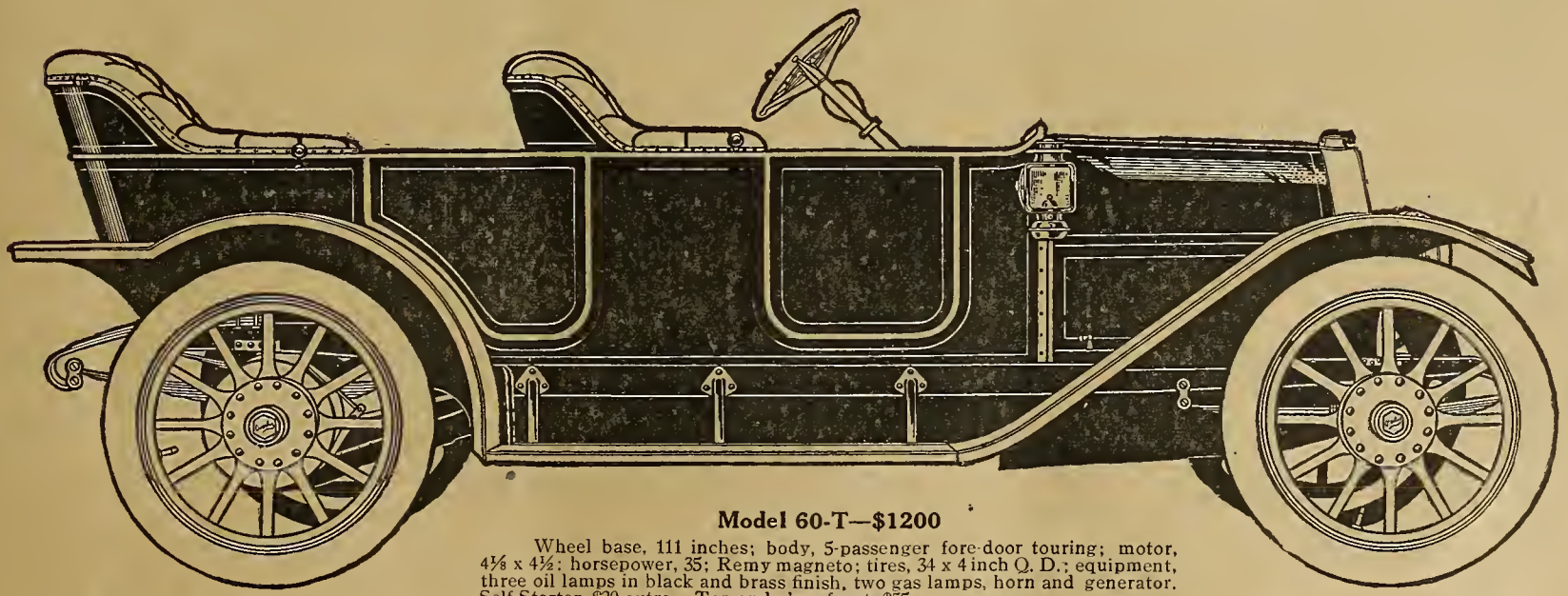
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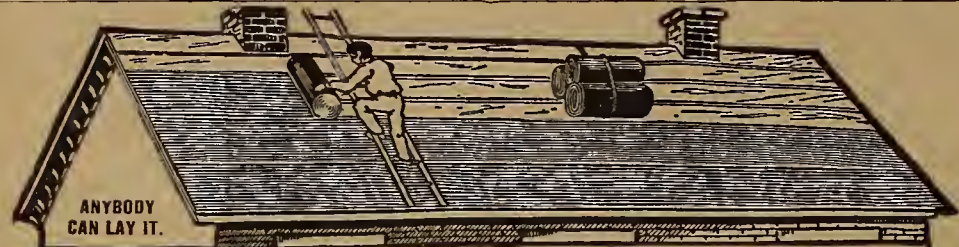
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Live Stock and Dairy

Ear-Worm and Blind Stagers

CORN-GROWERS are now threatened with a danger that heretofore has not been considered very serious. Information coming from widely separated places shows that the corn ear-worm is causing injury and death to farm animals in numbers sufficient to cause much loss to those who are feeding or holding damaged corn.

For five or six years occasional outbreaks of blind staggers in horses has attracted attention. During this time the Kansas Experiment Station has been making an experimental study of this disease and its origin. Its exact cause is still only partially understood, but enough has been learned to place the blame safely on poison in the mold and filth found on ears damaged by the corn ear-worm.

The eggs of the adult insect causing this trouble are laid in the husks of the young ear. After hatching, the ear-worm burrows through the soft young kernels, leaving its filth, which, with the escaping juices of the corn, furnishes the best possible medium for the development of the mold and putrid decay. Sufficient of this poisonous material remains in the corn-cobs and corn to cause a gradual poisoning of the horses consuming any considerable quantity of the damaged corn.

The loss of horses in Kansas and a number of other states from blind staggers is now considerably greater than formerly. The following letter from C. W. Beyers, southwestern Ohio, well shows the serious aspect of the disease for which the corn ear-worm is held responsible:

In many parts of the country the last corn crop has been below the average, indeed an utter failure. The drought affected it to a great extent, and where

NEXT ISSUE—A real parcels-post discussion, direct from the Post-Office Department. Parcels post will affect every consumer.

it was not a failure the corn is affected by a worm causing it to kill many horses that have been fed the damaged corn. In this section over sixty horses have already died the past three months, and from all indications more deaths are likely to follow.

Owing to this danger, stockmen are afraid to feed the damaged corn, and in this neighborhood one can have all the corn he wants for the hauling. With corn at the present price, this means quite an item of loss to farmers.

Having a field that has been infected in this way, the best plan is to shell the corn right in the field, or at least not near the barn; then place it in an oven where it can be baked until almost black. This will not only kill the disease germs, but also furnish charcoal, which has a healthy influence upon animals as well as humans.

Only a small proportion of the cases of blind staggers have been found to be curable, even by a skilled veterinarian, unless the treatment is begun early.

Floating the moldy corn off by immersing the shelled grain in water lessens the danger from feeding it. Also combining bran and

oats with the corn after ridding it of the worst of the moldy grains makes the chances of injuring stock much less.

Growing the corn too frequently on the same land without rotation of crops favors the reproduction of the corn ear-worm just as a similar bad practice encourages the cotton boll-weevil and most of the injurious insect enemies of our staple crops.

B. F. W. T.

An Automatic Trough

I AM a dairy farmer, and though blessed with fine pasture, I have no running water on the place. Having always considered clear, pure water a prime requisite to success in dairying, I found that it gave me considerable trouble to supply the demand, especially during the hot summer months. Finally I hit upon a plan which has worked to perfection, and although it would not be feasible on many farms, there are a great many others where it would be of convenience.

My farm is located on a river slope and is rolling. On one of the knolls I dug a well about twenty-two feet deep. In our locality, at this depth, we strike a vein of gravel, which supplies us with plenty of water. I bricked up the well, but instead of installing a pump I bought about three hundred feet of one-inch iron pipe. I extended this from the bottom of the well, up over the curbing and down the slope, so that the end of the pipe was at a considerably lower level than the bottom of the well. Before connecting the pipe at the elbow, which formed the curve at the curbing of the well, I filled the entire pipe full of water, putting in stoppers in order to keep it full. Then the pipe was connected so as to be air-tight and fixed in place. The corks were removed from the ends and the water flowed out in a good, strong stream. In other words, it was merely the principle of the siphon put into practical use.

However, after viewing this simple contrivance for a few moments, I realized that the continuous flow of water would soon empty the well, allow air to get into the pipe,

and necessitate another starting of the siphon. To prevent this, I placed a trough at the end of the pipe, from which the cattle could drink. I then placed a valve on the end of the pipe, which opened and closed with a small lever. To this I attached a board about a foot square in such a manner that when the trough was full the board lay flat on the water with the valve closed. If the stock drank some of the water, this board dropped, opening the valve and allowing the water to run until the trough was again filled. Thus by a purely automatic arrangement my stock received plenty of pure fresh water whenever they desired, and my attention was not required. This is not only a time and labor saving device, but it is simple and cheap, and requires no cost to operate. It has been in operation on my farm now for five years. In all this time it has given absolutely no trouble, required very little attention and is still in good condition.

Of course, it is necessary to remove these pipes from the well before the advent of cold weather in the fall and to install them in the spring, after all danger of freezing. This may cause a little inconvenience in the fall, but usually it is not much of a hardship.

JAMES H. MURPHY.

Bacteria and the Dairy

IN THE dairy and the creamery we must foster the desirable and useful bacteria and control or eliminate as far as possible the undesirable forms.

Ripening of cream for churning is due to the growth of certain acid-producing bacteria. In the modern creamery the desirable milk-souring bacteria are introduced into the cream intended for butter in the form of a starter. This starter is simply milk in which the favored bacteria are present in large numbers and from which the undesirable forms have been eliminated. This ripening process in the cream gives the much-desired flavor and aroma to the butter.

Slimy or ropy milk and cream arise from the growth of certain bacteria that produce a gum-like substance. This gum is formed as a coating on the bodies of the bacteria and gradually dissolve in the milk, giving it much the consistency of a solution of gum arabic.

Rancid butter is in part due to the growth of bacteria which form a foul-smelling acid and sometimes putrefactive products. Most of the "off flavors" and bad tastes in butter are due to undesirable bacteria.

Cheese ripening in its initial stages is brought about by bacteria. In some types of cheese the aromas and flavors are developed by bacteria, molds and yeasts working together.

R. E. BUCHANAN.

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Most dealers have it. If yours hasn't, ask him to get one for you, and when it comes have it set up and try it. If you are convinced that it is what you want, buy it and try it on your sheep with the distinct understanding that it must do the work O. K. or no sale.

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is just the easiest of all shearing machines to turn. A boy can run it all day without tiring. It is ball bearing throughout, including a ball bearing shearing head, shears quick and evenly all over. The price including four sets of knives is only \$11.50. It is really a wonderful machine and you will be agreeably surprised at the work it does.

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This is the good advice one of the big and long experienced Western cream buying concerns gives to its farm separator patrons, being taken from a letter to one of them:

"We believe the DE LAVAL is the best separator made. We feel that anyone wishing to purchase a separator makes a great mistake unless he purchases the best machine on the market. No one can make a success of dairying by continuing to use scrub cows. Neither can he make a success of dairying by using scrub separators."

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Poultry-Raising

Competing Hens



Professor Stoneburn

TO ASCERTAIN the egg type of hen and, as far as may be, to standardize the breakfast egg: these are the purposes of the year-long egg-laying contest now going forward at the Connecticut Agricultural College, at Storrs, Connecticut. Then, too, there is the fact that after the contest is over from five to six hundred birds with records which count will leave Storrs to be bred from and the possibility that the wealth of data afforded by this contest may help in raising the present average of about eighty eggs per year per hen in this country somewhat nearer the coveted two hundred per year and thus affect beneficially the cost of living.

Every breed and variety known to the American poultry standard is represented and one, Buttercups, not recognized—but thoroughbred birds. There are White Leghorns to double the number of any other breed, and Barred Plymouth Rocks come next; but there are also Buff and Brown Leghorns; White, Columbian and Partridge Plymouth Rocks; Buff, White, Columbian, Silver and Golden Wyandottes; Rhode Island Reds; White and Buff Orpingtons; Black Minorcas; Anconas; American Dominiques; Black Langshans; Houdans, and Cornish Indian Games.

This is the first egg-laying contest on this continent and international in character, there being entries from most of the Eastern States, from Canada and from England. The English entry of White Leghorns comes from Thomas Barron's poultry-farm at Catforth. The Canadian entries are Rhode Island Reds from the Institute Aricole of the Trappist monks in Quebec, in the name of Brother Wilfred, and Brown Leghorns from A. P. Hillhouse, Bondville, Quebec; White Wyandottes from Bculah Farm, Hamilton, Ontario, and Barred Rocks from Alfred B. Wilson, St. Catharines, Ontario. Hans Lobert, the Philadelphia third baseman, has in some White Rocks, and Ellis Ames Ballard, Philadelphia's millionaire fancier, enters the Houdans.

The birds are housed in a new plant built by the college, consisting of fifty specially designed houses, two pens to a house. Six birds are in each entry, but one is reserved for a substitute if needed. No roosters visit the pullets for the year.

The contest is under the auspices of the Philadelphia *North American* and in charge of an executive board consisting of Dr. A. A. Brigham of the South Dakota School of Agriculture (who when at Rhode Island State College offered the first course in poultry husbandry in this country), Prof. Homer Jackson of Pennsylvania State College and Prof. F. H. Stoneburn of Connecticut College, representing the science of poultry husbandry; Prof. Thomas F. McGrew of International Correspondence, representing the poultry fanciers; Dr. Prince T. Woods, editor *American Poultry Journal*, and Dr. Nathan W. Sanborn, editor *American Poultry Advocate*, representing the poultry journals and practical poultrymen; Prof. F. C. Eldred of McDonald College, representing Canada, and George A. McDevitt and F. V. L. Turner of the *North American*.

Professor Stoneburn is chairman of the board and in personal charge of the affair. He planned the houses, twelve feet square, of wood, set on skids and in a position to get the sun all day long, and each with a wire-fence-enclosed yard twenty by fifty feet; he fashioned the all-of-wood trap-nests



Students constructed the houses

after his own design; he planned the perfectly uniform treatment for all birds, the exhaustive physical measurements, the loose-leaf records of number of eggs laid, by pen and by bird, their weight, feeding and condition of birds, and every other fact of possible moment. All eggs weighing two ounces or over—and few weigh less—go to a Philadelphia firm in patent carriers, at forty-five cents a dozen throughout the year.

There are prizes for every conceivable thing in which birds can excel: cups for leading pen and bird making highest score, class prizes for this in every class and for individuals; and state prizes, monthly and quarterly prizes and special prizes for many things—among others pen showing greatest net profit above cost of food, laying greatest number of eggs during molting and consolation prizes for lowest records.

The feeding is on the dry-mash system, the dry feed of corn, wheat, oats, barley, buckwheat and Kafir-corn mixed being fed by an ingenious machine the hens operate themselves. In each house are water-pans, cups of grit and of shell, and for green feed a huge beet on a nail.

The birds arrived during October and the contest began November 1st. The only variant in the proposition, the differing conditions and characteristics of individual hens, has shown out strongly. Some had been hatched too early and forced and commenced to molt before fairly getting started, others were under-developed. The leading pen from the start has been the English White Leghorns; at the end of the fourteenth week they had laid 259 eggs, an average of 18½ per week; but this is somewhat accounted for by the fact that the entry is really that of the utility poultry clubs of England, which have had a little experience in egg-laying contests at home.

These birds seem smaller than our Leghorns because their feathers lie close and sleek, but are broad and chunky and, in reality, heavier. In common with most of the White Leghorns, they got their combs frosted in the unusually severe cold of January and have fallen off a little. The White Leghorns are mostly heavy layers, but in comparison to the number of entries the Rhode Island Reds and Orpingtons, which are dividing the weekly honors of late, are doing even better, and the Dominque pen is right along with them. The Wyandottes and Barred Rocks come pretty well up too, while all the other breeds are laying like the thoroughbreds they are.

The nineteenth week of the egg-laying contest ended with the English pen of White Leghorns, leaders since the first, still in the lead with a total of 369 eggs, an average of 19 8/19. They are improving their average and holding their lead well. The second pen is one of Rhode Island Reds belonging to E. S. Edgerton, West Willington, Connecticut, with a total of 315 eggs.



A pen of Barred Rocks. The house was specially designed for the contest

As a breed, the White Leghorns are getting into the game again, and so are the Barred Rocks. Orpingtons and Rhode Island Reds are still a little ahead in proportion to the number of entries, but the other two breeds are coming along well.

The surprise of the week was the sudden spurt of the Dark Cornish Indian Games with a total for the week of 30 out of a possible 35 eggs. These belong to John W. Ward, Jr., Pennington, New Jersey.

Two thousand one hundred and forty-eight eggs were laid by the 490 birds for the week (there are not 500 birds laying, because one entrant sold his farm and all stock just before the contest opened and after paying his entry fee of \$25; and the entrant assigned Pen 13 has never sent his birds, an explanation or a demand for his entry fee back), and the total for nineteen weeks is 17,780.

J. OLIN HOWE.

A Question of Breed

THE question, "Why Won't They Lay," so aptly answered in a recent issue of *FARM AND FIRESIDE*, has still another side, which one would do well to study, and that is the question of breed.

The fowls considered were Buff Rocks, and to me, who have had a good long experience with Rocks, this is the main feature. When we kept Rocks, they were the Barred, but there is not a great deal of difference except in coloring of the Barred or Buff, but, to quote from experience of others, the Barred Rocks have proven more satisfactory.

I am willing to give the Rocks their share of praise, for in point of size from a marketable standpoint, they are unequalled; they are also docile, and for that reason nice to handle, and for our own tables they are unsurpassed. They lay fine large eggs, but not over-abundantly; and this brings us back to the starting-point as to why they won't lay during fall and early winter. In the first place, they are slow maturing, and pullets will not reach a size and condition to produce eggs in fall or winter unless hatched as early as March; they are easy going and depend too much on being fed. The pullets and hens that are ambitious enough to get out and hustle for a part of their living when the season permits are the ones that mature more quickly, lay younger and longer than the big, slow breeds. Then for like reasons old hens after molting are slow getting started to laying, and thus winter comes on, and birds

that have not gotten in shape to lay before that time are not apt to begin during cold weather. The Leghorns, Minorcas and other small and non-sitting breeds mature early and shed, or molt, quickly. They not only hunt diligently for part of their living, but they also use the dust-bath so frequently that lice trouble them but little, while one must give especial attention to larger breeds to keep body-lice in subjection.

If one is keeping poultry chiefly for market, the Rocks take the lead, for none are better, if as good, for broilers or frys, and buyers pay more for them than for light fowls. On the other hand, if one wants lots of eggs, select a small breed, for the Rocks, while fairly good layers a part of the year, cannot compare with the small breeds in egg production. And for a year or more poultry has been so cheap that there has been little profit in raising chickens for market, while eggs have remained a good price the year around.

A medium-sized breed is the Rhode Island Red. The cockerels become nearly as heavy as the Rocks, but the hens are considerably lighter. However, they are very hardy, great hustlers, mature quickly, and the hens are fine winter layers, though in summer they are somewhat too much inclined to broodiness.

When we can get a breed that will have all the good qualities, we will have reached perfection, but that is not likely to occur, and we must content ourselves to choose a breed best suited to our needs and situation.

It was a long time before I could decide to give up the Barred Rocks, but the step once taken I have had no cause to regret the change from large to small breeds.

MRS. N. W. WILLIAMS.

Selling Fresh Eggs

ALL eggs should be collected daily and should not be allowed to remain unsold over two or three days. No stale nest-eggs should be used, and every precaution must be taken to have each customer satisfied. When the confidence of customers is secured, the matter of good prices will be settled, as the majority are willing to pay an extra price when they know that the eggs to be purchased are fresh. The reputation for supplying choice fresh eggs must be made. No mistakes must occur at any time. A single bad egg will deteriorate the whole in value.

A. E. VANDERVORT.

A Unique Remedy

OUR neighbors are having such good success using peroxide of hydrogen for chicken-cholera that I want to tell the readers of *FARM AND FIRESIDE* about its use.

One neighbor is quite a crank on the use of peroxide, so when one day she found one of her choice hens very sick with cholera she went for her peroxide bottle and gave biddie a teaspoonful at one dose.

The next day she went out to see how biddie had fared, and to her surprise found the hen picking around as smart as could be. In a few more days her comb became red and she began laying.

Another neighbor had some sick turkeys which he thought would not live. Hearing of the remedy and the lady's success, he procured some and tried it on his turkeys by giving two teaspoonfuls. Every one got well. He then gave a tablespoonful to a sick pig with the same success. The peroxide seems to kill every disease germ in the system and all the bird or animal has to do is to gain in strength, and it has a new lease of life.

MRS. MABEL PHILLIPS.

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E. E. COOLEY, Frenchtown, N. J.

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Crops and Soils

How to Raise 100 Bushels of Corn to the Acre

By a Man Who Does It

THE way to raise one hundred bushels of corn to the acre is very simple. I might tell you how we did it once on a rather large field—a field of ninety acres. We drained this field and manured it, and then seeded it to alfalfa. We left it in alfalfa, a part seven years and a part eight years, and then plowed it in the fall and winter. We planted my whitecap corn—every ear tested—on it the next spring; cultivated it some six or seven times; cut the weeds with a hoe, and with nearly a perfect stand and a favorable season grew a little over one hundred bushels to the acre. But I have a lot of sympathy for the young man who really tried and only raised ninety-five bushels of corn to the acre. And I'll tell you why. While we raised, in 1908, one hundred and ten bushels to the acre, we haven't done it since. Not on a big field. And yet I feel sure that our seed is better than it was then. We have not had the alfalfa-sod to plow. And we have had two bad droughts at times when corn needed rain most—the wrong time.

But may we not hope to so farm and so plant that one hundred bushels will be the average one year with another? I hope so, but I have my severe doubts whether we can raise it depending on just good cultivation and good land and good seed one year with another. A few years ago I expected to be able to do it with regularity and precision by virtue of seed alone, but you see I have not succeeded—quite.

Why Not 100 Bushels Every Year?

On poorer ground, since 1908, we have raised from seventy-five to ninety bushels average. Three years ago, ninety; two years ago, seventy-five; last year, about eighty bushels. This on the same field as in 1908, with corn after corn and a thin coat of manure and a little phosphate.

Well, why did I ever hope to raise one hundred or one hundred and twenty-five bushels with ordinary methods of fertilizing and cultivating corn? Why, my test-plots led me to hope that we would be able to do it with the seed alone. For some eight years now I have selected some fifty ears of corn in the fall that were sound, symmetrical ears and to the type I wished for our corn and have planted one half of these ears on uniform ground, one half of each ear to a row, and have har-

vested these rows separately and weighed the product. Now I found the first year a great variation in the yield of these ears. The variation was from fifty-five to one hundred and fifty bushels to the acre.

Now, then, if I sorted out the kind that yielded from one hundred to one hundred and fifty bushels to the acre on the poorest ground I had and then saved seed for my general planting from them, had I not a right to expect that their product would make a big gain? Had I not a right to expect that when returned to the field they would hold at least half the average gain? Well, that was what I did expect, and what seemed to happen for several years. But the last few years the gain has been a gain of quality rather than of quantity. Now I am sorry that this should be the case, but I am going to tell you experience, not theories, concerning corn. On the other hand, I do not wish to discourage you in your efforts to improve your yield. If it takes the first thirty bushels of corn to the acre to pay expenses, then fifty bushels of corn to the acre would show about twice the profit that forty bushels would show, and I do not think that any of us ought to beat fifty bushels of corn on the average. But we are not doing it in Ohio. We in Ohio raised more corn to the acre last year than did Indiana, or Illinois, or Iowa; but then we only raised 38.2 bushels.

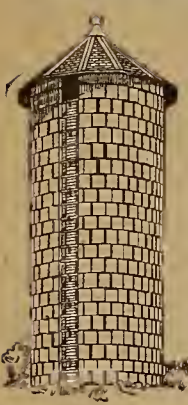
Now this is safe ground for me to talk on, and I feel easier.

We Seldom, if Ever, See a Perfect Stand

Get some nubbins. Now find one that weighs five and one-third ounces. Look at it hard and tell yourself that that ear is the average size needed with a three-stalk stand and an ear on every stalk to make fifty bushels to the acre. But we never can have a perfect stand. And there are always some barren stalks. True, but double the size of this nubbin, and still it won't look very big to you. Now with seed properly cared for; that is, picked in early fall and put away in a warm, dry place on wire racks, say, and then with every ear tested through a germinating-box in February or March, you will still not obtain quite a perfect stand. Worms will get some, and moles will get some more, and some may perish under a clay crust. But we will get a lot better stand than if we do not try.

In other words, the corn crop needs care as to details. There will always be a few hills that will not appear at all, and some stalks in other hills will be lacking, but if known facts are followed, there will be little loss from the outside sources, such as have been mentioned. Putting it in a simpler way: "Do the best that you can from the time the corn is planted until the harvest." That means work.

Now a word about varieties. From my work with different ears of corn in test-plots I am convinced that it is not the



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vested these rows separately and weighed the product. Now I found the first year a great variation in the yield of these ears. The variation was from fifty-five to one hundred and fifty bushels to the acre.

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The Ohio Carriage Manufacturing Co.
Station, 27, Columbus, Ohio

biggest ear, not the overgrown ear, that most readily reproduces itself. It is the ear of moderate size that will show a field-row of corn with a moderate-sized ear on every stalk and the biggest yield. And I incline to think that this is true of varieties, or breeds of corn, too. My own favorite white-cap corn is a rather large-eared variety and is a good yielder, but I am inclined to think now that it is a big yielder owing to its vigor and virility rather than on account of the tendency to grow big ears. There is a variety of corn grown in Ohio that has the smallest ears of any improved field-corn that I know of. It is the old Clarage corn, and do you know that, on all kinds of ground considered, it is one of our heaviest yielders? Furthermore, it gets sound most years.

Improve the Corn That You Have

Take the variety you are now growing and improve it, if you are sure it is a good one. It may have the merit of being adapted to your section.

If your section is a fertile section, you may be able to grow a rather large-foddered variety. A large-foddered variety will stand drought better than a small-foddered variety. Your sweet corn is the first corn to roll when the drought comes and the sun gets hot.

How about hybridizing to increase your yield? Hybridizing will certainly increase your yield. If you can find another strain of corn so near like your own that you can scarcely tell the ears apart, and if you know it to be as early a maturing corn as your own, I believe I would say do it. I have been looking for just such a chance with my own whitecap corn, but I can't find any other whitecap corn like my own, and since improvement is only for a couple of years—in yield—and since after that time this corn begins to break up and take after the one or the other parent, there is a chance, should the breeds differ materially in the shape of grain, etc., to lose whatever you may have had of type.

And uniformity is only second to maturity in importance to you. How can you get a planter to drop with uniformity if your kernels are not uniform in size? And how can you expect the corn to ripen at one time if the parent ears are of many types? If your corn is a medley of a hundred types, you have no type to lose, but if it enjoys type, think twice before sacrificing it.

And now about that dry year. We can conserve the moisture in the field, can't we? Yes. We can do as well as the boy who watched the team. A man once jumped from a sleigh and left a spirited team with a near-by boy to watch. The man went into the drug-store, and when he came out, the team had disappeared. "Say, boy, I thought I asked you to watch that team." "Well," the boy replied, "I did watch them until they went around the corner." Why, our main trouble about conserving moisture is that it is difficult and sometimes impracticable to keep a soil mulch in Ohio when we get a lot of little showers. The westerner who irrigates, can give a field a good soaking and then he can cultivate when about right, and there may be nothing to destroy that mulch. Here in the humid lands we may start in on a field to break the crust, and before we are over it another little corn shower comes along and well crusts that ground again. But we can try at any rate, and if a wind-storm does not lodge the corn when big, we may continue cultivation well into the ear-forming period. We sometimes get through our fields seven or eight times. But even then I have seldom seen a year when we had enough water through the shooting and earing time.

We want to cultivate shallow, don't we? Yes, I guess so. But I tell my men for about the first four plowings to cultivate about as deep as they can without covering up the corn. Sometimes we are over it four times by the time the corn is knee high. The first two cultivations are very important ones. I tell my men that if they only plow one round to plow those rows well. As the season advances we get a little further away from the corn, and at the very last our plowing is shallow.

Maybe we will all know more about corn ten years from now. WILLIS O. WING.

A Missouri correspondent last season produced roughage at the rate of twenty dollars per acre by sowing oats early in the spring, mowing them while they were in the "dough" state, stacking them for feed, grain and all, following the oats with millet.

Grass on Thistle-Land

A MICHIGAN reader of FARM AND FIRESIDE has a patch of Canada thistles, which he wants to seed to grass. He asks if he can seed by sowing the grass-seed in corn in the latter part of July so as not to lose a crop.

We think it a most uncertain plan. The corn draws heavily on the moisture of the land, and, unless it is a moist season, failure is very likely. If he is willing to take the chance of a wet season, a mixture of eight pounds of timothy-seed, two pounds of cleaned redtop, four pounds of red clover and two pounds of alsike would be a good combination to try. B. F. W. T.

The Silo for Dry Farms

SILOES are becoming quite common in the North Central States and they are doing a great good for the country. They have increased the profits of stock-raising and dairying; they have increased the number of cattle or sheep raised without diminishing the amount of grain produced. In fact, wherever the silo has been introduced, it has had a creative power in that it has made a profit of what otherwise would have gone to waste. But farming was a successful business in the North Central States before siloes came, and thousands of farms are still making good profits without siloes. But what would you think if I say that there is an area almost as large as Kansas and Nebraska together, whose main hope as an agricultural country is in the silo?

I am now speaking of the Panhandle of Texas, western Kansas and Oklahoma, and eastern New Mexico. Thousands of people have been lured into this country and failed. Other thousands have taken their places, while many of these are failing. Nevertheless, the level, fertile prairies and the healthy climate seem a far greater attraction than the many failures can counteract.

Many farmers all over this wide expanse of prairie are learning how to conserve the moisture and grow drought-resistant crops. This is a great accomplishment, for it proves that fair crops can be grown under very adverse weather conditions. But the mere production of crops is a poor foundation for great cities and all that go with them, to say nothing of the farms, homes, schools and churches. Many of you old-timers can prove this statement when you recall the days in the seventies when wheat failed year after year in Iowa, Illinois and Minnesota. Farmers became bankrupt everywhere and



Farming "wisely and well"—an English method

sheriff's sales became common. It was a hard lesson, but you learned the value of clover, cows and rotation.

It is much the same way in the Southwest plains, only that we can't turn in and grow clover and grass and rotate as the Iowans did. Clover, alfalfa or any hay crop is invariably a failure on these high plains, and the silo therefore fills a long-felt want.

Any of the sorghums (Kafir, cane, Jerusalem corn, milo) make good silage and are in that form vastly superior to the dry fodder. Not only that, but there is much less waste, no leaves to blow around and no stalks to rake out of the feeding-yards.

Another argument for the silo in the Southwest is that this is the logical place for feeding. Thousands of cattle and sheep are raised in the rough lands and on the prairies that are remote from railroads, and are shipped east into the corn belt to be fattened. The climatic conditions are ideal, especially for sheep-feeding.

The manure from the stock is a valuable by-product. Careful tests at the Utah Experiment Station have proved that a rich soil will produce more feed per acre with the same amount of moisture than the same soil unfertilized. The Minnesota station has also found out that a fertilized soil produces richer grains and forage than unfertilized soil. In other words, a ton of hay off rich land is more valuable than a ton off poor ground.

The silo and stock-feeding or dairying is absolutely essential to putting dry farming in the Southwest on a firm foundation and doing away with the mad speculation and many failures of city and country.

IVAR MATTSOON.

Training Corn for New Conditions

[CONTINUED FROM PAGE 5]

How has this change come about? It is through selection. This selection has been of an unconscious haphazard sort, to be sure. But when we contemplate the wonders that have been wrought by this sort of selection, we may obtain some conception of the tremendous possibilities to be accomplished by conscious, intelligent and systematic selection.

As an illustration of what a powerful control we have in our hands in such systematic selection in corn may be mentioned the work of our Illinois Experiment Station to influence the height at which the ear is borne on the stalk. By selecting the seed continually for high ears and for low ears, two strains have been produced from the same original variety, so that after seven generations there is a difference in the height at which the ear is borne of three

and one-half feet. Although this selection was based solely on height of ear from the ground, the secondary effect has produced in the high-car strain a taller plant, and in the low ear a shorter and quicker maturing plant. While in productiveness these two strains yield practically the same amount of grain per acre, in maturity there is a remarkable difference, the low ears being from a week to ten days the earlier.

These results have a practical bearing upon the particular problem before us, since maturity is one of the main considerations in moving a variety of corn from one locality to another. The largest and most productive varieties of corn are naturally the later maturing varieties, and there is constant temptation to bring these varieties into regions having too short a growing season.

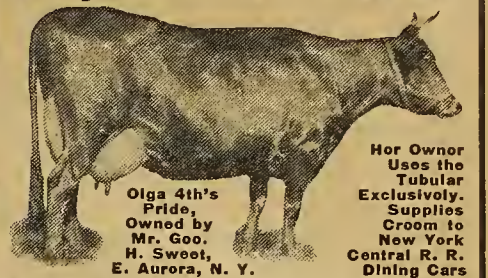
The lesson to be derived from these experiments points to the importance of field selection of seed, where the standing plants may be examined. In the selection of seed-corn, too much importance has been attached to the appearance of the ear and too little consideration given to the plant that produces the ear.

If early maturity, then, is one of the chief points to be considered in the selection of his seed, one should go through the field early enough in the season to observe the ripening of the first ears and choose from these the most desirable. In the light of the above-mentioned facts, he may be guided also in this selection by the character of the plants, giving preference to those ears that are borne rather low on the short, strong, healthy stalks. By repeating this a few years, an early strain is soon established.

Although through this sort of selection alone much can be accomplished, still greater results are to be obtained by supplementing this with the breeding plot which makes possible the keeping of systematic records based upon actual performance of individuals.

The matter of maturity has been emphasized in these remarks mainly because of its practical importance in this connection, but the same general principles apply to other qualities or characters that may come under consideration in adapting a variety of corn to new conditions.

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Mr. Chas. Foss, Cedarville, Ill., makes that and more on a 96-acre dairy farm. Mr. W. L. Hunter, Raymond, Neb., has had to enlarge his dairy to meet the great demand for his cream. N. H. Locke Company, Lockeford, Cal., gets 8 to 10 cents per gallon above the highest market price for cream and won 17 prizes at the state fair. You can win like success.

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50,000 best Columbus Buggies ever made—exactly alike—one quality—one price—offered this year direct at only \$1 factory profit on each to us. We've reorganized whole factory to make this. 5 weeks Free Trial—2 year guarantee. Satisfaction or money back. Write. Big Facts Portfolio Free.



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Columbus Carriage & Harness Co., 2021 So. High St., Columbus, O.

Maxwell "Mascotte"

\$980



\$980 f.o.b. Factory (top extra)

I want every farmer and his family to ride in the Maxwell "Mascotte" at my expense

I want you to take a pleasant little holiday. I don't mean that I want you to ride up and down Main Street a few times. Some pleasant afternoon, maybe, I'd like you to get the family together and go out and visit some of the folks—just as you are accustomed to doing—only this time go in a Maxwell "Mascotte," which I will arrange to place at your disposal.

I am inviting you to do this because I want you to know the exceptional qualities and wonderful value of the Maxwell "Mascotte." I want you to test it in the same way you will use it if you buy one, on the same roads—good or bad as they may be—the same hills—the same levels.

I know the "Mascotte" is the best all-around car for undeveloped highways, hills, mud and sandy roads and rocky by-ways. *But I want you to know it.* I know a ride—an actual road experience—will prove the many merits of this car to you and your family in the most practical way.

For reliability the Maxwell "Mascotte" is unequalled. Remember, the Maxwell won this year's Glidden Tour, the hardest test of efficiency on record. It had the best team score in last year's Glidden Tour also; it holds the world's non-stop record for traveling ten thousand miles over country roads without stopping the motor. The Maxwell has won more endurance contests than any other car in the world.

For durability The Maxwell stands supreme. Official figures prove no other car will last as long. Over 91 per cent. of the Maxwells sold in New York State during 1905-1906, are registered again this year, proving seven years of continuous service. The Maxwell will give you years of absolutely reliable service at the lowest cost of maintenance.

I want to prove to you that the Maxwell "Mascotte" is the first real high-grade family touring car ever sold for less than \$1000. No other car within \$200 above its price compares with it. It has been close figuring to build such a large, powerful and stylish car as the Maxwell "Mascotte" and sell it for only \$980. No other company, lacking our wonderful manufacturing facilities, can afford to do it.

Don't fail to take advantage of my offer. I want the opportunity of entertaining you and your family in the Maxwell "Mascotte." Remember, it will not cost you a penny and involves no obligation whatsoever.

All you need do is fill out the attached coupon and send it to me personally. I will instruct our local representative to make arrangements with you for your trip. Write me today.

J. D. Maxwell

Mr. J. D. Maxwell, 66 West 61st St., N. Y.

Dear Sir: I will be glad to accept your invitation to take a ride with my family in the Maxwell "Mascotte."

Kindly arrange to place a car at my disposal. It is understood that no expense or obligation on my part is involved.

Yours very truly,

Name.....
Address.....
Town.....
State.....
F. & P. 4-27-12.



**United States Motor Company
Maxwell Division**

66 West 61st Street, New York

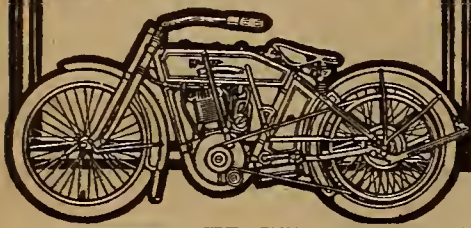
HARLEY-DAVIDSON

The children can go to city school and still help with the chores. You can carry freight weighing 200 lbs. You can run to town for repairs, in fact, there is no end to what the Harley-Davidson motorcycle will do for you on the farm. It will do the road work of five horses and cost but one-tenth to one-sixth cent per mile to operate.

The Harley-Davidson was built for country use. Its *Ful-Flotem* seat (an exclusive feature) does away with all jolts and jars. Makes every road seem like a boulevard. Its *Free-wheel* Control (also exclusive) permits starting or stopping by the mere shifting of a lever.

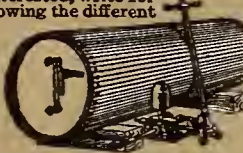
Let us tell you all about it. Don't be tied down. Don't make the farm a prison. You can go and come as you wish, horses or no horses, if you own a Harley-Davidson. Send for catalog.

Harley-Davidson Motor Co.
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This System is the most Simplified of any type Air Pressure Water Works System. For either hand or any type power equipment. The smallest size we can furnish complete, ready to install, for \$39.00. If you are interested, write for our circular "X.Z." showing the different types. Buy from first hands—save middle-man's profit. Sixty Days' Free Trial Money Back if not Pleased. We take the risk. SATISFIED USERS EVERYWHERE.



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New Combination Tool. Made of drop forged, high grade carbon steel. Sells to Farmers, Plumbers, Machinists, Auto Owners, in stores and the home. 15 TOOLS IN ONE. Can be used as a vise. A machine shop for the home. Everybody pleased. Won't be without one. Sales easy. Demand enormous. Big profits. Rep. Va. ordered 275. Made enough profit to keep his family 4 months. Write quick for sample to workers.

THOMAS TOOL CO., 6146 Berry St., Dayton, Ohio

The Best Tool I Use

A Few Implements That Have Met with Favor on the Farm

Long after the Best Tool Department closed many months ago our readers continued to write us. We saved the best of these letters, such as did not directly duplicate matter previously published. These letters are here given. EDITOR.

A Labor-Saver

ONE of the best tools we use and one of the greatest labor-savers at haying-time, is a double-harpoon hay-fork combined with a track and carrier. Not many years ago it was quite a task to unload a big load of hay into the mow. It took two strong men quite a bit to pitch a big load off the wagon, and an immense amount of hard labor was required. Two or three more men were necessary to mow the hay back and tramp it down.

Now it is quite different. We hitch a strong horse to the rope, set the fork in the load of hay, start the horse, and a bunch of hay that six men couldn't lift is easily raised and deposited in the mow just about where you want it. Repeat the operation from five to seven times, and your load is off. One man to set the fork and one or two in the mow are all that is required to do the trick.

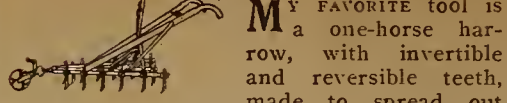
A good hay-fork is not only a labor-saver, but a great time-saver in the farmer's busiest season, and not only that, but it is a saver of space as well, because the hay can be put in the mow much more compactly than by the old method. L. ENSMINGER.

A Combination

THE best tool I use is the Washington hatchet, which, when once used, is indispensable. It has so many points of usefulness. There are ten tools in one. A, hatchet; B, pincers and nail-puller; C, pipe-tongs; D, wire-cutter; E, hammer; FF, wire-gage; GG, wire-splicer; H, alligator wrench; I, screw-driver. What more could be asked for in one tool? FRANK PARKHURST.



A South Carolina Harrow



MY FAVORITE tool is a one-horse harrow, with invertible and reversible teeth, made to spread out four feet, or cover but one foot of space. It has fourteen teeth bolted to three horizontal bars, two of which form a "V" shape, with the other bar running straight back from the point of the "V." Twelve of the teeth are attached to the outside bars. Two teeth, the handles and the lever, are supported by the middle bar. The teeth are flattened and turned to the front, like cultivator teeth or plows. The other ends of the spikes are straight and sharp. When I want a harrow job done, I use the harrow end of the spikes. When a cultivator job is required, I put the other end down. If I want a dust blanket after corn-roots have matted the ground, I turn the little cultivator teeth backward, and drag along, where the ground has lately been plowed with sweeps.

If I have trashy ground to harrow, I turn the teeth backward and use the harrow that way.

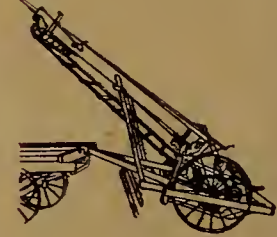
This tool is for the one-horse man, for instance a country pastor, who wants to make his horse-feed on the patches around his parsonage. This is what the harrow, described above, can do: Where land gets hard before breaking, before the truck comes up, or just after coming up, the harrow is the thing to use. The land softens up, then, without rain. After ground is broken, run the harrow over it right away a time or two. Lay off the rows and bed. Subsoil the middle furrows. Run in there with the harrow set very narrow. If you have manure to put in, put it into that furrow before harrowing and drag it along and mix with the soil. Bed on, open seed-bed, drop the corn, if you have no planter, and cover with the harrow set narrow. Don't forget to take out the two middle teeth. The clods will be pushed away, and the grains of corn lodged on the sides of furrow will be dragged into the furrow. When corn is up, run across beds with harrow. Later run around the corn about twice with the harrow. Plow with sweeps, but harrow after plowing every time to preserve the moisture. Now for oats. Suppose you don't have a drill and don't want to bother your neighbor. Plow the land well. Harrow. Plow the land again, making ridges about a foot wide. Sow down the fertilizer broadcast. Do the same way with the oats. Follow with the harrow the way the furrows run. The result is oats in pretty rows, standing in furrows half filled—the best way to raise oats in the South. Y. VON A. RISER.

as dock, elders, briars; to cut straps for harness mending; to cut rope, twine strings; to remove old putty from window-frames; to putty glass in; to cut wedges for loose tool-handles; to trim off shoe-soles; to trim a horse's foot, or to remove a stone that gets wedged between the shoe and foot; to cut bands at the thrashing-machine; to cut fodder-twine; to cut bean-poles; to make shavings to start fire with; to cut and split fuse in blasting stumps; to cut chickens' heads off; to stick a turkey, goose or duck; to skin a squirrel, rabbit, skunk, muskrat, mink and all fur-bearing animals, also sheep, cattle or horses; to carve a fine ripe melon. It is a tool that a stock-raiser could not do without, nor could the teamster, farmer, doctor, lawyer, teacher, preacher, merchant. The thief would not do without it. It is the small boy's best treasure, the old man's greatest pleasure. GEO. A. SAYRE.

A Clean Sweep

MY BEST implement is the hay-loader. It picks up the hay clean and leaves the dirt on the ground where a dump rake will mix it with the hay. It loads from the swath as well as from the wind-rows. It don't take the leaves from the clover-hay. It saves the labor of raking the hay and saves the pitching on the wagon. It does he work quicker.

My two boys of fifteen and seventeen years old did all the loading last summer. We put up about thirty acres of clover-hay and some alfalfa. H. C. NEIMANN.



It Kills Weeds

I HAVE often noticed in the leading farm papers various ways suggested for killing weeds and briars, but from all accounts they don't "stay killed."

The best thing I have ever used is the jointer: the one tool that is absolutely perfect in its work, simple to understand, easy to attach to the respective plows for which it is made and cheap in price. Yet it is hard to find a farmer who uses one. It will more than pay for itself in a ten-acre field when used. It is attached to the plow-beam about eight inches forward of the beam proper and should be set to run about two inches deep, in which position it will cut a furrow of its own, and throw to the bottom of the big furrow weeds, briars, mullein-stalks, corn-stalks and almost all trash above ground.

We once plowed a five-acre field that was literally covered with dewberry-briers, being so thick that they would cut your shoc-lacing out if you walked through them much. We used the jointer, and it did its work so thoroughly that I have never seen a dozen briars in the field since. They "stayed killed." R. A. CAMPBELL.

The Disk Forever

MY SUBJECT is the disk-harrow, for I have about come to the conclusion that this is my ideal tool. Its range of work when fully understood is so great and its usage so varied that it is hard to conceive of things it will not do when in the hands of a practical farmer.

I think the disk-harrow is an ideal tool with which to prepare the perfect seed-bed. It thoroughly mixes the soil, cutting and pulverizing it nicely.

I find the disk-harrow a splendid tool for working corn. Remove the two inside disks, set it up at the greatest angle. Go astride the row, throwing the dirt from the corn, leaving about an eight-inch space at center. Scrape this with a hoe, and you will have the corn in nice shape. Then in about eight or ten days reverse the harrow so as to throw the soil in (if your harrow is not reversible, take disks off the shaft and turn around), and go over the corn same as you did before. This time you will pull the dirt in to the corn and will place the least bit of dirt around the corn, leaving the land level. C. L. SHUPING.

I feel justified in naming the disk-harrow as my favorite tool. I use a ten-disk machine with rigid frame. The disk gangs are reversible, so that in orchard work I can either cut the dirt away from the trees or throw it to them, as desired. As the trees grow larger, I can spread the gangs apart, so that they may extend under the limbs and still do no harm. I find the rigid frame best when filling ditches and washed-out places. One will find the disk better than a plow, for the gangs may be set as far out as possible, and the farmer will be surprised to see the ditch fill up and the horses safe and sound. To prepare a good seed-bed, let the disk lap each round, and the soil will be smooth and level.

If I had to have only one machine on a farm, I would select the disk, for with it you can stir, level, pulverize, harrow and by spreading the gangs cultivate potatoes or anything low. W. C. HOWDLE.

A Garden Tool

MY GRANDFATHER was a blacksmith and fashioned a tool which has been of great service to us in weeding and transplanting small plants.

It is simply a miniature hoe made entirely of steel with a blade three inches long and one and one-half inches wide, handle twelve inches long ending in a small trowel one and one-half inches wide at place of greatest width and tapering to a point. It can be used to loosen soil around small plants set a few inches apart, to dig weeds, for transplanting small plants and for clearing larger plants of bugs and worms. It is a necessary part of a greenhouse or hotbed outfit. MRS. J. B. BUNDY.



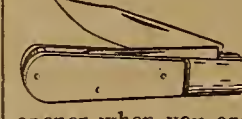
A Friend to Apples

MY FAVORITE tool is my sprayer. I have tools of various kinds, but have none that will equal the sprayer. It will bring me in from fifty to seventy-five dollars per day when used at the right time. For codling-moth one should spray thoroughly with arsenate of lead about four to six days after the bloom falls. Records show that sprayed apples sell for at least one dollar more on the barrel than the unsprayed ones. That means a great deal to a man with several thousand barrels to sell. West Virginia is getting to be one of the leading fruit-growing states, and the sprayer is helping it reach that point. C. B. HAINES.



Always Useful

THE best tool I ever used is the jack-knife, or common pocket-knife. It answers for a can-opener when you are at a picnic, or a cork-extractor, also a nut-cracker and pick, a tack-hammer, a screw-driver, an apple parer and corer, a peach peeler and seeder, a plum-stoner, a vegetable peeler, and slicer, a fish scaler and cleaner, a paper-knife and ink-eraser, a pencil-sharpener. It will cut potatoes for planting, trim fruit and shade trees, rose and shrub bushes. It may be used to bud or graft trees; cut slips from flowers; to cut obnoxious weeds such



Standard Farm Wagon

Studebaker

STUDEBAKER HUBS will last till doomsday. Made of the strongest, toughest, closest grain wood we can find, soaked in boiled linseed oil to protect their surface, air dried for years to thoroughly season them—finally treated by a secret sealing fluid that tightens and toughens every fibre and makes them absolutely weather-resisting.

Studebaker hubs never check nor split. Neither hard usage nor hard weather ever leave a scar. The hub bands never break or come loose, because they are electrically welded and shrunk on by hydraulic pressure.

We make all metal parts, including skeins, that go into a Studebaker wagon and we know they are right. We test chemically the material when we buy it and again test the finished parts to make sure that they are absolutely perfect. Nothing is left to chance in Studebaker—that's why we guarantee Studebaker products. Insist upon getting a genuine Studebaker. Don't take another wagon represented to be "just as good." Ask our dealer or send for catalog.

The Studebaker Corporation
South Bend, Ind.

California Wants You This Spring

You would want California this spring—you would take a farm nowhere else—could you see what I saw in the San Joaquin Valley in March.

This wonderful sun-kissed valley is prospering and developing with rapid strides. You can make its increase in values profit you.

Go NOW—you can buy a farm cheap and on terms that will allow the land to pay for itself. On your deferred payments the interest will be only six per cent, or less.

Go this spring, buy forty or eighty acres, even ten or twenty will give you a good living and a surplus, put most of your place to alfalfa—get a few good dairy cows from the man who owns the creamery (he will sell them to you on time) and from the start there will be an income. After the first year the profits from the place will meet all payments—in four, or at most five, years you will be out of debt and the sole proprietor of a home that can be sold for \$250 or more per acre, and will bring you a net income of at least \$40 an acre, much more when your fruit trees come into bearing. I give just average results. If you put in more than average energy and foresight, your results will be in proportion.

I wish you would read our new book about the San Joaquin Valley—then tell me if you are interested and let me answer your questions.

The book is free.

C. L. SEAGRAVES
General Colonization Agent, A. T. & S. F. Ry.
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SEE THAT SHUTTLE
This Awl sews a lock stitch like a machine. Just the thing for repairing shoes, harness, buggy tops, etc. Sew up grain bags, tents, awnings and wire cuts on horses and cattle.

Makes a neat, durable repair and quickly, too. Has a diamond point grooved needle, a hollow handle, plated metal parts, a shuttle, and a bobbin holding 24 yds. of best waxed linen thread. No extra tools needed. Can be carried in the pocket. Special discounts to agents. S. Perrine says "Sold 9 on way home with sample." W. Spenser writes "Sold 11 first 4 hours." Reg. price \$1.00. Complete sample with 1 large, 1 small, 1 curved needle, a shuttle, and a bobbin of thread sent postpaid for 60c., 2 for \$1.00. Get one, keep it a month or so, and all your harness, etc., and then if you are not satisfied return the Awl and we will refund your money. Send quick for sample and instructions.

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WANTED—MEN

Prepare as Firemen, Brakemen, Electric Motormen, Train Porters (colored). Hundreds put to work—\$65 to \$150 a month. No experience necessary. 500 More Wanted. Enclose stamp for Application Blank and Book. State position.

I. Railway C. I., No. 36, Indianapolis, Ind.

BOYS!

Get This

Air-Rifle

A Few Moments of Your Spare Time Will Turn the Trick



The King Air-Rifle is a repeater. It shoots 150 times without reloading. It is strong, durable and shoots accurately. It cultivates trueness of sight and evenness of nerve.

These fine air-rifles are provided with pistol-grip, true sights, and are so strongly made that it is almost impossible for them to get out of order.

Boys have use for it every minute—hunting in the woods, shooting at targets, drilling as soldiers, and innumerable uses that only boys can discover. Every boy will want one of these rifles, and this is an unusual opportunity to get a high-class Air-Rifle. Get your subscriptions at once and send your order in early.

This rifle is harmless. It uses no powder—just air.

There is no smoke, no noise. Air is plentiful and shot costs but 10c for 1,000.

BOYS

Send a postal to FARM AND FIRESIDE to-day. Just say you want an Air-Rifle without having to pay one cent. Thousands of happy boys easily earned this way.

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Better Farm Implements and How to Use Them

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Illustrating the most important line of farm machines made. Tells when, where and how to use them. It answers every question you might ask about farming implements. Send postal today for package No. X-71 John Deere Plow Co. Moline, Illinois

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Get Quality and Service—**JOHN DEERE Dealers Give Both**

GARDENING

By T. GREINER

The Short Tomato-Plant

IN OUR own locality, the kind of tomato-plant we set counts much for or against success. The secret of success in getting the right kind of plant is found mostly in frequent repeated transplanting, and in giving to each plant the necessary room. You can easily start a good lot of plants in nice fibrous loam in a box set in a warm kitchen-window. But you cannot keep them there long after they have come up. Better have a hotbed or a cold-frame outdoors. Dig up the young seedlings from the box, and set them into another box, say an inch and a half apart each way. When they begin to crowd, dig or pull them up again, and set into a third box, say three inches apart each way. If there is a tendency to run up tall, you may have to spread them still farther apart. Keep them down. I would rather cut them back than let them run up tall and spindling. It is not advisable to use very rich soil for tomato-plants, nor to force them into over-rapid growth by high temperatures. A moderate but healthy growth is what we prefer for this class of plants.

How Many to the Acre?

A reader wants to plant an acre in tomatoes for a canning establishment. He wonders how much hotbed room it will take to raise them. The plants are usually set about four and one-half feet apart each way. This calls for a little over 2,000 plants per acre. I would try to raise at least 2,500 to make allowance for losses, replantings, etc. This quantity could be started very easily in a single sash hotbed. When a couple of inches high, they may then be taken up and transplanted into cold-frames giving the space required to make them grow stout and stocky. Thus the plants may be grown quite cheaply, yet be good enough for planting in larger fields for canning purposes.

Plants for Neighbors

As usual I am preparing for raising a fair supply of cabbage, cauliflower and similar plants for my plant trade, which is mostly among neighbors, and somewhat on a small scale. But it always has paid me well. I sow the seed with the garden drill, in long rows, a row or two at a time, and sowing every few days so as to make sure that I have plants coming on and ready for transplanting every day for a period of weeks or even months. I got to have some early cabbages, although not so very many, as most persons plant mostly for fall and winter use and sales. I find Jersey Wakefield the most popular early sort, although I grow more of the flat-headed Maule's Earliest; for mid-season people call mostly for Succession, and they prefer Danish Ballhead to all others as a winter cabbage. People are always willing to pay twenty cents per hundred, or from \$1.50 to \$2 per thousand, for good cabbage-plants, and about double that for good cauliflower-plants. Sometimes there is call for kohlrabi and turnip plants. All these are easily grown, and bring in quite a little pocket money. Any industrious youngster in a good neighborhood can start up a business of this kind, and beginning small and slow, may gradually work up into a nice plant trade. Ordinary good garden land will do. It is advisable to avoid land on which cabbages or similar crops have been grown before, at least for two or three years. When sowing, do not let the seed run too freely, or sow by hand. The plants should not stand too thickly in the row. Two or three plants to the inch is enough, although we often have fifty to the foot. The plants are usually all taken up before weeds start up or give us trouble.

I also find that there is occasionally some demand for asparagus-roots and rhubarb-sets. Asparagus-plants are not difficult to grow, but need the whole season and close looking after to keep them free from weeds, also the plants thinned to stand several inches apart in the row. But it is easy to get one dollar for a hundred good plants where sold in small numbers to neighbors. A little patch of rhubarb will supply the few dozen rhubarb-roots that neighbors will call for, and for which they are ready to pay five of ten cents apiece. Celery-plants are likewise very salable, and for me very profitable.

No Cabbage-Maggots Wanted


We have the cabbage-maggot always with us. This pest takes a percentage of my early cabbage and cauliflower plants after they have been set in open ground in early spring. But my plants started in nursery rows in open ground have never suffered very much from the depredations of this pest. Consequently I have never resorted to the newer plan of protecting such plant-beds by means of muslin or cheese-cloth stretched over the entire bed, with the sides

made tight by setting boards up on edge all around the bed. Where the maggots are liable to come in larger numbers, or serious damage is anticipated, this method can be recommended as entirely successful. So long as I can grow my plants in the open, however, I am not going to protect them in the manner described.

Foreign Seed-Potatoes

THE United States seed and plant experts warn us against planting potatoes imported from foreign countries. They say that such potatoes are not adapted to our soils and climate and will not yield well. Moreover, there are several serious diseases not now prevalent in this country which are almost sure to be brought in if foreign seed is used. Don't be tempted to plant them because they look nice.

Seed-Potato Cutter



NAIL a one-by-four lengthwise across a box twelve by twelve by twenty-four inches in dimensions. Then put a keen double-edged knife-blade (A) through the one-by-four, as shown in sketch. A one-and-one-fourth-inch strip of saw-blade steel sharpened on both edges, dirk fashion, works well. It is held in place by a set-screw, S. The knife, being fixed leaves both hands free to handle potatoes. Put one hand on each side of blade and push the potato past the blade, cutting it as desired. The potatoes drop in the box.

J. H. WATSON.

Chewink

"CHEWINK! Chewink!" cry these alarmists, and immediately all of the little birds and animals within sound of these voices are on their guard. Then the alarm is taken up by other chewinks and so carried on down through the woodland. Often they follow the rambler, but always at a respectful distance, and keep up such a clatter that he wishes the chewinks did not exist; they are much like the village children who follow some strange character through town, jeering at his heels. Yet, for all of this, the chewinks have their place in nature, and the woods would be lonesome without them.

Towhee is their proper name; but ground or swamp robin are names often applied to them. The "sparrow" bill will distinguish them from the thrush family. They are



black above and whitish underneath, with chestnut-colored sides; tail black and white. Except when singing, which is a serious matter with them and is always accomplished by their mounting higher and higher any tree within their domain, the chewinks spend their time on the ground scratching among the fallen leaves for their food. In this they render valuable service, for they gather weed-seeds and insects that other birds, by skimming the surface, do not find.

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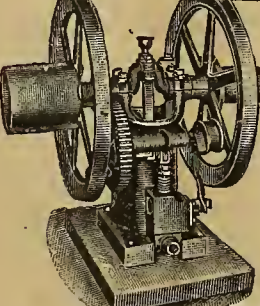
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The Market Outlook

Do Not Speculate Now

IT TAKES two years of big crops in this country to make a surplus, and here we start in this spring with a bare platter in practically everything appertaining to live stock and feed. It naturally follows that all live stock and all crops raised in 1912 will sell some time during the year at high prices, and farmers ought to plan to save everything on the farm, for it will all have a value.

Stock cattle, considering quality, are very high, and the general custom of rushing in and buying cattle simply because the grass is an inch or two high, without thinking of the cost, is a most unbusinesslike proceeding. Why this rush to eat up the grass? It won't spoil, and as a general rule stock cattle can be bought cheaper in July than in May, and in many cases the land used as pasture can be cut for hay. We all must, in handling cattle, speculate to a certain extent, but there is no great prospect of big financial profit in buying stock cattle at present prices.

Again, a large majority of our pastures are eaten off so close in May and June that they are bare through July and August, always a ruinous proposition with six-cent stockers.

Every year there is always a time when cattle lose money and a time when they make money, and as a rule the poorest time to sell cattle is in the full of grass. This is not so with range cattle, but is very much so on our high-priced lands. Cattle bought now, weight, say, one thousand pounds, and fed grain or grass all summer, may pay out, but the ordinary run of stockers offered on the markets to-day, weighing from five hundred to six hundred pounds, will, in the fall, not be heavy enough for feeders.

It is for that reason it takes considerable figuring to see how these six-cent steers can pay much for the grass eaten.

Prices on everything are getting higher. Everyone is feverish. Just play safe for a while and pile up all the rough feed you can this season.

You will find a time to get cattle when there's some daylight to the deal. This is a dangerous time to speculate at present prices. **W. S. A. SMITH, Iowa.**

Sheep Prices O.K.

SINCE the middle of March the demand for sheep and lambs has been steadily advancing, and it has been fairly met by an adequate supply. A few spring lambs made their appearance toward the end of the month, the principal offering being forty-eight in one lot, forty-six-pound lambs, which went at \$12 the one hundred pounds. They, probably, would have done better had they been held till they weighed another ten pounds so as to dress out at a more sought-for weight, about twenty-five pounds. Not as many, even as usual, of these have been fed this year, probably on account of the severe and early winter and the high prices of hay and mill-feeds. Those who have disregarded these drawbacks, and have succeeded in raising some good spring lambs, are likely to be well rewarded.

It seems pretty clear that until we get the idea into our heads (and act upon it) that it is the thoroughly finished article that first attracts the attention of the buyers and gets the most benefit of a rising market, and that this rule applies as much to sheep and lambs as to any other merchandise, sheep-raising will never become as popular as it deserves to be, as a filler of the pocketbook and a restorer of waning fertility.

A striking instance of the advantages of sending none but well-finished animals of desirable weights to market is found in the uniformity with which Colorado sheep and lambs have secured the top prices during the past three months. The feeders of that State have certainly had no advantages over their neighbors, either as to weather conditions or prices of hay and feed-stuffs; but they seem to have learned the value of finishing their product before marketing it. The following tables will serve to show how uniformly they have held the top of the market, as against lambs, native and western, sent in from other states.

The following table is taken at random from one day's report in the *Farmers' and Drovers' Journal* of Chicago, about the middle of March. It deals with prime lambs.

Native Lambs			Western Lambs			Colorado Lambs		
No.	Wt.	Price	No.	Wt.	Price	No.	Wt.	Price
25	87	\$7.25	253	78	\$7.50	512	77	\$8.00
240	79	7.35	17	79	7.60	486	83	8.00
70	82	7.50	226	75	7.60	151	86	8.00
1	90	7.75	318	81	7.75	343	85	8.00
4	72	7.75	159	78	7.50	700	79	8.00
325	72	7.30	478	73	7.80	350	79	8.00

The wool trade is in a satisfactory condition, and prices are steady. Sales of Ohio half and three-quarters blood are reported at twenty-nine cents. Many western flockmasters are holding out for twenty cents, and there is every prospect of their getting it, or more, as stocks in wool centers are getting low. **JOHN PICKERING ROSS, Illinois.**

Hogs Supply Demands

THE hog-market continues on its upward climb, and the \$8 mark was reached in Chicago the first week in April. This advance has been even more rapid than was generally expected. Indications are that prices will continue on their upward march for another month or more. General supply conditions favor it. The cattle feed-yards throughout the corn belt that were filled this winter have been closely cleaned up, because of the deep mud caused by the melting of the heavy snow. Many cattle that might have been held for grass have gone marketward, because of the lateness of the spring. Even distillery-fed cattle are being sent to the yards earlier than the customary time and so are not so heavy. Numbers of yearling cattle that should be fed until mid-summer are being pushed to market in a half-fat condition.

All of these point to a continuation during the summer of the beef and mutton shortage. The supply of pork now in the packing-house cellars and the supply still in the hogs to be marketed must fill in this shortage as far as it is able. Under such conditions the market must rise, and such rises will be supported by the large packers, as it enables them to sell quickly their provision supply at a round profit. So far provisions have not kept pace with the live-hog prices, but the sharp advances have caused the wholesalers to fill up considerable of their space. The slow movement of provisions will help to advance live-hog prices, and the packers will support the rise, as it enhances the value of these provisions on hand. This will counteract any slump in the June run of hogs should there be any.

Quality, which has now become the controlling factor in price, is not as good as it was, and the average weight is decreasing from two to five pounds per week. It now stands twenty pounds under the average of one year ago. The receipts have dwindled until they are no larger than those of a year ago, and the hogs now are not as large. The corn belt west of the Mississippi is supplying nearly all the hogs marketed. The market is climbing on its usual spring rise and will not go down until a much larger supply is at hand. It is now timely to consider the profitability of fall pigs. While they may have cost quite a bit to feed the past winter, they have not eaten as much as the larger hogs. **L. K. BROWN, South Dakota.**

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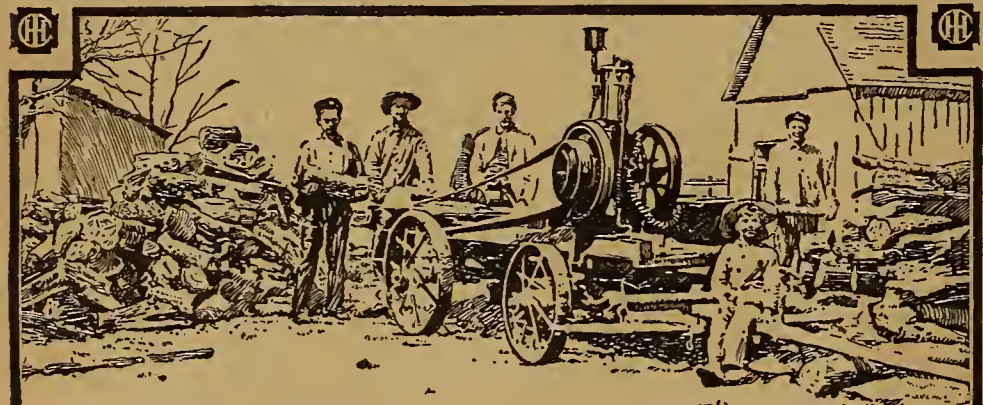
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The FARMERS' LOBBY.

THERE has just come to hand a particularly edifying example of the workings of senseless economy in government affairs, that seems to deserve a little attention. Just note, first, these facts:

National forests contain one fifth of the standing timber of the country.

Half the western sheep and ten per cent. of western cattle are grazed in national forests.

These forests protect the headwaters of all the important western streams, thereby preserving the water-supplies which make irrigation possible, and which also are available for water-power developments. These latter, already worth many millions, have only just begun.

There is half a billion feet of potential lumber in the national forests, worth as it stands at least half a billion dollars. In twenty years it will be worth twice as much.

Now, keeping those facts in mind, note this:

Uncle Sam's immense timber reserve and other wealth, in these national forests, is menaced constantly by forest fires. For years the construction of roads, trails and telephone-lines has been systematically carried on, to protect these forests. Rangers and fire-fighters have been stationed where they could do the most good. In the dry and disastrous season of 1910, when fires were very bad, the great forests of the far Northwest would have been well-nigh destroyed but for the protective system built up by the Forest Service. As it was, over one hundred lives of fire-fighters were lost and many millions of wealth were burned up.

A Plea of Economy!

The government has been providing \$500,000 a year to build roads, trails and telephone-lines in the forests, and, in addition, it has been setting aside an emergency fund for fighting fires, of \$1,000,000 annually. This latter fund can be used only if there are fires that demand it. In 1910 it was greatly exceeded, so tremendous were the fires; in other years it has sometimes been partly returned to the treasury.

Altogether, the government's insurance on its forests has been about one fourth of one per cent. annually on the timber values alone; maybe one tenth of one per cent. on the real values of the forests.

And yet, infinitesimal as this would seem for protecting such vast reservoirs of natural resources, what do you imagine has been seriously undertaken?

Nothing less than a reduction of these items: the emergency fire-fighting fund, from \$1,000,000 to \$200,000; and the fund for building roads, trails and phone-lines, from \$500,000 to \$275,000!

That is the way the House committee fixed the items, when they were reached in the agricultural appropriation bill; and that is the way they passed the House, when the bill came up. All on the plea of economy! Why, the business man who would let all his insurance lapse, in order to save the premiums, would look safe and sane, compared to the government that would adopt such a course as this.

The bill, as I am writing, is before the Senate committee on agriculture, and these items may be restored. It is uncertain, however, for the Senate is full of anti-conservation sentiment, and very likely a fight of considerable proportions will have to be made. The national conservation association and other interests have taken hold of the fight, and are lining up forces as effectively and fast as possible, in the hope of saving the national forests from such a disastrous "economy" policy.

* * *

The Real Cost of Milk.

There is no bigger question, in connection with the cost-of-living problem in this country, than that of supplying milk for the big cities. Every year it gets more difficult. Last summer, during the drought, milk was actually brought by special express consignments from west-central New York to Washington, nearly four hundred miles; the town would have gone milkless if it had not been possible to get it and bring it that far.

About this milk question, there are some features that ought to make it tremendously interesting to farmers. Recently I visited some friends in New York, right in the milk-raising country. Their county is one of the most important sources of supply for the New York market, and what that means will be suggested by the observation that New York City uses an average, daily, of 2,069,200 quarts of milk. Of this about ten per cent.

Hen-Headed Economy in Congress Likewise Some Observations on Milk Prices and Deliveries By Judson C. Welliver

is scientifically Pasteurized, twenty per cent. is heated by the momentary process, and the rest is sold raw.

My up-state New York friends told me that many men in their immediate neighborhood were then getting fourteen cents per gallon for milk. It was midwinter, and the mid of one of the hardest winters in many years, too. I was surprised to know that they got so little for milk in such a season.

"Oh," they said, "that's a pretty good price; in summer it'll get down to probably eleven for a long period."

"What does it sell for when it gets to New York?" I asked.

"Most of the milk from around here brings nine cents a quart," was the reply.

That struck me hard. Two and three-fourths cents a quart to the farmer in summer, three and one-half cents a quart to him in winter; yet the New York milk trust gets nine cents a quart for it from the consumer!

I had long known in a general way that the milk-growers around New York were outrageously victimized by the trust; but these figures made it worse than I had dreamed. For I happened to know something about prices paid for milk for the comparatively unimportant market of Washington. There is no milk trust at Washington; perhaps that explains. Anyhow, my Maryland neighbors who raise the best milk have been getting up to twenty-three cents the gallon for it this past winter, and in summer they never get below eighteen, and seldom below twenty cents the gallon.

It will be conceded that the difference between fourteen and twenty-four cents ought to make quite a difference in the price to the consumer.

Well, it doesn't. Inquiries about milk conditions in New York and in Washington lead to the conclusion that the New York consumer pays nine cents a quart for milk that the dairyman got not over three and one-half cents for; while the Washington consumer pays nine cents for milk that the dairyman got as high as six cents for.

But there's a trust in New York; so the newspapers say and the public believes. Grand juries, and so on, have investigated it time and again and failed to get anything done for either the farmer or the consumer; but there certainly must be something doing in the trust line, when New York can get away with such a good thing.

A Margin of Six Cents

The Washington dealers don't lose money, doing business as I have described; I looked up one of them, doing a fine, flourishing business, and was assured that he made \$61,000 last year! Now, if a man with a modest business in Washington can make \$60,000 in a year on a margin of three cents a gallon, how much would you think the New York trust ought to make with a margin of five to six cents?

All this got more interesting as I looked farther into it. One dairyman in New York told me this story of milk methods:

"Do you see that dairy farm over, across the valley?" pointing to it. "Well, the chap who lives there has a good dairy here. A year ago he got tired of selling to the trust, and negotiated with a summer hotel in the neighborhood. The hotel was buying from the trust and paying trust prices. The farmer proposed that they get together and both profit by cutting out the trust's profit."

"They did, and both made money. But what happened? There was a time during the summer when the supply wasn't large enough for the rush season at the hotel, and the hotel management needed some from the trust people. There wasn't any to be had!"

"When the season was over, the dairyman wanted to resume selling his milk to the trust. The trust waited a spell, and then reported that it had had an unsatisfactory report on sanitary conditions at his farm and couldn't take his milk!"

For these statements and the bad business conditions they imply, I do not vouch; I do know that up in the New York milk section this kind of story circulates commonly, and is believed by the people who have most concern with the milk business.

What is the truth about the milk conditions surrounding the great cities? The New York milk-zone seems to be in worse shape than any other; Boston is not much better. The milk-producers around New York almost unanimously protest that they can make nothing at present prices and under existing conditions. Land, feed, stock, everything, costs too much. People who are in the business, who have the plants on their hands, who don't know what else to do, are sticking at the business in a hopeless way, because they don't know how to get out; but they generally agree that there's nothing in it. Are they right?

They Ought to "Get Together"

Beyond doubt, there are exceptions. In New York, for instance, there is a certain percentage of milk that sells up to twenty cents a quart; certified, Pasteurized, extra choice, and so on. The people who raise that sort of milk make money on it, because almost invariably the man who is smart enough to raise that sort, is also smart enough to keep a direct touch with his customer. He sells direct to some big hotel, café or institution, or to a dealer with a limited but select trade. This sort of milk, sold to this sort of a market, earns money for the producer; and, of course, it's quite obvious that a poor devil of a dairyman losing money at three cents would do a lot better if he turned out a high-toned product and got maybe ten cents for it. But it isn't possible for everybody, or for very many bodies, to get these excessive prices. After all, the real question has to do with the mass of producers, making milk for the mass of people who must have milk all the while.

When I talk to city health authorities, inspectors, and the like, they look wise, explain that the farmer doesn't do his business intelligently, that he doesn't get the best results from his plant, and has to be jacked up all the time to keep sanitary conditions up to the point of acceptability. Mr. City Official, in the milk business, is generally a pretty superior sort of person.

On the other hand, when I talk to the farmers about the city inspection and health authorities, I find that the farmers look on these people as their natural enemies. They believe that there is a huge conspiracy to do up the milk-raiser, and they suspect that the officials are somehow in it.

Both sides, of course, are largely wrong; and they ought to understand each other better. It isn't yet possible for the dairyman to keep his cows in his parlor and feed them on *pâté de foie-gras* and have them milked by real milkmaids, like the ones in picture-books. The milkmaid is a horny-fisted cuss with a quid of tobacco in his cheek. That's all right; but he could just as well be careful about the quid and the cleanliness of the fists—and the cow's bag. The city officials have too long represented the frayed-out edges of a political spoils system that made such things as milk and dairy inspection mere jobs for henchmen, without regard to merits.

Conditions are Improving

But this is getting better. The Agricultural Department officials tell me that public opinion about milk has forced immense improvement in all these respects. Most of the cities, big and small, now have pretty competent officials, working hard and anxious to cooperate with the farmers to improve conditions all around.

"At present prices of land, feed and stock," said a dairy official at the Department, "there's no money—no real profit—in a cow that doesn't produce 6,000 pounds of milk a year. I wouldn't try to estimate what

the average dairy cow gives now. There are about 22,000,000 of them in the country; the census of 1900, I believe, made the average just about 3,500 pounds. That's a long way too low.

"Why," he continued, "I have known inspectors from this department to put a dairy on its feet and turn a profit out where there had been a heavy loss, by simply inducing the dairyman to sell all the cows that were not producing enough milk to be profitable. You've got to put your herd on the basis of absolutely requiring every cow to earn a profit. When she doesn't do it, take her out; sell her; give her away; anything; but don't keep on losing money on her."

"We're coming along, in the matter of the 6,000-pound cow. The average is improving, and in time we will get up to it. We must, or our cities will go milkless. People can't pay any more for milk, and farmers can't raise it, under present conditions, unless they get more."

The Department isn't very certain what it thinks about the big margin that milk-dealers claim for conveying it from the raiser to the consumer. Mr. Rawl, chief of the dairy division, admitted that there was sharp conflict of testimony on this point.

"In many cities," he said, "fine modern milk-handling plants have been put in, and then have failed. But it has been my observation that they always began to make money about the time something like a monopoly was secured; let combination come in, reduce the waste of duplicating delivery throughout the same territory, do things on the larger and more economical scale, and you generally find the dealers making profits."

It is simply impossible to get any useful facts as to the economy which would be effected if waste, through duplication of city delivery, were cut out. The Department has been getting much material together, but cannot yet announce results. But any sane man can see that the delivery waste is little less than a crime. I have seen six different milk-wagons stop, in the course of the morning delivery, at six houses in a row, and each house get one bottle of milk!

Around New York and Boston there has been almost continuous warfare between producers and the retailers of milk in recent years. A little over a year ago the milk-producers' association, including a large proportion of people shipping to Boston, actually set out to boycott the Boston market, and the city was threatened for some days with a milk famine. There was talk about court injunctions and all the usual procedure for stopping strikes!

Two Ways of Solving the Problem

The remedy for all these bad conditions—and they get worse all the time—is to get the two parties to understand each other, to get the dairyman to run his business better, to secure cooperation of farmers in moving their milk to the railroad stations, to have strict municipal, or even state, supervision of the distributing business in the cities and to provide a municipal delivery system in every city, that will do all goods-delivery for all the people, all stores, all milkmen—everybody.

This municipalization of goods-delivery is one of the biggest items in it all. There isn't an intelligent city man of affairs who doesn't know that delivery costs go far to make city living costs high. But if you put up to Mr. City Man the proposition that he ought to get the city to socialize the delivery service, and reduce its cost about sixty per cent.—why, he just blows up and tells you it can't be done.

Then, as likely as not, after admitting that he can't solve his end of the problem, he will insist that the farmer ought to do it all, by developing right away the 6,000-pound-a-year dairy cow!

It's always easy to explain how the other fellow could solve the problem that you give up; and the city man isn't doing his share, or any decent part of it, toward solving the living-cost problem.

I venture, in all candor, and after some examination of both ends of the problem, that if on one hand the farmers would systematically cultivate their herds toward the 6,000-pound standard, and if on the other hand the cities would provide municipal delivery systems, cut expenses to the bone and compel milk to be handled at a moderate profit:

That the result would easily be, inside five years, an average increase of four cents a gallon in the dairyman's price for milk, and a decrease of four cents in the consumer's.

A Girl With an Idea

By E. L. Royle



VIS had been driving the sober old horse that handled the hay-slings all the morning, watching load after load disappear into the cavernous mow. Warm and dusty, she sat for a moment by the well-house while her father drew up a bucket of fresh water. Perhaps it was the hired man's description of a neighbor's mishap with a runaway team that diverted her thoughts. McFarland had been shockingly hurt, it seemed. There had been a long hunt for the overworked doctor, and the delay might leave him a cripple. Avis thought of something she had been reading in an English book, and asked:

"Father, what's a cottage hospital?"

"A hospital in a cottage, I suppose, daughter," responded John Burton carelessly, "only I never heard of such a thing."

"But they have them in England, father," continued Avis; "they're in country places, 'way off from the cities. Why don't we have them here?"

"Wouldn't be a bad notion," responded her father, as he threw the water remaining in the dipper at a too-inquisitive hen, "but who's going to pay for them? Besides, no one in Agradoc ever wants to go to a hospital. What's home for if it doesn't care for us when we're sick?"

The bell rang for the noon dinner, and the subject of cottage hospitals was forgotten long before the cherry shortcake was reached. Somehow Avis did not forget it. She thought of Mrs. Snowden, who had been ailing ever since the baby that died had arrived, when the doctor was over in the next county; of Billy McAllister, with the arm that hadn't been treated right when he fell out of the hay-mow, and of her favorite classmate, whose long fight against typhoid had ended after the ineffectual nursing in which love could not take the place of science.

"It seems to me," she said to Miriam Ford, "that we've as much right to be cared for in sickness as the city people who have everything found for them."

The two girls were seated on the side porch, Miriam embroidering a marquise waist as skilfully as the idlest of summer girls, though she had been up at dawn to bunch vegetables, while Avis shelled peas for the family.

"Only there isn't anyone to do such things in the country, 'less it's the Grange," agreed Miriam doubtfully.

"Then why shouldn't the Grange do it?" asked Avis. "Dear knows our Grange hasn't done a thing since we finished paying for our hall, except hold basket picnics and send delegates to the state and national conventions."

"And all those delegates have ever done was to pass 'resolutions' that sounded all right in the papers and had about as much effect as if we stroked the Brooklyn bridge to make New York wag its tail," added Miriam scornfully.

"Well," said Avis, with decision, "I'm going to work for a cottage hospital, and if I can't stir up our Grange, I'll know the reason why. I don't see why those people over in England, that's nothing but a back-number monarchy, should have parcels post, and government telephones, and heaps of things we want right here, and if they've got cottage hospitals for country people too, it's a little too much."

Now it is true that neither of the girls had the slightest idea what a cottage hospital really is, but the more they chattered about it, the more delightful it sounded. Miriam thought chiefly of a shining little bungalow with broad porches and red geraniums and a sweet-looking woman in white uniform, who would lay her cool hand upon the patient's fevered brow—though, as Avis remarked, when old Job Hayward got mixed up in his mowing-machine, tourniquets and surgical bandages were more necessary than the cooling of a fevered brow. Avis, who was distinctly practical, began to make a list of questions she intended to ask the hurrying local doctor—nurse's salary, expenses of equipment, absolute necessities of construction, etc. It was not until she had secured all this information that she began to talk freely of the plan, which shows that a good foundation is required even for a castle in the air.

It speaks well for Avis' convincing logic that her father, who smiled indulgently the first time she mentioned "our Grange cottage hospital," listened with real interest to the next chapter and was overheard a few days later pointing out the advantages of the plan to a neighbor who was hunting for a vagrant swarm of bees.

"Jest waited to swarm till I'd started in to whitewash the hen-house with lime-sulphur," he complained, "and then went skallyhootin' acrost the pastures and through the woods."

"Maybe you didn't tell the bees there's been a death in the family," suggested Archie, Mr. Burton's English hired man. "In the old country we whisper the news to the bees first of all, and put a bit o' crape on the hives, else the bees won't bide."

"These weren't those fussy English bees, Archie," called Avis with a laugh, as she came running along the lane. "I just came to tell you they're swarming in our old Seckel pear-tree. They're on a high limb, too, and if you're not mighty careful, you may wish we'd got that cottage hospital in running order before you get them hived."

The bees were secured, however, without any accident and escorted home, and though Abner Newell looked rather thoughtful while Avis went on describing the hospital plan, it was more the result of a casual bee or two which had invaded the interior of his khaki jumper than from any disapproval of the idea.

Avis had to own a little nervousness the next Grange night, when her father brought her daring idea before

the critical neighbors. Some of them looked doubtful, some smiled indulgently at "a girl's notion" and some were openly hostile. Old Jonathan Halloway frankly opposed the plan, and started in on the familiar subject that made his oratory the dread of every Grange in the county.

"Why should we waste our time on such women's fallals," he asked, "while we let the int'rusters crush the very life out o' farming? What we want to do is to git together to eliminate the middlemen. If the farmer gits his dues and ain't held down to thirty-five cents for a dollar's worth o' produce, he won't need no airified city nurse puttering around in a white cap every time he stirs up a mess o' hornets in the pasture-lot."

There was a general laugh, and Avis recognized the fact that her plan was laid aside for the evening, and that some other attack must be planned. But Mrs. Atkins, who still remembered the epidemic of typhoid half a generation before, when all her brightest hopes were laid in the grave of an only son, sat there with tightly clasped hands and fixed gaze, thinking how many

neighbors, on the same principle that she led her skittish chestnut colt around an automobile.

Early the next morning, before Avis heard her father shaking down the stove, she was aroused by an apparent dash of hailstones at her window. This phenomenon was followed by a fluty whistle. Throwing on her kimono, she went to the window, to see Billy Weston, her fourteen-year-old cousin, standing beyond the currant-bushes with a small rifle over his shoulder and an expression of worryment on his rosy face.

"Oh, Avis," he began, "I went out early after woodchucks—you know Dad promised me a quarter for every one I shot—and when I went by the old mill in the hill pasture, I heard someone talking and singing. And I was scared, but I looked in, and there was that tough-looking tramp that was here the other day. He's terribly sick, and I'll bet it's something catching, for he's clean out of his head and all broke out in spots."

"Stay where you are, Billy," ordered Avis, and then followed a brief talk with Miss Lindabury, who woke up clear-headed and efficient, and Billy was accommodated with a picnic meal in the far end of the grape-arbor until the case was studied. The nurse, with certain supplies, was driven toward the old mill, picking up the overdriven doctor, while all Agradoc looked toward the distant hill pasture and watched for a quarantine sign.

"Like as not," said Abner Halloway, "we'll be having a winter like my grandfather used to tell about, when there wasn't a house at the corners but what had a funeral in it. Smallpox that was, too, brought in by a French drover from Canada."

A few of the neighbors, who heard this dismal prophecy, repeated the suggestion to John Burton, showing at the same time a disposition to keep as far away from him as possible; the unfortunate victim being sheltered upon his land.

"The doctor says, Abner," remarked Burton solemnly, "that the best way for you to prevent an epidemic is to clean up that mess of poison-ivy along your fence. That tramp is suffering from an acute attack of poison-ivy, complicated with bad whisky, and there's nothing else the matter with him, unless it's hydrophobia that makes him so skait of water; he seems to have no use for it inside or out."

And so the great smallpox scare ended; the tramp, recovered from his various afflictions, wandered off on his devious ways again, and the old mill, relieved from further duty as an alcoholic ward and cleaned up as to its interior, formed the picturesque headquarters of the Boy Scouts. But strangely enough, that incident, which might have been tragic, instead of ridiculous, turned the current of local opinion just where Avis wished it to go. Mrs. Covert, whose shrewd speech was always listened to with respect, asked why decent country people couldn't have a visiting nurse just as well as folks that lived in the city tenements. Even old Jabez Workman, who generally objected to things, seconded the movement to study the requirements of a local nurse, when it came up at the Grange, but then the old gentleman still bore the scars received in slaking a pailful of lime, with too little regard for the chemical combination thus formed. So the first step was taken, and the Grange became responsible for the salary of a visiting nurse, who proved herself a veritable jewel.

And so, for the first time in years, there was no closing of the school because of a juvenile epidemic, for, as Billy Weston asserted, "No measles nor chickenpox could get past Miss Seward." A Grange Mothers' Club, at which the nurse gave little talks on the children's teeth, eyes and ears, aroused much interest among the women, and the general information on the subject of hygiene and sanitation has been known to induce much thoughtfulness on the part of a milk-inspector, who came to criticize, but departed, not much wiser, perhaps, but a great deal meeker.

It looks now as if a little bungalow hospital, on a breezy hilltop, were not very far off. As it is, the fresh-air camp up beyond the old mill has proved a wonderful help to the whole neighborhood. Sometimes the young dominie, who is not nearly as hollow-chested as when he first came to Agradoc, has charge of a few boys who have been ordered outdoors by Miss Seward. Sometimes the nurse goes there with women or girls who need the treatment quite as much as if they lived in a city flat. Closed windows are not as common in Agradoc as they used to be, and Abner Halloway says he "don't dast to git a real hard cold for fear that nurse chases him into the woods to get over it."

Perhaps Miss Seward is not entirely responsible for Billy Weston's determination to work his way through college, preparatory to medical school, instead of going West to fight Indians, but she has certainly had a wonderful influence upon the young people's ideals throughout the district. And all this happened because Avis Burton read a casual reference to a cottage hospital!

Chinese Proverbs

Defame a Man of Energy, and soon
The Mob will echo, mingling Truth and Lie.
Let one lone Mangy Mongrel bay the Moon,
And all the Village Curs will swell the cry.

* * *

Within the home where fewer Servants dwell,
With greater speed the daily work is done;
One Man will bring Two Buckets from the Well,
Two Men, between them both, will carry One.

* * *

Through the years of Earthly Dole
Man's gross Clay knows not his Soul.
When the Life has passed away,
Shall the Spirit know the Clay?—A. G., in *Life*.



"The nurse, with certain supplies, was driven toward the old mill"

rural scourges shrink away before sanitary science and skilled nursing. "Perhaps Robert would have stayed if we'd had that hospital," she said. There was no other comment from the women, yet each of the mothers wore an air of grave thoughtfulness, until a chorus of good-nights relieved the tension.

It is surprising how quickly we become accustomed to a strange idea. For a week or two the Grange hospital was just a "woman's notion." Then a few daring spirits got together, headed by Avis, and asked permission for a "Hygeia supper" at the Grange Hall. Just what a Hygeia supper was nobody knew; but as it began with corn chowder of agreeable succulence, and progressed through a varied list that included the national grain in a variety of delectable disguises, there was some idea that in this case the goddess of health was the goddess of Indian corn, also. Seated at the head of the table, however, was a stranger, a handsome young woman of commanding presence, wearing a plain gown of lilac linen and a bibbed white linen apron, her dark braids crowned with a close linen cap. She bowed pleasantly to those near her, and aided in the serving with much self-possession. There was hardly a person present who had ever before seen a nurse in uniform, save in magazine pictures, and the attractive stranger formed a very pleasant mystery. After the supper was over, however, the Master announced that Miss Lindabury, the guest of the evening, would give a talk on rural hygiene, and everyone settled down comfortably for an entertaining discourse.

It was entertaining, and Miss Lindabury spoke as to an audience that could never, never be guilty of the sanitary sins she was pointing out. But when the calcium, engineered by Jimmy Burton, showed a few haunts of the typhoid-fly, Abner Halloway wriggled a little and thought of a certain swill-barrel he knew entirely too well. Indeed, there had been "words" between him and Mrs. Halloway on the subject that very morning, and if his wife had not looked at him meaningfully at that moment, she would have been more than human. Perhaps several of the men felt easier when the speaker turned from outside nuisances to damp houses, unaired rooms and moldy pantries. She did not talk about "perils of country life" like a recent magazine writer, who makes us wonder that anyone has escaped alive, but rather gave the idea that the health, comfort and prosperity of the country depends on the country itself, and not on external critics and advisers. So the little talk left a very pleasant impression, and Avis escorted her guest home with a feeling of personal pride. She had said nothing about her hospital in the clouds. Avis possessed just as much of the wisdom of the serpent as a nice girl ought to have, and she had invited the handsome nurse for the benefit of her most conservative

Clothes for Spring Days

Designs by Miss Gould



No. 1977



No. 1910



No. 1977—Tucked Waist

Pattern cut for 32, 34, 36, 38 and 40 inch bust measures. Material required for 36-inch bust, four and one-fourth yards of twenty-four-inch material, or three and five-eighths yards of thirty-six-inch material. The price of this waist pattern is ten cents

No. 1910—Dressing-Sacque

Cut for 32, 34, 36, 38, 40, 42 and 44 inch bust measures. Material for medium size, three and three-fourths yards of twenty-seven-inch material, or two and one-fourth yards of thirty-six-inch material. The price of this sacque pattern is ten cents



No. 2019



No. 2015



No. 1450

No. 2019—One-Piece Dress Buttoned at Side

Cut for 32, 34, 36, 38, 40, 42 and 44 inch bust. Material required for 36-inch bust, five and five-eighths yards of thirty-six-inch material, with three-fourths yard of contrasting material. Price of pattern, ten cents

No. 1450—Work-Apron—Adjustable Sleeves

Pattern cut for 32, 36 and 40 inch bust measures. Material required for 36-inch bust, six yards of twenty-seven-inch material. Price of pattern, ten cents



No. 1450



No. 2015—Double-Breasted Waist

Cut for 32, 34, 36, 38, 40, 42 and 44 inch bust. Material for 36-inch bust, one and five-eighths yards of thirty-six-inch material, five-eighths yard of lace or embroidery. Price of pattern, ten cents

No. 2016—Five-Gored Skirt: Side Closing

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Snakes as Mousers

By Percy Prior

IT HAS been suggested by a French professor that every household should have its snake instead of its cat or dog, for the purpose of keeping rats or mice away.

In view of the fact that the bubonic plague, which is now prevalent in Asia and Europe is spread by rats, and there are many billions of rats in our cities ready to spread the pest should it make its appearance here, therefore the suggestion is well worth considering.

It is not new, for in the days of the Romans many snakes were kept by the housekeepers for precisely this purpose. Since those early times, however, the household reptile has been supplanted by the cat or dog, and the modern housewife, as a rule, has nothing but revulsion of feeling for every species of snake, harmful and harmless. The hostile attitude toward snakes, however, is largely due to ignorance. Thus it is commonly supposed that snakes are "slimy." As a matter of fact, they are not. Their skin is cold to the touch, but absolutely dry. It feels as if it were made of china or porcelain.

Then, again, the sharp, wormlike tongue of the snake, which darts in and out at lightning speed, is harmless, although it is commonly believed to be the medium by means of which the snake ejects its venom.

Snakes which have venom communicate it by means of special teeth called fangs. Harmless snakes do not have these fangs.

The principal disadvantage about a cat or dog is that these animals are apt to carry the same disease-spreading vermin as the rats and mice they are supposed to destroy.

Both the dog and the cat frequently kill rats and mice without eating them, leaving them to decompose in invisible places. The snake never does. Every rat killed by a snake is at once swallowed. The snake, too, is much cleaner than either of the other household pets.

The tussle between a rat and a dog is often a most harrowing sight, and the spectacle of a cat cruelly toying with a mouse which is but half alive is most pitiful. A snake, however, captures its prey without any of these disagreeable preliminaries. Reptiles move so quickly that rodents fall a ready victim to them. The conflict is over in a minute, and the snake swallows its prey at once.

Then, again, the modern house-dog, or house-cat, is such a pampered creature that it gets lazy and often allows rats to infest the house with impunity. There are half a dozen types of snakes particularly suited for the purpose.

The king snake averages about three and a half feet long. It is, perhaps, the best ratter for homes, where rats are particularly numerous, and dangerous, because of its great strength and pugnacity. Of the smaller varieties, there are the chicken-snake, the corn-snake and the milk-snake. Any one of these snakes will answer the purpose of a household pet.

A Barrel of Flowers

By H. F. Grinstead

THE little red section-house had not so much as a yard fence around it or a shrub or flower-bed, but the matron who presided there evidently had a taste for flowers and was determined to have them.

A barrel was filled with rich soil and big auger-holes bored in the barrel at intervals of six inches from top to bottom. The soil on top was sown to seed of annual flowering plants, and when the tiny plants were large enough, some of them were transplanted to the holes in the sides of the barrel where the roots were nourished by the soil. Some of these were creepers and dwarf climbers, as nasturtium and ivy. The tall-growing plants were left to grow on top of the barrel. It looked like a huge bouquet with its clinging vines and wealth of bloom. The soil in the barrel was kept moist by the waste-water from the house. Water was scarce in that forsaken spot, but no one ever washed without emptying the basin on the little flower-garden.

It is not necessary to be forced through necessity to have your flower garden in a barrel, in order to make the most of it; these barrel gardens are a thing of beauty to place in front of the window, though you may have beds of beautiful flowers.

A Foe to Disorder

AN OLD woman who owns a small farm in southern Colorado was greatly disturbed one day when she found a party of mining prospectors on her property.

"I pray the Lord that you people won't find no gold on my land," she said, with tears in her eyes.

"Why, madam," the surveyor replied, "the discovery of gold on your place would increase its value many times."

"Maybe so," she said sadly, "but I don't want our farm all tore up."—The Popular Magazine.

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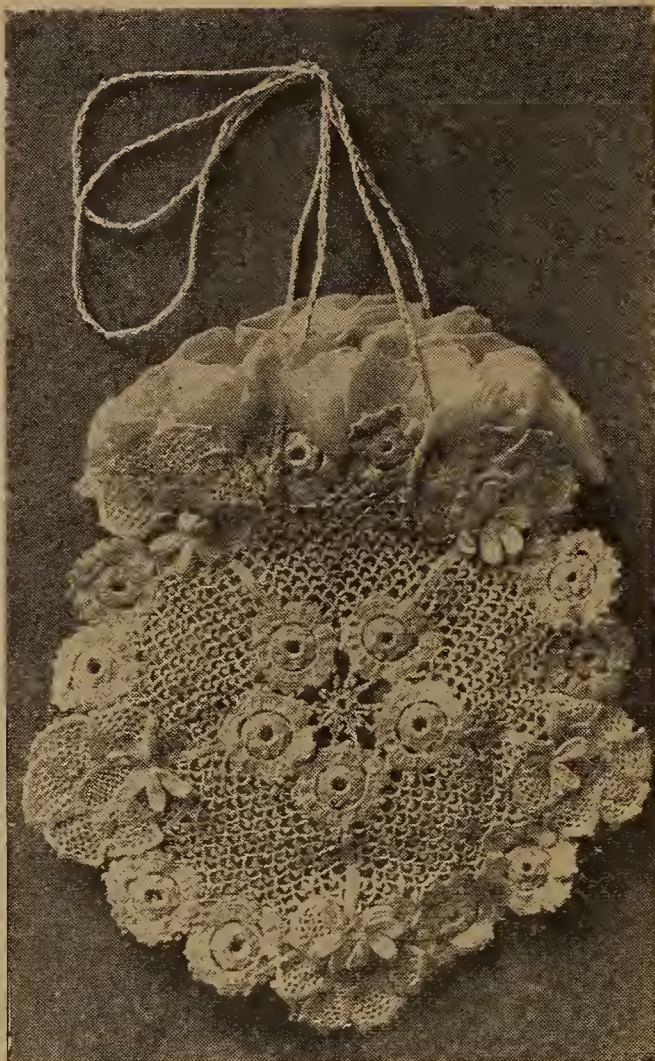
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WE PAY FREIGHT

The Third Lesson in Irish Crochet

By Evaline Holbrook

Editor's Note—In the present series of articles, of which this is the third, Miss Holbrook has endeavored to make plain the seeming intricacies of some of the simple variations of ordinary crochet stitches. Any but experienced needlewomen thoroughly acquainted with simple stitches are advised not to try these later stitches without having mastered the first lesson. The novice cannot understand these stitches without a knowledge of the first lesson which appeared March 2d. To obtain the directions for making these Irish crochet stitches, send six cents in stamps for each lesson and a self-addressed envelope, to Evaline Holbrook, care of FARM AND FIRESIDE, Springfield, Ohio. Miss Holbrook will be pleased to answer any inquiries from our readers in regard to Irish crochet. For an immediate reply enclose a stamped and self-addressed envelope with each request. It is Miss Holbrook's desire to make her work helpful and practical, and all inquiries will be answered promptly.



This photograph shows the detail of the motif employed in making the crochet bag on the left. The use of the picot filling and the petal arrangement of the larger flower may be seen very clearly.

Blooming Plants for Shaded Locations

By Mary Mason Wright



HAVING a lawn with a great many shade-trees and shrubs, we found it quite a problem how to grow blooming plants upon it. We tried annuals, but had to give the most of them up after repeated failures, since we discovered very few annuals that would bloom satisfactorily in the shade, although we had splendid success with sweet peas and asters grown in partial shade. We then studied the floral catalogues and noted all the blooming plants that were said to thrive and bloom in the shade or partial shade, and gave them a trial on our lawn. From these we have picked out those that have given us the greatest satisfaction after several years of testing. Most of these are found among the perennial or herbaceous class.

For bedding and border purposes we would mention the tuberose, begonias, irises, lilies-of-the-valley, violets, myosotis, daisies, trilliums, pansies, Dicentras and foxgloves which are excellent for a background or in prominent places in a shady border. Fuchsias are best grown in flower-holders or here and there where they will show off their pretty blossoms against a background of some kind; we have had splendid success with them at the north and northwest of the house, where they received very little, if any, sunlight. The day lily, or *Funkia grandiflora* as it is known in the catalogues, does much better grown in the shade, and will do fine right under a tree. In the North, where plants of a tropical nature are scarce, they will prove delightful on the lawn. Among the vines that bloom in shady locations we have found none more satisfactory than the *Clematis flammula* and *paniculata*. There are a number of blooming plants that will bloom in a partial shade, and so can be planted where the sun will strike them part of the day. Cannas belong to this class, and most of the lilies; they do not thrive in a dense shade, but several hours of shade, especially in the middle of the day, is of advantage to them. Most plants that like a moist atmosphere will do best in the shade.

Needs of Shade-Loving Plants

Nearly all the plants that bloom best in shady locations demand similar soil conditions, plenty of moisture and good drainage, especially in the spring. They need, as a general rule, a light, rich, loamy soil; one composed of two parts of loam and one part of well-rotted cow-manure, with enough leaf mold and sand added to make it light and loose, is about right. Trilliums, which are native wild flowers, should have some wood's earth added so that the soil may be as near as possible to that which they have been accustomed in their native haunts. They are delightful to grow in combination with ferns on the north side of a house or among the trees in a wild-flower bed.

For bedding in shady places we have found no equal to the tuberous begonias; they are superior to the geraniums in many ways, excelling them in their foliage and brilliant flowers, which range in color from white to scarlet, crimson, orange yellow, copper, giving all the intermediate tints; some are of solid color, while others are flashed and tinted with the most delicate graduations. Some of the flowers are also fringed, crested and picotee edged. If they are grown under the proper

conditions, they will give blossoms six inches across. Beginning to bloom in July, they will bloom continuously until frost. These begonias can be started from seed, but it is much more practicable to buy the bulbs or tubers from a specialist. These bulbs can be purchased very cheaply considering the fact that they can be lifted in the fall and stored for another season or more. The dormant bulbs should be started in pots or flats in the house in March and allowed to get a good start before being set out in open beds in June. Fill the pots or flats about two thirds full of the prepared soil, with good drainage in the bottom. Spread over this about one-fourth inch of sand, and press the bulbs down in this, and then just cover with sand; this is to keep the bulbs from rotting before they send out root growth; then cover with a little soil. Water carefully and well, but do not give too much moisture until well started. Harden off the plants before transplanting to the beds; this can be done by placing the pots or flats outdoors part of the day, or if grown in a hotbed leave off the glass a few days and the last few nights before bedding out. During the hot, dry weather of summer they should be mulched frequently with grass-clippings and well-rotted manure. It is best to water the beds close to the ground.

The Irises, Lilies and Pansies

The irises, with their orchid-like blossoms, are also very desirable for growing in shady locations. If given proper soil composition and preparation, and plenty of moisture with good drainage in the spring, and a free circulation of air, they will thrive and bloom in entire shade; in fact, their beautiful frost-like flowers seem to take on a deeper tone when grown in entire shade than when grown in partial shade.

The lilies-of-the-valley, with their dainty, fragrant blossoms, which are so fine for bouquets and table decorations, are plants that prefer shade to sunshine; they require very little attention after being once started. They have a great tendency to spread, so to keep them in bounds I confine them in beds surrounded with a brick or stone border. By dividing their roots one can soon have hundreds of plants. Daisies, violets and pansies are all early-blooming plants that prefer shade to sunlight, especially the last two. Pansies will not thrive in a hot, dry, sunny location; if you wish any bloom during midsummer, they must be planted in a shady location in a rich, cool, moist soil. They do not thrive if hedged in from a free circulation of air, yet they should be protected from high winds. Violets are a very modest little flower, but just the same one would miss their sweet, subtle odors from the lawn, and their delightful blossoms on the table and as boutonnières. The yellow, blue and white daisies are charming for low beds or for edging borders, and make fine table decorations. The dainty myosotis, or better known as forget-me-not, is a charming shade-loving plant; like the other flowers just mentioned, it is a low grower and should be used for edging of beds or in beds by themselves.

Many people complain of not having success with fuchsias, yet we find them the most satisfactory of all blooming plants for shady locations. The mistake that many make in regard to their culture is in not giving them enough water; they should be watered daily in dry weather and should not be exposed to high winds; for this reason they are better grown near the house or protected by a pleasing background of foliage plants.

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SUNDAY READING



"Somethin' Heroic"

By Eliot White



CONFESS to even more delight in seeing fire-engines go by now than when I was a boy. In fact, the excitement they stir in me sometimes makes my friends smile, but I do not care, and I believe I get just so much more than they do of the thrill of things, because of this joy of the streets.

And besides, the incident I wish to tell about here shows that something more than "thrill" can come from the enthusiasm for the whirlwind dash of fire apparatus over the echoing pavements.

One evening when I was having dinner with some friends in a Boston hotel just off Washington Street, I heard in the distance the clanging bells and muttering wheels that meant response to an alarm of fire. Throwing down my napkin, I abruptly left my surprised companions, and raced down the hotel steps and along a little lane to the main street, just in time to see the horses plunging by before engine, hose-wagon and ladder-truck, the nervous, pale-faced drivers leaning almost over their steeds' backs, the sparks and smoke swirling back from the boiler-stack, and to hear the full uproar of rocking bells, men's shouts and the crash of hoofs and whirling wheels over the paving-stones!

I had forgotten everything and everybody else while the furious procession roared by, but it had no sooner turned a corner and left Washington Street to calm down to its normal evening temper than I heard a boy's voice, just at my elbow, exclaim, "Gee! but don't that make yer feel like doin' somethin' heroic!"

The Small Boy's Opinion

Looking about in surprise that anyone was so near me, and still more that the exclamation was spoken in just those words, I saw a boy about eleven years old rubbing his hands gleefully together, while his eyes shone as though he wanted to dash away to the heroic exploit without delay.

Here was "fellow feeling" indeed; the little chap had expressed for us both the kind of reaction the impetuous fire hunt had stirred in us. I wanted to fling my arms about him and give him an exulting hug!

And perhaps I ought to have done it after all, for, poor little lad, what a figure for the "heroic" he made there alone at night in the heedless city streets! His pale face had so far somehow escaped the hardening that most children's acquire from the harsh "sidewalk school," and it shone at this moment with really a beautiful light from his enthusiasm for the fire-machines. But one of his shoes had its fore part tied abruptly back toward the ankle by a string, which passed through the leather where the toes should have been, and was tied about the leg above the shoe-top. Surprised at this strange device for keeping the sole from touching the sidewalk, I asked him what was the matter with his foot.

"I got it run over by a freight-car," he answered, and explained how the wheel had cut off the end of the foot.

I inquired where he lived, and he said with his mother, and that his father was dead.

Did he sell papers? "No," he replied, "not now;" he used to, but since a license was required of the boys, he could not get the money to buy one. I asked him how much he needed for it, and when he answered, "A quarter," I slipped the piece into his hand, and was well enough thanked by the appreciative face. He gave me his name and promised to begin selling papers at once and take the money to his mother.

What the Quarter Did

So we said good-by, who had been so unexpectedly thrown together in comradeship by our common delight in the passing fire apparatus, and I have never seen the little fellow again. But I did have this satisfaction, that in answer to a letter I wrote to one of the Boston papers, asking if a boy of the name he gave me was now among their "newsies," I received word from one of the editors that the boy was selling papers for them. And it was only a few days later that I was further

pleased to receive a letter in childish scrawl, on one of the newspaper's letter-heads, from the boy himself, in which he said the editor had let him use this writing-paper, and that he was earning money for his mother and doing very well.

After parting from my little sidewalk friend, I went back to my interrupted dinner, and when I told my companions how much more I had gained from my expedition than the sight of the fire apparatus, they were amused and touched, and I suspect not a little envious of the pearl of human interest which the ocean of the city life had just yielded me.

And for my own part, I am sure there will always remain in vivid remembrance the scene of that windy street when the fire-machines had filled it with the tumult and excitement of their passing, and left the little waif at my side rubbing his thin hands together and asking me in a quivering voice with uplifted face if that didn't "make yer feel like doin' somethin' heroic."

Somehow the smile comes and the tears get ready to start at the same time, when I recall his appealing face and voice and the crippled foot, and I realize that the "pathos" of characters and plays on the

The Church on the Frontier

By Edward P. Owen

LIFE everywhere has its difficulties. As the Good Book has it, "man is born to trouble as the sparks fly upward."

The banker who handles his millions still finds his world full of difficulties. The merchant does not find his business all profit. The manufacturer is hampered by the law of supply or demand. Neither the minister of the Gospel, nor the public-school teacher finds his path a bed of roses.

The farmer, in like manner, must expect to find his little world a world of trouble. The troubles of the farmer of the North are not the same as the troubles of the farmer of the South. The difficulties of the farmer on the depleted soils of the Eastern States are not the difficulties of the frontier farmer of the West. Each man must solve for himself his own problem in his own way, and the frontier farmer, although he knows little of the need of chemical fertilizer and although he pays only the small price of "filing" for his farm, is at times tempted to think

nature a social animal, and it is highly important that his social instincts should be controlled by the better elements of the new society. The literary society and the neighborhood social may be a detriment to the community or a valuable asset, according to the style of the leadership in control. Let the frontier church be in the lead for all that is highest and best.

Lastly, but not least in importance, will it not be a wise plan for the church to take the lead in investigating the best methods of developing the new country? One of the great difficulties for the new settler is that the methods in vogue in his former home are often unsuited to his new surroundings. In the Eastern States the rainfall is abundant, but the soil, by constant and perhaps careless use, has become depleted. In Oklahoma, in New Mexico, in eastern Colorado, the soil is marvelously rich, but there is a serious lack of moisture. It is necessary for the farmer in his new surroundings to learn an entirely new system of farming. Conservation of moisture is the true secret of success, and without it little can be done. The very levelness of the prairie is a trap for the unwary. It is so comparatively easy to plow large stretches that the farmer is tempted to put out large areas and to profit that it is only by intensive methods that sufficient moisture can be conserved to make the profitable crop. It is easy to understand the value of the summer fallow to increase the fertility of the older sections, but it is easy to think that there is no need of careful farming on the virgin soils of the West.

Doctrine of Conservation

The truth is that careful farming is as much needed to conserve moisture in the West as it is to conserve fertility in the East. Now the work of the Dry Farming Congress and of Mr. Campbell is to crystallize the experience of the most successful farmers in the arid sections, and why may not the frontier church be made a convenient leader in the dissemination of the needed knowledge? The place of the church is to encourage the down-hearted, and I believe it is a fact that nothing is as potent a cause of discouragement as the ignorance of the methods best suited to the new surroundings. The Apostle Paul was right when he said that hope was one of the essential and abiding elements of life, and he was right to place faith as the base of hope, and what can give us a practical faith better than a knowledge of the success of others in like situations? To hear the statement of a settler of twenty-three years' experience that, since he commenced to summer fallow his land—seven years ago—his average yield of wheat has been 27½ bushels is certainly an inspiration to at least experiment along the lines of the man's success.

If Moses, 3,500 years ago, preached a seven-year system of summer fallow, why may not the church take a similar lead in the matter of the farming of to-day? Christ Himself when on earth was willing to busy Himself with the material needs of those around Him. He furnished wine to increase the enjoyment of the guests at the wedding-feast, He healed the sick and taught the care of the hungry and the naked as a cardinal feature in His idea of religion, and why may not the church be as practical to-day in caring for the physical as well as the spiritual needs of mankind? The true place of the frontier church is to take the lead in whatever is best for this world's needs and those of the world to come.

Little Sermons

If you live grandly and happily when the days are sunny, the hours which are rainy will have no dread for you.

The man who talks his life-work down is digging the foundation from under his prospects for success.

Plan as if you expected to live a thousand years. If there is anything that will knock the props out from under the best living, it is to think you are at the end of your rope—nothing left, except a few days more of waiting and watching for trouble.

E. L. VINCENT.

Imitating the Good

By William J. Burtscher

"I FOLLOW the thing that good is."

In following the things that were good, the Psalmist became an imitator of the good. We are all imitators. We imitate men and God.

An old track-walker on an eastern road took with him a little dog, until every crew on the division knew the two. One night the old man died suddenly. The next morning the engineer on the nine-o'clock flyer saw a red flag being waved near the surface of the track. He applied the emergency brakes. He saw trotting along in the middle of the track the old track-walker's dog, carrying in his mouth a red flag. The engineer picked up the dog and proceeded with the train. The dog knew that the track ought to be walked, and when his master failed to show up at the usual time, he felt that in some way he ought to show his friendship, so he looked over his master's tools and picked out the one he could the most conveniently carry—and away he went. The purpose of the flag was to stop trains, in which the dog had succeeded. Otherwise his imitation was a failure.

In our efforts to imitate the forces of nature, or God, we are about as incapable as that little dog:

God made the sun bright enough to light half the world. Man imitates and erects a street-lamp, which lights up half a block.

God made the sun hot enough to warm part of the earth. Man imitates and makes a stove that partly heats a room.

God makes the wind strong enough to uproot a tree. Man imitates and makes a fan that will move a leaf.

God produces rain, which falls on a million plants at once. Man imitates and makes a sprinkler, which waters but one plant at a time.

But however imperfectly we do what we are trying our best to do, it answers our purpose, and the very fact that we are doing them at all will serve as a signal that we are worthy of being taken to a better place, where perhaps we will be able to imitate more perfectly.

In imitating God, we cannot do as well, but in imitating men we should be able to do a little better. And we should only imitate the good in men.

stage is but a faint reflection of that deep-laying element in life itself.

And finally I know that when my day sometimes looks gray and uninteresting, I gain new zest in the midst of it, if that plume of spark-bespangled smoke from the rushing engine billows up again in memory, and after the roar of its wheels has abated, I hear a tense little voice ask me if life isn't full enough of splendid summons to make me want to do "somethin' heroic."

Learning the Way

By Aubrey Fullerton

DURING a camping-out holiday last summer, it fell to one of the party to make daily visits to the nearest farmhouse for supplies. The way led along a mile and a half of country trail, and a long walk it seemed at first.

But after two or three days, the early morning jaunt lost its seeming tiresomeness, for, as one grew accustomed to it, there were landmarks all along the way that measured off the distance, and, passed one at a time, they made the road seem very much shorter. When one learned to know the way, it lost its tediousness.

Sometimes it seems a long and dreary road that stretches ahead of us in life. So long it looks, that passage of the years, and because we know so little of what is ahead, we find it hard and weary when we set out for ourselves. But presently we get to know it better, and this fuller experience of the years, like landmarks that shorten the trail, makes it easier to travel life's journey safely, without fearfulness, and in the hope of coming joy.

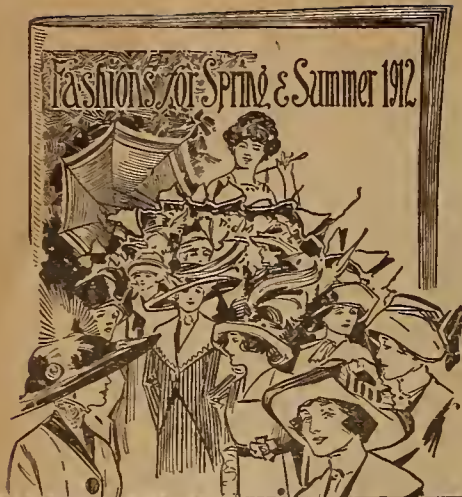
that he is the only one who really knows the meaning of that hard word "trouble."

I am sincerely glad that I have myself learned by actual experience the various trials and tribulations of the settler on a piece of homestead land. To leave a good home in an older settled country, to put in eight consecutive days in a prairie-schooner in weather cold enough to require the presence of a "topsy" stove, to make the first trail in the virgin sod to a home twenty-five miles from the railroads, to learn the dangers of the quicksand in crossing a bridgeless river, to wrest from the coyote and the rattlesnake, the prairie dog and the cattleman's cattle the home of the future, make a man feel that he is actually a member of the conquering race that has placed in the front rank the youngest member of the family of nations.

The Church's Opportunity

But what is the part of the church in this frontier struggle? It is manifold. I cannot say that I am surprised when I find the settler in the new country a little careless in the matter of religious observance. In fact, the wonder sometimes is that he does not wander even further from the path of duty. Three times in my frontier experience I have been compelled to travel all day on Sunday, and at least once I can remember putting in unavoidably a heavy day's work on the Sabbath day. The work of the frontier church is to see to it that from its earliest days the new community shall grow up on lines of reason and religion.

Again, an opportunity of the country church is to become the social center for the settler and his family. Man is by



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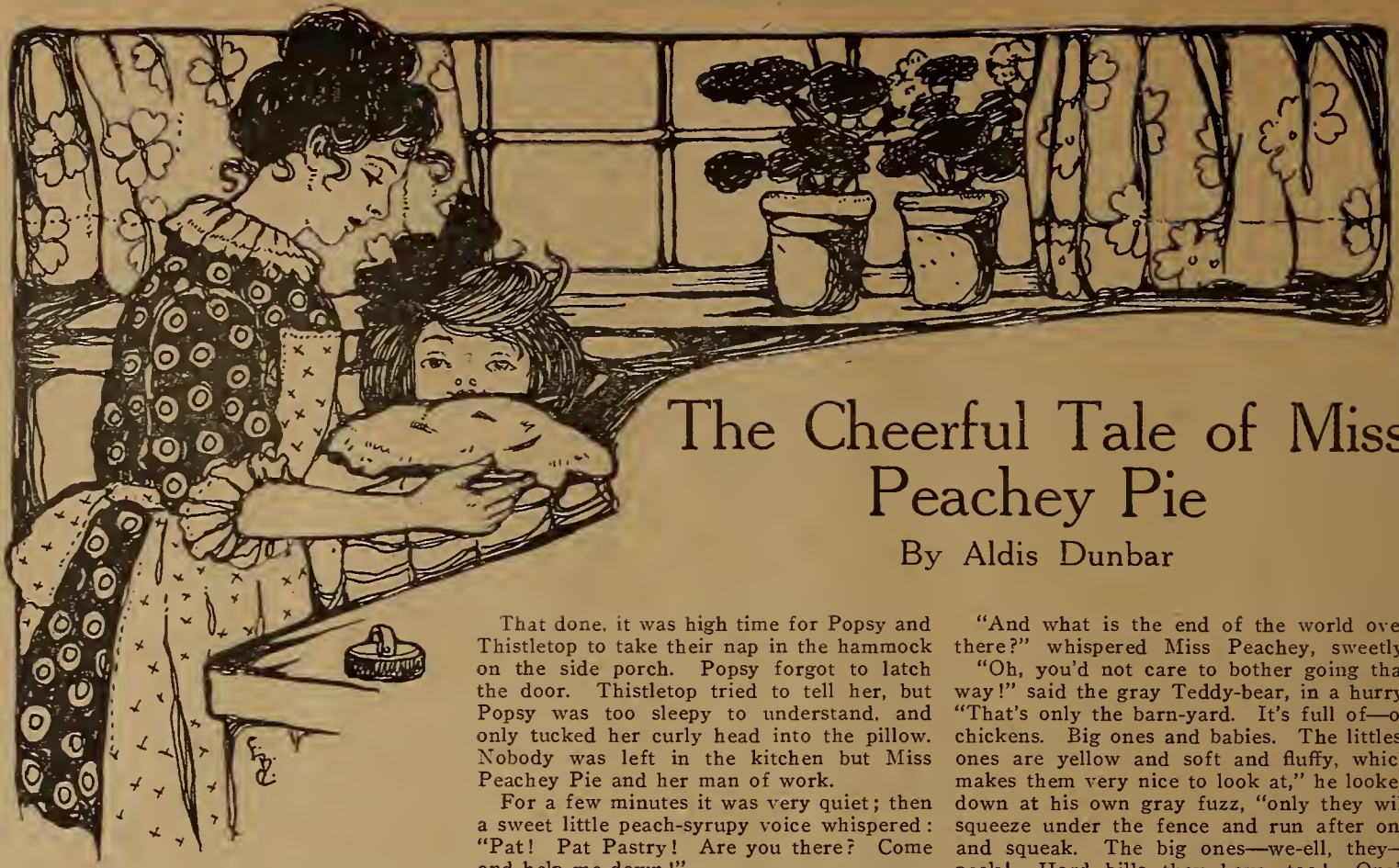
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The Cheerful Tale of Miss Peachey Pie

By Aldis Dunbar

MOTHER MAYBLOSSOM stood at the big kitchen-table rolling out pie-crust. On the corner of the table, because she was five years old to-day, and was extra good, sat Popsy Mayblossom, watching while her mother put the round piece of pastry over the cut peaches in the pie-plate and clipped the edges to make it fit. Those sweet yellow peaches were the very first that had ever grown on Popsy Mayblossom's own little peach-tree, in the corner of the garden; and there was to be peach pie for somebody's birthday supper.

Mother Mayblossom twisted some lovely squirls of pastry and let Popsy trim the top crust with them. Next, she crimped the edges beautifully all the way around and gave the top crust four little cuts with a knife. Popsy leaned over to see. "Oh!" she said. "It looks like a funny round face! The two eyes are just peeping at me, and there's a wee nose, and a mouth right across the pie! Is it going to be somebody?"

"Of course it is!" laughed Mother Mayblossom. "It's going to be Miss Peachey Pie, come for your birthday supper." Then she picked up all the tiny bits of pastry that were left on the board, rolled them together, twiddled and twirled them, poked a couple of dried currants in one place and a bit of citron in another, and there, all ready to lift into the pan, was a pie-crust boy, with arms, legs, two black beady eyes and a wide mouth!

"Ooh!" cried Popsy Mayblossom. "Who is he?"

"That is little Pat Pastry, who works for Miss Peachey. He is going into the oven, first, to see if it is hot enough to bake her nicely." So into the baking-pan went Pat Pastry, and Mother Mayblossom popped him inside the oven door, and set Miss Peachey in the ice-box, to keep cool while she was waiting for her turn.

Pretty soon Mother Mayblossom looked into the oven and nodded merrily. "Pat says that the oven is all right for Miss Peachey," she told Popsy, "so in she goes, to bake nice and brown."

"But her eyes are nearly tight shut. They can't see how to bake," said Popsy.

"The oven takes care of that," Mother Mayblossom told her. "Wait, and you will see how well he knows how." So Popsy jumped down from the kitchen table, brought her own small chair and Thistletop, the gray Teddy-bear, and sat down beside the oven door to wait, while Pat Pastry stood up against a pan, on the kitchen table, to get cool.

After a good while there came a jolly sound of sizzling, inside the oven. Mother Mayblossom ran quickly to open it, while Popsy and Thistletop danced around, and the kitchen smelled like making taffy when a drop falls on the stove.

Mother lifted out Miss Peachey Pie, and set her carefully on the windowsill. Popsy reached up on tippy-toe to look. "Dear Miss Peachey Pie!" she said. "I'm so glad you are done! And little Pat Pastry, too! Ooh! Mother Mayblossom, look! Those little squirls of pie-crust I put on are just like wee bits of hands and curled up feet for Miss Peachey! And her eyes are waked up, and her mouth is 'most laughing, just like Pat Pastry's! They must like to be for my birthday supper!"

That big oven was a master one at baking! Miss Peachey's eyes were truly wide open, and her mouth turned up at the corners and smiled the sweetest of peach-syrupy smiles at Popsy, who trotted back and forth, putting things away for Mother Mayblossom until the sunny kitchen was all tidy as a row of new pins. A girl five years old is big enough to help Mother in ever so many lovely ways.

That done, it was high time for Popsy and Thistletop to take their nap in the hammock on the side porch. Popsy forgot to latch the door. Thistletop tried to tell her, but Popsy was too sleepy to understand, and only tucked her curly head into the pillow. Nobody was left in the kitchen but Miss Peachey Pie and her man of work.

For a few minutes it was very quiet; then a sweet little peach-syrupy voice whispered: "Pat! Pat Pastry! Are you there? Come and help me down!"

"Yessum, Miss Peachey!" said Pat Pastry, running along the edge of the table and sliding down the leg to the floor, where he stared around with his black currant eyes until he saw the cord of the window-shade, hanging past the sill to the floor. Up he climbed, and held out his pie-crust hand to Miss Peachey, who caught hold of it, waved her little feet wildly for a minute, then stood up and gave herself a hard shake, to get loose from the pan. It was not easy, for some of the syrup had bubbled over and had stuck it fast to her under crust; but at last the pan fell away, and Miss Peachey took a long, happy breath.

"It was far too heavy to wear, on such a warm day," she said to Pat Pastry; "at least, when one is going out to see the world, as I mean to do before I appear at Popsy Mayblossom's birthday supper party. Of course, I shall come back in time, for she couldn't have it without me; but first I do want to see the world! It must be wonderful!"

"Yessum, Miss Peachey!" said Pat Pastry, sliding down the curtain-cord and waiting at the foot of it to catch her. But Miss Peachey came down very lightly, patted down her crimped edges tidily, smiled at herself in Popsy's tin tray and led the way to the porch door, Pat Pastry closed behind her.

"I looked out the window," whispered Miss Peachey, as she gave the door a gentle push, "and our dear little Popsy is quite asleep. I'm not so sure about that gray bear. Unless he sleeps with his eyes open, I'm afraid—the least bit afraid—that he is quite wide awake!"

"Yessum, Miss Peachey!" said Pat Pastry—and "I am!" remarked the Teddy-bear, who had been watching that door! He let himself tumble out of the hammock with a bump so light that Popsy never heard him, but went on sleeping soundly. "Where are you two going?" said Thistletop, the Teddy-bear, barring the way. "You belong to Popsy Mayblossom's birthday. She's dreaming about you now! She thinks you are going to run away from her birthday supper on your two pie-crust feet, but I sha'n't let you!" He scowled mightily at the pair, and Pat Pastry shook, as he hid around the edge of the door. But Miss Peachey made a low courtesy to Thistletop and smiled some drops of syrup at him, which was untidy, but very charming. He really had to smile back at her. She was so very sweet.

"How tall and strong you are!" said Miss Peachey Pie, looking up at him with big, admiring eyes. "Now, if you would only come with us to see the world, I should not be afraid of anything! I do so want to see it before I go to Popsy's birthday supper!"

Thistletop looked at the hammock. Popsy was very fast asleep. "We-ell," said he, gruffly, "perhaps I'd better go along and show you around it. The world is a pretty big place," he went on, as he showed Miss Peachey where to slide down the steps without breaking herself: "There's a fence on one side of it, and a road, with a barberry hedge and a gate, out front," he waved his paw. "Once I got caught in that gate," he told her, "and I nearly smashed it, getting myself out. Woof! But that was nothing!" he added in some haste, seeing two tears of syrup show in Miss Peachey's wide-open eyes. "It hardly hurt at all. Teddy-bears don't mind little things like that!"

"It's wonderful to be so brave!" sighed Miss Peachey. "Isn't it, Pat?"

"Yessum, Miss Peachey!" said Pat Pastry.

"And what is the end of the world over there?" whispered Miss Peachey, sweetly.

"Oh, you'd not care to bother going that way!" said the gray Teddy-bear, in a hurry. "That's only the barn-yard. It's full of—of chickens. Big ones and babies. The littlest ones are yellow and soft and fluffy, which makes them very nice to look at," he looked down at his own gray fuzz, "only they will squeeze under the fence and run after one and squeak. The big ones—we-ell, they—peck! Hard bills they have, too! One's stuffing is never safe! And no one can be sure just when they've stopped being little and soft and will start to peck at one! Let's go and see the front gate!"

He marched off without looking back, for a moment.

"Pat!" whispered Miss Peachey, with a gurgly, syrupy laugh, "I must meet those darling fluffy yellow chickens. See them over there? It's only a step. You run after Mr. Thistletop and keep him from looking."

"Y-Yessum, Miss Peachey!" faltered Pat, but he stood quite still. If his mistress was going to risk being pecked (Pat gave a shiver!), it was his duty to be at her side. But she was already near the clucking crowd when Thistletop suddenly turned and saw the danger she was in. He gave a loud "Woof!" and ran straight at the chickens.

"Were those the big ones?" gasped Miss Peachey, as she shuddered becomingly.

"Well, rather! Woof!" growled Thistletop. "In another minute you'd have been their birthday supper!" He pulled a spray of chickweed and fanned her as she leaned against him.

"I—I guess we've seen enough of the world," said Miss Peachey Pie.

"Y-Yessum, Miss Peachey!" agreed Pat Pastry. And that was all that either of them said, as Thistletop showed them the way back to the porch-steps, boosted them up, one at a time, and held the door open for Miss Peachey to enter the kitchen. He watched her slowly toiling up the curtain-cord, with Pat Pastry after her, and tried to think cheerful thoughts about syrupy smiles.

"I'll surely see you again at the supper," he called, as the lady settled back into her pan and waved a small pie-crust hand to him.

"So glad to have known you!" she said.

"Wasn't the world wonderful, Pat?"

"Yessum, Miss Peachey!" he said, glad that he was leaning back against the wall.

It was a lively birthday supper! Thistletop saw it from Popsy Mayblossom's lap. Pat Pastry had not stayed for it. Popsy had been too hungry. But Miss Peachey sat in the place of honor, smiling at everybody. Popsy had the first piece of her, and Miss Peachey smiled with more syrup than ever.

At last she had smiled herself away until all that was left of her was a little pool of syrup in the pie-plate—and that was the happy end of Miss Peachey Pie!





THE GIFT CLUB

Jean West

Secretary



A Difference of Opinion

A FRIEND once asked "Uncle Joe" Cannon for information as to the prospects of a politician who was at that time generally thought to be "on the ragged edge."

"He seems to think he's getting on all right," said Uncle Joe, "but others entertain a decidedly different opinion. His situation brings to mind the story of the old lady up in Maine. When she was asked as to the whereabouts of her husband, the dame replied:

"If the ice is as thick as Henry thinks it is, he is skating; if it is as thin as I think it is, he is swimming."—*Lippincott's*.

Making Sure of It

BROWN had just received a telegram saying: "Your mother-in-law is dead. Shall we bury or cremate her?" "Take no chances," was the reply; "do both."—*Lippincott's*.

Love Lyrics of a Cowboy

By Robert V. Carr

LOCO

WE'VE been engaged jes' two days now, An' it's a fact I don't know how It happened; seems I'm in a trance, Jes' shut both eyes an' took a chance, An' she said, "Yes." Say, on the square, Am I alive? Please tell me where I gits my mail an' what's my name, An' if I'm loco, who's to blame? I'll welcome information that Will let me know jes' where I'm at.

PAW

Her paw he siz to me: "My boy, You've won her an' I wish you joy; An' now to practical affairs, You gits a bunch from me on shares. The rest you know 'bout how to do, An' it's a cinch that you'll pull thro'. Her maw an' me got married when I hain't enough to feed a hen." An' then he mutters queer an' sad: "My baby's done gone quit her dad."

JUNE

I wonder why a girl likes June Fer weddin' days? It hain't so soon As May or April, which to me Be jes' as good or better. Gee! I wish she'd make it right away Instead o' June. Why not to-day? Aw, shucks! A woman's got to sew An' fuss an' fix! I'd like to go An' see a J. P. on the whiz— But she sez June, an' June it is.

PUZZLED

She's diff'rent than she used to be, She looks so sort o' sad at me; An' her maw cries as if I would Go take her girl away fer good. It seems these wimminfolks are queer: When they is glad, they springs a tear; When they is sad, they starts a smile; Jes' plum contrary all the while. Say, kindly beat it thro' my head, Why all these weeps when 'bout to wed?

RESPONSIBILITY

I figgers it's no snap to do The right thing by a wife clear thro'; To build a home an' smooth the trail Fer her, an' never, never fail To see she gits the lightest pack, An' never give Love's rope the slack. To treat her fair an' treat her square, An' thank your stars that she is there— When all your hard, rough work is thro'— Down at the gate to welcome you.

CONGRATULATIONS

Bud Hampton sez to me to-day, "Old boy, I've often spoke in play, An' joshed you 'bout the girl, but now I begs your pardon, an' allow I envies you an' wishes all The good things in the world to fall Across your trail." An' there I stand An' gulp—an' then they shakes my hand— The outfit does. "Good luck!" they cries. Aw, what's the matter with my eyes? *Twice-a-month Popular Magazine.*

GRIGGS—"So Smart is going to marry his divorced wife?"

BRIGGS—"Yes, the mercenary cuss is after the alimony he pays her."—*New York Times.*

FIRST AMATEUR—"You spoiled the whole show, Maud."

SECOND AMATEUR—"How? I thought I did well."

FIRST AMATEUR—"You did, eh? What induced you to speak my lines in the third act?"

SECOND AMATEUR—"I'd forgotten my own. I had to say something."—*Bazar.*

I FEEL, Miss West, as though I had found a magic wishing-ring, or something of the kind! So many wonderful things do happen in the Club, and it seems just like Christmas all the time," wrote one of our Gift Club girls a few days ago.

Like Christmas! I should say it must seem like Christmas to our Club girls when they receive package after package from the Club! And as for a magic wishing-ring, indeed our girls have found it—or something that is just as good. For all that they have to do is to want a thing keenly enough and they get it! How? Oh, that's one of the delightful secrets of the Club. I can't tell you until you are a member.

I've just returned from a shopping tour for the Club, and I've had the jolliest time! I do wish that you could see the lovely things that I've been buying for our Gift Club girls—beautiful rings and pins, bracelets and necklaces, table-silver, dainty china, exquisite silver toilet and manicure sets, pretty jabots and lace coat-sets, and, oh, a hundred and one things, besides. I had them all sent to our office in Springfield, Ohio, and here they are, stowed carefully away in our Gift Cupboard. They won't be there long, though. Just as soon as our girls find out what treasures I am holding they'll all try their level best to claim them.

And what particular plum in our Gift Club pudding would you like to have? Do you want a nice new white linen waist with a jabot and belt to go with it, or would you rather have a dainty bit of jewelry or something for your home? Whatever it is, you may be sure of finding it in our Cupboard.

Our Club membership list is well up in the thousands, and we are welcoming new members every day. They come trooping in from east and west and north and south—all eager to learn the Club's wonderful secret that will help them earn these splendid gifts for themselves and their friends and families. There is a place in the Club for all our farm people—that is, for the mothers and daughters. We do not admit any men! This Club is purely a feminine affair! Men may laugh and say that girls do not know how to conduct an organization of any kind, but we've been showing them for the past six months that we do know how to run a Club and run it well. Perhaps if these same men could read the big budget of letters on my desk from Club girls who have received beautiful gifts without spending a penny for them, they'd realize that we do not need any help in managing our affairs.

Speaking of that budget of letters, there are a few that I simply must show you. They are so full of spirit and enthusiasm.

DEAR MISS WEST:

Thank you a thousand times for that lovely little gilt clock which you sent me. I hadn't any idea that it would be so lovely. In fact, when I tried for it, Mother told me that I would be disappointed most likely But I never was so surprised in my life as I was when I opened the package. I wouldn't miss being a member of The Gift Club for anything in the world!

J. N., Delaware.

Miss J. N. is going to be still more pleasantly surprised when she receives the

silver toilet-set that I'm sending off to her to-day. It's just beautiful. Our girls try harder to get this artistic and attractive toilet-set than any other one thing in our Gift Cupboard.

And here's a letter from Mrs. K. L. of Indiana, who only a few months ago was wondering if there was "anything in it." Just a minute, and I'll get two of her letters, the first and last, and show you an example of a skeptical reader of these notes of mine who has been transformed into a most ardent supporter of the Club. Here they are:

DEAR MISS WEST:

First of all, it's only fair to tell you that I don't really believe a thing that you say in FARM AND FIRESIDE. It is almost too much to be asked to believe that you give away such handsome things as china dinner-sets, lace curtains, table-cloths, gold rings and all the other things that you've spoken of. You see, I'm a doubter, but still you have aroused my curiosity and I'd like to know the secret, whatever it is. Don't expect me to join the Club, though, for I probably shall not care to.

Now I knew just as well as anything in the world that Mrs. K. L. would join the Club within a few days after she received my reply to her letter, and so I was not at all surprised when she wrote me that she was delighted with all our plans and wanted to be a member right away! And here is her last letter:

DEAR JEAN WEST:

Did I ever say that I doubted the Club? Well, I take it all back a thousand times. The Gift Club is the finest thing in the world for us farm women, and I wish I could tell everybody about it. I've been talking so much about The Gift Club that all the girls in our neighborhood are going to join and get some of the lovely things, too. That vacuum cleaner came yesterday, and I can't tell you how delighted I am with it. It's ever so much nicer than I expected, and it will be a fine help in my spring cleaning. I'm rather late with my cleaning this year, but I kept putting it off, hoping that I could buy a vacuum cleaner. I never thought I'd get one without paying a penny for it! Thank you again! I'm a "rooter" for the Club now!

And so you will be a "rooter" when you are initiated into all our mysteries! There's room for just one more letter, and here it is:

DEAR SECRETARY JEAN:

Oh, I'm so happy, and I just love you and the Club. That darling silver comb, brush and mirror just came, and I've spent half the morning looking at it. Why didn't you tell me how lovely it was so that I could have had it before? For I would have worked with might and main to get it. Is the manicure-set as nice? If it is, I want it the very next thing! MINNIE J., Ohio.

And now that you've seen the interest our girls take in The Gift Club, don't you feel that you'd like to know more about it? It will not commit you to a single thing to write me, and if you are interested—as, of course, you will be,—you can join the Club whenever you like. There are no dues. A line on a postal will bring a prompt reply.

Jean West

Secretary, The Gift Club,
FARM AND FIRESIDE,
Springfield, Ohio.

Modesty vs. Vanity

A LITTLE hen of modest mien,
And not a whit too fat,
Just went, without a bit of fuss,
And laid an egg like that:

O

And when she'd laid that good-sized egg,
Just like a modest bird,
She went and picked her living up,
Without a single word.
Another hen, much larger, too,
Who strutted and looked wise,
Just fussed about before she laid
A dinky egg this size:

O

And when she'd laid this little egg,
She had to have her say,
So she went out and cackled, cackled,
Cackled half the day.

—*Yonkers Statesman.*

FLIM—"Gee, that's a loud suit you have on!"

FLAM—"Yes; it's crash."—*Yale Record.*

Chaffing Cholly

ETHEL—"Maud was talking about you before you came in. What do you suppose she said?"

CHOLLY—"Really, I haven't an idea."

ETHEL—"Good guess. That's just what she did say."—*Boston Transcript.*

"What you see in that creature to admire I can't see," said Mrs. Dubbleigh. "Why, she's all made up. Her hair, her figure, her complexion—every bit of her is artificial." "Well, what of it?" retorted Dubbleigh. "If the world admires self-made men, why shouldn't it admire a self-made woman?"—*Harper's Weekly.*

"What did my ma say to you when you came in?" inquired Johnny of his friend, who had come to tea. "She said she was very pleased to see me." "I'm glad," said Johnny in a relieved tone. "Cos she said this morning she hoped you wouldn't come."—*Stray Stories.*

YOUNG BACHELOR—"I often wonder if I am making enough money to get married on."

OLD BENEDICT—"Well, I don't know how much you're making; but you ain't!"—*Puck.*

"Who gave ye th' black eye, Jim?" "Nobody give it me. I had t' fight fer it."—*Life.*

ARTIST—"This is my painting, 'Youth in the Melon-Patch.'"

CRITIC—"But where are the melons?"

ARTIST—"What a foolish question!"—*Toledo Blade.*

"What do you think of our patient?" asked one alienist. "Wholly irresponsible," replied the other. "Mentally or in money matters?"—*Washington Star.*

"Sir," said the haughty American to his adhesive tailor, "I object to this boorish dunning. I would have you know that my great-great-grandfather was one of the early settlers." "And yet," sighed the anxious tradesman, "there are people who believe in heredity."—*Tit-Bits.*

MAUDE—"We had private theatricals last evening. They went off first-rate, only the folks would laugh in the wrong place."

UNCLE HENRY—"There is no such thing, Maude, as laughing in the wrong place in private theatricals."—*Boston Transcript.*

His Request

A MILLIONAIRE lay dying. He summoned his lawyer. "Mr. Tape," said he feebly, "draw my will and make it brief. I want my money so left that not one penny of it shall ever leave this country. How shall I manage that?"

"Easily enough," answered the lawyer. "Leave it all to foreign missions!"—*Fun.*

How It Worked Out

I UNDERSTAND she married her husband to reform him."

"And she succeeded?"

"Yes; but after she had him reformed she wanted something to occupy her mind, so she became a suffragette."

"Well?"

"And that drove him to drink again."—*Detroit Free Press.*



The New Housekeeping

By Mary Hamilton Talbot



HUGH," said Betty McLean to her husband one morning, "this servantless question has to be solved some way. I simply cannot go on as I have been doing since we had to dispense with Chloe. It seems as if I have used up my last ounce of energy, and you don't know, you can't know, how tired I am of housework! It is all very well for Margaret to talk of how she manages without a servant, for she has electricity for her handmaiden, but as there is none within goodness knows how many miles of here, what on earth are we going to do?"

"I'll tell you the first thing we'll do, Betty," replied her husband. "You shall go to your mother's for a couple of weeks' rest, and when you come back, we'll look this question squarely in the face."

Betty went. At the end of the two weeks her husband met her at the station, and as they drove past the green fields, she felt how good it was to be at home again. But, oh! the housework and its everlasting trials. As she entered the house, the children rushed down-stairs to meet her, but she had little time to talk, as it was the breakfast-hour, and the youngsters must not be late for school. As she took off her hat and entered the dining-room to proceed to the kitchen, her husband pushed her gently into a chair and said in a matter-of-fact way:

"I guess you are hungry. Will you have some breakfast now?"

"Why, yes; but it has to be gotten first."

"Wait a minute." He struck a match and quickly turned the valves of two small stoves, no larger than chafing-dishes, which stood on shining nicked trays on the breakfast-table. On one was a coffee-percolator, which made the coffee in nine minutes, and on the other was a toaster on which ten slices of toast were ready, hot and crisp in seven minutes, with no scorching of face or toast, no smoke, no soot and no getting cold before being served. On the other burner Hugh soon had an omelet ready.

"But," said Betty, "there is no smell, it's not kerosene or gasoline; what is it?"

"It's the new industrial fuel, denatured alcohol," replied her husband, "and, my dear, not only has it no smell, smoke or dust, but it costs less than one cent to cook your breakfast. It is simply great, the flame can be controlled precisely as the gas your city neighbor uses."

"Oh, what a dear you are, and to think I won't have to hurry down-stairs in the mornings to start the fire and get things going for breakfast. But, of course, the dinner will have to be cooked on the coal-stove, for a whole dinner could not be cooked on that." The "that" was a bit provoking.

Hugh rose suddenly from the table, and picking up his three-pound stove, walked into the kitchen. Betty followed uncertainly, just in time to see him set an enameled-ware upright oven, with a water space beneath, on the one burner, and then he opened the door. On the lower shelf was a ham; a cabbage and dish of beets was on

the second shelf, and green corn, onions and several cup custards were on the top shelf. Betty opened her eyes wide with astonishment, but could not help exclaiming:

"It's just grand, but that custard will certainly taste pretty oniony."

"Oh, no, it won't," replied Hugh; "there is absolutely no intermingling of odors, strange as it may seem. I have been experimenting. And I guess you'll be glad to know there won't be any pots and pans to wash up after this meal, for things are cooked in the dishes in which they are to be served. All you have to do is to wipe them off and set them on the table. Now look at this."

"This" was a fireless cooker. "I call it a conserver of the heat of denatured alcohol. Every night before you go to bed you can heat to-morrow morning's oatmeal to the boiling-point in ten minutes on your little stove, at a cost of two and one-half mills, and pop it



A whole dinner cooked on that!

into the fireless cooker and keep as cool as a cucumber in summer throughout the whole performance. Isn't that a saver of time, expense and good looks as well?"

As he was talking, Betty seized an alcohol iron which was standing on a near-by shelf.

"Yes, Betty, when ironing-day comes in hot weather, you have your electric handmaiden beaten to a frazzle, for you can do your ironing out under the trees. You can take your iron to the work, not your work to the iron. It costs only \$3.25. I wish we had had it last summer when we arrived at the hotel. Will you ever forget those crushed and crinkled frocks and trousers and what innumerable tips to the maids it took to keep us looking even half-way fresh? We'll take our little iron along the next time we go away from home. But come on and see your washing-machine."

When Betty entered the laundry, she found a washing-machine which dispensed with the endless handling of water, it was put into the machine cold and heated to any temperature required by the alcohol burner under the steel tub. And she later found it washed anything, from the heaviest blankets to the lacy things she wore on her neck.

What a pleasant shock it was, indeed, when evening came and the lamps were lighted, to find, instead of the

usual yellow kerosene flame, a brilliant white light.

She was still smiling delightedly when her husband said: "Perhaps you'll be glad to know that neither your lamp, burner nor chimney require any attention for months, except the wiping off of the dust with a soft rag when you sweep the room."

"Well, of all the work of the house I believe I disliked the care of the lamps the most. Every day the wicks had to be trimmed and snuffed, and the soot scrubbed from inside the chimneys, and the burners had to be boiled at least once a month, and then my hands! the washing to try and remove that smell that 'won't come off.' I guess the servantless question is about solved for us, Hugh."

"Well, Betty, I thought the matter of the housework all over while you were away, and I realized that it was making the woman I love and promised to shield and protect somehow not just herself, there was always a tired droop to her mouth and a weary look about her eyes, so I went to town and investigated this new domestic fuel I had read something about, and then ordered these 'helps for housewives,' and they were not so expensive, either. By the way, did I tell you that at fifty cents a gallon it is cheaper than coal at six dollars a ton, and one gallon is sufficient to cook thirty-six meals for two people at a cost of less than five cents a day. I almost forgot to tell you that there will be a heater out next week. It looks like a steam-radiator, but has a handle, and I can take it about for you; it weighs too much for you to lift readily: forty pounds. Maybe you could do it, though, for I guess you have lifted the youngsters when they weighed more than that. We won't have to start up the furnace so soon in the fall. And you know what that means."

A few weeks later Hugh McLean, as he woke from a snooze on the porch, heard his wife's voice in eager conversation with a neighbor at the gate, and these words floated back to him:

"Even the children call me their rejuvenated mother. I have time now to enter into all their interests, and I am beginning to know them in a way I never did before. Hugh and I have gone back to our old way of reading aloud in the evening, and I'm seldom tired now, and, well—you'll hardly believe it, but all that dreary round of housework is almost play now. I am so glad to be rid of a coal-oil can; if I spill any denatured alcohol, it dries quickly and disappears, leaving no stain behind. But talking about stains, I must tell you it is perfectly splendid for cleaning purposes, as it is a good solvent of fats, oils and all kinds of grease. It is especially fine for cleaning delicate fabrics, such as laces, silks, etc. A little ammonia added to it helps, I think. Do you know that I believe I wouldn't have a maid now if we could afford it. Come over to the house and let me show you my new house-keeping way."

"I almost forgot to tell you the principal reason I had for stopping you. Tell the children that Rob and Jean want them to come over to-night to a 'marshmallow toast.' We tried doing it last night with tooth-picks and our alcohol-stove toaster; they were fine, and we didn't have any burnt faces and blistered hands, either."



The clear, white lamp-light



The coffee-percolator

The Plaint of a Dry-Farmer's Wife

By Lina Curry McCoy

YE OF irrigated districts, living on the verdant plain, Pay your tax without a murmur, never grumble nor complain;

Ye depending on your cisterns, offer thanks for copious rain;

O, be grateful, ye hill-dwellers, for the streamlet rushing by;

Yes, be praiseful, all ye people, for the moisture from the sky,

If you've never missed the water when the well went dry.

You who have abundant water at a faucet's simple turn, You have yet one phase of worry of the pioneer to learn, For you've never felt that haunting fear, "what if our home should burn."

O, my hearers, "bach" or matron, who have household tasks to do,

Have you ever skimmed the water that your dishes were put through?

Have you ever done a washing leaving out the "boil" and "blue"?

O, you watermelon-lovers, stop a moment, just to think, Would you like to eat one solely so 'twould save you one more drink

From the bucket of water setting in the kitchen sink?

For that bucketful of water has been carried half a mile, Up a steep and stony hillside—o'er a neighbor's barb-wire stile,

And at the zeal with which 'tis guarded the uninitiated smile.

Yes, the rinsings from potatoes wet the pansies near the door,

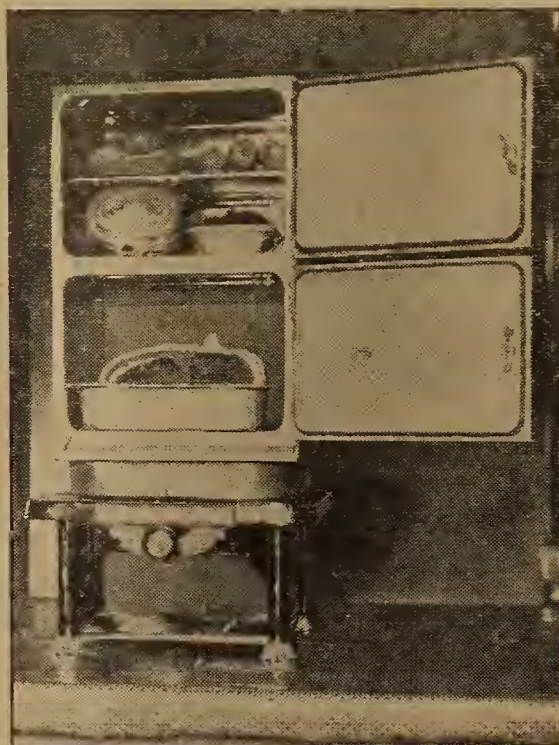
And the grimy suds from washtubs go to mop the kitchen floor,

And the towel on the roller is turned over o'er and o'er.

O, take from me delicious sweets—the sugar trust to swell;

Of wearing my last season's hat you'll seldom hear me tell;

But give to me, please give to me, A Never-Failing Well!



The enameled-ware upright oven

Though All the World's Akin

Cora A. Matson Dolson

SHE rocked the cradle back and forth
Each night, that cradle bare,
And dreamed the child who died at birth,
Lay calmly sleeping there.

While in an orphan's bed was laid
A shivering little lad
With wide brown eyes, who might have made
That lonely mother glad.

Suggestions for the Housekeeper

By Alice M. Ashton

REGARDING Work-Tables—Study to get your work-tables and sinks just the right height. They will, of course, differ, according to the height of the worker.

Too high a table causes a constant strain upon the arms and shoulders. Too low a one causes stooping and a tired back.

Being a medium tall person, my favorite table is thirty-two and one-half inches high. On this I can roll out pastry and do similar work without stooping, and in consequence get much less tired than when my work is lower down.

About an inch lower is my favorite height for an ironing-board.

A low stove is wearying if it must be used much every day. And a washing can be done much easier if a higher bench than common is used for the rubbing tub.

The easiest way to discover the exact height best suited to yourself is to place blocks of wood on your ordinary table to support a board until you have found which is less fatiguing.

Any woman who neglects to rectify this matter is extremely foolish if she values her own health, for many a woman is nervous and unhappy after a day in her kitchen without knowing the cause.

And the causes are, too frequently, the table, ironing-stand and cook-stove of her daily tasks.

For a Runaway—We cured a runaway tot of that very pernicious habit—running away. An ornate gilt medal, which she greatly admired, was fastened to a ribbon, and when she was allowed out of the yard, this was tied about her neck, to her intense pride and satisfaction. All the neighbors understood that when she appeared at their door without the medal she had come without permission, and that she should be immediately sent home. This very inhospitable treatment soon caused her to prefer her own yard on such occasions, and we were saved a great deal of trouble.



No. 2020

A Spring Costume Blouse

A Lesson Telling Just How to Make It

By Grace Margaret Gould

THE costume blouse matching in color the tailored suit is now looked upon as one of the necessities of the spring wardrobe. Voile, éolienne, marquisette, or crêpe de chine are all good materials to use for this attractive blouse, with a heavy deep cream or a darker shade of écru lace for the collar. The color contrast may be introduced in the revers of satin and the cuffs on the short cap sleeves.

The pattern No. 2020, Costume Blouse with Guimpe, is cut in six sizes, for 32, 34, 36, 38, 40 and 42 inch bust. The pattern envelope contains thirteen pieces. Eight of these pieces belong to the blouse, and are lettered as follows: The front V, the back T, the sailor collar M, the square revers I, the belt A, the girdle X, the cap sleeve Y, and the cuff J. The five pieces for the guimpe are lettered: The front E, the back H, the collar L, the upper sleeve K, and the under sleeve F. The letters are perforated through each piece of the pattern, in order to identify it.

Before placing the pattern pieces on the material, smooth them carefully, removing the wrinkles from the tissue. In cutting, lay the pieces with the edges marked by triple crosses (XXX) on a lengthwise fold of the material. Place the other parts of the pattern with the line of large round perforations in each, lengthwise of the goods. Be sure to mark all the perforations, and cut out all the little notches before removing the pattern pieces from the material.

To Make the Blouse

Join the pieces by corresponding notches. Match the lines of small round perforations on the shoulders and under the arms, and baste along these lines.

Gather the blouse at the lower edge between double crosses. Join the belt to the lower edge of the blouse as notched. Match the centers of the blouse and belt, back and front, and bring the large round perforations at the sides to the under-arm seams. Pin to position. Pin the plain part under the arms, and then distribute the fulness evenly, back and front. Baste the belt securely to the lower edge of the blouse; then try it on. If the gathers are not adjusted in a becoming manner, draw them closer to the center, back and front, leaving a plainer effect under the arms; or else rearrange the gathers so the blouse will be a trifle full all around. This should be done to suit the individual figure.

Join the cuff to the lower edge of the cap sleeve. Gather the cap sleeve at upper edge between double crosses. Always hold the sleeve toward you when arranging it in the arm's-eye. With the sleeve in this position, pin the seam in the sleeve at the notch in the front, and bring the notch in the top of sleeve to the shoulder seam.

No. 2020—Costume Blouse with Guimpe

Pattern cut for 32, 34, 36, 38, 40 and 42 inch bust measures. Quantity of material required for medium size, or 36-inch bust, two and three-eighths yards of twenty-two-inch material, or one and one-half yards of thirty-six-inch material, with three eighths of a yard of contrasting material, three eighths of a yard of lace, and two and one-half yards of twenty-four-inch material for the guimpe. Price of pattern, ten cents



No. 2020

Pin first at these two points, then pin the plain part of the sleeve smoothly in the arm's-eye. Draw up the gathers to fit the remaining space, distribute the fulness evenly, and pin carefully before basting.

Join the revers to the fronts. Join the sailor collar to neck. Lap the fronts, matching the center lines of large round perforations, and fasten on the left side in surplice effect. Sew a hook on the right side of the belt directly in the center front, and an eye in the center on the left side. Also hook the lapped end of the left side of belt securely on the under side. This will keep the belt in position, and the fronts of the blouse will not pull out of shape after it has been worn for a little while.

Turn hems on the girdle by notches. Gather at the ends between double crosses, and arrange around the waist, matching the lower edges of girdle and belt. Fasten the girdle at the left side of front on a line with the blouse closing. This finishes the blouse.

The woman with a limited wardrobe who must plan her clothes carefully, will find that it is economical to have two guimpes for one blouse. One may be of white net, collarless and with short sleeves. The other a high-necked, long-sleeved guimpe of dyed lace to match the color of the blouse, or of the softest of embroidered cream batiste.

Three eighths of an inch seam is allowed on all edges of this pattern, except at the shoulder and under arm, where one-inch seam is allowed, designated by lines of small round perforations.

This is allowed as a safety outlet. After the waist has been properly fitted and stitched, this additional seam may be cut off and only the regulation three eighths of an inch seam left.

To Make the Guimpe

Join the pieces as notched. Take up the darts in front by bringing the corresponding lines of small round perforations together. Join the collar to the neck. Turn hems on the collar and backs by notches, and fasten invisibly.

Join the upper and under sleeve as notched. Ease the upper sleeve at the elbow between the notches. Gather the sleeve at upper edge between double crosses, and arrange in the arm's-eye as directed for the cap sleeve. For short sleeves in the guimpe cut off on the cross-lines of small round perforations.

Guimpes to wear with blouses of this description are usually made entirely of lace or net.

You may, however, economize by having only sleeves of net and by making the body of the guimpe of plain lawn. Then face the front of the lawn body with net, and face down the back about two inches, in case the blouse slips away from the guimpe.

Note

Miss Gould will be glad to answer any questions pertaining to home dressmaking which may perplex the readers of Farm and Fireside. She will send by return mail a personal letter to the writer if a stamped and self-addressed envelope is enclosed. Direct all letters to Miss Gould's Dressmaking Department, care of Farm and Fireside, 381 Fourth Avenue, New York City.

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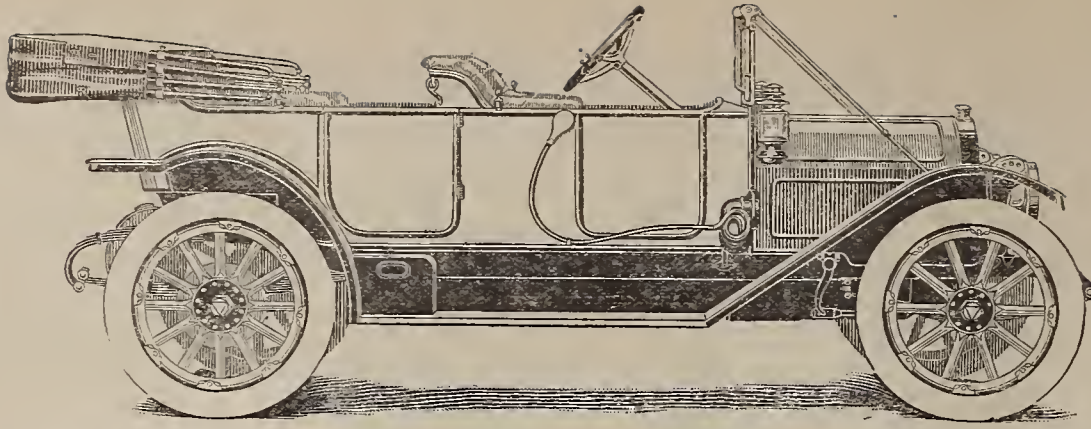
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Examine Our Rivals' Car, Too

We urge you to examine other cars as well as the New Self-Starting HUDSON "33."

If you can't find it convenient to personally examine the other cars, get catalogs and compare the illustrations. Lay the photographs of the engines and chasses side by side.

Note as a comparison of simplicity the complications of other self-starters, if there is one. Some use miles of electric wire. They are so heavy that they tax the engine with power to operate them and add a load to the car weight equal to an extra passenger.

Note how easily such starters can get out of order. Many starters are so much a part of the car that when they are out of order the automobile is out of commission.

Now turn to the amazingly simple HUDSON "33" Self-Starter. Note its weight of only 4 pounds. Note its utter simplicity of only 12 parts. It is the only self-starter that Howard E. Coffin—America's foremost engineer would O. K.

Many cars having a jumble of rods, wires, exposed mechanism—and other mechanical obstructions—are difficult to understand.

See how they are bound to collect dust and sand that must eventually ruin the car. Vital parts of cars of such design are so inaccessible that they cannot be reached except by tearing out other parts of the car.

These things add greatly to the cost of maintenance. They interfere seriously with the performance of the car.

You need not be an automobile expert to understand such disadvantages.

You immediately recognize that by eliminating approximately 1000 parts, we can put the money thus saved into bettering the quality of the parts that are used. That is why experts do not compare the HUDSON with other cars selling within its price-range—between \$1400 and \$2000—but with cars which sell above \$2500.

What This Means in Reducing Repair Charges

Most repair expense is for the time required to remove the obstructions that interfere with the free access of the part needing attention and for the replacing of those rods and wires and other things after the repair has been made.

At 60 cents an hour—the minimum charge for such service—you can understand what this means when four or five hours must be consumed in removing and in replacing parts in order to make an adjustment that, were it not for this inaccessibility, could be made in a few minutes. You save all such expense and annoyance if you own a *New Self-Starting HUDSON "33."* It is accessible in every detail.

The Dust Proof Idea

Dust and sand cut the finest bearings.

No amount of wear is so destructive. Note what provision has been made in other cars for protecting moving parts and then look at these details on the HUDSON "33." The valves are enclosed. Dust

never gets into their mechanism. They are protected from such wear. Thus they are not so likely to become noisy. Every moving part of the car is fully protected and that means long service. It means a greater operating economy.

A Value Catalogs Cannot Show

It is impossible to fully compare values of automobiles by reference to illustrations and catalogs.

Even experts do not always know the character or suitability of materials for the functions they must perform, even when the cars can be personally examined.

You cannot realize beauty by looking at illustrations. You cannot appreciate quality of finish by a hasty examination.

To do this you must have had the car for some time and then have learned how well the finish stands up under service.

You must ride in the cars to know their riding qualities. You must drive them to know which is easier to operate.

Experts Do Not Know

Even a skilled musician cannot correctly choose which of two pianos has the finer tone if he cannot test the instruments side by side.

By looking at an automobile in one salesroom and another at another place, aren't you likely to be persuaded in your choice by the more convincing salesman?

You may measure the seats and find a difference in the width, but can you carry in your mind for half an hour the qualities of one while examining the other?

Others have found that they can't do that.

But they have learned a better, safer way to choose. They make their choice as they choose their doctors. Not by demanding that the doctor explain how he will treat their affliction, but by the successes he has had for others.

Having confidence in him, his advice is faithfully followed.

Engineers must necessarily know more of their work than do laymen. In this they are experts. Their reputations rest upon their accomplishments. Why not, then, choose the most successful engineer and accept his work as the car you should have?

In such a case your choice would be the *New Self-Starting HUDSON "33,"* for it is Howard E. Coffin's greatest car.

Thousands in the hands of owners endorse the wisdom of such a choice. The long, hard service those cars have given to the individuals who own them confirm all that has ever been said for them.

You can do no better than to choose "the Master car of the Master builder."

If you don't know the dealer nearest you, write for his address. We will also tell you much more about the *New Self-Starting HUDSON "33"* that you will be interested in knowing.

See the Triangle on the Radiator

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THE NATIONAL FARM PAPER

EVERY OTHER SATURDAY

ESTABLISHED 1877

MAY 11, 1912



"With the Editor"

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We have recently prepared a circular describing several bond issues which we consider particularly suited to investors seeking an attractive income and safety of principal.

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Thousands of dollars worth of fruit and vegetables are wasted in your neighborhood annually. Turn this loss into a profit for yourself. Our interesting pamphlet

"Secrets of the Canning Business"

tells the story. It explains canning methods, what to do and how to do it; shows how to increase the revenue from fruit and vegetables and how to make money canning at home. Pamphlet is free, also our 1912 Catalog. Farmers save \$100 each year in grocery bills. Orchardists and vegetable gardeners make from \$500 to \$1000 yearly, from fruit and vegetables that otherwise would go to waste.

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With the Editor

ONE golden May I drove through the "piney woods" of Alabama. A good old Demopolis negro named Frank held the lines. The woodpeckers were drumming on the dead pines, and the scarlet buckeye flamed in the fence-corners. On the rails of the roadside fences I saw dozens of gray lizards, like the rail in color; and darting about in the greenery were other lizards, as like the gray ones as two peas, except that they were green.

I wondered whether they were green because they were on the foliage, or on the foliage because they were green. I had heard of the chameleon, which changes color to correspond with whatever it happens to run over, and I wondered if these lizards would change from green to gray, and vice versa, if their places were changed; or if the fence lizards were naturally gray, and the tree lizards naturally green, and had chosen their habitats by dint of common sense. But Frank, wise as he was in all the lore of the woods, could not help me. He pointedly discouraged any attempt to experiment.

"Dem's scawpions," he asserted. "De gray ones won't hurt, but if one o' dem green ones was to bite you, you'd nevah live to git into the carriage, suh."

"Did you ever see anyone who was bitten by one of them, Frank?" I asked.

"No, suh."

"Ever see anyone who said he had ever seen anyone who was bitten by one?"

"No, suh."

"Ever seen anyone who had ever heard of any real certain person who was bitten by one of these 'scorpions'?"

"No, suh."

"Well now, Frank, you're sixty-five years old and have lived in these woods all your life. If you have never seen nor heard of anyone being hurt by one of these green lizards, how do you know they will bite, and if they will bite, how do you know the bite is poisonous?"

"Ah don' know, suh," replied Frank, "but Ah want to have mah religion in good shape 'fo' one o' dem scawpions bites me! Don' you fool with dem scawpions, Mr. Quick, if you 'spect to git to Grove Hill! Don' you do it!"

Down on the Gulf Coast the fishermen's children were as afraid of the little lizards as was old Frank. But there came among them a little boy from the North, who had seen pet chameleons in the cities, and within a week all the children were carrying "chameleons" in their pockets, or "picketed" to buttons on their jackets. "Scawpions" were running all over them.

Old Frank's fear was merely a case of an error passed from generation to generation and fully believed. Most of our enmities to snakes are equally without reason or validity. It was a notion which had not been challenged, that is all. A great many people feel the same way about so many things that I won't mention them for fear of getting into an argument. Yes, I will mention one.

I WAS asked the other day by an intelligent man where "the sign" ought to be when peas are planted. Most of our present-day farmers have lost all interest in the location of "the sign." But there are still some who refer often to the picture of the man with folding doors in his abdomen on the front page of the almanac. They plant by "the sign," and they do a great many things about the live stock by it. Most of them are successful, too. A man or woman who studies "the sign," generally studies the work in other respects, also. That's why they are successful.

I have a letter from a new subscriber in Indiana, which set me off on this train of thoughts about out-of-the-way ideas. This good woman sends the suggestion for the purpose of saving life, and preventing pain, and it is received respectfully in the spirit in which it is sent.

"When anyone steps on a rusty nail," says the letter, "put the end of the nail that has gone into the foot in beeswax, and keep it there until the foot is well. If you are not sure of the right nail, put in all nails which could possibly have stuck in the flesh, so as to be sure of getting the right one. If the nail cannot be got out of the board, put the wax on the nail, and cover it with a small can. This will save cattle, horses and other live stock, as well as human beings, from lockjaw."

Now this is just as good a remedy as many of those which physicians prescribe. If the patient lives, the remedy is given the credit for the cure. Thus do the patent-medicine people build up their books of "cures" and the "It-cured-me" testimonials in the papers. Of course, there isn't anything in it—any more than in that other old remedy: "The hair of the dog will cure the bite."

Not that I am ready to reject a thing because science does. Science is so often wrong. But the great thing about science is that it is all the time hunting for its own mistakes, and correcting them. But the believer in signs, hoop-snakes, the moon, and the like, never hunts for his mistakes. Uncle Frank never handled a "scawpion" and died unpoisoned, mourned by all who knew him. Science tells us that the moon has no perceptible effect on plants; but a Santo Domingo sugar planter tells me that if he cuts trees in the wrong time in the moon down there, they decay. Ten days in the month are the right days to cut trees if you want them to last as timber. A botanist friend laughs at this. But the sugar planter has been cutting trees in Santo Domingo for twenty years. He may know. Science may need another guess.

ON MY farm last year we tore down an old house, in the attic of which were a great many hornets. They were real hornets, with the proverbial tempers. We were all afraid of them, except one man, who gathered up a handful of them and held them calmly, quite unstung, and gradually let them go by a slow opening of his fingers. I saw him do this. He says that he keeps them from stinging by holding his breath. If he should breathe, he asserts, while holding the hornets, they would sting instantly. He claims to have tried it—once.

Science may have an explanation for this. I don't pretend to have. Science once said that clover can't and doesn't take nitrogen out of the air. But it does. Practice said it did all the time. For four thousand years the best farmers had been taking nitrogen out of the air with clover; and at last science found out how it is done. Now we know it better than we did before. We know the Why as well as the How of it. My man on the farm seems to know the How of the hornet question; and has a theory as to the Why of it. Another fine thing about science is that, when it really settles a thing, it is apt to stay settled. Maybe it will one of these days be able to make a guess as to why one man can handle hornets and another has to run from them.

Hubert Quick

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On the State prison farm at Waupun, Wisconsin, a field of three and a half acres was infested with quack-grass and Canada thistles. It was sown in hemp to test that crop as a weed-eradicator. The seed was sown at the rate of a bushel per acre. It yielded one hundred and eighteen dollars' worth of hemp and killed all the thistles and nearly all the quack. Worth looking into.

College Jealousy?

THE critical stage of the Page-Davis vocational education bill has been reached. The conflict seems to be between the full-length Page Bill and the Lever Bill, which is at best a half-way measure. The Page Bill, if passed, will place the funds of the United States government to the extent of several millions a year back of better schools in the country as well as the cities. What good the half-way measure of Senator Hoke Smith and Mr. Lever will do is doubtful. A number of influential agricultural college men are working for the fly-bite measure because of reasons of their own. Some of them profess to think that the larger measure so ably championed by Senator Page of Vermont has no chance of passage. Our impression is to the contrary. It does not seem likely that the Page Bill can be beaten on an open vote in either house. Is it possible that the college men are afraid of the new conditions which such a measure as the Page Bill would create in their half-worked field of agricultural education? We should be sorry to believe in so pernicious a timidity on their part. If this timidity and jealousy are a part of the reason for the preference for the Smith-Lever Bill on the part of men who, we should think, ought to know better, they are pursuing a greatly mistaken course. The best thing that could happen to the agricultural college work in this country would be the stimulus of the alliance between the State colleges and the federal government which the Page Bill would bring about. If the agricultural college work is what it should be, the teaching of agriculture in the rural schools would make the number of college students not less, but more. Better be beaten temporarily on a good bill than to win with a poor one.

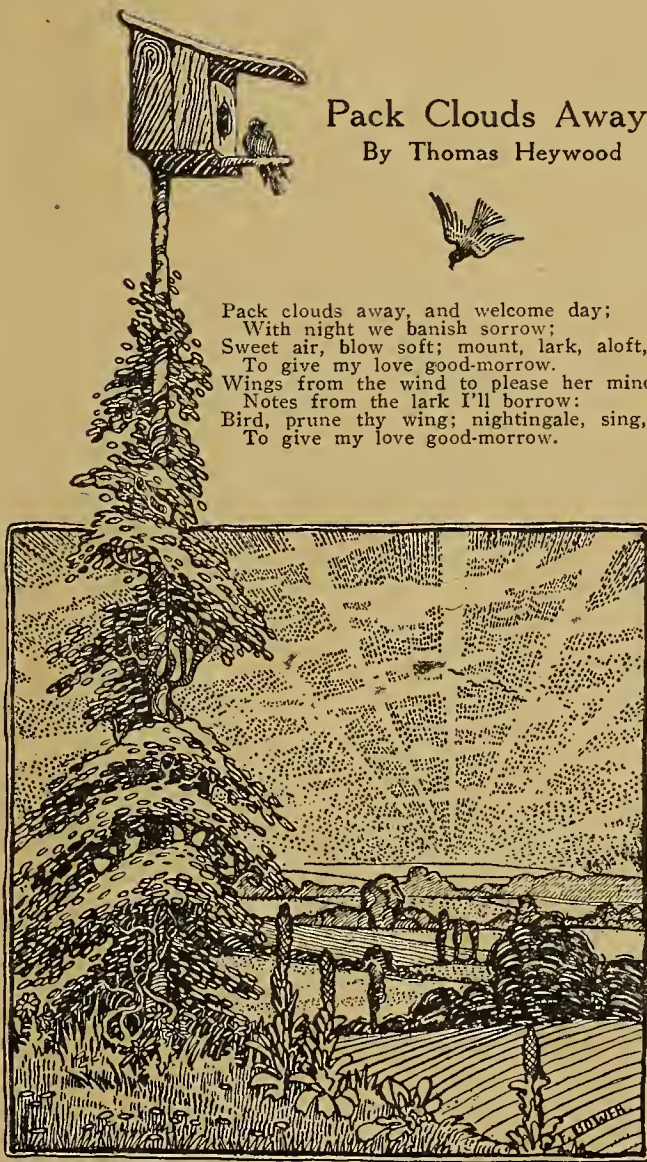
"Souring Land" by Green Manure

IN A recent bulletin on cotton culture (No. 164), the North Carolina Experiment Station tells us something about the alleged "souring" of the soil by the plowing under of green manures, which is of great interest to all of us, North and South. If cow-peas, for instance, be plowed down in a mass at the bottom of the furrow-slice, says this bulletin, the decaying mass will cut off the moisture in the lower soil from that above the plowed-down crop, and produce the effects called in such cases "souring." But if the green crop plowed down be cut up well with a disk-harrow, and then "plowed in," rather than "plowed down," by furrows set on edge, so that the green manure is mixed into the soil rather than buried under it, no bad effects will be produced. If this is true in the warm climate of North Carolina, it would be a very reliable index in the cooler States; for farmers have been more troubled by this alleged "souring" in the South than in the North. The matter is important. If we can, by carefully preparing the crop for plowing in and by proper plowing, turn in our green manures at any stage of their growth without damage to the soil, it is a good thing to know. The statement is made in the North Carolina bulletin with the greatest positiveness, and it would seem a perfectly safe piece of advice to follow.

Illustration of profit from the use of commercial fertilizers: On a light, sandy Wisconsin soil, phosphate and potash made it possible to grow a leguminous crop, which, plowed down in 1910, supplied fertility for a forty-five-bushel crop of corn in 1911. Similar land in which the legume was grown and plowed down with no fertilizer made only thirty bushels per acre. And the land is in better condition for the next crop.

Bordeaux Makes Potatoes

THE spraying of potato-fields for the control of disease has been kept up at the Vermont Station for twenty years. The average gain in yield by the use of Bordeaux mixture has been 105 bushels per acre, or 64 per cent. In the year 1910, when there seemed to be no disease, the gain was 18 per cent. In 1911, when it was very prevalent, the gain was 215 per cent. And yet thousands have never used a single drop of the spray on their potatoes. Have they not learned these facts?



Pack Clouds Away By Thomas Heywood

Pack clouds away, and welcome day;
With night we banish sorrow;
Sweet air, blow soft; mount, lark, aloft,
To give my love good-morrow.
Wings from the wind to please her mind,
Notes from the lark I'll borrow:
Bird, prune thy wing; nightingale, sing,
To give my love good-morrow.



The Bull and the Milk Yield

BECAUSE bulls do not give milk, many farmers act on the notion that they cannot impart milking qualities to their calves. This is a great mistake. The sire of a heifer has as much to do with her milking qualities as the dam. If his pedigree shows an unbroken series of dams which were great milkers, there is a practical certainty that his daughters from ordinary dams will be better milkers than their mothers. At the Missouri Experiment Station a poorly bred, though pure-bred, Jersey bull used with registered cows produced a generation of heifers whose yield of butter-fat was eighteen pounds lower per year than their dams'. On ten daughters, counting fat at twenty-five cents, this made a loss of \$45 a year through a poorly-bred, though pure-bred, bull, or interest on an investment of \$750. The next bull got heifers which gave a little more butter-fat, but was, on the whole, a poorly bred bull. The next was a finely bred bull, the son of a line of great milkers. All his daughters but one were better than their dams. It would, therefore, have paid the owner of a moderate herd of pure-bred cows—and the case would have been the same with grades—to borrow \$800 and buy bull number three rather than to have used number one for nothing. Of course, this does not mean that farmers are advised to do such a thing, but the statement is true, nevertheless, and significant.

By thorough and effective work it is possible to so far master the codling-moth as to get under Eastern conditions ninety per cent. of worm-free apples with one spraying. Experiments in New York show this. Unless the work is well done a second spraying is needed three weeks after the first. Here is a case where the taking of pains pays peculiarly well.

Facts Concerning Sweet Clover

A MOST valuable document is Farmers' Bulletin No. 485 on sweet clover. All farmers interested in this forage plant are advised to send for this to the Secretary of Agriculture and to study it carefully. This plant which a few years ago was universally regarded as a noxious weed, and is still mistakenly so looked upon by many, is rapidly growing in favor for pasture, for hay, as a soiling crop and as a soil-improver, as well as for its immemorial use as bee-pasture. This bulletin very well sums up the knowledge now available concerning it.

There are three kinds in this country, the white, the yellow and the yellow annual. Only the first two are of importance, except in the extreme south. Of the three, the white is probably the most valuable and is the most common. Sweet clover will grow in dry climates or in wet, on dry ground or on land needing drainage, on limy soils or on those which are acid. It stores nitrogen in the soil, and bears on its roots the same bacteria which form the nodules of alfalfa. Where alfalfa is difficult to start, a crop of sweet clover will generally prepare the soil for it if the sweet clover itself be properly inoculated.

It needs to be carefully studied by those intending to grow it. In many places it flourishes on sand slopes and clay banks and refuses to catch on good soils, because the farmer has failed to make the conditions as favorable for it as those of the bare slopes.

A "Test" of "Parcels Post!"

LET the record be kept straight. Making the rural carriers errand-boys to bring to town parcels to be turned over to the express companies is not parcels post. It may prove a convenience to the farmers occasionally and surely will help the express companies—but it isn't parcels post. For it doesn't run from one post-office to another.

Neither is it a test of parcels post. Whether it succeeds or fails, it will throw no light on real parcels post.

Those who think a "test" necessary for parcels post should, to be really consistent, advocate an official "test" of the use of water for bathing purposes. This use of water is general over the world save for a few exceptional peoples. The people who do not bathe are the Esquimaux. Those who do not have parcels post are the Americans. In both cases the facts are not creditable to the exceptional people, and in each instance it smells to heaven of all sorts of questionable things.

An "official test" is as necessary in one case as the other.

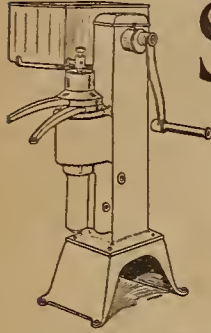
The Potato Crop Threatened

THE spreading of crop diseases and pests over the world is startlingly illustrated by the presence of the European potato-wart disease in Newfoundland, where it awaits shipment to the United States. Once landed in this country, it will surely spread over the nation. It might bring the greatest suffering to our poor who find in the potato the cheapest of foods in normal years, and it would surely work great hardship upon farmers. Yet we have no quarantine law against such pests! One would be justified from this in the suspicion that only the most ignorant of men ever get into the House or Senate. How long will this criminal negligence be tolerated?

This disease was first observed in Hungary sixteen years ago. It has spread with great rapidity and is recognized as a danger to the whole potato industry.

How to Select a Hand Cream-Separator

By B. D. White



SINCE the introduction of the cream-separator for farm use, there has been such a great demand for this little piece of mechanism that, with mushroom rapidity, factories for making such machines have sprung up all over the country, and surprising as it may seem, perhaps, all of those provided with sufficient capital to get a fair start have grown to enormous size and are turning out separators by the thousand. This very fact, probably, is a reflection on the business acumen

of some farmers, for many cream-separators which have been made and sold have been no credit to anyone who could rightfully be called a manufacturer of a mechanical device.

Truly, some of the so-called cream-separator makers plunged into the business without any previous knowledge or experience and were dependent upon what little information they could obtain from machinists who were mostly employed at the current scale of wages in that vicinity.

Machines Made by Experts

Thus we have with us to-day manufacturers of various types of separators. Truly, there are some makers of cream-separators who are experts, and the machines they turn out from their works are considered by the mechanical world as masterpieces. Their machines have been in actual use and have proven to be efficient, durable, economical and easily operated. Of this type there are several makes, and the farmer who is fortunate enough to choose wisely, or who is honestly, conscientiously and rightly advised, and who accepts such advice and makes his choice accordingly, may be put in the lucky class.

A machine for the separation of an article so valuable as butter-fat must be efficient, or it is worthless.

Suppose a poor machine would lose the small amount of .2 per cent. more fat than a good one, and a farmer had only 200 pounds of milk per day, the loss would be .4 pound butter-fat per day, and at the low average value of 25 cents per pound, would be 10 cents per day, or \$3 per month, or \$36 per year.

Let us suppose that a poor machine costs \$72 and the life of it is five years, the loss would be \$180.

A good separator, by proper care, ought to last at least ten years. During its lifetime it would save over the poor machine the sum of \$360. The object in buying the poor machine was to save the difference between \$72 and \$100, or a saving of \$28 on the original investment. The net loss is the difference between \$360 and \$28, or \$332. But the poor separator must be replaced at the end of five years. Therefore, the cost of the second machine must be added to the loss, especially if it is of the same character as the first.

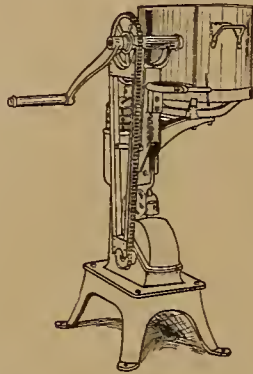
It will be observed that \$100 was taken as the basis for our compilation and was only used as a comparison. It is not the purpose of this article to convey the idea that a cream-separator must sell for \$100 to be good. True, the better machines are in the \$100 class, for a machine of fair capacity, but that is no assurance that some of the poorer ones are not sold for the same price for the express purpose of creating the impression that they belong in the higher class. However, most of the poorer machines may be bought for a mod-

erate price. Some are sold under various names. A difference in the color of the paint, or, at the most, a different base is sometimes sufficient variation to merit another commercial name.

In some parts of Europe where dairying is carried on extensively, no dairy apparatus can be sold until it has been tested and approved by a commission of experts appointed for that purpose. It perhaps will be said that under monarchical rule this is possible, but not under the Stars and Stripes. We believe the time will come when under the glorious flag of ours it will be possible to prevent fraud, and a man who wants to buy anything will be able to get reliable information from a reliable source as to the actual value so far as efficiency is concerned.

We have seen changes along other lines which point strongly toward such changes.

Our agricultural schools for obvious reasons do not, as a rule, give information in their possession as to the value or efficiency of a cream-separator, and few



dare to publish the results of their tests, experiments or research upon the ground of commercial interference. Personally, they say some of the separators on the market ought to be condemned for sanitary reasons, but still separators are being sold which can in no manner be properly cleaned, and the milk passing through one of these, no matter how clean and pure of itself, becomes contaminated. Such institutions are supported by the federal as well as the state governments and ought to give facts.

If the agricultural schools would make investigations, or appoint a committee whose duty it would be to pass upon matters of this kind and publish the results, there would be better, more efficient, more durable and economical dairy apparatus put upon the market. This would result in the betterment to the manufacturers who to-day are turning out trash, as well as to the good manufacturers.

The results of an honest test conducted by a sufficiently large committee composed of any of the dairy professors who have given mechanics any study, and who have had actual experience in the subject they teach, would be generally accepted by the manufacturers.

What to Consider

What we have written so far does not give anyone a definite plan to follow in order to ascertain the best, or one of the best, cream-separator. It does, however, give a tentative plan for getting the information.

If I were to buy a cream-separator and personally knew nothing about the subject, I would

- 1st. Ascertain the efficiency by making inquiries and reading available bulletins on the subject.
- 2d. Consider the simplicity of construction bearing on sanitation.
- 3d. Consider durability from actual service.

4th. Study durability from construction, which may be done by noting the general workmanship and the kind of bearings. A bearing of brass will wear much longer than one of cast iron. Only slow-revolving shafts may be run on cast iron.

5th. Try not let the color of the paint have any influence at all in the matter. Judge the machine from a mechanical point of view.

6th. Consider carefully the power required to operate a machine of a given capacity.

7th. Ascertain whether the separator would skim cream having about 50 per cent. butter-fat and leave no more than .05 per cent. fat in the skim-milk.

8th. Note the protection of the gearing, etc.

9th. Look for smoothness of operation.

10th. Note the convenience of the machine.

The appearance, if considered at all, would be last and would be considered of least importance.

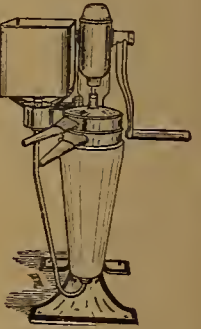
If a person is not in position to judge the good or poor qualities of a separator, possibly the best advice may be obtained by asking someone who does know. Ask them the frank question: "What kind would you buy if you were to buy one for your own use?" This usually brings an answer most satisfactory.

The Separator's Use

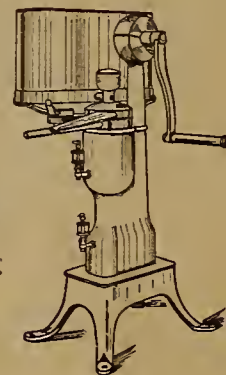
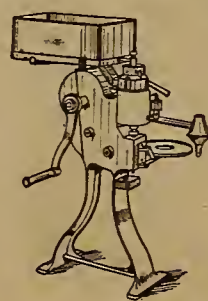
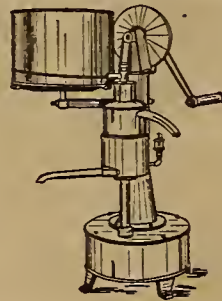
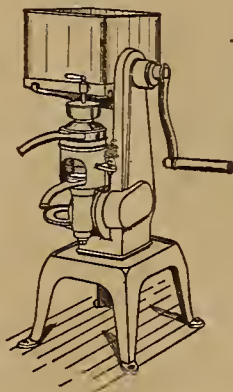
By D. S. Burch

EVERYWHERE cream is sold on the basis of its test, the richness of the cream is as important a factor in the amount of the cream-check as the current price for butter-fat. Throughout all of the states in the Mississippi Valley, and many on the eastern and western coasts, cream is bought entirely according to its fat content. I have found that a thirty-five per cent. cream is the most satisfactory to the dairyman and to the creamery. A thirty-five per cent. cream will contain just about the proportions of butter-fat required to make good butter with ordinary churning methods and still allow for the addition of a small amount of starter to improve the flavor. If a thinner cream is skimmed, there will be too much buttermilk in proportion to the butter, and the skimmed milk, which could easily have been skimmed out by properly adjusting the separator, is lost for feeding operations. In sections where cream is shipped over the railroads at a fixed rate per can, the express charges are likely to be very high in proportion to the value of the cream if a thin cream is skimmed. A few farmers go to the other extreme by skimming a very thick cream, sometimes containing as high as fifty-five per cent. butter-fat. The mistake which they unconsciously make by so doing results in a direct financial loss. In the first place, no separator yet invented can skim more than a fifty per cent. cream without causing a considerable loss of butter-fat in the skimmed milk.

There is, furthermore, a great waste due to the thick cream adhering to the bowl of the separator, to cans and to other utensils used in the work. Therefore, I would advise all dairymen selling cream according to its test to skim a thirty-five per cent. cream, which has been tried out by dairymen all over the country and has given the best results.



THE illustrations on this page will give the reader an idea of the different forms of separators now on the market. There are hundreds of different shapes and sizes. EDITOR.



Integrity as a Source of Income

By H. C. Taylor

THE young farmer wants to become the owner of a good farm with fine buildings and splendid equipment. In these days of high land values, this requires a large sum of money. Few can hope to acquire the desired farm by inheritance or even by marriage. These are both poor places to look for a farm, for if the farm should come by these means, the pleasure of earning it would be lost.

Those who have made calculations upon the time required to earn and save the modest fortune required in these days to own a farm have too often left out of account certain very important sources of income. It is a matter of common observation that the income of one man is often very much larger than that of another. There are those who are much inclined to attribute this to unfair dealing. The difference is due in a great measure to the fact that some men have more sources of income than others.

There are four important sources of income: labor, managerial activity, integrity and capital. The man who depends upon labor alone will have, as a rule, but a small income. It is when ability as a manager and integrity as a man begin to yield their income that the young man gets ahead rapidly.

It has often been said the first thousand dollars is the hardest to accumulate. This is true, because it must be saved almost wholly from the one source of income, labor. From the one source of income must be provided food, clothing and shelter for the worker, before

anything can be put aside as savings. Add another important source of income, and accumulation by saving becomes easy.

The importance of integrity as a source of income can not easily be overestimated. There are two ways of realizing upon your integrity. Most men are willing to assume a certain amount of integrity on the part of the young men. The young man can sometimes take advantage of this fact and, by dishonest actions, realize a small return once for all. It is not this method of realizing upon one's stock of integrity that is to be dwelt upon here. The way to realize an important financial return for one's reputation for integrity is not to sell out, but to continually acquire more stock.

Reputation for integrity gives the opportunity for the young man with little capital to realize upon his managerial activity. There are many owners of farms who, having grown old at farming, are willing to turn their entire capital over to the management of a trustworthy young man. By working as a hired laborer on a farm, a young man may establish a reputation for integrity such that the owner of the farm will turn over the entire management of the farm and equipment to him as a tenant instead of a directed hireling. I know cases where this has resulted in an increase in the income of the young man from thirty dollars a month and board

to a thousand dollars a year. Integrity gives opportunity to realize upon one's managerial ability by operating the capital which belongs to others.

How should one inventory his resources? The capitalist values his stocks according to the income they yield. If a given certificate of stock yields \$60 a year, and the current rate of interest is 6 per cent., he will value the stock at \$1,000. This is the capital value of the stock. If a young man can increase his annual income \$360 by establishing a reputation for integrity, and thus securing an opportunity to manage the capital of others, why should he not look upon this stock of integrity as the capitalist does his stock? It would take \$6,000 loaned at 6 per cent. to yield \$360 annually. In counting his net worth at any given time, the young man may well thus capitalize his integrity. In calculating how much money he can loan on a certificate of stock, the banker capitalizes the earning power of the stock. Is it not true that a banker or a farmer who contemplates making advances of capital to a young man capitalizes the integrity of the young man? It is better for its possessor to overestimate than to underestimate the economic value of simple honesty as a resource.

As a source of income from which to save money and buy a farm, business integrity is of the greatest importance, because the living expenses do not have to be paid from this income, hence it can all be saved for investment purposes. Every honest, efficient young man can become the owner of a good farm well improved.

How We Whipped Them

The Story of the Rebellion of the Farmers of the Middle West Against the Grain, Coal and Lumber Trusts. A Study in Coöperation
By Edward G. Dunn



THIS is the fifth and most important of Mr. Dunn's articles on the coöperative marketing of grain and the coöperative buying and selling of lumber, twine, coal, lime, cement, feed and other staples. It is the first story ever published telling the whole inside of this most important matter. We want to urge on farmers everywhere, in all lines, to read it. EDITOR.

BEFORE leaving the deliverance of the Mid-Western farmers from the clutches of the Grain Combine, I want to make it clear to the farmers of the undelivered sections

of this land, and to those still undelivered as to other things, just what it was we shook off.

It was control of grain prices by the Iowa Grain-Dealers' Association, and of the similar combine which I have mentioned as existing in Illinois, Kansas, Nebraska, Minnesota, Wisconsin and the Dakotas—and I have every reason to say, in every State covered by the National Grain-Dealers' Association and its allies.

I say the control of prices; and yet gentlemen will probably write to FARM AND FIRESIDE protesting that they did not control prices. They will point out the fact that all this time prices rose and fell according to the price in Liverpool. They will say that all this is a figment of my imagination, or worse. But in talking to farmers I need no sponsor; the higher prices we paid wherever coöperation was adopted, and the lower prices we had to pay for other staples bought for the farm, is the answer—and they are history. And, in fact, the prices did rise and fall with the prices in the world's markets. I think the Grain Combine is not without its influence on those, but the way they robbed us, and still rob the farmers, I suppose, wherever the farmers allow it, is not by manipulating the Chicago or Liverpool prices, but by widening the margin between Chicago prices and local prices. The farmers found that they could pay within half a cent of Chicago prices, less freight, for oats, and other grains accordingly, at Burchinal, while the Grain Combine were taking long weights and paying only within about four and a half cents.

Thus they were taking four cents a bushel on oats, and more on other grains, than would make a living for the man running the elevator, and fair interest on the money in the plant.

Faked Bids Did It

They did this through Mr. Wells's "dummy track bid" at Des Moines—a false bid supposed to be a bid for grain on track in the terminal market, but really faked up at a dinner of the Cereal Club in Des Moines.

I lay continued stress on this, because it is the favorite method of robbing the producers everywhere, and in many lines. We have recently learned that the prices of butter and eggs have been lowered to the creameries and other producers by the "dummy" bid of the Chicago Butter and Egg Board. The big operators have been making contracts for butter and eggs for future delivery, based on Chicago prices. It was and is a favorite device for making the creamery members feel good, to contract for the product at a shade above Chicago prices. And while the farmers were chuckling at this fine deal, the Chicago Butter and Egg Board fixed up a record showing that Chicago prices were lower than they really were, and paid the farmers accordingly. At least, this is what seems to be true from my viewpoint.

The operations of the big meat-packers, as recently disclosed in court proceedings, seem to show that there is often no real bidding on live stock—only "dummy bids." I believe the farmers should sift every form of terminal dealing to the bottom, looking for "dummy" bids and faked competition. It paid us in grain. Why would it not pay in cotton, in fruit, and the like? I have seen the price of wheat, in a rural community in Iowa, boosted twenty cents a bushel merely by coöperation.

As I have said, there is no nook or corner of the grain-growing regions of Iowa outside the trade territory of a Farmers' Coöperative Elevator. The same is practically true of Illinois. There are almost three hundred of these coöperative companies in Minnesota, which is almost as well covered as Iowa, but not quite. In 1905 there were less than ten farmers' elevators in South Dakota, where most, if not all, of them had been driven into the combination led by Mr. Jack Quinn. To-day they have 253 or 254 farmers' elevators in that State, covering practically every town east of the Mis-

souri. North Dakota, east of the Missouri, is covered by over two hundred farmers' coöperative elevators, most of which have been organized in the past year or eighteen months. Montana is just starting, but is sure to be covered as fast as the farmers can get to it. There does not seem to be any concerted action in Indiana or Ohio, or in several other States where the grain business is quite large. But I feel sure such action must come very soon in all of the States.

A Need for Coöperation

The next step necessary is to free ourselves of the injustice to which we are still subjected in the terminal markets through the entangling alliances of the great terminal grain companies and the railways. These inter-

ests have built a fence which keeps the eastern consumers of grains—the millers, feeders, feed-merchants, and the like—from meeting the western producers. There are about 25,000 people in Chicago alone, and quite as many in proportion in Minneapolis and St. Paul, Duluth, Milwaukee, Kansas City, St. Louis, Omaha and Council Bluffs and other elevator points, making a living off our grain, and many of them doing absolutely nothing at all useful in the matter of

getting it from the farms to the mouths of the world. We westerners do not know anything about the eastern consumer, and 99 9/10 per cent. of all our grain is concentrated at the big terminal markets—Chicago principally for Iowa—to be sold to commission-merchants or track buyers, who send on to Buffalo, or

to pay all these exactions of middlemen, rather than go the direct way. As the Irishman said, "That's the intintion!"

Now if the eastern and western consumer and producer try to get together by shipping through the terminal market, they are up against the matter of unloading and reloading, for, of course, one can't depend on securing cars on their way home. That is out of the question—as the gentlemen well knew who established the rule. But if your car of virgin grain goes through a Chicago terminal elevator, it will come out different grain. Grain will be substituted for it of the character which the rotten political machine, the Illinois Inspection Department, allows to go as grain of equal grade. In other words, the eastern buyer cannot

depend on getting the identical grain he buys from the western farmer or elevator. It will come to him adulterated and brought down to a certain grade if it is too good for the eastern consumer, as the terminal combine estimates him. The result is that eastern buyers, especially the millers, practically refuse to accept Chicago grades—and the conditions have to be kept the same in all terminal markets, or the combine's

For the past twenty years the terminal elevators have put their own grain in public elevators in violation of law. I suppose there was money in it, or they wouldn't have done that! The State officers? They do not move.

arrangements would be all upset—and so are obliged to resort to buying direct from the terminal elevators and other interests, where they can inspect their grain car by car, and see just what they are getting. A great commentary, this, on the boasted honesty of the great American Captain of Industry!

I know that there is a law in Illinois which requires the public elevator to be free from grain owned by the elevator, but it is not enforced. You can see that if the great terminal grain-man had stored in his elevator your grain and mine and our neighbor's, he would not be tempted to mix my poor grain with your good grain in shipping, thus giving me the best of it and you the worst of it. But if he himself owned a lot of poor grain in the same elevator, and owned the governor of the State and the State inspection department, he might be tempted to mix your good grain, and mine, and our neighbor's with his poor grain, and thus give himself the best of it, and you and me and our neighbor the worst of it. And let us not forget that these terminal elevator men are the same gentry who devised the "dummy track bid" and who are largely interested in the "dummy" butter and egg, and "dummy" live-stock markets. So, while the eastern consumer may feel easy about the matter, we of the West do not.

Why be Forced to Lose Money?

For the past twenty years the terminal elevators have put their own grain in the public elevators in violation of law. I suppose there was money in it, or they wouldn't have done that! Judge Tuley of Chicago some years ago enjoined them from doing it, but they appealed. The Supreme Court took six years to think about it and finally upheld Judge Tuley in saying that the terminal elevators had no right to keep their own and the public's grain in the same establishment. Then a compromise was effected by which a part of each elevator was licensed as a public elevator, while the other half is kept as the private elevator of the owner. Governor Deneen has been told about this, and so has the State's Attorney of Cook County, and so has the Attorney-General of Illinois—but these gentlemen do not move.

I sometimes wonder if the relations of James A. Patten, the Wheat King, to Governor Deneen has anything to do with this. Patten has been the governor's financial backer—at least, in his early political career. He seconded Deneen's nomination in the famous convention when Deneen won over Yates and Lowden. Governor Deneen appointed Patten's friend Eckhart to the office of Chairman of the Illinois Railroad and Warehouse Commission, which rules in all these matters

People sometimes admire the ability of a man who can make his millions in grain as Mr. Patten has done—but how on earth can he lose? The terminal grain-market is a cinch. The man who can buy the public's grain, and have the chance of substitution, and control of inspection, simply cannot lose unless he belongs to the feeble-minded.

of our Iowa grain when it goes into the elevators, and what when it comes out. People sometimes admire the ability of a man who can make his millions in grain as Mr. Patten has done—but how on earth can he lose? The terminal grain business is a cinch. The man who can buy the public's grain and have the chance of substitution, and control of inspection, simply cannot lose unless he is feeble-minded.

So here we have the situation—railways force our grain into the terminal markets, and will not let us get to the consumer direct. They force us to unload at the terminal elevators, and the [CONCLUDED ON PAGE 17]



The elevator Crall and Co, sold us after eight months of competition with the farmers



Our first elevator—located at Burchinal—was sold to the farmers by the Iowa Elevator Co. when the coöperative movement first started

other eastern distributing points. It must go through the terminal elevator. On its way it must pay charges to the Chicago commission merchant, the Chicago terminal elevator, the Buffalo or other terminal elevator where it is unloaded from boats or cars, the wholesale dealer who ships to the retailer, and finally the retail grain and feed dealer, from whom you, my eastern farmer friend, buy when feed is short. Chicago is made an absolute barrier against trade except on payment of tribute.

The other terminal markets are equal barriers in their territories. They are like the Robber Knights of the Rhine during the Middle Ages, who dwelt in their castles and made all commerce pay tribute to them.

We of the West have completed our coöperative grain organizations and are ready to ship directly to organizations of consumers in the East—as soon as the railways and terminal elevators will let us. If consumers and millers and other interested people in the East would only organize as we have done, we could make a fight for the right—which clearly belongs to us in morals and in law—to ship right past Chicago or Kansas City, or the Twin Cities or St. Louis, or any other of the castles of the Robber Knights of the Grain Combine, and reach the market direct. It would make the cost of living lower in the East, and might make some of the farmers' livings a little higher in the West. Anyhow, it is just, and must come.

To be sure, the railways do not say we shall not ship past one of the terminal markets of their pets, the terminal elevators. But they will not bill through to the East unless we can secure a car that is the property of an eastern railway! We are thus really denied cars for these eastern shipments. Then again, the freight rates are so arranged as to make it absolutely necessary to ship through the terminal elevators. If you have any doubt of this, try, if you live in the West, to get rates for a car from your town to a New York country town, or if you live in Ohio or West Virginia, try getting a car shipped direct to you from a point in North Dakota, or Kansas, or Iowa, or Illinois. You will find it cheaper

I believe the farmers should sift every form of terminal dealing to the bottom looking for "dummy bids" and faked competition. It paid us in grain. Why would it not pay in cotton, in fruit, and the like? I have seen the price of wheat in a rural community in Iowa boosted twenty cents a bushel by coöperation.

BUILDING FOOD To Bring the Babies Around

When a little human machine (or a large one) goes wrong, nothing is so important as the selection of food to bring it around again.

"My little baby boy fifteen months old had pneumonia, then came brain fever, and no sooner had he got over these than he began to cut teeth and, being so weak, he was frequently thrown into convulsions," says a Colorado mother.

"I decided a change might help, so took him to Kansas City for a visit. When we got there he was so very weak when he would cry he would sink away and seemed like he would die.

"When I reached my sister's home she said immediately that we must feed him Grape-Nuts and, although I had never used the food, we got some and for a few days just gave him the juice of Grape-Nuts and milk. He got stronger so quickly we were soon feeding him the Grape-Nuts itself and in a wonderfully short time he fattened right up and became strong and well.

"That showed me something worth knowing and, when later on my little girl came, I raised her on Grape-Nuts and she is a strong, healthy baby and has been. You will see from the little photograph I send you what a strong, chubby youngster the boy is now, but he didn't look anything like that before we found this nourishing food. Grape-Nuts nourished him back to strength when he was so weak he couldn't keep any other food on his stomach." Name given by Postum Co., Battle Creek, Mich.

All children can be built to a more sturdy and healthy condition upon Grape-Nuts and cream. The food contains the elements nature demands, from which to make the soft gray filling in the nerve centers and brain. A well fed brain and strong, sturdy nerves absolutely insure a healthy body.

Read the little book, "The Road to Wellville," in pkgs. "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.

The Market Outlook

Spring Lambs Scarce

THE market for all classes of sheep and lambs has been steady during the last two weeks, and but little change in prices has been apparent since the third week in April, at which time grass-fed sheep from Texas made their first appearance on the Kansas City market, and sold at the highest price for two years. The best prices realized in Chicago were for lambs, \$8.15 to \$8.25; yearlings, \$7.25 to \$7.50; wethers, \$6.75 to \$7.50; ewes, \$6.25 to \$6.50. These prices show an advance of about \$2.00 the hundredweight since the first week of the present year, and there seem to be good reasons to expect further advances, for mutton sheep will be scarce because of the way in which they were rushed to market in February and March, and on account of the increasing popularity of mutton and lambs as a substitute for beef, which is getting too high in price for most people. Sheepmen should rejoice in this turn in the popular taste toward the best and most wholesome of animal foods, and make the most of it by breeding and feeding the best-bred ewes and rams of the mutton and wool combinations that they can obtain. The demand in all classes seems to be for moderate weights and high finish, there being a great diversity in the prices of these and the less desirable sorts.

Spring lambs appear to be unusually scarce, probably on account of the length and severity of the winter and the high prices of feed-stuffs. Their appearance on the market will also be late and their owners be tempted to hurry them there, or to turn them out to pasture, a practice which is sure to lead to loss from scouring (if the grass comes early, a little mown and fed in the yards will do no harm).

In marketing lambs, uniformity in weight, style and finish is very desirable; and to insure this the feeder should frequently handle them, and either separate them into lots, or mark those which are best suited to form a bunch for the market. For the benefit of the inexperienced a few words as to how expert salesmen and butchers decide these matters may be of use.

The laying on of fat and flesh commences internally and makes no external signs for three or four weeks. After that time the backbone becomes less prominent, and by firmly pressing the fingers along each side of it, in course of time what was formerly a ridge will be found to have become a furrow, surrounded on both sides by good, firm flesh. At the junction of the tail quite a cushion of this should be formed, and the neck should become rounded and full. The breast and flanks also should have acquired a good covering of flesh. A lamb is rarely found equally good at all points; but as long as the parts which supply the choice cuts are satisfactory, considerable allowance may be made. A "good leg of mutton" and well-covered ribs are indispensable. Practice will soon make the farmer expert in judging, and frequently gentle handling uses the lambs to bear the process without undue disturbance when sent to market.

JOHN PICKERING ROSS, Illinois.

Hogs at a Standstill

AFTER hog prices had reached the \$8.00 mark, the market was at a standstill. It seemed to be all the boosting it could stand under the existing conditions.

The large packers were averse to paying higher prices and preferred to allow the order-buyers and speculators to fill their needs and then take what was left rather than compete and advance the quotations.

The outlook for the rest of the spring is of the same nature. Receipts will continue to be light, as there are no hogs to speak of left in the country. Already the Chicago market has become somewhat of a one-day affair. The Monday runs have quality, as the hogs come from a distance, Iowa being the main contributor; but the rest of the week receipts are small and of inferior quality, as they come from the local territory.

With the advent of lofty quotations a new scale of retail prices went into effect in the eastern cities, and almost immediately the demand lessened, and order-buying at western markets was curtailed. Speculators, however, have become active and aggressive and are maintaining the outlet.

This condition will probably continue until larger shipments appear at the chutes. As long as the packers hold large stocks of provisions, they will not allow the market to drop.

There are many in the trading circles who expect considerable of a June run, but it must be remembered that the heavy hogs have already crossed the scales and that a winter so severe that the pigs farrowed in February and March are malformed is not the winter where fall pigs thrive. What fall pigs there are, are not in a condition to greatly affect the market, unless the packers get on the other side and begin a

bear campaign. The reports of the early pig crops are not reassuring and will help to maintain present prices. Due to the severe winter and heavy snow, the hogs were out of condition, and many sows that farrowed in February and March farrowed but two or three pigs, and many pigs were imperfect and dead. The later litters are somewhat better, but are hardly up to normal. A recent State report from Missouri figures that there are but forty-six per cent. of the average number of brood-sows on the farms.

Conditions are as bad east of the Mississippi. Such reports aid the bull element in the provision pit. It and the market has become active and is advancing.

LLOYD K. BROWN, South Dakota.

Two generations of idlers make a dude, and three a fool.

Put more of yourself into everything you do. It is the half-hearted man who fails. When the fire is low in the furnace, the train gets stuck on the hill. Anybody can pull up his feet and let things slide on the down grade. The thing that counts is to nip it when things go a bit hard.

Look Out!



"No," SAID the confirmed store-sitter, "I don't run after no temptations, but if a'y temptation's just bound to keep gittin' in my way, w'y that temptation's got to look out for itself, that's all."

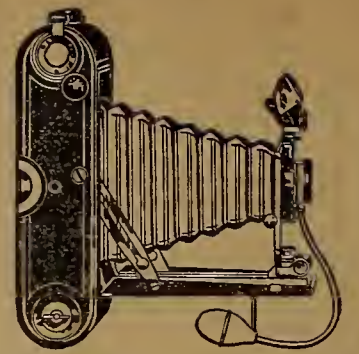
Onions, a Money Crop

I HAD a piece of heavy muck soil which had been used several seasons as a garden. I decided to plant an acre of it to onions. I prepared the plot as early in spring as the soil could be worked into fine, loose condition. It was made quite rich with applications of well-rotted manure, poultry-droppings and wood-ashes. The manure was applied in the fall with a manure-spreader, and the ashes and poultry-droppings were applied as a top dressing after the crop was in cultivation. The soil was well pulverized and left free of clods, clumps and stones. It was then ready for transplanting.

I had sown the seed, about two pounds, in hotbeds on the twenty-fifth of February, and the plants were ready to set out the latter part of April. Seed were sown thinly in rows about two inches apart. As the plants came up, those which grew too tall and weak were made more stalky by shearing off the tops two inches from the soil. Before leaving the hotbeds plants were gradually weathered to field conditions. I believe that transplanting doubles the yield. They can be planted the right distance apart and do not rob each other of food and room as they sometimes do when planted in the row. Onions grow very slowly, and if sown in the ground, the weeds get the start of them before they are big enough to cultivate. They require much moisture during the early growing period, and if grown in hotbeds, can be transplanted in time to get the full benefit of the spring rains. I plant in rows fourteen inches apart and put plants three inches apart in the row. Straight rows are essential, as it is very difficult to use the wheel-hoe in crooked rows. I marked the rows by stretching a string across the plot. An old wagon-wheel with the tire removed, on whose edge wooden pegs three inches long and three inches apart have been set, is used to mark the plot. Plants are set in the holes made by the pegs and the soil tightly pressed about them. Much cultivation is very essential and I do most of it with the wheel-hoe. A certain amount of hand weeding cannot be escaped. Weeds should never be allowed to get a start. I went over the field eleven times with the wheel-hoe and three times by hand. When the tops were dead and dry, I harvested the crop, pulling the bulbs and allowing them to dry in windrows for several days. They were then stored in a dry, cool place to await marketing. I sold 780 bushels from that acre at 80 cents per bushel, receiving a check for \$624 for the lot. The cost of growing the crop was \$60 including cost of seed and fertilizer. Greatest cost was cost of cultivation. Cost of cultivation would vary somewhat according to the season, as a wet one would grow more weeds. Much labor is required, but none of a skilled character; a child could do it. The variety which I grew was the Yellow Globe Danvers. They yielded heavily and are in favor on the market. They have a rich flavor and good keeping qualities. The bulbs were large and about all of a uniform size, thus being an attractive product such as buyers like. I attribute the largest part of my success with this crop to good seed, heavy fertilizing and thorough and frequent cultivation.

C. J. GRIFFING.

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My Greatest Success

By R. E. Olds, Designer

Trainloads of Reo the Fifth

In the past 25 years, a dozen models of mine have become the season's sensation.

Again and again I have seen the factory swamped, and men paying a bonus to get my latest creation.

But Reo the Fifth has broken all records. I never saw a demand which compares with this.

Five cities at this writing have trainload orders with us—orders for forty carloads each—to go in a single shipment.

But the demand is just beginning. Very few men have yet discovered this car.

Soon there will be 10,000 cars in the hands of 10,000 owners. Ten thousand men will be telling others how Reo the Fifth performs.

Then will develop the real demand for this final car of mine.

Not a Passing Sensation

Other season sensations have come and gone. New cars and better came out to displace them.

Those days are over now. Reo the Fifth comes close to

the limit in motor car engineering. It embodies the final results of my 25 years of experience. In every detail it marks the best I know.

There is no probability that we shall ever see a materially better car. The years can bring only minor changes.

It Deserves It

This car deserves popularity. That is my satisfaction.

The men who buy it get the utmost of which I am capable. There will be no regrets—none to say I misled him. And none will ever see a car which gives more for the money.

The steel in this car is all analyzed. Every vital part is put to radical test.

Parts are ground over and over, to get utter exactness. Inspection is carried to extremes.

There are big margins of safety. The bearings are Timken and Hyatt—roller bearings, in place of the usual ball bearings.

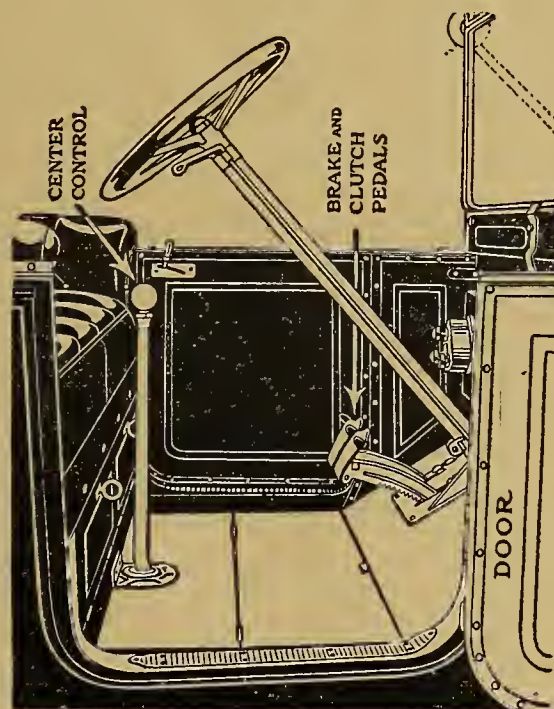
The tonneau is roomy, the wheels are large, the car is

over-tired. The carburetor is doubly heated.

The body is finished in 17 coats. The upholstering is deep, the lamps are enameled. Even the engine is nickel trimmed.

Every part of the car shows the final touch—the avoidance of petty economies. I am proud of it. Not an iota has been omitted which could add to the worth of this car.

Center Control—No Side Levers



Then here, for the first time, we get rid of all side levers.

All the gear shifting is done with this center cane handle—done by the right hand. It is done by moving this lever less than three inches in each of four directions.

Both brakes are operated by foot pedals, one of which also operates the clutch. So the entrance in front, on either side, is clear.

This arrangement permits of the left side drive. The driver sits, as he should sit, close to the passing cars—on the up side of the road. Heretofore this was possible in electric cars only.

Thus we have solved the last important problems in designing.

Price Still \$1,055

The price of this car remains at \$1,055, though subject to instant advance. This price is too low for a car like this. It leaves no adequate margin.

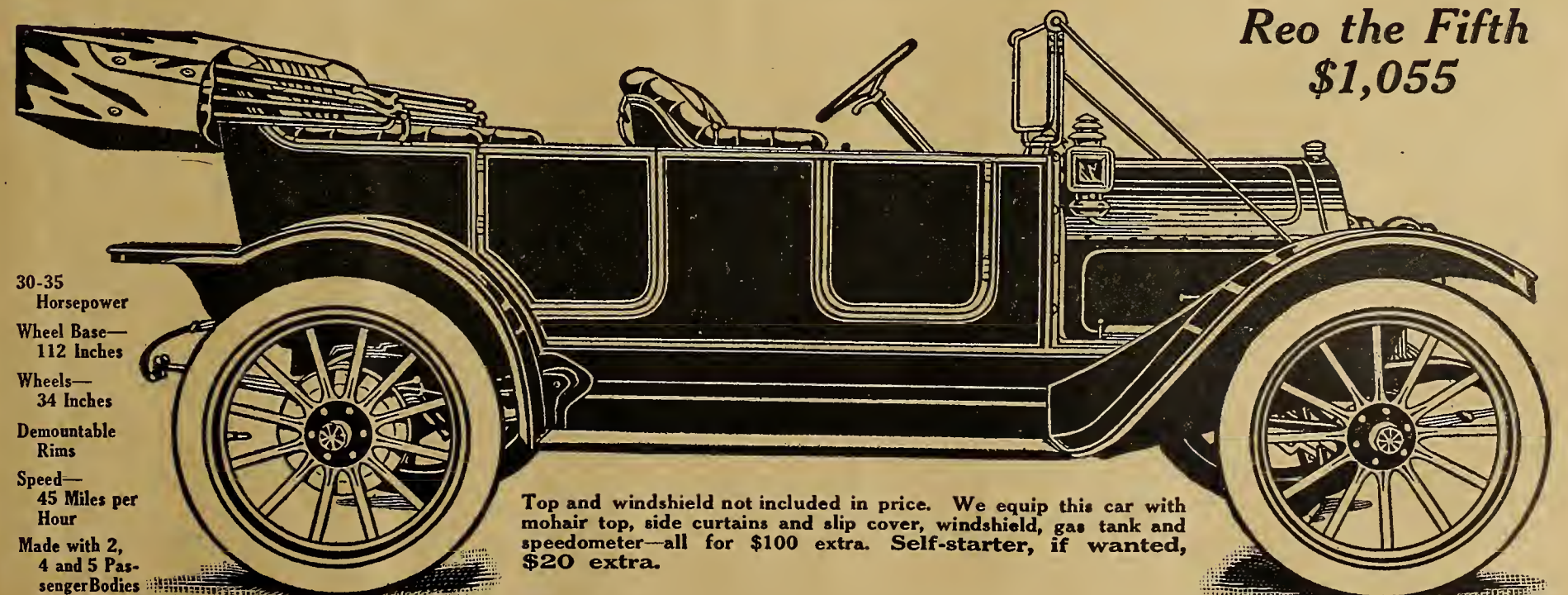
But we shall continue this price, in all probability, until materials on hand are exhausted.

1,000 Dealers

Reo the Fifth is shown by dealers in a thousand towns. We will direct you to the nearest when you send for our catalog. Please write for it now. It shows the various bodies. Address

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Top and windshield not included in price. We equip this car with mohair top, side curtains and slip cover, windshield, gas tank and speedometer—all for \$100 extra. Self-starter, if wanted, \$20 extra.

Farmers and their families everywhere have accepted my invitation to ride in the Maxwell "Mascotte"—will you ride in it at my expense?

I FIRST extended this invitation about a month ago and the acceptances I have received show me that this is the right way to demonstrate an automobile—on the roads where it will be used if purchased, under exactly the same conditions. The responses to my invitation are great in number, but some parts of the country are not as well represented as I want them to be. So I am repeating my invitation, and if you have not yet accepted, do so now.

Maxwell "Mascotte"



I am sure you will immediately see what an ideal car the "Mascotte" is for the farmer and his family—if you once take your family for a ride in it.

The average automobile "demonstration" falls far short of really showing what a car will do, so I don't want to demonstrate the "Mascotte" in that way. I want you to ride around the country-side some nice afternoon—up hill and down dale—over the roads you travel in your daily life. If you do this, you should be able to know when you get home in the evening just what kind of a car the "Mascotte" is and how well it is suited for use in your daily life. I want the family to go with you, too—the wife and the children. I designed the "Mascotte" to be a real family car and it is just that—a car for the whole family.

You may know something about Maxwell reliability and durability—you may know that nine out of ten Maxwells in use in New York State in 1905 are still in use today, after seven years of continuous service. Few cars come anywhere near this record.

You may know how sweeping was the Maxwell victory in the recent Glidden Tour—the hardest tour in history—in which the Maxwell was the only team to finish with a perfect score after 1450 miles of travel over the worst roads in the country. The Maxwell beat practically every other American car, some of which sell for as much as \$6000. You may be familiar with the marvelous non-stop record of the Maxwell, when it traveled 10,000 miles over country roads without once stopping the motor. If you know these things, you will know what to expect in the Maxwell "Mascotte."

The Maxwell "Mascotte" costs \$980, and I can safely say that no other car within \$200 of its price compares with it.

If I haven't had your acceptance to my invitation for you and your family to ride in the Mascotte, send it to me today. Send it to me personally—fill out the attached coupon and I will instruct our representative near you to arrange with you and your family for a trip. Write today.

UNITED STATES MOTOR COMPANY

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Dear Sir:

I will be glad to accept your invitation to take a ride with my family in the Maxwell "Mascotte."

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Yours very truly,

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Crops and Soils

Soils May Need Sulphur

THE sulphur contained in a large number of our farm crops has been determined by experts at the Wisconsin station, and in agreement with other investigations the quantity of sulphur in them is found much greater than was thought when Wolff made his determinations from the ash of such plants. In the case of cereal crops, the sulphur removed by the crop from the soil is about two thirds the phosphorus removed. A fair crop of barley takes out about 14 pounds per acre of the sulphur and about 20 pounds of the phosphorus. In the case of oats, the amount of each is about 19 pounds. The grasses of mixed meadow-hay take quite as much sulphur as phosphorus. The legume hays approach the grasses in their needs for sulphur, and in the case of alfalfa exceed them. An average crop of alfalfa removes from the soil about 65 pounds of sulphur and about 40 pounds of phosphorus. Cabbage, turnips and other plants of this tribe—the *Crucifera*—are heavy sulphur-users and may take out two or three times as much sulphur as phosphorus. An average acre crop of cabbage will remove from the soil about 100 pounds of sulphur and about 60 of phosphorus.

Soil May be Robbed of Sulphur

Normal soils are relatively poor in sulphur. Our analyses show a percentage in the soils studied of from .033 to .40, or only from 1,000 to 3,000 pounds, in the top foot of each acre of land—about the same as the normal supply of phosphorus.

Soils cropped from fifty to sixty years unmanured, or slightly manured, have lost on the average 40 per cent. of their original supply of sulphur, as shown by comparison with virgin soils. Where farm manure has been used in fairly liberal quantities, the sulphur supply has been kept up, and even increased.

Sulphur Falls in the Rain

Sulphur, like nitrogen, is derived to some extent from the air. It falls in the rain. During the five months of June to October, 1910, inclusive, the sulphur which fell in the rain at Madison, Wisconsin, amounted to 11.7 pounds per acre. The annual amount is probably from 15 to 20 pounds per acre. While this would be ample for an average crop of cereals, it should be remembered that only a part of the rainfall comes in the growing season, and not all of what does fall in that season is retained in the soil. So a part of the sulphur which falls with the rain runs off and is lost.

Sulphur Lost by Necessary Drainage

The analyses of the drainage waters at Rothamsted, England, indicate a yearly loss of sulphur by drainage of 50 pounds per acre in each ten inches of water drawn off. Even with much less loss than this, it does not seem that enough sulphur can be depended upon through rainfall to make up for the loss by cropping and drainage. The observed partial loss of the sulphur in lands which have been continuously cropped supports this statement.

A Most Important Matter

The general question raised in the foregoing statement is one of great importance. The fact that crops remove from the soil a good deal of sulphur, while the supply from the air is very probably offset by losses in drainage, makes it clear that this element, contrary to the prevailing opinion, must be systematically added, either in farm manures, or as an element in commercial fertilizers.

As the surface eight inches of a normal soil contains only enough sulphur for one hundred crops of barley, the notion that the land does not need a supply in manures or fertilizers assumes that the crop yield could be kept up with a steadily decreasing supply of sulphur. The upward movement of water would possibly bring up sulphates from the lower areas, but this could not continue indefinitely. According to Hilgard, the sub-soils are no richer in sulphur than are the surface soils.

Plant-Needs Not a Simple Question

Many factors are concerned in the growing of a maximum crop. Plant-foods in the soil, bacteria, freedom from plant-poisons, and the physical condition of the soil are all important. So many factors enter into the problem that the very best condition is probably seldom obtained. For this reason, the changing of conditions in the soil by the addition of a single agent is often followed by better crop production. Whether the change affects the living things in the soil, destroys poisons or harmful substances, changes the physical status of the soil, or furnishes more plant-food, is always a difficult question to answer; but that there must be maintained an ample supply of the essential elements of plant-food is one of the first principles of plant production. Judging by natural supply and crop demands, sulphur is in the same class with phos-

phorus. But if experiments finally show that there is no need for us to supply sulphur, then we must change our views as to the reasons for applying phosphates.

We Have Not Thought Enough of Sulphur

Most soils contain plenty of the essential elements, potassium, iron, magnesium and calcium. Nitrogen, phosphorus and sulphur are the only essential plant-foods which are low in percentage, and are thus in a class by themselves. Nitrogen and phosphorus are recognized as valuable essentials in fertilizers. Every farmer reads, or should read, the tags on his fertilizer-bags to find how much of these he is buying. Field experiments show, too, the benefit of the application of readily available potash salts. When calcium is added, it is usually in the form of lime and rather for the purpose of correcting an acid condition than to supply plant-food. But the study of fertilizers for their sulphur content is practically unknown.

What Makes Acid Phosphate Good?

Unconsciously, however, we have been applying sulphur in commercial fertilizers for many years. Acid phosphate carries a large amount of calcium sulphate, a compound containing sulphur. So every farmer who has ever used acid phosphate, has applied sulphur to his land whether he knew it or not. Whether the benefits derived from acid phosphate are to be credited solely to the phosphorus which it carries, or in part to the sulphur, is a question raised by this investigation. It seems possible that the better results sometimes obtained in field practice with acid phosphates over other phosphates, such as Thomas slag, or ground-rock phosphates are due, not entirely to the fact that the acid phosphate is more readily soluble, but to the sulphur added to the phosphorus in acid phosphate.

When potash salts are furnished the crops in the form of sulphates rather than other forms, better results are often noted. This superiority in the sulphates may be the response of the crop to the sulphur.

Our Wiser Ancestors Used Land-Plaster

The practice of using "land-plaster," or ground gypsum, as a fertilizer was once common. The benefits of this practice have been explained on the grounds that the gypsum acts as a "stimulant." Boussingault showed that it enables the plant to take up more potash, through a rather complex chemical reaction. Consequently it was classed as a stimulant for the reason that, while it produced increased plant growth, it was supposed to furnish no plant-food. This may be quite true, and still the explanation of the benefits from gypsum may be only partial.

If sulphur ever becomes so scarce through cropping as to limit plant growth, the good effects of land-plaster may come in part from the sulphur in it.

The Ohio experiments with animal manures extending over thirteen years show in a very positive way that for the soil at Wooster, where the work was done, reinforcement of the manures with gypsum gave good profits in increased crops. Gypsum and yard manure gave a net increase per acre of \$25.12, and yard manure alone \$20.63. All this emphasizes the value of gypsum, a material which has been in spasmodic use in agriculture for many years. Its real function seems to be the supply of cheap sulphur.

The twenty-five years of carefully recorded plot experiments in fertilization at the Pennsylvania station furnish results on the sulphur question which are mainly negative. But they are the only ones, so far as the writer is aware, which throw any light on it. On Plots 9 and 17 muriate of potash and dissolved bone-black were used. These probably contained enough calcium sulphate to amount to from 30 to 40 pounds of sulphur trioxide per acre. On Plots 12 and 35 the treatment was dried blood, muriate of potash and ground bone. The first mixture carried 24 pounds of nitrogen to the acre, and the second 30 pounds, and all plots were treated alike as to phosphorus and potash.

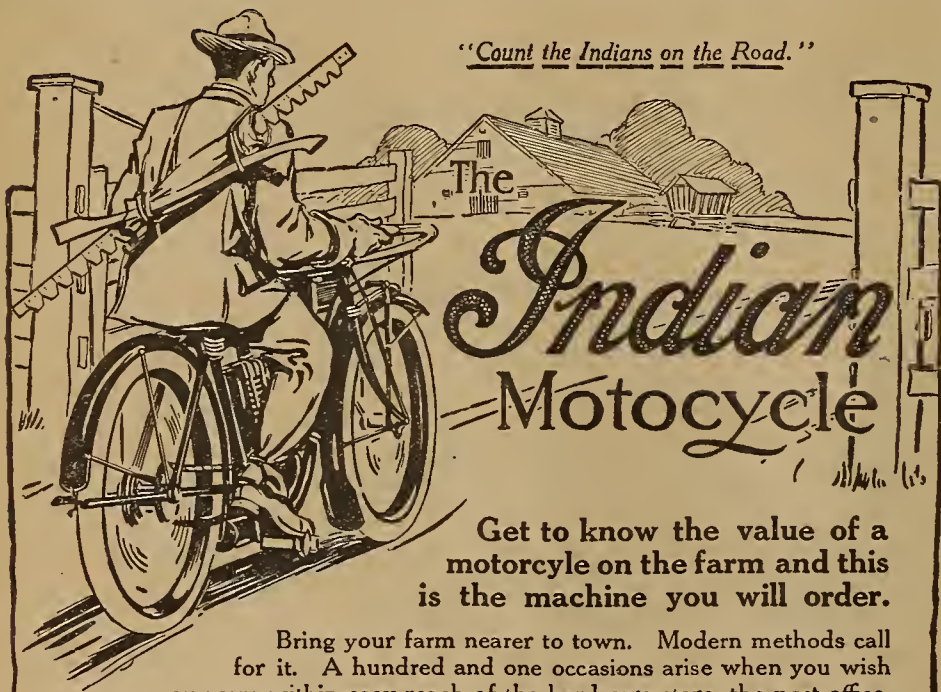
Experiments in Pennsylvania

Unless the muriate of potash and dried blood carried sulphur enough for all crop needs, then the only difference in essential elements of plant-foods between these two pairs of plots was in the greater amount of sulphur in the first mixture. Yet the total yield in crops for the twenty-five years was slightly in favor of the second treatment. Judging from some of our own analyses of dried blood and muriate of potash, the amounts of these used in the Pennsylvania experiments could have furnished about 14 pounds of sulphur per acre.

While the annual removal of 15 pounds of sulphur per acre by the crops grown on these plots might not alone so exhaust the soil, so long as it received plenty of nitrogen, phosphorus and potassium, as to cause diminished yields within the twenty-five years, it seems probable that this could not continue indefinitely.

Our own data on sulphur exhaustion shows that for the production of fair crops of cereals and mixed hay the additional supply of sulphur in acid phosphate was of no value for that soil. These Pennsylvania experiments, however, were not designed to answer the question of the necessity of

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supplying sulphur, and are open to the objection that the muriate of potash and dried blood on the bone-black plots actually contained sulphur. Thus the conclusions to be drawn as to sulphur requirements are lessened in value.

English Experiments Not Conclusive

The oldest experimental plots in the world are at Rothamsted, England, and it is unfortunate that these long-continued experiments have none of them been planned to determine the effects of fertilizers with and without sulphur. The common practice in England of using acid phosphate, one half of which is calcium sulphate, has made it impossible to fix responsibility on single essential elements in most of their field experiments. Acid phosphate was found to be required by the turnip crop, and this necessity was supposed to be the result of the demand for phosphorus. But the turnip is a high sulphur-user, and it is quite possible that the benefits from acid phosphate came from the sulphur as much as from the phosphorus that was used.

How to Apply Sulphur

Many careful experiments will be required to decide in what way sulphur, if needed, should be applied to the soil. Economy and safety are the factors involved. No harm can result from the judicious use of sulphates of calcium, magnesium and potassium. Sulphur can be added in land-plaster, in acid phosphate, or sulphate of potassium or ammonium. All these are now offered by the trade. A ton of land-plaster contains about 900 pounds of sulphur, and a ton of acid phosphate 200 to 300 pounds, besides its phosphorus. A ton of high-grade sulphate of potassium will contain about 900 pounds of sulphur, and about 1,000 pounds of potassium. A ton of ammonium sulphate will contain about 1,000 pounds of sulphur, besides its large amount of nitrogen.

Sulphur Goes Back in Manure

Of course, under systems of stock farming, where the crops and purchased feeds are fed and the manure saved, the sulphur will find its way back to the land; but whether even then the losses by drainage and in the practical handling of the manure must not be met by applications of sulphates are questions still to be determined. The strengthening of manures with both crude rock phosphate and gypsum is being practised with success on some dairy farms in Wisconsin, and it would seem that this is both wise and necessary. The amounts used are about 40 pounds of rock phosphate and 20 to 30 pounds of gypsum per ton of manure.

Grain-Farming Exhausts Sulphur

In systems of grain-farming it would seem that sulphur must be added in some form if the fertility is to be kept up. From these facts it seems certain that we must look further than to the mere keeping up of the nitrogen, phosphorus, and in some soils the potash, in the land, and must see to it that the losses of sulphur through cropping and drainage are in some way made good. The sulphur-supply is to be found in trade fertilizers, such as acid phosphate (superphosphate), ammonium sulphate and sulphate of potassium—and the old "soil stimulant" gypsum or land-plaster. E. B. HART.

EDITOR'S NOTE—The writer of this article is Professor of Agricultural Chemistry at the University of Wisconsin. The importance of fertilizers in the production of profitable crops compels interest in the subject here presented. Chemical workers refer to "sulphur trioxide" and to "phosphorus pentoxide" as the beneficial properties of sulphur and phosphorus fertilizers. Here, however, Professor Hart refers to these properties by simply "sulphur" and "phosphorus." We may expect some surprises in the agricultural fertilizer business within the next few years, and probably sulphur will play an important part in those surprises.

Science is all the time correcting its own mistakes, and every such correction makes science more useful. In this case a mistake as to the sulphur needs of plants has come down to us from the error of the older chemists. In their analyses a great deal of the sulphur in plants was lost in the form of vapor. Not finding all the sulphur, they underestimated the need of it. Professor Hart's work sets us right on this last, and maybe opens up a new era in fertilizers.

Ridding Wild Carrot

AN ILLINOIS reader sends a plant for identification which proves to be a wild carrot, *Daucus Carota*, a rather troublesome weed belonging to the parsnip family. It is readily recognized by the flat cymes of showy white blossoms and particularly the infolding, birdnest-like top of the maturing seed-clusters. Since it is a biennial and lives only to fruit, its extermination is accomplished by repeated mowings or cutting below the crown in parks and lawns. Considerable success has been achieved by spraying with iron sulphate (copperas), but some study needs to be given the matter to get best results. Farmers' Bulletin No. 28 gives detailed information. B. F. W. T.

Men are generally pretty well sized up by their neighbors, and it is only in rare cases that they find out exactly what that size is.

What America May Learn

WHY should anyone come to Europe to study agriculture? When I first decided to spend this year studying agricultural conditions in Europe, I wrote to one of my brothers, who had spent three years in a German university studying history and philosophy, telling him of my plans. He immediately wrote me that he could not conceive why anyone should want to go to Europe to study farming (the original expression was not quite so mild), but if I wanted to see and study the real thing, to go west and see farming as it is done by the most approved and modern methods, on an extensive scale. This view is typical of the average American citizen, who has given no special thought to the matter, and especially so if he lives in the newer agricultural regions of America, where the land has not yet lost its virgin fertility and is more abundant than labor or capital with which to work it.

The farmers of Europe do not talk of "worn-out land" as we do in America. I remember, when a boy in central Ohio, young men were going west to get new land, because they thought the farms of Ohio, many of them that had not been cultivated a generation, were worn out.

Land Does Not Wear Out

As though land was to be worn out and thrown away. American agriculture has been developed largely on this basis, beginning with the tobacco-fields of Virginia, which the early colonists cultivated as long as the soil would produce and then abandoned the country and took new lands to devastate. The American farmer has swept across the continent, leaving abandoned farms and worn-out fields in his wake, until now we have come to the point where all our arable land has been occupied, and we can no longer wear it out and abandon it. We must not only maintain ourselves on the land we have, we must maintain a population that will soon be double and treble what it now is.

Where should we look for information if not to the countries of an equal degree of civilization that are much older than our own and have a much greater population in proportion to their area? Here in Europe are farm lands that have been in cultivation for a thousand years and are producing larger crops than our fertile virgin soils and no one ever thinks of these farms wearing



American machinery being operated in a German wheat-field

out. On the other hand, they become more valuable and more productive year by year. It is a notable fact that has been repeated over and over to the American farmer, that the average production per acre of the European countries, particularly England, France and Germany, is over twice the average production of the same crops in the United States. Wherein lies the difference? It is not because European lands are naturally more fertile than American, but because they are farmed more intensively. The land is better prepared for the seed, plowed deeper, worked more before seeding, and as far as possible the lands that are to be planted in the spring are plowed in the fall and allowed to weather during the winter, a system that deserves to be greatly extended on American farms, especially in our corn-lands.

Use of Commercial Fertilizers

But above all the real secret of maintaining the fertility of the land lies in the care with which the stable manure is preserved and applied to the fields. Manure is valued as a product from live stock, just as wool or milk, in a system of farm management, and is so valued because the European farmer knows what it will do in maintaining and increasing the yields of his crops.

The European farmer is also an extensive user of commercial fertilizer. Germany alone in 1910 imported nitrogen and phosphoric-acid fertilizers to a value of \$35,000,000 more than she exported, while her export of potash, of which she at present possesses the supply of the world, amounted in value to \$24,000,000. The market reports of the European agricultural papers give extended quotations of the various kinds of commercial fertilizers, quoting them according to their analyses and not according to some commercial brand, as so much of our own fertilizers are sold. One other source of plant-food that should not be overlooked comes in the extensive importation and use of concentrated feeds. Europe has long been the principal market for the cottonseed and linseed meal from America. Concentrates to the value of over fifty millions of dollars are imported by Germany every year, and it is only by taking the most

scrupulous care of the manure that the feeding of these expensive concentrates can be made to pay.

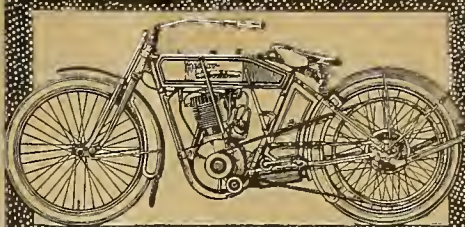
Organizations of European Farmers

But it is not only in the production of crops and in the maintenance of fertility that there is an opportunity to profit from the experiences of European agriculture. In the development of agricultural coöperation for the production and marketing of crops, for the breeding of live stock, for the insurance of buildings, live stock and growing crops and for the securing of credit for the purchase of land, improvement of buildings and for other agricultural purposes the farmers of Europe are far in advance of the farmers of America. Not all of the farmers are organized by any means, but in certain sections these organizations have been perfected and in operation for many years, and it has been demonstrated that they are suitable to the conditions under which they exist. We have the opportunity of studying these and patterning from them what is suitable to American conditions and getting the benefit of their experience. The possibility of what coöperation can do for a country is shown in the case of Denmark, in which coöperative societies have been formed, especially for the production and marketing of agricultural products, and in two or three decades the agriculture of Denmark has been changed from a poor and almost destitute condition to one of the most prosperous countries of Europe.

Lack of Farm Machinery

The lessons that are to be learned by a comparison of American and European agriculture are not all on one side. The European farmer is woefully behind in the use of agricultural machinery, and what he has is largely of American manufacture. This is due principally to the excessive amount of labor available and the small size of the farms. Low farm wages prevail and the European farmer is accustomed to doing things by hand. Many farms are of only a few acres in size and the operation of them is in no sense done on an economical basis. By the help of the wife and children, the latter of which are usually in abundance, the farm work is done and an existence eked out. As a consequence, it is a common sight to see grass being cut and raked by hand, grain reaped by hand and the cultivation of crops done by hand. The standard of living of the American farmer is far above the standard of the European farmer. Rather, America does not have the classes of farmers that Europe has. We lack, fortunately, both the aristocracy and the peasant

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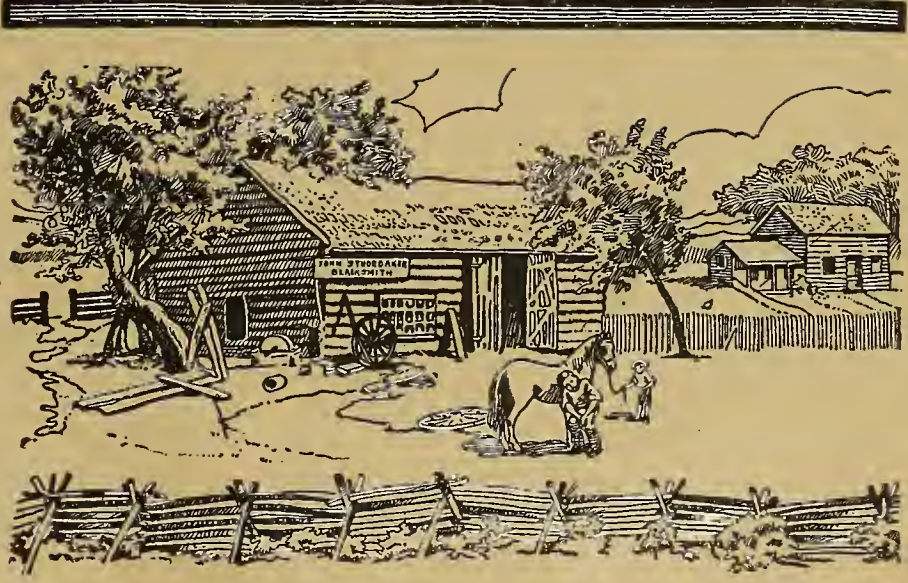
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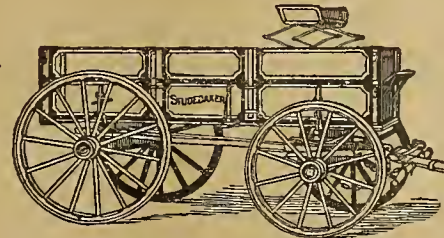
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Cultivating the Corn

WE SHOULD have everything in working trim before the corn is ready for the cultivator. The corn-plows should be inspected and frail or broken parts replaced. If the shovels are dull, they should be sharpened. A little trip to the blacksmith's is insignificant when compared with the increased labor to the team and the inferiority of work dull shovels produce. It is a matter of saving of the traditional story of the woodmen: The one hastened to the woods in the morning; the other delayed to sharpen his ax. Though losing the start, the sharp ax was far ahead at night.

If the plow is a pin-break, another matter requires attention. Nothing makes one feel so much a dawdler as to be all ready for the field in the morning and then be reminded that more pins are needed, incurring a delay. The utility of a few idle moments of the evening before would have avoided this task.

The points of friction on the machine should be kept well oiled. The wheels, in behalf of the team; the levers and gang-couplings, in behalf of your own self.

When the corn is small, a little care and attention in adjusting the shovels and fenders may greatly increase the protection from dirt and clods to the tender plants. Some contrivance for removing clods from the corn is desirable when using a riding-plow. For this purpose we made a sort of a light hand-rake. Through an inch slat, six inches long, five eight-penny nails were driven. To one end of a five-foot slat this was then attached. The other end of the long slat was tapered to a convenient size for a hand-hold. With this one can remain in his seat and reach a hill of corn several feet in the rear.

Where both a riding and a walking cultivator are used, the tedium of continually operating one machine can be mitigated by the operators employing a system of alternately changing machines. As walking is fatiguing to some parts of the body, while riding tires other parts, such a change puts the labor of the task on a more equable basis.

While the corn is small, attention should be given to loosening the soil near the plants; for the ramification of the lateral roots will necessitate each succeeding plowing to be shallower and farther distant from the row of corn. We aim to make the first cultivation do considerable in the way of loosening the soil, but thereafter we confine our efforts to the destruction of weeds and the maintenance of a soil mulch. As depth of plowing is a secondary matter in our method, we believe a four-shovel gang superior to one of three shovels. The greater number of small-sized shovels better pulverize the soil and leave the soil in a less ridged condition, thus exposing less surface to the evaporating effects of the air. For some time we have used plows having each kind of gang and shovels, and our observations lead to this conclusion. We have, also, used two sweep shovels on each gang, but our heavy clay soil is, very much of the time, too solid to permit of their practicable use. P. C. GROSE.

Where are the Corn-Roots?

ONE of the corn-belt readers asks in regard to corn-roots and their development.

The roots in a field of vigorous, well-developed corn spread through every inch of soil surface as deep and even deeper than the soil has been plowed.

I have found the roots penetrating to a depth of over three feet into the subsoil when ditches were being dug for tiling, this where the soil was very hard in character. The fibrous roots near the surface frequently spread to a distance of four or five feet from the corn-plants.

It has been estimated that all the roots placed end to end from fully developed corn-plants of a large variety would give a total length of a quarter of a mile. From this showing it is made plain that where any fertilizer is used it should be distributed through the entire surface of the soil very thoroughly. It also makes plain how important it is that the soil be perfectly prepared so that the delicate feeding rootlets of the corn may get in close contact with all the soil particles possible. B. F. W. T.

Plan for Catch Crops

MANY farmers have already arranged for growing supplementary crops as insurance against fodder shortage next autumn and winter. The drought injury last summer to clover, alfalfa and grass was very serious over wide areas, and inferior seed-corn this spring must inevitably reduce the fodder-supply still more. In view of these facts, thousands of farmers should plan for growing catch crops without delay. One or more of the following recommended catch crops will meet the requirements in most cases, according to varying soil and climatic conditions:

Canada field-peas and oats—a catch-crop mainstay for Northern and Central States, fully equal to clover-hay in fodder value. Seed early four to five pecks of peas and six pecks of oats per acre.

Soy-bean (Medium Green or Medium Yellow)—adapted to latitudes as far north as Ohio or where corn will ordinarily ripen. Equal to alfalfa in fodder value. Seed after the ground is thoroughly warm five pecks per acre drilled solid for hay; two to three pecks per acre drilled to cultivate for seed. Culture: same as for corn or barley.

Cow-pea—requirements practically the same as for soy-bean. Good judges favor soys as more satisfactory for hay under northern conditions.

The millets (Barn-yard, Foxtail, German, Pearl) are stand-by catch crops the country over. Seed six to twenty quarts per acre, according to variety, in thoroughly prepared, warm soil, rich in available plant-food. If necessary, seed as late as July 10th.

Sorghums are excellent for fodder under conditions generally favorable to corn; the cultural requirements being the same. Kafir and Milo are especially drought-resistant varieties. Seed four to five pecks drilled solid, one to two pecks drilled for cultivation.

Spanish peanut, beggar weed and velvet bean are staple forage crops, but cannot be depended on much north of the Carolinas.

Sweet corn for green feeding and cured fodder should not be overlooked. Seeded six to twelve quarts in drills allowing for cultivation furnishes the best results.

Plant some of these on every acre where the crop planted has failed. B. F. W. T.

This spring drive some green willows in those washes about the field, meadows and pasture-lands. The wood will soon sprout and take root. Excessive washing will be checked.

Some Soil Bacteria

THE manure that we add to the soil is not in such form that the crops can use it at once; it must first be rotted. Barn-yard manure makes a soil more friable, and puts it into better physical condition or tilth. It also contains plant-food, largely in the form of nitrogen and phosphorus. The preparation of these materials so that they can be taken from the soil by the roots of plants is accomplished by the bacteria. Except for



Bacteria of these forms change manures to the nitrogen needed by plants

their presence, all the available food in plants would soon be withdrawn from the soil, and the plants would starve. This preparation of manure for crop-food occurs in two stages: first, the formation of ammonia; second, the changing of ammonia into nitrates. You have doubtless gone into a horse-barn that has been tightly closed overnight and smelled the ammonia in the air. This ammonia is formed by bacteria from the nitrogen of the manure. In the soil the ammonia is dissolved by the water present, and other kinds of bacteria change it to nitrates. It is then used for food by the plants growing in this soil. Bacteria also assist in dissolving other plant-foods in the soil. R. E. BUCHANAN.

Field-Peas and Rye

A READER in Utah says: "I have five acres on which I wish to raise field-peas and rye for feed. Could the peas be cut when high enough, and still grow up again to be plowed under as a green manure, to be plowed under in autumn for potatoes following year? How many pounds of peas and rye would you advise?"

I doubt very much the advisability of cutting the peas and rye, if you expect any effect of green manuring from them. The peas will usually not grow up again, at least, to such an extent that they will do much good as a green manure.

I would suggest that you sow peas and oats for feed, instead of peas and rye, as this mixture will give you much better feed. The peas and rye mixture is good for green manure when plowed under and not cut and carted away. The peas and oats make a better mixture to cut for feed. Plant about a bushel and a half of peas and a bushel of rye, or a bushel and a half of peas and a bushel and a half of oats. J. C. HOGENSON.

Live Stock and Dairy

Grain vs. Dairying

HERE are the results obtained on two farms, one primarily a dairy farm and the other primarily a grain farm. Both farms are about the same size and are likewise about equally capitalized. Mention is made of the difference in the distribution of capital, the amount and kind of crops grown, and the source and character of the receipts and expenses.

Both of these farms are handled by men of more than ordinary ability. The dairy farm, which we numbered 1004, consists of 135 acres, of which 20 acres are rented; the grain farm, No. 1016, is composed of 140 acres. The uses to which the land is put is delineated in detail as follows:

Use of Land	Dairy Farm Acres	Grain Farm Acres
Under cultivation	54	71
Pasture	47	20
Meadow	22	40*
Devoted to orchard and garden	2	1.5
Devoted to buildings and yards	5	1.5
Woods	—	3
Waste land	5	3
Total	135	140

*20 acres of the meadow is marsh-hay.

The dairy farm has 17 acres less land under cultivation and 18 less in meadow, but has 27 acres more in pasture and a few more acres in orchard, garden, buildings and yards.

The crops grown on the cultivated and meadow land of these two farms may be summarized as follows:

Dairy farm: Barley 12 acres, corn 25 acres, oats 10 acres, potatoes 7 acres, clover 11 acres, clover and timothy 11 acres, making a total of 76 acres.

Grain farm: Barley 20 acres, beans 1 acre, corn 20 acres, oats 25.5 acres, soy-beans 1.5 acres, wheat 3 acres, alfalfa 3 acres, clover 13 acres, clover and timothy 4 acres, marsh-hay 20 acres; a total of 111 acres.

It will be noticed that the investment in barns on the dairy farm is small. This is a temporary condition, as the owner of this farm had under consideration the construction of a new cow-barn at the time this data was taken. Among the other items worthy of notice on the dairy farm are, the silo valued at \$460, ice-house at \$25 and water-system at \$500. The grain farm, on the other hand, seems to put the emphasis on the granary and corn-crib, valued at \$420, and swine-buildings, valued at \$150.

The investment in machinery and equipment is shown as follows:

Capital Invested in Equipment	Dairy Farm	Grain Farm
Dairy supplies and utensils	\$575.00	\$12.50
Farm machinery and implements	500.00	550.00
Wagons, carriages and sleighs	110.00	150.00
Harness	45.00	110.00
Miscellaneous tools and equipment	25.00	162.00
Bank balance for running farm	300.00	2,000.00
Total	\$1,555.00	\$2,984.50

The dairy farm being engaged in the sale of market milk demands a large investment in dairy supplies and utensils. The other equipment is somewhat similar on the two farms, with the exception of the bank balance. It is interesting to note that this balance is nearly seven times as large on the grain farm as on the dairy farm. This is undoubtedly due in part to the more regular and uniform income from month to month on the dairy farm.

The investment in live stock also furnishes an interesting comparison.

Investment in Live Stock	Dairy Farm	Grain Farm
Horses	\$725.00	\$900.00
Cattle	1,940.00	579.00
Sheep	—	121.00
Swine	45.00	230.00
Poultry	50.00	107.50
Total	\$2,760.00	\$1,937.50

The main difference in the investment is in live stock. The dairy farm has 20 cows



Friends of the dairy farm

The dairy farm raised less barley, less oats, but more corn. The grain farm has a small number of acres in several crops not found on the dairy farm.

The capital invested on the two farms is indicated in the following data:

Capital Invested	Dairy Farm	Grain Farm
Land excluding improvements	\$11,845.00	\$12,600.00
Buildings and water-system	5,405.00	4,700.00
Machinery and equipment	1,555.00	2,984.50
Live stock	2,760.00	1,937.00
Total	\$21,565.00	\$22,221.50

The investment in land is nearly equal in both farms, although the land composing the dairy farm is valued at \$100 per acre, as compared with \$90 per acre on the grain farm. The rent paid by the dairy farm corresponds exactly with 5% interest on \$100 land.

The buildings and water-system are valued at \$700 more on the dairy farm. It is interesting to note the distribution of capital in buildings on the two farms:

Capital Invested in Buildings	Dairy Farm	Grain Farm
Residence	\$3,000.00	\$2,000.00
Tenant house	—	145.00
Horse and cattle barn	1,000.00	1,460.00
Swine-buildings	—	150.00
Poultry-house	25.00	75.00
Silo	460.00	—
Granary and corn-crib	125.00	420.00
Implement-shed	250.00	300.00
Ice-house	25.00	—
Wood-house	—	25.00
Tool-shed	20.00	—
Water-system	500.00	125.00
Total	\$5,405.00	\$4,700.00

and 10 heifers, valued at \$1,940, while the grain farm has 9 cows and 4 heifers, valued at \$579. The latter farm puts more emphasis on sheep, swine and poultry than the former.

We have covered the subject of capital and its distribution on these two types of farms. The next important consideration is the sources of receipts on the two farms. These are indicated in the following figures:

Receipts	Dairy Farm	Grain Farm
Crops sold	\$140.00	\$1,445.20
Live stock sold	498.00	958.70
Live-stock products sold	3,925.00	812.75
Increased inventory	1,089.00	511.50
Miscellaneous sources	135.00	72.00
Total	\$5,787.00	\$3,800.15

There is considerable variation in both the amount and the sources of the income. Some of the detailed items connected with these receipts will be both interesting and helpful:

Income from Dairy Farm	Grain Farm
Sale of Crops Bu. Value	Bu. Value
Seed-barley	650 \$975.00
Navy beans	7 14.00
Seed-corn	7 \$35.00 80 110.00
Seed-oats	— 1,000 65.00
Soy-beans	— 29 81.20
Seed-wheat	— 100 200.00
Potatoes	300 105.00
Total	\$140.00 \$1,445.20

The dairy farm produced both barley and oats, but none were sold. It will be noticed that on the grain farm the leading seed crop is barley.

It is rather surprising to note that the grain farm sold more live stock than the dairy farm. The items in this connection are found to be as follows:

Live Stock Sold	Dairy Farm	Grain Farm
Cows, heifers and calves	\$378.80	\$101.42
Swine	80.00	727.19
Poultry	40.00	130.09
Total	\$498.80	\$958.70

It will be noted that the grain farm sold \$727 worth of swine, which is the principal item under the sale of live stock. It should be noted, however, that the dairy farm is a new farm and is not yet completely stocked. In a few years the sale of live stock from this farm will undoubtedly be materially increased.

The expense account of the two farms are indicated as follows:

Expenses	Dairy Farm	Grain Farm
Live stock purchased	\$755.00	\$18.00
Seeds	62.00	14.00
Feed	75.00	594.50
Supplies	195.00	67.00
Permanent improvements	278.00	43.00
Rent, taxes, insurance	252.00	75.00
Labor	1,520.00	1,076.50
Repairs	385.00	78.40
Printing and advertising	50.00	13.00
Miscellaneous	—	25.00
Decreased inventory	32.00	—
Interest on investment	1,078.25	1,111.08
Total	\$4,682.25	\$3,115.48

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All you have to do is to mark just where your horse has a swelling, sore or any one of the big number of possible causes of lameness, and send it to us. We will then give the coupon to our practicing Veterinary Specialist for his expert diagnosis. We then inform you of the cause of your horse's lameness and the remedy that will **absolutely cure him.** We do all this for nothing.

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Mack's \$1000 Spavin Remedy goes right to the source of the trouble and quickly restores natural, healthy conditions in the bones, muscles and tendons of your horse. It cures lameness in just a few days and the animal may be worked as usual. Contains nothing to injure or scar the horse.

Hackensack, N. J., Dec. 3, 1911.
McKallor Drug Co., Binghamton, N. Y.

Gentlemen—I take pleasure in advising you that I purchased a bottle of Mack's \$1000 Spavin Remedy, and used it on one of the largest curbs I have ever seen, and which I thought incurable, but after using about one third of the bottle of your wonderful remedy he has become sound, and as smooth as the day he was foaled. It certainly is the greatest remedy on the market. Yours respectfully,
Geo. Molloy.

Mark a cross showing where your horse is lame and mail this coupon to us.



Ask your druggist for Mack's \$1000 Spavin Remedy—if he cannot supply you, remit \$5.00 direct to us. Anyway, send today for our valuable Free Book—"Horse Sense."

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As already indicated, the dairy farm is building up its new herd and naturally considerable money would be spent for live stock. The feed-bill for the grain farm is strikingly large. This is due mainly to the fact that the grain raised on the farm was sold for seed. As would be expected, the bills for supplies, labor and repairs are larger on the dairy farm.

After deducting expense of operation, the income of the two farms for the year under consideration is as follows:

	Managerial	Labor	Interest	Total
Farm No. 1004,				
dairy	\$1,104.75	\$1,073.25		\$2,178.00
Farm No. 1016,				
grain	684.67	1,111.08		1,795.75

As will be seen from this discussion, both farms are doing well and both of them are undoubtedly on the road to still greater success.
D. H. OTIS.

Something New!

Professor Hart, on "Sulphur"
See Page 8.

Effective Fly-Repellent

TO PREVENT flies from tormenting your cattle during hot weather, make the following inexpensive, effective and harmless fly-repellent. The proportions of the ingredients are:

- Pulverized resin 2 parts
- Soap-shavings 1 part
- Water 1/2 part
- Fish-oil 1 part
- Oil-tar 1 part
- Kerosene 1 part
- Water 3 parts

Place the resin, soap-shavings, one-half part water and fish-oil in a receptacle, and boil till the resin is dissolved. Then add the three parts of water, following with the oil of tar, mixed with the kerosene. Stir the mixture well and allow it to boil fifteen minutes. When cool, the mixture is ready for use, and should be stirred frequently while being applied. Use a good paint-brush for this purpose. One application a day for three or four days and then every other day will keep flies from bothering cows. Apply it most freely on the shoulders, neck and under parts of the body, where flies cannot be switched off with the tail.

F. M. WHITTEMORE.

Ear-Corn and Young Hogs

IT is gratifying to the busy farmer to know that ear-corn is the best form in which to feed this grain. The Iowa Experiment Station has conducted several trials covering a period of three years, in which we compared ear-corn with dry shelled, soaked shelled, dry ground and soaked ground. It was found that dry ear-corn was fed with the least waste and that the hogs eating it made the most economical gains. In 1907 a hundred pounds of dry ear-corn made as much pork as one hundred and twelve pounds of shelled corn soaked twenty-four hours or one hundred and twenty-two pounds of corn-meal soaked twelve hours. The dry shelled and the dry meal were even less efficient than the soaked meal.

Whether the corn was fed dry or soaked, a bushel of corn ground without the cob made much more pork than a bushel of corn ground grain, cob and all. Happily it took one third of a bushel of corn-and-cob meal to produce as much gain as a bushel of ear-corn. In addition, there was an added expense of six cents per bushel in preparing the corn-and-cob meal.

Summarizing, the results for the last two years showed that with strong young pigs, during their first six months of life, there was a saving of over six per cent. of the corn by feeding it in the ear instead of shelling and soaking it; a saving of over eighteen per cent. to twenty-four per cent. by feeding it in the ear instead of shelling and grinding it.

After the hogs reached two hundred pounds in weight, however, soaked shelled in season was the most profitable form in which to feed the corn. Soaked corn-meal came next in rank.

The lesson learned from this experiment, then, is to feed ear-corn until the hogs reach two hundred pounds in weight, at which time gradually change to soaked shelled, if the hogs are to be kept for any considerable period of time. If the hogs are to be marketed, however, in a few weeks, the advantages gained in making the change will more than be offset by the disadvantages of the change itself.
JNO. M. EVVARD.

Pasture-Soil—Heavy Sheep

THERE are certain soils better suited to certain of the larger breeds of mutton-sheep than others. Those soils which produce heavy crops of old pasture-grasses, rape, rye, the various clovers, vetches and other forage crops are best stocked with breeds heavy in carcass and in fleece. These comprise the Lincolns, Oxfords, Suffolks, Leicesters and the larger specimens of Dorset and the Romney Marsh sheep on low lands; on the thinner and poorer lands, Shropshires, Southdowns Hampshire Downs and some Scotch and Welsh horned sheep, little known over here, but very hardy and great as cleaners-up of rough lands. Of course, the richer the lands, the quicker all classes of sheep will fatten, or at all events there will be heavier crops to feed them on.
J. P. ROSS.

A good fly-net for the team is a humane necessity.

Bacteria and Milk

How bacteria enter milk. There are generally some bacteria present in the udder, particularly in the milk-cistern and in the teats. The first few streams of milk drawn from the udder generally carry away most of these germs, and the number of bacteria in the milk can be decreased by discarding this fore-milk. Bacteria are present in enormous numbers on the hair and skin of the belly and udder, and fall in great numbers during the process of milking. Grooming the animal, moistening the surface of the udder and the use of partially covered milk-pails are all efficient and necessary means of diminishing such contamination. Certified dairies take all of these precautions. The air of dusty, dirty stables or air filled with dust, by feeding hay or dry fodder just before or during milking, adds many germs to the milk. The hands of the milker unless carefully washed will contribute their share; this is important, because many disease-germs may gain entrance in this manner. Most important of all the sources of bacteria in milk is the use of vessels, pails and separators that are not thoroughly cleaned and scalded.

Numbers of bacteria in milk. Milk correctly drawn, quickly cooled and kept cold will contain a few hundreds or at most a few thousands of bacteria to the teaspoonful when delivered to the consumer. When incorrectly drawn or not properly cooled, there will be tens of thousands or even millions in the same quantity. Milk is an excellent food for bacteria, and they multiply rapidly in it. Milk that is just beginning to taste sour has at least several millions of bacteria to the teaspoonful. The number of bacteria can be kept down only by careful milking, by clean utensils, by quick cooling and by prompt delivery.
R. E. BUCHANAN.

15⁹⁵

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Farm Notes

Westward Bound

By Berton Braley

SO YOU'RE going west—as so many do? Brother, I'd like a word with you. You're going west, and of course you'll sell the old farm where you used to dwell, and you'll buy new land where land is high, and you'll probably prosper greatly. Why? Because, like a man who has seen a light, you'll run your high-priced purchase—RIGHT.

You'll spray your trees and fight each pest that threatens the life of a crop out west, and you'll work your land with the greatest care, because you'll have learned more sense out there.

You'll use your head, not your hands alone, and you'll have no time to sit and groan, blaming your woes on the hand of God, when you've merely neglected to till the sod.

So you're going west? And all the while if you ran the old place in the style that you'll certainly have to run the new, it would bring a BIGGER return to you. You needn't go west where land is dear if you'd only use western methods—HERE! It isn't the place that has the call; it's the way that the place is run—that's all!

Why a Parcel Post?

An Official Statement of the Facts Relating to This Question

A PARCEL post is commonly understood to be that service of the Postal Department which is devoted to the carriage and delivery of parcels up to a maximum weight of 11 pounds. According to this definition of the term, we have never had a parcel post, the present limitation of weight for domestic mail matter being 4 pounds, for which a rate of 1 cent an ounce, or 16 cents a pound, is provided. Parcels up to a maximum weight of 11 pounds are received from, and delivered to, foreign countries within the Postal Union at a rate of 12 cents per pound, making the unique condition that while a parcel weighing 4 pounds could be carried from Godhaven; Greenland, to Seattle, Washington, or from Saint Louis, Missouri, to Cairo, Egypt, for 48 cents, the charge for carrying the same parcel by mail across the Hudson River, from New York City to Jersey City, would be 64 cents, an unjust discrimination that obviously should not be permitted to exist.

Former Postmaster-General Wanamaker, in his Annual Report for the year 1891, said, "There are but four strong objections to the parcel post, and they are the four great express companies"—the American, Adams, United States and Wells Fargo. That the American people, appreciating the wisdom and necessity of a general parcel post, have determined to override these objections and correct the inconsistencies of existing conditions, is evidenced by the rapid development of public sentiment in favor of a general parcel post and the popular and increasing demand for its early establishment. Letters and petitions in advocacy of this postal facility are being received in large numbers by the President, the Post-Office Department and Congress, and it is altogether probable that definite legislation will be enacted before the adjournment of the sixty-second Congress.

"We Want Parcel Post," Says Mr. Powell

The Post-Office Department is unreservedly committed to the policy of a parcel post and has repeatedly recommended its authorization by Congress. The Department does not deem it advisable or practicable, however, to extend the postal service simultaneously so as to cover a general parcel-post system, and therefore recommends a gradual and cautious introduction, beginning with an experimental delivery service on rural routes of parcels weighing not to exceed 11 pounds. This service could

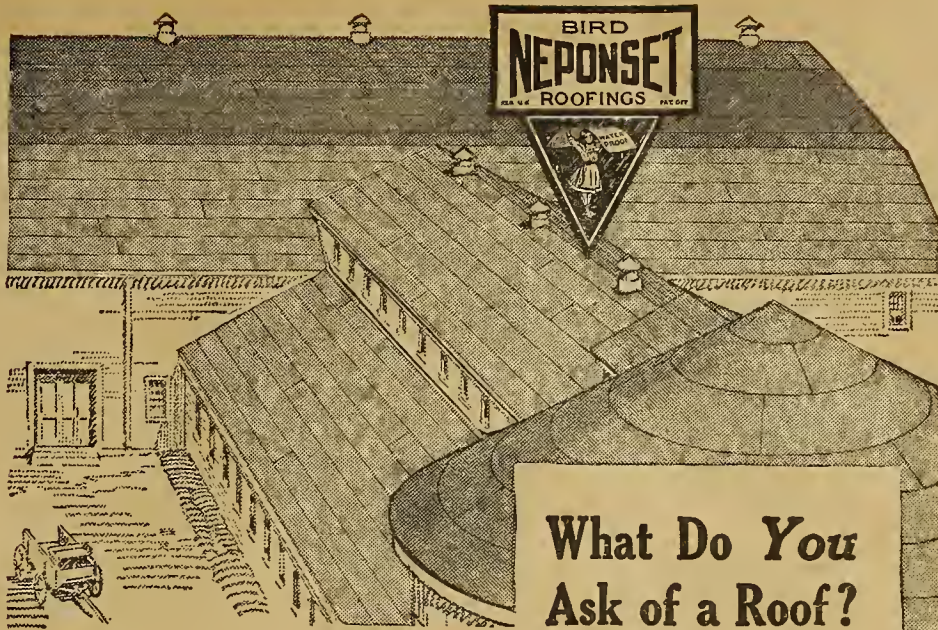
be conducted with little, if any, additional expense to the government, the carriers already employed having the necessary equipment, in the way of horses and wagons, to distribute the parcel as well as the ordinary mail. The average daily load carried by rural carriers is only about 25 pounds, and it is safe to say that twice or even three times that weight could be satisfactorily carried without any increase of expense. This would be followed almost immediately with the introduction of such a service in cities and towns having delivery by carriers, and it has been estimated by Postmaster-General Hitchcock that within one year's time after its authorization the system could be extended to cover all phases of our domestic postal service.

The Post-Office Department of the United States, with its force of 300,000 employees, distributes one third of the mail matter of the world, a service requiring an aggregate annual travel by railways, carriers and messengers of over 965,000,000 miles. It carries and delivers one half the newspaper and magazine mail of the world and more parcels than any other country, except Germany. Statistics compiled by the Department, predicated on special weighings of the mail, show that 231,701,287 pieces of fourth-class mail matter, weighing 73,232,192 pounds, were received, handled, transported and delivered during the fiscal year 1911, and that the Post-Office Department realized from the carriage of this class of mail matter a profit of \$6,601,574.22, or about 8 cents a pound.

Our Postal System is the Best

The growth of the rural delivery and postal savings systems, with their gradual extensions and improvements, well illustrates the advisability of careful and cautious procedure in the establishment of any general postal facility. Our rural delivery system is a privilege enjoyed by the people of the United States such as the citizens of no other country in the world enjoy. It was established 15 years ago, and by gradual development has been extended until, at the close of the fiscal year 1911, 41,563 routes were in operation. On June 25, 1910, in response to a general public demand, the postal savings system was authorized by Congress, and it has been rapidly extended until to-day there are about 8,000 post-offices designated as postal savings depositories, with a total deposit of over \$18,000,000. It is predicted that within 50 years this branch of the postal service will be the largest single governmental enterprise in the world and will require a greater force of employees in its operation than those at present engaged in our entire postal service.

While the United States has the most efficient mail service in the world, it is the only country of importance that does not provide its citizens with a parcel-post service. Suggestions have been made that a study and ascertainment of all obtainable facts from foreign countries now enjoying the most elaborate and beneficial parcel-post systems would give information which would warrant the organization of the system immediately on a broad scale; but on account of the difference in relative areas and density of population between the United States and such countries as England, Germany, France and Belgium, the Post-Office Department does not deem it feasible to adopt outright a system like that in operation in those countries without approximately determining by investigation and actual experiments the character and volume of the business that would be thrown into the service, and the nature and extent of the changes it would necessitate. The continental United States, including Alaska, has an area of 3,617,673 square miles, with a population of 91,972,266 people, an average of less than 26 persons to the square mile, and the proposition of a parcel post is of such tremendous magnitude that it is essential that the greatest care and caution be exercised in its establishment, in order that a secure foundation may be laid upon which to build this important extension of the service. The Department has addressed letters of inquiry to the heads of the postal departments of the various foreign countries that have parcel-post systems, and from the replies that have already been received it is patent that information along this line will be gained that will be particularly helpful in establishing



What Do You Ask of a Roof?

WHEN you were a boy there was one universal test for a roof:—"will it keep out the weather?" Shingles gave that protection, they were cheap—good shingle timber was plentiful and every one was satisfied.

Roofing today must not only keep off the rain and snow, but should offer protection against fire as well. Farmers everywhere are now turning naturally to

NEPONSET PAROID ROOFING

In 1898 the United States Government put NEPONSET Paroid on a storehouse—in 1911 (thirteen years later) the building was torn down but the roof was still in good condition. NEPONSET Paroid is used by the great railways because of the protection it gives against fire. Put it on all your farm buildings if you want to be free from worry over roof-leaks and repair bills as well as from risk of fire from sparks.

Write for Our Free Booklet on Roofing

It gives many interesting roofing facts and tells how many farmers are saving money by using NEPONSET Paroid and laying it themselves. We will also give you the name of the NEPONSET dealer near you.

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FREIGHT PAID to any station east of the Rocky Mountains on all orders of six gallons or more, except to N. D., S. D., Colo., N. M., Tex., Okla., Miss., Ala., La., Ga. and Fla. Delivered price to these States is 5c. per gallon additional.

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Why not be fair to yourself and to me and investigate before you buy a buggy of any kind. It only takes a day or two to get this big showroom catalog of mine that I have written myself, which tells you more about my trade-mark vehicles for every purpose than I can tell in an advertisement. Just a postal will bring the book at once. Wait two or three days, get the book, see my styles, read my fair plan of selling, compare my prices—and then decide where you will buy. **150,000 People** have already made these comparisons and are customers of mine. I am going to give better buggies at less money to 20,000 more buyers this year. Will you be one of them? Anyway, use your best judgment, without prejudice, and send for my free book. I will pay the postage—send it to you gladly. No other maker of high grade vehicles makes as fair an offer as I do, nor prices as low, considering the quality. Why not write me today for book and full particulars?

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30 Days' Free Trial Guaranteed 10 years. Here's your chance to do away with help and save money, time and labor. Absolutely the best engine for farm use. Write for catalogue.
ELLIS ENGINE CO.
21 Mullet St., Detroit, Mich. **WE PAY FREIGHT**



a parcel post in this country should it be authorized by Congress. The objection that the establishment of a parcel post would be injurious to the rural merchant, in that the improved facilities and cheapened postage rates would divert business from the local dealers to the big mail-order houses, is believed to be without any foundation in fact.

Those who are advocating the parcel post declare that the rural dealer would be the real beneficiary. The farmer naturally prefers to trade with his local merchant and make his purchases where he can personally inspect the goods before buying. He is frequently not in a position to hitch up and go into town to buy even some of the necessities of life, and very often goes without the comforts he would obtain were he able to order by postal card or telephone the purchases he desires and have them delivered by parcel post on the rural route. He is now compelled to attend to his own parcel deliveries, and this induces him to buy in large quantities, and it is mainly on the business done by freight in shipments of 100 pounds or more that the mail-order houses are able to underbid the rural merchant and secure profitable orders. A parcel post will provide the local merchant with a cheap medium for delivery of his wares to rural patrons, and will enable the farmer to receive his parcel direct at his home at a reasonable price, by phone or indited order, within 24 hours. Such a condition would tend to break up the rural "clubbing" orders to mail-order houses, increase the consumption of goods and benefit mutually the patrons and the small-store men all over the United States.

The Senate Committee on Post-Offices and Post-Roads, of which Senator Bourne of Oregon is chairman, in the hearings held during the early part of this year to inquire into the necessity and desirability of a parcel post, was apparently in favor of a mileage zone system, which would provide for the carrying of parcels mailed for delivery to a post-office within a radius of 50 or 100 miles at a lower rate than that charged for parcels whose destination were without that limit. This plan would make every merchant's store in the small village the center of the most-favored rates, and would remove every possible objection he might have against the establishment of a parcel post.

By far the greatest advantages of a parcel-post system would accrue to the residents of rural communities. A parcel post would give the farmer an opportunity of distributing such products as butter, eggs, fresh vegetables, etc., at a reasonable cost, direct to the consumer, thereby eliminating the middleman's profits, with a resultant advantage both to himself and to the consumer. It would afford him a prompt delivery of his parcels and enable him to enjoy comforts which he would otherwise be denied. Its added facilities would result in improved roads and increased value of farm property generally.

Owing to the efficient and economical operation of the Post-Office Department under Postmaster-General Hitchcock, during the last fiscal year, for the first time in 28 years there was an excess of revenues over expenditures, and the time is now ripe for the inauguration of a parcel post.

WILLIAM J. POWELL.

EDITOR'S NOTE—Mr. Powell is Third Assistant Postmaster-General of the United States and speaks directly for the Department. His statements are significant.

Kafir-Corn

EXPERIENCE tells us that Kafir-corn is a full brother to the durras, the kowliangs and the miloes, but unlike these the whole plant is relished by both horses and cattle. The grain is a good substitute for corn. In addition to this, recent experiments have shown us that Kafir is coming to be a strong rival to corn in filling siloes.

Kafir is the latest maturing non-saccharine sorghum. It takes about one hundred and twenty days to ripen. However, investigators have under selection a variety which is more dwarf, which is two weeks earlier and fully as heavy a yielder as the common sorts. As a general thing, Kafir yields ten bushels more per acre than corn, under similar conditions.

Kafir's popularity is growing year by year and is displacing common corn in the fattening of steers and swine. Again, it has a place as a poultry-food and in a limited way as porridge, bread and similar dishes for man. Quite recently we learned that crackerjack will have a rival in Kafir jack, a toothsome confection that has met the approval of the children.

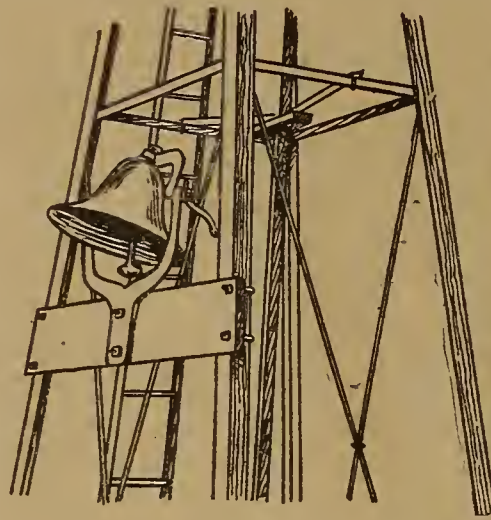
Since Kafir is a member of a drought-resistant family, we would expect to find it at home in the great plains, where the annual rainfall is under twenty inches. It will be found in a large portion of Texas, Oklahoma, Kansas, a bit of Nebraska and some of eastern Colorado. C. BOLLES.

The Dinner-Bell

WITH timber becoming more valuable each year, the matter of procuring a suitable post for the farm bell is now a difficult proposition. However, where there is a windmill-derrick near the house, the post may be wholly discarded.

The derrick is usually high enough so that the bell's sound will not be restricted by the farm buildings.

For several years we have had our bell attached to the windmill-derrick and find that a very suitable place for it. We had a blacksmith make us several hooked bolts so



that we could bolt a strong wide board horizontally to the upright angle-irons of the derrick. By placing the auger holes so that the bolts, when drawn tight, fit close up to the outside of the derrick posts, all danger of the board working down was eliminated. The spread of the posts would prevent it even if the nuts became a little loose. The forked base was then securely bolted to the boards midway of the derrick posts and the bell hoisted to its position. The board should be so placed that the cross brace-rods of the derrick will not interfere with the bell's movements.

If it is desired to have the bell so high up that it cannot be placed between the derrick posts, one end of the plank may be extended beyond. P. C. GROSE.

More About Screening

THE two enemies that are after our early plants, especially radishes, cabbage and other plants, are the little flea beetle and the cabbage or radish maggot. They do their mischief mostly at the very beginning of spring, in April and May. The New York State station at Geneva has devised a plan to protect plant-beds from both these enemies by screening the beds with coarse cheese-cloth. Set up boards, eight to ten inches wide, on edge all around the plant-bed, stretch light wires across for the cloth to rest on so it will have no chance to sag, and then cover the top so tightly with the cloth that no beetle or fly can crawl through, also filling in with soil should there be openings underneath the boards, so that they cannot crawl under. The station tells of other advantages accruing to the plants from this plan. I have thus far managed to keep my cabbage-plants fairly free from maggots, and also keep the flea beetle at bay, by the free use of tobacco-dust. Mr. T. B. Wilson of Ontario County, New York, whose word carries weight, also states that he has prevented the ravages of the root-maggot by sowing a thick layer of tobacco-dust over the seed-bed, and that he prefers this to a cloth covering, as this tends to weaken the plants. T. GR.

THE OLD PLEA

He "Didn't Know It Was Loaded"

The coffee drinker seldom realizes that coffee contains the drug, *caffeine*, a serious poison to the heart and nerves, causing many forms of disease, noticeably dyspepsia.

"I was a lover of coffee and used it for many years and did not realize the bad effects I was suffering from its use. (Tea is just as injurious as coffee because it, too, contains *caffeine*, the same drug found in coffee.)

"At first I was troubled with indigestion. I did not attribute the trouble to the use of coffee, but thought it arose from other causes. With these attacks I had sick headache, nausea and vomiting. Finally my stomach was in such a condition I could scarcely retain any food.

"I consulted a physician; was told all my troubles came from indigestion, but was not informed what caused the indigestion. I kept on with the coffee and kept on with the troubles, too, and my case continued to grow worse from year to year until it developed into chronic diarrhea, nausea and severe attacks of vomiting. I could keep nothing on my stomach and became a mere shadow, reduced from 159 to 128 pounds.

"A specialist informed me I had a very severe case of catarrh of the stomach which had got so bad he could do nothing for me and I became convinced my days were numbered.

"Then I chanced to see an article setting forth the good qualities of Postum and explaining how coffee injures people so I concluded to give Postum a trial. I soon saw the good effects—my headaches were less frequent, nausea and vomiting only came on at long intervals and I was soon a changed man, feeling much better.

"Then I thought I could stand coffee again, but as soon as I tried it my old troubles returned and I again turned to Postum. Would you believe it, I did this three times before I had sense enough to quit coffee for good and keep on with the Postum. I am now a well man with no more headaches, sick stomach or vomiting and have already gained back to 147 pounds." 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.

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\$25.00 to \$50.00
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Good positions easy. Our home-study course of 10 weeks with free auto model is simple, interesting and very practical. Highly endorsed—reasonable. First Lesson Free. Send Now.
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A GOOD POSITION OPEN

THOUSANDS of men and women keep pegging on in the same old way, barely making a living, perhaps without steady employment. They don't know how to get a position that will pay better.

Here is a chance for someone in your county to get a permanent position that will pay well. It is subscription work, and we guarantee good pay.

If you want to make more money than you do now or if you are looking for a good job, write to us to-day.

FARM AND FIRESIDE
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DEATH TO HEAVES
AND INDIGESTION TROUBLES



Indigestion causes Heaves. **NEWTON'S** Heave, Cough, Distemper and Indigestion Cure gets at the root of the trouble by correcting Indigestion, and is therefore **Death to Heaves.**

Heaves is not a Lung Trouble. Heaves is brought on by indigestion caused by overfeeding bulky food or violent exercise on an over-taxed Stomach. Overfeeding enlarges the Stomach and Diaphragm, retarding the circulation and nerve force of the Lungs. Good feeders and good workers only have Heaves.

Newton's cures Chronic Cough, caused by Indigestion and the after-effects of Distemper. It cures Distemper by driving the poison from the blood. Newton's, in correcting Stomach and Bowel troubles, makes it a **Grand Conditioner**, Expels Intestinal Worms, cures Colds, Acute Cough, prevents Colic, Staggers, etc. A Blood Purifier, cures Skin Eruptions. Economical to use; dose is small. Equally effective for all stock.

Put up in screw top cans, 50c & \$1.00. Large can contains 2 1/2 times as much as small, and is recommended for Heaves and Chronic Cough. Sold by all Dealers or sent direct prepaid. Newton's is a standard Veterinary Medicine backed by Twenty Years' Record of good results.

Satisfaction guaranteed in every can. Book with full explanation sent free. **THE NEWTON REMEDY CO., Toledo, Ohio.**

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ORIGINAL & GENUINE **FENCE**
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AN investment, not an expense. Theory? No! It's a demonstrated fact.

Put up fences. Let the stock feed on the wastes; grow fat on that which otherwise would never bring a cent. Keep the stock moving on a pasture that is broken up into small fields. The manure adds fertility to the soil. Yields are greater.

Land value increases. All by good fencing and lots of it. Practically every farm in the country would show a splendid profit if divided with American Fence.

AMERICAN FENCE is made of large, stiff wires, galvanized heavily, having the American hinged joint (patented), a fabric most flexible and wear-resisting. Square mesh fence of weight, strength and durability—three great needs in farm fences.

Dealers in Every Place where farm supplies are sold. Shipped to them direct from mills in carload lots, saving freight charges and enabling dealers to sell at lowest prices, giving buyer the benefit.

Send for copy of "American Fence News," also book "How to Make the Farm Pay," profusely illustrated, devoted to the interests of farmers and showing how fence may be employed to enhance the earning power of the farm. Furnished free upon application.

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American Steel Fence Post Cheaper than Wood and More Durable. Get Catalog.

Poultry-Raising

What to Feed Hens The Criticism

IN AN article published in the issue of January 6th over the signature of A. W. Richardson there are some very grave errors which should be corrected before some unthinking person tries out the formulas given. The article of Mr. Richardson is excellent in the main, but his values and formulas will not stand either investigation or practice. The first error is in the statement that cob-meal (included with the corn) is almost equal to bran as a poultry-feed. As a matter of fact, cob-meal contains 2.4 per cent. protein, 54.9 per cent carbohydrates and .5 per cent. fat, of which 17 per cent., 60 per cent. and 50 per cent. respectively are digestible. This gives the low value of .40 pound protein, 32.9 pound carbohydrates and .25 pound fat as the digestible nutrients in each 100 pounds of cob-meal. Now bran contains, of digestible nutrients, in each 100 pounds 10.3 pounds protein, 30.7 pounds carbohydrates and .94 pound fat. The bran contains more than 25 times the protein that the cob-meal does, and the bird don't have to handle a lot of valueless stuff through its digestive tract to get the nutrition. It is not my idea to convey the impression that corn-and-cob meal is not fit for poultry-food, for Mr. Richardson's idea of raising the corn on the farm and grinding both cob and corn together as a matter of expediency is a good one. It is wrong to state that it has the value of bran as a feed. His ration of 100 pounds, each, beef-scrap, gluten-meal, linseed-meal, bran and middlings with 300 pounds of corn-and-cob meal and 70 pounds of cut clover cannot be fed to any hen and have her live even if a scratch feed of an equal bulk were eaten daily and same was made up of mixed grains. This ration is very narrow; 1:2.5 and 1:4.5 is as narrow as can be fed with safety even to hens being forced for egg production. Even the 100 pounds, each, of good beef-scrap and linseed-meal cannot be fed as part of a ration containing 870 pounds. The birds would be scoured and laying soft-shelled eggs in three days, followed by eggs without shells, and then the yolks only. My experience is that linseed-meal is not a fit feed for poultry, especially for laying hens. It is usually fed for its high proportion of protein, but it is a fallacy to think that it is cheap to purchase protein by buying linseed-meal. There are 31.8 pounds of digestible protein in 100 pounds of linseed-meal and 60 to 70 pounds protein in 100 pounds of high-grade beef-scrap. If linseed-meal costs \$2 per hundred and beef-scrap \$3.25, it is cheaper to buy the scrap. I would suggest to those who have corn-and-cob meal as a farm product, that the following would be a good ration: 100 pounds, each, wheat-bran, alfalfa-meal or clover-meal and middlings; 200 pounds corn-and-cob meal, and 30 pounds highest grade beef-scrap. This makes a ration that figures 1:4.5, and if fed with a scratch feed made up of at least four cracked or whole grains mixed, in equal parts, and fed in litter once or twice daily with the dry mash always before the birds, success along the feeding line will be assured. CHAS. E. MERRY.

The Answer

In answer to the above would say that my reasons for giving the formula mentioned by Mr. Merry are as follows: In my opinion the use of bran as a poultry-food has been mainly to dilute and render more digestible the more concentrated foods as linseed-meal and gluten-meal. It is a coarse and bulky food and serves as a cleanser to the whole digestive system.

And cob-meal, while it may not contain as much actual food value as bran, and in itself may not be as good a feed, it serves the intended purpose and, therefore, is nearly as good a poultry-food as bran.

When Mr. Merry says that my formula cannot be fed to hens and have them live, I must take exception with him. My pullets have been fed with the above-mentioned mash since the first of December and have done very well, only two dying. They have laid no eggs without shells and only occasionally a soft-shelled egg. They averaged nine eggs, each, in December and were well on the way to lay even more in January when the protracted cold spell struck us and they let up.

In regard to linseed-meal, there is room for argument. Many students of poultry-feeding consider it a good feed, and many others consider it otherwise. The Maine Experiment Station feeds it every other month to their laying hens, in the proportion of 50 pounds in a mash of 600 pounds. And 100 pounds of this mash is beef-scrap. Thus it would seem to me that I have good authority for using 100 pounds of linseed-meal and 100 pounds of beef-scrap in a mash of 870 pounds. However, I am willing to admit it may be a matter of opinion.

In regard to balanced rations and tables of food values, the majority of poultrymen cannot live up to such fine points, and if we

can get approximately near to the true balance, we have done all that ought to be expected of us. And when such an authority as the Maine Experiment Station, who has devoted years to the study of poultry-feeds, advocates the use of 100 pounds of beef-scrap in a mash of 600 pounds, every month, and an addition of 50 pounds of linseed-meal every alternate month, it would seem to me that the value of a mash of 530 pounds containing only 30 pounds of beef-scrap and no linseed whatever would have to be demonstrated. A. W. RICHARDSON.

Sometimes the road over the hill to bankruptcy is strewn all along with the wrecks of machinery which has spoiled for the want of a cheap roof when not in use.

Swapping \$1 for Another

STATISTICS gathered by departments of Agriculture in several states show that the average egg production per hen is still under seventy eggs a year in those states. If the eggs are sold at an average price of twenty cents per dozen, this egg yield lacks considerable of paying the cost of the feed consumed while growing the pullets to producing age and feeding them during the year of production. Unquestionably some of the flocks thus kept get enough of subsistence from grain that would otherwise be wasted, and prevent actual loss. In other cases there is actual loss by keeping hens.

An Ohio farmer (Hamilton County) has furnished us an account of his poultry operations for a year that well shows how the keeping of hens and selling eggs on too many farms is merely swapping one dollar for another. His account follows:

"We have been keeping chickens for the past eleven years, but have not kept a close account, with the exception of one year, 1908. I will say right here that on that year we were on a farm of three hundred acres, milking twenty cows twice each day, delivering the milk once each day to the milk-depot four miles from the farm. When we men were in the field, one of the women delivered it, so you see we did not have much time to spend on the chickens, as there were only two men and two women to do the work.

"On January 1, 1908, we had two hundred grade Barred Rock chickens. They had the run of the farm and cow-yards, but there was no grain planted near the house. In the winter we fed them ear-corn, running

it through an old fodder-cutter with all the knives removed but one, which cut it in half-inch lengths, feeding about twenty-five pounds of corn per day.

"We used no incubator or brooder, but set the eggs under hens, giving each ten ten or twelve chicks. A great many people give them twice that number, but they are almost sure to lose a great many.

"Each hen with her chicks was housed at night in a home-made coop two feet square. These coops were made without bottoms. We placed them on platforms made a few inches wider and longer than the coops, as they are much easier cleaned that way.

"The chickens were sold in the market at Hamilton, Ohio, at an average of fifty cents each and the eggs at eighteen cents per dozen. Eggs and chickens that were used at home were charged at the same rate. The gross income for the year was: 346 chickens, at 50 cents each, \$173.00; 1,086 dozen eggs, at 18 cents a dozen, \$195.44; total, \$368.44."

Can it be shown that this farmer received any profit for the work of himself and wife by keeping this fairly large flock of poultry?

Counting ten male birds in his flock, leaves 190 hens for egg production. The 1,086 dozens of eggs equals sixty-eight eggs per hen for the year's production. Reckoned at eighteen cents per dozen this gives \$1.02, as the year's average income per hen for the eggs produced. This sum will no more than pay for feed consumed by one of his grade Rock hens while growing to productive age and during her year of laying and loafing, even though we make a liberal estimate for waste grain and insects gleaned while ranging on the farm and in the cattle-yards.

When we consider the chicken account, this presents a more encouraging showing. A considerable number of experiments carried out to learn the cost of raising chicks to broiling and roasting sizes show that the cost varies from twenty-five to forty cents each. If we make the average cost thirty cents, this leaves a profit of twenty cents realized on each chicken sold, if no allowance is made for any losses by death or accident in the flock.

Viewing this poultry account on the basis of the foregoing analysis, the total profit for the year's work comes entirely from the chickens sold, amounting to \$69.20 (346 chickens at twenty cents profit each). There is, of course, manure left on the farm obtained from the poultry to be considered, as in the case of any kind of live stock.

It will be noticed that this farmer's flock of hens had nothing in the way of a balanced ration or special care to induce egg production during the winter. The chances are that few, if any, eggs were produced until the spring weather, open range, exercise and opportunity to balance their own ration enabled the hens to get in condition fit for egg producing. Then, of course, the time left before the annual molting was too short for a profitable yield of eggs.

Under favorable conditions this flock of grade Rock hens might reasonably have been expected to yield an average of one hundred and thirty eggs each, or five dozen more per hen than they did produce. These additional eggs produced at a fair estimate could have been sold for \$1 for each hen, or, say, \$150 profit from the 190 hens, instead of feeding and caring for the birds merely for the fertilizer that was secured from them.



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That offers abundant security in the form of first mortgages on improved real estate?

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And that is backed by a conservatively managed company with ample resources and seventeen years of successful business experience?

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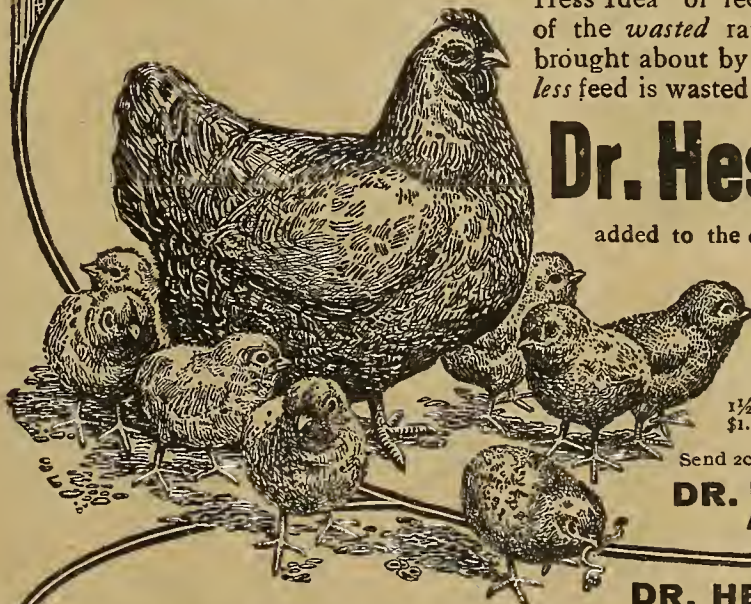
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Dr. Hess Poultry Pan-a-ce-a

added to the daily mash helps chickens to extract more nutrition from the ration. With this extra nutrition they are strong enough to ward off cholera, gapes, roup, leg weakness and other poultry ailments. On the same principle of increased digestion, Dr. Hess Poultry PAN-A-CE-A makes hens lay more eggs—fattens poultry for market rapidly and keeps fowl in robust health.

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Helps hogs digest more food—makes them fatten quicker. Keeps the stomach and intestines clean—remember that, because worms and cholera germs start trouble this time of the year, and only strong, clean, healthy hogs can ward off disease. Only healthy hogs pay. Dr. Hess Stock Tonic keeps hogs healthy, by strengthening the digestion and cleansing the functional organs. 100 lbs. \$5.00; 25 lb. pail \$1.60. Except in Canada and extreme West and South. Smaller quantities at a slight advance. Send 2c. for Dr. Hess Stock Book, free. Guaranteed just like DR. HESS PAN-A-CE-A.

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of corn, cotton, cereals, and all fruits and vegetables.

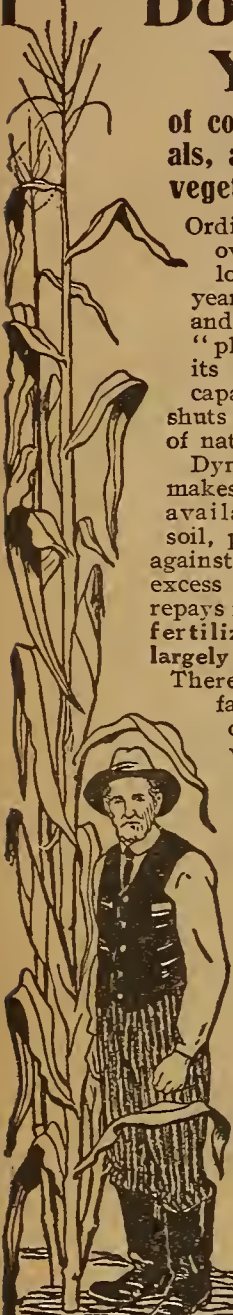
Ordinary plowing turns over the same shallow top-soil year after year, forming a hard and nearly impervious "plow sole" that limits the waterholding capacity of the land and shuts out tons per acre of natural plant food.

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DU PONT POWDER CO.
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WILMINGTON, DEL.

Garden and Orchard

A National Peril

Give Us Quarantine Laws!

NOT for many years has there come to the attention of Congress a question of such importance to the fruit industries of the United States as has been raised through the efforts of the fruit-growers of California with reference to the protection of the Pacific Coast from the ravages of the Mediterranean fly.

It is a strange fact, in view of the importance of the Mediterranean fly, that so little general attention has been given it in this country. The reason, of course, is to be found in the fact that it has not actually entered the United States. Its attempts at entrance have thus far been successfully checked. But it is threatening to invade the country, and once it effects a successful landing, and gets a good base for operations, it is not easy to calculate or conceive the damage that will result.

Nor is the danger that threatens from it local. While just now it is the Pacific Coast that is threatened, such are the habits of the pest, such its possibilities in way of multiplication, that once it effects a lodgment on the Pacific Coast it will be difficult, if not impossible, to prevent it extending over the United States.

The facts with reference to the Mediterranean fly have come out in connection with attempts being made by Representatives Hayes and Kahn of California in the House, and the California senators in the Senate, to get an appropriation to be spent by the Bureau of Entomology of the Department of Agriculture in the study of the habits and natural enemies of the pest and to assist the people of Hawaii in stamping it out in their territory. In the hearings before the House committee on agriculture, in behalf of the desired appropriation, it was declared by those who have made a study of it that in a hundred years no pest has appeared that has so disturbed the fruit industries as this one. Beginning, as it is supposed, about the Mediterranean Sea, it troubled the fruits of the Mediterranean islands, migrated to Africa, was carried in ships to Australia and, finally, from there was transferred to Hawaii. Last year it destroyed the entire peach crop and other fruit crops of Hawaii. It is declared that it has totally destroyed the fruit crops and even some of the vegetable crops of New South Wales and other parts of Australia.

The only remedy that has been found thus far is to enclose the trees with mosquito-netting. So far as Hawaii is concerned, it is supposed to have reached the islands two years ago from Australia, but its effects were not visible until last year.

The facts that the fly is carried in the form of eggs or maggots in the fruit makes its migration easy. It attacks citrus fruits first. It also attacks beans, tomatoes, green peppers and other vegetables.

Representative Kahn of California made a study of the Mediterranean fly in Hawaii. He looked into its ravages there carefully and he was able to tell the House committee on agriculture much of interest about it. Mr. Kahn's statement is worth reproducing. He said:

The people of Hawaii have for many years conducted a local campaign against insect pests, and they expend every year something like seventy or eighty thousand dollars in stamping out those pests that affect their particular crops. Fruit-raising for profit is not conducted on a large scale in the Hawaiian Islands, except in the case of pineapples and bananas; and, strange to say, this pest has not attacked as yet in Hawaii the pineapple or the banana, although Doctor Howard, of the Agricultural Department, has informed me that the Mediterranean fly has attacked the pineapple in Australia, and I have also learned that it has attacked the banana in some countries. The female fly punctures the skin of the ripening fruit and deposits her eggs underneath the skin. This puncture is not visible to the naked eye, and you cannot tell from the outside appearance that the fruit is infected. After a little while these eggs breed out into maggots that look like the so-called cheese "skippers." When the fruit falls to the ground, it bursts open, and these "skippers" move along rapidly until they find a soft spot in the earth. They crawl underneath, and there they develop. They come out a little fly—smaller than the common house-fly—beautifully marked with brown spots on the wings and brown spots on the head, making a rather attractive little insect.

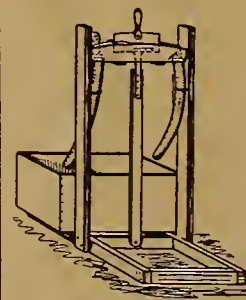
In Hawaii you have a very unusual condition for the propagation of this insect. You have the wild guava growing in abundance everywhere. There are thousands of acres of wild guava-bushes, and the fly has attacked the wild guava. Much of it grows on the precipitous sides of the mountains of Hawaii, and man cannot reach it. I believe that it will be necessary for the Department, in order to thoroughly exterminate the pest down there, to burn off or otherwise destroy the wild guava. The fly was first discovered in the citrus fruits, the oranges there, but it has attacked nearly everything in the way of fruit except those two that I have mentioned, the pineapple and the banana. It has destroyed the bean crop down there and it has destroyed their green-pepper crops. It has even attacked the mango, with its thick skin, even though the skin has a very pungent taste and smell, not unlike turpentine.

Mr. Kahn emphasized the fact that this pest is gradually but surely working its way around the world and that it is essential, to prevent invasion of this country, that it be stamped out in Hawaii.

It is not the purpose here to go into a detailed study of the origin of the fly or a scientific discussion of it. It is sufficient here to say that the alarm felt by the fruit-growers of the Pacific Coast has made itself felt in Congress. The Agricultural Department, too, is aroused on the subject. Little question is entertained that a liberal appropriation will be made by Congress and that expert entomologists will be sent to Hawaii and also to other countries, especially Australia, for the purpose of finding, if possible, a natural enemy of the fly. Search for such an enemy in the Mediterranean region will also doubtless be made. Temporarily, the zealous work of the local authorities on the Pacific Coast is keeping the fly out, but it is easy to see that fruit from regions of the world where the fly is rampant may at any time be admitted to this country.

JOHN SNURE.

Another Potato-Cutter



THE sketch shows the device I use in cutting seed-potatoes. The potato is placed directly over the hole. The operator pulls the cutter head over, and the potato is divided into four quarters. If the head is adjusted properly, the pieces fall through the hole into a tube made of tin or cloth and then on into a basket or box set beneath. This device can be made to be adjusted to suit the operator.

Observe that the cutter is divided at one end and a piece of steel is inserted, which divides the potato into quarters. The other end splits the potato in two parts. Two men can cut potatoes on this; one man or boy cutting the smaller potatoes that are too small to be quartered.

J. E. ELLIOTT.

Garden-Weeder

TAKE a piece of wire cable containing five or six strands of wire. Bend a handle on one end and untwist the other end about five inches. Spread the strands apart and bend a hook one and one-half inches long on each wire. Tie with a small wire just back of the spread, and you will have a handy little garden-weeder or tool for loosening the dirt in the window-box.

RUBEN FULMER.

Very Few Peaches

THERE will be no peach crops in the Hudson River Valley this year. The temperature in January fell to eighteen degrees below and as low as twenty-four degrees below in low places. There may be just a few live buds left on the highest hilltops, one per cent. or less. However, fruit-growers did not seem to be particularly discouraged at the recent meeting in Poughkeepsie. They have had very satisfactory crops for a number of years, and they can afford to skip a year. This will be a good time to cut back the trees that are getting too high and bring them down to where they should be. The tops can be lowered four to six feet with no harm to the trees, they will make a strong new growth and set buds for fruit next year. If the growth should be excessive, cultivation should be stopped and the cover crops be sown earlier than usual.

Thirty fruit-growers at Milton, Ulster County, have just organized to cooperate in selling their produce. Many car-loads of berries are grown in this section, and the experiment will be watched with great interest. Cooperative selling is sure to come.

E. O. MUESER, New York.

Transplant This Way



TAKE a post-hole digger that is free from dirt and rust. Place it over the plant to be removed. Push it in the ground as far as you can. Pull the handles apart, then raise the digger and plant out of the ground. All comes together. Now carry the digger full of dirt with plant to the hole that has been prepared for the plant. Place the digger and plant in the hole. Push the handles together. Rake dirt all around the digger. Now place your fingers around the plant and raise the digger out. This leaves the plant nicely transplanted. Water it, and you will never know it has been moved, as far as its appearance is concerned.

Watermelons and cantaloups can be nicely transplanted from hotbeds this way when each plant has four or five leaves on it.

A. B. COOPER.

A Tomato Scheme

PLANT the tomatoes in rows three feet apart each way, and pole them just like you would pole Lima or other pole-beans. Use poles about eight feet high. Set four in the ground, one at each tomato-plant. Then draw the four together at the top, and tie



How they looked last October

them. The poles will stand against the storms, and the tomatoes by leaning inward will get the sun better and will be easier to tie and handle. The fruit is kept clean and free from dirt, and picking is made easy.

E. J. BURGESS.

Staking Up Tomatoes

I HAVE had considerable success in raising tomatoes for home use and for the early markets. I set on two rods of ground thirteen dozen plants, one foot apart in the row. A stake for each plant should be four and one-half feet long. When the plant is one foot high, it will form a cluster of fruit-buds; also, there will start from above each leaf a lateral branch. When an inch long, break that branch off close to the stem by catching it between the thumb and finger. As the plant grows, tie it to the stake at each foot, keeping off all side-shoots. When the first clusters begin to ripen, there should be, under ordinary circumstances, at least one dozen clusters, with an average of three to each cluster, in all stages from blossoms to ripe fruit. By this method the loss by rot is virtually nothing. The bulk of my last year's crop was marketed when retail prices were from two dollars to three dollars per bushel, although there were an abundance left to ripen until frost. Of course, I raise my own plants in hotbeds and transplant so that each plant has a twelve-inches-square space.

A. E. VANDERVORT.



There Are Some Mighty Good Dairy Districts in the Northwest

You would do well to look over the field.

Washington offers many advantages—so does Western Oregon, as well as Central Oregon—the new territory just opened by the building of the Oregon Trunk Railway, an affiliated line of the Northern Pacific.

Washington and Oregon have excellent grazing land at very low cost. The cut-over timber lands in Western and Southwestern Washington are ideal for dairying. The Kittitas and Yakima Valleys are good sections also, and the markets on the coast will take all you can produce.

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Farm Notes

Another Kind of Record

LAST year we encountered some difficulties that emphasized to us the importance of keeping a new kind of farm record. We have never heard of any farmer who keeps such a record, but we believe the plan a salutary one, nevertheless.

We decided to drain a wet clay basin on the edge of a rising slope of ground. The nearest outlet, so far as our knowledge extended, the land having been in our possession only a few years, was a blind ditch about twenty rods distant across a stretch of ground that, seemingly, needed no ditching. This was our shortest course, however, and we procured tile and proceeded with the ditching. Laying the tile as we went, we had arrived within a few rods of the basin, when we ran across another ditch. Investigation showed that a lateral branch had been run from the main near where we had started, to a point within a few rods of the basin we wished to drain. All of our work and expense had been unnecessary. With no evidence to indicate the existence of the former ditch, we buoyed up our dejected spirits by calling it misfortune, not error. But this was not reparation for the loss, and, lest it might occur again, we did this:

We have had an outline map of the farm, showing the fields in their exact proportion, with each field numbered, to assist us in keeping some of our other farm records. A duplicate of this map was taken by tracing on thin transparent paper. On this map the ditches in each field were then designated by drawing lines along the courses they followed. The ponds and low places were designated by figures similar to them in contour. The size of the tile in a certain ditch was shown by small numbers, the beginning and termination of a certain size being indicated by a short line drawn cruciform to the line of the ditch. By adding lines to the map each year for the new ditches made, we will have a complete tab of the drainage system of our farm. Though we may still encounter ditches that were laid prior to our régime, this graphic record may eliminate much of this difficulty.

It seems to the writer that nothing is more commendable than for every farmer, before retiring from the active management of his land, to provide his son, or the one who is to succeed him, with a ditch record as is here described.

P. C. GROSE.

How We Whipped Them

[CONTINUED FROM PAGE 5]

political machines under the control of the big grain firms fix it so there can be harmful substitutions and adulterations. This makes it unsafe for the eastern consumer or buyer to attempt to get by the corner, and therefore he is forced into the hands of speculators and re-buyers, and is never a real competitor with the Grain Combine. Thus our fix, while better than it used to be, is still not what it ought to be.

There are two ways out. Either would solve the difficulty.

The one is a forced traffic arrangement between the eastern and western railways, under which we can have cars furnished us as called for, and billed right through to the eastern miller or dealer. We cooperative elevators could then organize to supply the East at great savings over the present system, and to the profit of both the western farmer and the eastern miller, dealer or feeder. This is a right which we should organize to secure. We should go before Congress and the Interstate Commerce Commission with the matter, go strongly, and never cease until we win. The eastern people interested should organize to aid. And then cooperative organizations of consumers would be the last step. While this is going on, the farmers of the States where terminal elevators are situated should not let their public officers rest until the abuses of inspection are redressed, and the evil of keeping the elevator company's grain under the same roof with the public's thoroughly abolished.

The other way out is through terminal elevators owned by the farmers' elevator companies, or jointly by them and the eastern interests which desire pure grains and freedom from unjust exactions.

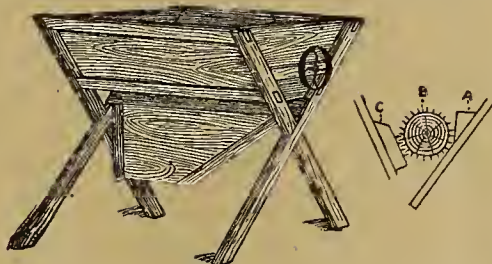
The railways' reform is necessary in any case; and the policy of owning their own terminal elevators would surely offer as great a relief to the farmers as has that of owning their own local elevators.

Cooperation has just begun in the United States. The next century will see its development. I have told this story of successful cooperation among the sober, every-day farmers of the Grain-Belt States, because it is a story of victory. It is constructive, not destructive. It tells how to do things. It is a tale of success.

If the farmers of the United States will read it and take its lessons to heart, I feel sure it will inspire them to such united action for self-preservation as will carry the movement to every part of the nation, and into every field of production and marketing.

Excellent Root-Grinder

AN EASIER and speedier method of reducing beets, carrots, turnips and other roots to pulp than chopping up with a spade or the four-bladed chopper sometimes used for this purpose is provided by the cheap home-made grinder illustrated. Any poultryman or stock-raiser can make it at trifling expense of time and work and use it with belt wheel for steam or gas-engine power, or if desired or compulsory, a crank and fly-wheel may be attached and the grinder operated by hand-power. Manner of making hopper, attaching legs, braces, etc., is well explained in large illustration; small illustration shows sectionally the interior or main working parts. A triangular-shaped strip of wood (A) extends across rear side of box, firmly nailed in place behind the



spiked cylinder (B), which revolves and does the grinding, and another wooden strip (C), fitted with teeth like the cylinder, extends across front side, and slides in grooves or small strips at ends of hopper as an adjustable concave. Teeth may be twelve-penny spikes, heads cut off and the remainder driven into cylinder, leaving about a half-inch projecting, with ends filed sharp. The distance cylinder teeth are placed apart and position of movable concave, the teeth of which should intersect those of the cylinder, will determine the degree of fineness to which roots may be reduced. The grinder may be made of any desired capacity. If all its working parts are well made with screws and bolts, it will be very durable and may be run at high speed. J. G. ALLSHOUSE.

Misapplied Sympathy

OLD man Richards had been chopping firewood and was on his way home to dinner with his ax on his shoulder. His little dog had chased a woodchuck into a pile of rock and was barking furiously.

On going to see what was up, the old man found that the woodchuck had turned about and sat just inside the hole and made insulting remarks of the little dog.

Encouraged by the presence of his master, the dog made a grab and caught the woodchuck by the jowl, but the woodchuck got the same hold on the dog, and as the two were about of a size, the tug-of-war that ensued was spirited.

First the dog pulled the woodchuck part way out, then the latter would gather himself up and pull the dog part way into the hole.

They kept this up for a while until the old man's sympathies were aroused in favor of the dog, and he decided to take a hand.

Raising his ax, he watched his chance, and when the dog had pulled the enemy out, he brought it down.

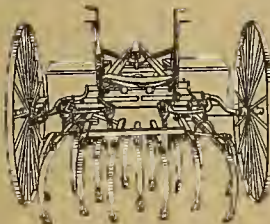
But, unfortunately, at that "psychological moment," as the philosophers say, the woodchuck gathered himself up, and when the ax came down, it killed the dog instantly.

When old man Richards used to relate the story afterward, he used to say:

"And to this day that little dog thinks the woodchuck killed him!"

Jack of All Tools

MY FAVORITE tool is a seeder and cultivator combined. This is a spring tooth on wheels and it is just fine to prepare the soil.



After the land is in shape, I can put on the seeder attachment and can sow the grain as well as with any machine that I ever saw. There are twelve teeth. The entire width of the harrow is five feet. As soon as I get my seeding done, I turn it into a cultivator. It has a corn arch and can be adjusted to one or two rows of corn or potatoes. It can be run at any depth desired. As shallow cultivating is best to conserve moisture, it is just the thing.

And that is not all that this machine will do. It is made so I can take off the spring teeth and put on a bean-harvester. It will do as good a job at this work as the best of them. Then it is just the

thing to sow winter wheat in the corn. The last time I go through the corn I can sow the wheat. That aids an early start before winter sets in.

I have but a small piece of land to work, so I can't afford to buy much machinery. This combined seeder and cultivator will do the work of a number of pieces.

A. D. ESTABROOK.



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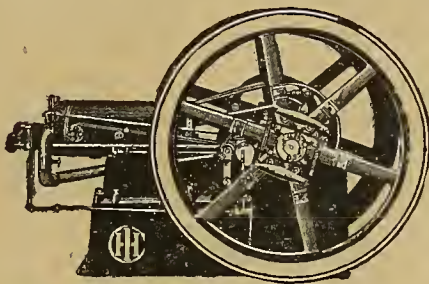
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ANCHOR MFG. CO. Dept. 1030 DAYTON, O.

GARDENING

By T. GREINER

For Flower-Lovers

AMONG annuals no flower can surpass the stocks (Ten Weeks' stocks) for perfume. And they are quite showy, too. I like to raise the plants early under glass, in gentle heat, and transplant to the border in cloudy weather. But they can also be grown by sowing seed directly in the border outdoors. Try them anyway.

Another Floral Hint

For show we like the double petunia. It is very pleasing and as easily grown from seed as the stocks (Ten Weeks'). But, as with the latter, do not imagine that the strongest seedlings will give you the best flowers. They are more likely to give you single flowers, and these we do not care to have. It is the rather backward, the weakly or puny plant that is sure to produce the nice double flowers that you are after. Bear this in mind when you start in with weeding out and thinning.

The Verbena-Bed

Comparatively few verbena-plants are required to cover a good-sized bed with showy bloom—that is, if you set the plants a couple of feet apart and peg down their branches, and if the soil is well provided with plant-foods and with water. The verbena is usually a thankful plant.

Watering the Flower-Beds

With almost all flowering plants, the amount of bloom depends largely on the quantity and regularity of the water-supply. Up to a certain limit, the more water, the more bloom. And if that water is strong liquid manure, the ranker the liquid, the richer the perfume and the more showy the bloom.

Climbing Tomatoes

A reader asks me whether we have any variety or varieties of tomato that are real climbers. I have never seen any such. All varieties that are of vigorous growth, when planted on strong soil, may be trained to stakes or poles, and if trimmed to one or two stalks only, and kept thus trimmed, will run up six, eight, and even ten and twelve feet. I have used a strain or cross of the Early Jewell (Chalk's) for such purpose, and will confess that a row of them, when well kept and when loaded with ripe fruit, is quite a sight. I am going to have them again in my garden this year. In the varieties that are sensationally advertised as "climbing" tomatoes, I have thus far not struck anything that I want.

Hen-Manure for Corn

A Connecticut reader says he has any amount of hen-manure which he wants to use on a piece of ground to be planted in corn, and asks what materials he might add to this manure to give more bulk and at the same time increase its efficiency. With hen-manure in plentiful supply it should be easy to raise big crops of either field or sweet corn, at least on soil that is at all suitable for the corn crop. But I think I would prefer to put the manure on the patch broadcast rather than in the hill as our friend intended to do. Hen-manure is rich in nitrogen, having about thirty pounds of it, more or less, to the ton, and is also fairly well supplied with phosphoric acid (about thirty pounds per ton). For cereal crops, or any other which we raise for the seed mostly, phosphoric acid is especially useful, and the addition of acid phosphate to the manure is surely a good thing in any case. Corn to give a big yield, especially also of stalks, needs also a good supply of potash. In this element hen-manure is a little bit weak, having only about sixteen pounds per ton. The addition of potash in some form, therefore, or its simultaneous application, would also be desirable and probably of marked effect. These substances added to hen-manure, however, have also the effect of "fixing" ammonia (nitrogen) that otherwise might escape, in course of fermentation, from the manure, and holding it for the use of the crop. Of course, these additions do not increase the bulk of the manure, nor is it particularly necessary that they should. If we can get dry muck, this substance might be added in any amount to the manure, besides the other ingredients, thoroughly mixed with it and the mixture afterward applied broadcast. There is no danger that you will put too much of it on the land. Spread it evenly, and let it become well mixed with the soil. Probably there is no better way for the farmer or suburbanite to manage hen-manure than to use plenty of good absorbents under the roosts, such as dried muck or sifted coal-ashes (the former preferred, both for its humus and its nitrogen), and then from time to time to sprinkle a liberal amount of acid phosphate, or even floats, and kainit or muriate of potash over the droppings. In cleaning the roosts, mix all these materials thoroughly together, and pile the stuff up in square heaps to ferment. Or apply them directly to the land. But he who has plenty of hen-manure has it in his own hands to raise maximum crops of all things.

Poisoning Cucumber-Beetles

An Elyria, Ohio, reader claims that he has seen an item in FARM AND FIRESIDE recommending the use of Paris green for poisoning the yellow-striped cucumber-bug. It is true that many papers and many growers still talk of Paris green for such purposes. The gardening page of FARM AND FIRESIDE, however, has long since abandoned Paris green as a remedy for leaf-eating insects, and has steadily and consistently advised its readers to depend entirely on arsenate of lead. This for the reason that it never harms the foliage of plants, even if applied in great strength, and that it will kill even in instances where Paris green fails or acts rather slowly. If you will thoroughly dissolve one ounce of the arsenate paste in one gallon of water and spray your cucumber-plants with it, at the time that they first come up, and repeating in a week or two, if necessary, the yellow-striped cucumber-beetle will not hurt them very much.

About Seed-Potatoes

One of our state stations warns against the use of foreign potatoes for seed. This with good reason, I believe. European potatoes do not seem to do well under American conditions. At least, they would first have to be acclimated, and this would require several years' efforts. In Germany they have a small potato famous as a salad potato, and often imported into the United States and sold at a fancy price. It was suggested that we grow this potato here and keep that money in our own country. Last year I planted a little patch, having the seed-potatoes sent me from the "fatherland" for that purpose. But I was simply disgusted with the outcome. I planted them on the best soil I had, and gave them the best culture imaginable; yet I had my labor for my pains. There was nothing doing. Still, I am now sorry that I did not save the few very small specimens I found in the hills, for the purpose of planting them again and, thus continuing, might have made some efforts to get these potato varieties used to American climatic conditions. If you plant imported seed-potatoes, however, and look for a crop, you will most likely look in vain.

Huckleberries from Seed

A Nebraska lady reader wants to know whether huckleberries, blueberries and Himalaya berries, which she has seen advertised, will grow from seed the first year. These fruits cannot be grown from seed the first or even the second year, and it is a big undertaking, for the ordinary person, to grow them from seed at all. The vegetable sub-

stitute for the huckleberry or blueberry, known as "garden huckleberry," "wonderberry," "sunberry," etc., is easily grown from seed the first year, provided one thinks it worth while raising it. Pie made from this vegetable, with proper flavoring, can be made to taste very much like the real huckleberry pie. It is quite a job to gather the berries, however, and in some quarters the fruit and plant are claimed to be poisonous, and not safe to eat, especially in generous doses.

Vesper Sparrow

IF, WHEN walking or riding, you see a "sparrow" going along on the road ahead, don't think it is an "English," for it is not; English sparrows are not road-runners. Then, if he chances to be a long-distance runner, keeping it up from a few rods to a quarter of a mile, and suddenly changes his mind and flies up and away, in a horizontal zigzag course, toward the direction from which he came, and in flying displays the two outer white tail-feathers, you will have identified your vesper sparrow. But your road must be through open country, for,



though he is found in orchards and bush-grown pasture-lots, he has no use for the woodlands.

While its name implies that it is an evening singer, it sings throughout the hot summer day when most of the other birds are silent.

The Biological Survey says: "Although the vesper sparrow is not found as far from cover as the snowflake and the longspur, yet it feeds farther out in the field than most sparrows, and thus accomplishes more valuable service as a weed-destroyer than many that feed to an equal extent on weed-seed. This same characteristic increases the efficiency of this highly insectivorous sparrow as a consumer of grasshoppers, caterpillars and weevils. Its value to the farmer is beyond question and should secure for it the fullest protection." H. W. WEISGERBER.

Two Important Features

"What is a Parcel Post, and Why Do We Need It?"—by a member of the Post-Office Department. Page 13.

"Do Our Soils Need Sulphur?" The answer is given by a practical experimentalist. See Page 8.

Be Up-to-Date

Tools frequently enable one person to do the work of several. The better the tools, the more a person can accomplish. The cost of help on the farm is a big item in the expense of raising crops. It is, therefore, necessary to have your implements of the very best grade in order to have each person do as much work as possible.

Look through the advertising columns of FARM AND FIRESIDE to see announcements of new or improved machinery of all kinds. If you then find that yours are out of date, get new ones. The time lost in mending old machinery is more valuable than the cost of replacing it.

FIFTY Beautiful Birthday and Greeting Post-Cards

For Farm and Fireside Readers

Here is your chance to get a set of 50 handsome Floral and Greeting Post-Cards. We are now closing out our entire stock of post-cards.

These cards are without doubt the acme of post-card production. They are lithographed in many colors, and the designs are new, original and attractive.

You Will Want These Cards

And we want you to have them. The subjects are many and varied, and can be applied to all occasions, such as Birthday Greetings, Best Wishes, Good Luck, etc.

We give you our positive assurance that a finer assortment of Post-Cards cannot be obtained anywhere. These cards are the best in every particular.

You Must Write To-day

We will reply immediately showing you how you may obtain this fine assortment of high-colored, high-finished, high-priced Post-Cards without a cent of cost to you.

Write at once. Address,

FARM AND FIRESIDE
Post-Card Department
Springfield, Ohio

All the Hard Work Taken Out of Scrubbing

Mop the floor — sprinkle on Old Dutch Cleanser and scrub well. Dirt and spots go flying; for the fine particles of Old Dutch Cleanser get down into the cracks and crevices, that are so hard to get at ordinarily, and take out all the dirt.

Old Dutch Cleanser

Many other uses and full directions on large Sifter-Can 10c.





The FARMERS' LOBBY.

NEXT, perhaps, to a project for monopolizing the atmosphere and piping it out exclusively to folks who paid meter rates, a brain trust would be about the tightest proposition that could be invented. There is some reason to suspect that we are threatened with one; and it looks to monopolizing a specialized variety of brain that farmers are highly concerned about.

I refer to the apparent purpose of the agricultural college highbrows to assume an attitude of hostility toward the vocational education legislation that is pending before Congress. Heretofore FARM AND FIRESIDE has discussed this general subject, but I have no recollection that it or any other publication has undertaken to chide the agricultural college people for their unfriendly disposition. The vocational education measure proposes to furnish money for a beginning in the direction of special education in industries, manual training and agriculture in the grade and secondary schools of the country. Agriculture is in the way of getting \$5,000,000 a year for this sort of work, if the bill by Senator Page of Vermont shall pass. It is certainly a curious fact that the faculties, trustees, regents, and so on, of the agricultural colleges have been unfriendly toward such a proposal; but the accumulation of evidence on this point is such that it cannot longer be ignored.

Colleges are Magnificent

It isn't many months since the Farmers' Lobby outlined the general purpose of this legislation. We have a large number of agricultural colleges scattered throughout the country, and the national government, under the Morrill Act, contributes liberally to their maintenance. They are magnificent institutions, and nobody would presume to deny them full credit for the great work they have done for the cause of better farming, conservation of lands, more effective utilization of energies and, in general, putting farming on the more scientific basis that it must reach if it is to meet the needs of the nation. Founded on so broad a conception of obligation of the public interest, it might fairly be expected that these institutions would be the first and most zealous supporters of any effort to supplement their work. It has taken a long time to convince the friends of vocational education that this is not their attitude. But it seems that, instead of favoring the vocational education project in its broad and its logical and its only practicable form, they are inclined to oppose it, on the ground, seemingly, that it might make the agricultural colleges a less important factor; it might take away something of their preëminence in their particular field; it might compel them to divide honors with the secondary institutions. That looks like a mighty narrow and unworthy view, but there is certainly ground for the fear that just that view is influencing the attitude of the college people.

To understand this strange situation, it is necessary to recount very briefly the project of the Page Bill. It proceeds on the theory that agricultural colleges ought to be the apex of an agricultural educational system; there ought to be steps leading up to them, through agricultural common schools and agricultural secondary schools. Instead, there are practically no institutions of these lower grades; the colleges stand out, away up above the common level, with no educational step-ladders by which to reach them. It is the aim of the vocational education propaganda to provide the step-ladders not otherwise possible; and it seems almost as if the agricultural college people don't want any ladders; they want to be left alone in their glory, up there in the clouds.

The Use of Money

Framing and passing legislation of this kind is a matter of give-and-take. You can't get a lot of money for the benefit of the boy on the farm without also giving something for the boy in town. So the Page Bill proposes to give \$5,000,000 a year for special training in trades and industries, in the city and town schools. A like amount is then to be given to agricultural schools, which will especially benefit the farm boys. Three millions a year is to go to agricultural extension work; that is, to carrying to the farmers the results of scientific experiments, investigation, etc., in agricultural matters. This money would be used, for instance, to disseminate common knowledge of the work done by the Department of Agriculture, the experiment stations, the agricultural colleges, and so on. Everybody is agreed that it would be a very practical investment.

Are Not the Colleges Blundering?

By Judson C. Welliver

Then it is proposed to give a million dollars a year for normal work; training teachers, in normal schools, and equipping them to carry on the work in the grade schools, of inculcating rudimentary industrial, trade and agricultural knowledge in boys and girls attending them. There would be mighty little use establishing a lot of agricultural schools right now, because there are practically no teachers qualified to teach in them. We must educate a crop of teachers before the teaching can be done.

That is the Page Bill, in substance. It is the measure that Senator Dolliver and his associates worked out after much study. It is the one that has seemed to me properly to cover the ground. But the agricultural college authorities seem to favor, instead, the Lever measure, introduced by Congressman Lever of South Carolina. This measure proposes to give merely the \$3,000,000 annually for agricultural extension work. It leaves out entirely the school provisions; nothing for teaching trades and industries to the city boys, nothing for teaching the rudiments of scientific agriculture to the boys and girls in the country schools, nothing for the instruction of girls in domestic science.

Perhaps it does the agricultural college people injustice, but it is a cheerless fact that in congressional circles the agricultural college people are considered hostile to all the appropriations they would not control, and favorable to those they would. They would not have anything to do with the \$10,000,000 given for special instruction in the city and country schools, whereas they would have an important part in handling the \$3,000,000 that is to go to agricultural extension work. They seem to want to keep their finger on the entire sum, and to be ready to fight any appropriation, no matter how generally meritorious, that they don't get a hand in spending. This is the opinion of many of the earnest friends of this legislation. They are disappointed and grieved at what they consider the narrowness and the lack of vision manifested by the agricultural college people; and they don't propose, if they can help it, that such a narrow view shall prevail.

The Southern Attitude

There are some other difficulties in the way of the legislation, aside from the college men's lack of amiability. One of these is the race situation in the South. To me, this seems just as unworthy a reason as the one attributed to the college men. Let me explain.

This legislation proposes to give nothing to the States unless they earn it. Each State's apportionment of the trades and education money is to be in proportion to the number of its people engaged in industries; each State's share of the agricultural fund is to be in the ratio of its number of population engaged in agriculture.

Simple and fair enough, eh? Seemingly. But when you come to the South, there are complications. They don't want white and colored children in the same schools. The Page Bill proposes to give no State any of the fund, unless the State shall appropriate an equal amount from its own revenues, for like purposes. The State must match up, dollar for dollar. And the Southern States seem determined not to give anything for this kind of work among their colored children!

When the bill was before the Senate committee, this question of the colored schools in the South came up. Somebody from the North proposed to put up \$10,000 a year for each southern agricultural college for colored people. There are sixteen of these, so it made \$160,000 to be added onto the measure, for the special benefit of these colored schools.

That looked like a big lot of especial generosity. Yet after the action had been decided upon, several of the southern sena-

A Sane Viewpoint

THE Page Bill proceeds on the theory that agricultural colleges ought to be the apex of an agricultural educational system; there ought to be steps leading up to them, through agricultural common schools and agricultural secondary schools. Instead, there are practically no institutions of these lower grades; the colleges stand out, away up above the common level, with no educational step-ladders by which to reach them. It is the aim of the vocational education propaganda to provide the step-ladders not otherwise possible.

tors privately protested against it. They believed the proposal would not be liked by their people, and thought the bill would be stronger, in the South, if that item were left out of it! And it finally was actually dropped out, for this very reason. The Southern States, it was intimated, might not care to be required to put up \$10,000 more for each school of this kind, in order to get a like sum from Uncle Sam. They would rather let Uncle Sam keep his money than to decide whether they would match it with an equal amount of their own!

A New England Opposition

That will perhaps strike northern people as a curious view. Yet it is a fact that in many parts of the South every proposal of higher education for the colored people is regarded with intense hostility by the white people. Great numbers of southern white people think Booker T. Washington's work for the colored people is a mistake and a misfortune. To me, that seems a narrow and mistaken view, and I have lived somewhat in the South. I am more convinced that it is an error, since I lived South, than before I was ever south of Mason and Dixon's line. But that's neither here nor there. The fact is that a group of southern senators did express the opinion that the bill would be stronger without that proposal to give a special extra fund for colored agricultural schools, and the fund was dropped out. The northern people were for it, the southern against it. There is yet the possibility that the provision will be put back into the bill. Not by any means all the southern senators and congressmen oppose it; but it is a close question among them.

So much for the southern opposition, based on the race question. Another equally eccentric basis of antagonism has been found by some of the New England people, notable Massachusetts interests. Massachusetts is a very unimportant farming State; a very small percentage of its people are engaged in agriculture, therefore it would get but a very small part of the \$5,000,000 that is to be given to agricultural educational work. Well, the Massachusetts people have been particularly zealous in opposition to the bill, on the ground that they would pay more than they would get out of it.

When I heard about this Massachusetts opposition, it made me particularly disgusted. "Why," I observed, "Massachusetts has been perfectly willing for three generations to draw down a vastly disproportionate share of benefits from the protective tariff. She has been the capital of high-tariffism, with never a quaver of conscience at the thought that she gets more out of the tariff than the Middle West and West, which have comparatively little that can be protected. It strikes me that Massachusetts ought to be willing to do this much for the agricultural States, considering how loyally they have stuck by Massachusetts in the matter of the protective tariff."

The Page Bill Has Strong Support

It was to Senator Page that I made that observation. The senator opined that my view seemed reasonable; but being a tariff standpatter, he didn't feel able to work up quite so much indignation as I felt. The senator doesn't propose to rub anybody's fur the wrong way if he can help it; what he wants is to get votes lined up for this bill, and he is meeting with a good deal of success.

The Page Bill has been reported to the Senate, and is well up toward the top of the calendar. It may be passed by the time this letter is in print. In the House it has been introduced by Mr. Wilson of Pennsylvania, a labor member. The bill, by the way, has the endorsement of the American Federation of Labor, the National Manufacturers' Association, the American Society for the Promotion of Vocational Education, The National Grange and probably the longest

and most representative list of uplift social organizations that has been arrayed, in recent years, back of any single measure.

However, it isn't material what may happen at this session. The House is Democratic, the Senate, Republican. The Lever Bill is the Democratic measure, and indications are that it, and not the Page-Wilson one, will finally get through the House. Next December, at the short session, the final decision will have to be made between the two. By that time the huge business of playing presidential politics, which is the only real business before Congress this session, aside from passing the appropriations, will be out of the way.

A Basic Education Needed

A president will have been elected, and there will be some chance to get down to real serious affairs. Senator Page thinks there is an excellent chance for his bill finally to become law. After looking into the situation at both ends of the capitol, I think he is right. The pressure in its behalf is very strong. The agricultural college people are not so nearly unanimous as they were early in the session, in opposition to the Page-Wilson bill, and there is reason to believe that they will have still less heart for their prejudiced and unfair opposition by next winter. To me, it is inconceivable that they should assume their present attitude. Advocates of the broader legislation urge that, far from detracting from the importance of the agricultural colleges, this measure looks to establishing a great series of preparatory schools, inspiring boys and girls with the desire and equipping them with the basic education to take the college course.

Suppose we had in this country a long list of great colleges and universities—Harvard, Columbia, Yale, Cornell, Ann Arbor, Madison and all the rest—but no common schools or academies worth considering. It might be true that the universities would lose their educational monopoly if it were proposed to create a system of common schools, high schools and academies; but would that injure the universities? It seems to me that, by providing the facilities for educating a great body of young men and women up to the point of preparedness to enter the universities, it would strengthen them and add immensely to their capacity for good work.

That seems to be an exact parallel to the situation of the agricultural colleges. Their real purpose is to help disseminate intelligence; and they ought to welcome whatever instrumentality would strengthen them for that work.

Labor Organizations Favor the Measure

The attitude of organized labor, for example, seems to be much more liberal than that of the college people. There was a time when labor organizations looked with suspicion on every proposal of industrial and manual training in the schools. They foresaw that it might weaken the unions by turning out a lot of skilled mechanics who, not having been trained as apprentices under the union regulations, might prefer to remain outside the unions. But the big labor organizations have not persisted in such a view; the strong leaders of labor have recognized that to do so would place them in a most unfortunate position before the public. So it comes about that Samuel Gompers is a strong supporter of the Page-Wilson measure, the American Federation of Labor has endorsed it and, in general, organized labor has taken what seems to me—and to most friends of this sort of legislation—a vastly more enlightened attitude than that of the college people.

The House committee on agriculture is to have a hearing on the bill, which will probably have been ended before this letter is published. A great number of organizations, of most diversified character, are to be represented. Outside the agricultural college men, it must be understood, the university and college people generally favor such legislation.

Between now and next winter, when the real issue will doubtless be made up, a vast deal could be accomplished in favor of a right solution of this affair, if farmers would take interest enough to talk and write to their congressmen and senators on the subject. Get copies of both bills, and of the hearings and reports on them; read, study, decide for yourself which measure you favor; propose any amendments you believe would improve the legislation. Your representatives will be thankful for the help, and the manifestation of interest will do more than anything else to secure needed results.

Ma Miller's Rest

By Anne H. Woodruff

Illustrated by Edward L. Chase



"His settles it," and Ma Miller's black eyes danced, and her frail form fairly quivered with excitement as she handed the letter she had just received to her husband to read.

"I'm clean tuckered out, an' I've got to have a rest. The spring cleanin's about wore me to a shadder, an' I'm tired of everything. I want to have a change."

"Now with me," observed Pa Miller complacently, "Natur—the seasons—spring, summer, fall an' winter, comin' along one on top of t'other—seems 'most change enough fer anybody."

"Huh!" snapped Ma Miller impatiently. "I'd like to see somethin' besides fields—an' farms—an'—an'—farmers, for once in my life," glancing off from the broad veranda where they were sitting, across fields of waving wheat, beyond which the young corn was sending up stalks of vivid green, to where the pasture stretched away to the thick woods where silence and shade reigned undisturbed.

Ma Miller's eyes were filled with eager longing. She had had her girlish dreams when life with her was at its spring; and those dreams were not of farms, nor yet of—"farmers." There had been another, whose image—if now somewhat blurred and indistinct—still skulked a shadowy remembrance of unrealized hopes in the background of her mind. For this romantic reason, her life with Pa Miller—whom all who knew him pronounced "the kindest man that ever lived"—had failed to afford her that complete satisfaction which her soul craved.

"Martha West's been pesterin' me fer years to return some of her visits. She says she hates to come ag'in till I go to see her," Ma Miller was saying. "An' ever since she was married an' went to Chicago, I've wanted to go—if I *didn't* say nothin' about it. I sh'd *admire* to visit the city. I always thought I'd like to live there. Do yeh think yeh could manage without me fer a spell, Hiram?" the worn, wistful face uplifted to his with eager enquiry.

"Sure!" the sturdy farmer assured her, with hearty, if assumed, cheerfulness. "Hanner Simpson's as good help as we've ever had yit. If *she* don't know how to handle a passel of harvest-hands, I don't know where yeh'll find 'em. Hanner's a good, sensible, stiddy girl; an' her cookin's 'most as good as your'n, Ma. We'll git along all right; so don't you worry."

"Now, don't you come home till yeh git good and ready, Ma," were his parting words when he saw her safe on the train, cheerfully masking his own dismay at the prospect of loneliness before him, with a smile of such radiant cheerfulness as to deceive even Ma Miller herself—a person not easily hoodwinked.

"Don't let me see yeh back inside of a month at the very outside," he vociferated outside the car-window as the train pulled out.

It never once occurred to Ma Miller that this—the beginning of July—was a strange season of the year for her friend to invite her to make a visit, a time when all who could manage to do so were leaving the city for the country and summer resorts. She was so entranced with the thought of enjoying city sights and attractions that she lost sight of all else.

The weather had been pleasant so far, with showers enough to keep the crops growing. The country looked beautifully fresh and green from the car-window—an endless panorama of verdant loveliness to all who had the eye to see and the heart to enjoy. And when, after a long day's journey was drawing to a close, the outskirts of the vast metropolis were reached, Ma Miller's sharp eyes and alert senses took cognizance of all about her with keen interest.

"Lawsie!"—her one word to express every varied emotion—as the train drew into the station, and the passengers poured out of the cars, "what a sight of folks!"

Well it was for her that Mrs. West was on hand to take care of her, singling out the quietly-garbed country woman from the surging crowd.

"Lawsie!" and Ma Miller clutched the outstretched hand with a sigh of relief. "I'm that dizzy that I don't know where I'm at. Did a body ever see so many people, or hear such a noise? I'm 'most crazy."

"It was so good of you to want me to come, Sarah," she said, when they were seated in the car and rounding curves at a rate of speed which made her shudder.

"That's all right, Mary," Mrs. West—a big, strong, self-satisfied looking woman—made answer with careless complacency. "I said to Mr. West that a change would do you good, and me good too, just at this time. I was sure that you—bein' used to workin'—wouldn't mind helpin' me out a bit. You remember I told you that I have an eight-room flat. Five of the rooms are rented to students who want to visit the libraries. I've promised to give them their meals, too, just as soon as I could get someone to help me. It's lucky for me that you could come just now. We can go about some between times and have a good time when there's nothing special to do."

Ma Miller's face fell, though it was too dark for Mrs. West to see. They had left the car and were walking the five long blocks lying between the car-line and the flat—that haven of rest for which Ma Miller's soul had so craved. But this was not what she had counted upon. The prospect before her was not quite so alluring. Her first enthusiasm had lost some of its brightness.

"What a shame for you to have to fill up your house with strangers!" she exclaimed. "An' we thought your husband was doin' so well!"

"He is!" replied her friend emphatically. "He's rolling up money hand over fist. But a man never knows what a woman needs. I've got to have more spending-money than he allows me. And between you and me and the door-post (I've never mentioned it to you before, and I wouldn't to anyone else), Robert West



"His hysterical better half . . . had flung herself upon his broad breast"

isn't as liberal to his wife as he might be, considering the amount of money he makes. He's close—mean—stingy! And as long as he does not positively forbid it, I shall take boarders."

"Lawsie!" breathed Ma Miller, her mind in a whirl as she stumbled on beside her companion. Robert West close—mean—stingy! Robert West had been that *other*: that girlish ideal of all that was noble, manly, perfect, that secret idol treasured in her young heart, and never quite forgotten all through the long years. A good-looking young fellow he was in that long ago, with ambitions toward a mercantile life and a soul above-farming. He had married Ma Miller's most intimate girl friend, removing early in their wedded life to the city, where his native shrewdness, energy and natural bent for money-making wrought together for his success.

"Lawsie!" once more Ma Miller muttered, as she climbed the third flight of steps in the flat-building. The air was stuffy in the dingy hall, which seemed to have never been ventilated since it was a hall. Mr. West did not propose to waste his hard-earned cash in paying high rents in an expensive neighborhood. The long, narrow hall inside the flat, with the closely closed doors on either side, behind which the roomers had entrenched themselves, looked dreary enough. But the dining-room, which also served as a living-room, seemed cheerful and homelike. The kitchen was not large and was dark, as was also the one bedroom opening off it—the only bedroom left to the family. Its one window opened upon a court, and in consequence the room was stuffy and close.

"You'll have to sleep with me, Mary," Mrs. West informed her. "I hope you don't mind. Robert can sleep on the davenport in the dining-room. There he comes now," as the front door opened and closed with a slam.

"How d'ye do?—How's Hiram?—Supper 'most ready?" all in a breath, was the greeting Ma Miller received from the one she had not seen since they were both young people in a far-away country village. She looked at the man, who had flung himself into the one comfortable chair in the room and was already absorbed in the evening paper—thin, nearly bald, the lips, that in youth were firmly compressed, now shut together like the mouth of a trap, it's expression anything but pleasant. Mentally she contrasted his with the wholesome, ruddy countenance of the man at home, whom she had never quite appreciated, with silent but severe self-upbraiding. Hiram had always been the reverse of close—mean—stingy. She could believe anything now of this boorish person here before her, whose image she had treasured for years in her heart of hearts. A vision of Hiram's old-fashioned courtesy to his guests rose to her mind, with a stirring of pride in her sense of possession. *He* would never be rude to a woman, even if his clothes were not so fine and well-fitting.

If Ma Miller had needed a lesson in contentment, she was getting it now. Mrs. West evidently expected her company to work; and work she did—*hard*. The rooms had to be put in order every day, the beds made and whatever else was needed to be done. Once a week the flat had to be swept and dusted thoroughly and the floors washed. The rugs had to be taken to the back porch, and when not beaten—because of the nearness of the other flat-dwellers—shook and swept very carefully. And there was the cooking! Ma Miller—being a born cook, and from long practice made perfect—had to bear the brunt of that. The boarders loudly proclaimed their appreciation of her efforts, which was certainly a satisfaction. But the heat and the dish-washing—it was almost too much, even for her.

Ma Miller never dreamed of blaming anyone for working in order to save money, when it was necessary. She had always been a hard worker herself, and she was not unwilling to help her friend. But everything was so different from what she had expected.

"Lawsie!" was all she could find to utter when her friend proposed to her to take an outing in the park, one day when the work was not quite so pressing. "If yeh don't mind, I guess I'll just lie down an' take a little nap. I feel kind-a sleepy to-day."

To tell the truth, the park did not appeal to her as did the stores, with their bargain-counters, for Ma Miller was a thrifty soul and delighted in picking up useful trifles at reasonable rates. She had no lack of beautiful trees and flowers and green grass at home, but there were no big department-stores, with a distracting array of desirable articles "Marked down below cost," to allure and entertain. If only she could find the time to visit them!

And so it went day after day. When the work was done, Ma Miller was too weary to go out; and when she did go, she was too tired to take any interest.

The hot weather continued. A general drought all over the country sent the price of provisions soaring.

"Butter'n eggs so scarce an' high; milk'n cream in dribbles, an' vegetables an' fruit to match!" Ma Miller kept thinking. "It's costin' these folks 'most a fortun' to feed me. Oh! I wish I was to home! But I promised Hiram to stay, an' I will, if it kills me."

This last threatened to become true when the thermometer registered one hundred and one in the shade, and no cooling breezes relieved the tension. Mrs. West awoke one night to find her bedfellow babbling of green fields and running brooks, with pitiful appeals to "Hiram! Hiram! I want to go home! I want to go home!" Whereupon that wise lady—whose plans did not include a possible invalid on her hands—mailed a postal card to Hiram the first thing in the morning. It reached the farmhouse two days later; and it was a very anxious big man—with bronzed face and hands—who appeared shortly afterward at the door of the flat, after the front-door bell had sent forth an alarming and insistent clamor.

"There, there, now! Keep a stiff upper lip, Ma," the husky farmer implored of his hysterical better half, who had flung herself upon his broad breast in a burst of joyful tears. "There—there!" soothing her as if she were a child.

"I had a notion that yeh might be gittin' a little homesick by this time," he said. "Git yer duds together as quick as yeh kin, an' we'll jest streak it fer home."

When they were on the train speeding homeward, Ma Miller unburdened her soul.

"I *could* hev had a good time, if it hadn't been fer the boarders," she lamented.

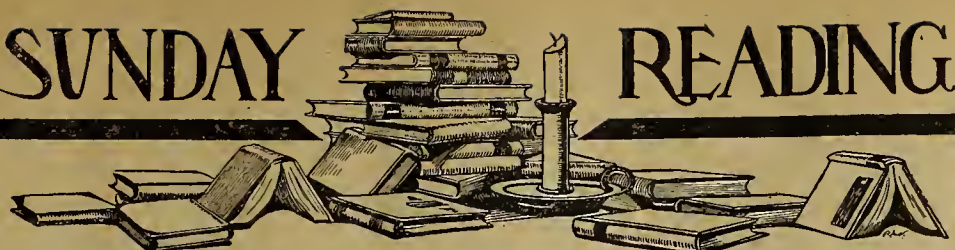
"Boarders!" shouted the angry farmer, to the wonderment of all in the car. "Great scott! I thought yeh went away to git a *rest*! If I'd a-known she was goin' to work yeh like a hoss, I'd hev never let yeh went a single step. Boarders, b' jiminy!"

"Home's the best place to rest in, after all. I've found that out," Ma Miller observed happily. Then, with fervent self-congratulation: "My! how glad I'll be to git there! But I'm not sorry I went, Hiram. Not one mite."

"Well, I be," declared Hiram stoutly. "An' I wonder, when I look at yeh, Ma—nothin' but skin an' bones—why you ain't sorry, too."

"I'm not sorry; I'm *glad*," reiterated Ma Miller stubbornly, while a pretty flush rose to the thin cheeks; "if it's only because now I kin see the difference there is betwixt some men an'—an'—an' *you*, Hiram."

SUNDAY READING



The Pilot in the Fog

By Eliot White



IT IS the third morning of unusually heavy December fog, and its blinding masses blow along the Hudson River between the New Jersey and New York City shores like smoke from some gigantic smolder of green wood.

The crowd on the fore deck of a ferry-boat in its dock at Jersey City wait impatiently for the delayed signal-bell from pilot-house to engine-room, to begin the hazardous trip to lower Manhattan.

At last the sharp clang is heard, and the clumsy craft dares to push its prow beyond the protection of its slip with its strong curved arms of driven piles. But now the passengers scarcely know whether to feel relief that their journey nearer their places of business has begun, or regret that the boat ever ventured out at all into the region of peril it is entering.

From the ends of the piers just left peal many fog-bells, made doubly loud by sounding-boards built behind them, and their slow, deep-toned strokes sound disagreeably like funeral tolling. "Come back again! Come back again-n-n!" they seem to call.

And from the midst of the vapor cloaking the bewildered river, there loom alarmingly on this side and then on that, the forms of other craft,—here an ocean-going steamer trying to find its way through this maze to the comparative safety of open sea, here a tug snorting angrily at the delays, and then, so close to the ferry-boat that its passengers could almost have recognized a face on the other's deck, a barge carrying freight cars across the channel, with men stationed on the roofs of the cars for lookouts in the murk.

The only living things on the river that can be heedless of the sullen veils that swathe the traffic are the seagulls, as they circle and swoop out of the obscurity over the boats and back into it again, as if mocking from their freedom the mist-imprisoned voyagers below.

The deafening clamor of the whistles is uninterrupted from every quarter, in tones from the deep baying of horns that shake the very water tossing ghostly below, to shrill neighings that might rather issue from a stampeding drove of wild horses. And all the time this din is penetrated by the ominous bells that now seem crying, "We warned you! We warn-n-need you!"

These thick layers of wintry vapor over wharves and boats, bridges, signals and rigging, are like a wash of plaster-of-paris across some orchestra-score, leaving the medley of instruments hooting and wailing in tumult of hopeless discord.

And now in mid-stream the ferry-boat slows almost to a halt, at the core of the threatening confusion and yet swathed so closely by the fog, that but for the uproar that swells from its depths the passengers might think themselves alone on a chartless ocean.

This whitish darkness is more fraught with danger than the blackest night, for that at least might be clear enough to show a signal lamp from afar, which this muffling reek would choke at a rod's distance. One realizes here that the gloom of a human soul, also, may as readily be blanched gray as lampless darkness, and the more desperate since it could not see a guiding light if it were kindled.

The passengers on the scarcely moving ferry-boat feel helpless as the merest babes, or sheep huddled thick on the deck, while their very breasts are shaken by the vibrations of the whistles and bells. Some of them wonder how the pilot feels now. Does he regret the venture? Is his face pale with anxiety, or with more dogged resolution? It must be one or the other. His is the strain of the general, who must not only banish his own fear but be the queller of flinching for all his troops, when the bullets shriek most menacingly and the shells burst nearest.

When at last welcome blurred letters on a pier looming from the fog show that the pilot has not lost his bearings, but has dexterously found his slip on the New York side, some of the passengers doubtless say to themselves, "Good luck!" But others do not so much esteem it "luck"; alertness, ability and seasoned courage, not unhelped by a mysterious guidance that the human worker feels beside his own skilled hand on steering-wheel or

engine throttle,—these seem to them better to account for the safe passage through such confusion and jeopardy.

And now the boat has scarcely fitted its blunt prow into the curved rim of the dock, and the pawls been thrown over to their ringing dance on the mooring-cogs, when the restless throng begins pouring from the deck along the dark passages to the street.

It seems ungrateful indeed for the liberated passengers to rush away like this without a word or a look of appreciation for the pilot. Why did not someone think to call for "Three cheers!" for him? It would possibly have taken the fancy of the crowd, and would have given him better zest and courage for all the rest of his difficult day. "At least," thinks one passenger, "I will try to catch his eye as I pass in sight of his window above."

But not even the top of the steersman's cap can now be seen at the opening of his cupola. He is probably at this moment sitting down for a nerve-quieting smoke of his pipe between trips, without the least suspicion that anyone thinks he has done a daring and able piece of work.

Must this always be the way, that the pilots, guides and burden-bearers of the world's immense activity and toil, shall be blamed when they err and fail, but receive no praise for their long records of courageous and efficient "every-day" successes?

Now and then the chance comes to each of us, to drop the ungrudging word of thanks to one who has stood for us at his post of responsibility and labor, in danger, weariness or other trial, that we might be helped along our way or delivered from some peril that we scarcely guessed.

Ah, stanch pilot in the fog, accept then at least the unspoken gratitude that springs to you from this dingy deck below! You have made some of your passengers, at least, realize how great a debt they owe you and your uncounted fellow workers, but few of whom they can ever meet to thank face to face, for the unfaltering service they are rendering day and night, to transport and feed, clothe, shelter and gladden humankind.

Wisdom at Work

By William J. Burtscher



WISDOM is the principal thing; therefore get wisdom."

If he who gets wisdom does not get with it the tact to do his work in an easier and better way than he has always done it, he still lacks the wisdom of putting his wisdom to work for him.

A lad in southern Indiana was engaged in raising ducks. At feeding-time his mother's chickens would show bad table manners and make it difficult for the ducklings to get a square meal. So the boy got wisdom and put it to work at once. He built a platform in the duck pond, on a level with the water. On this he scattered the feed for the ducks, and the ducks swam to the platform and there ate their meals unmolested—while the chickens stood on the bank and looked on.

Thus it is with the world and her two classes of people—those who are in the swim, and those who are not. Like the little boy, the world shows partiality to the swimmers, and makes it convenient for them to relish the good things they desire, while those who cannot swim are obliged to stand at a distance and look on.

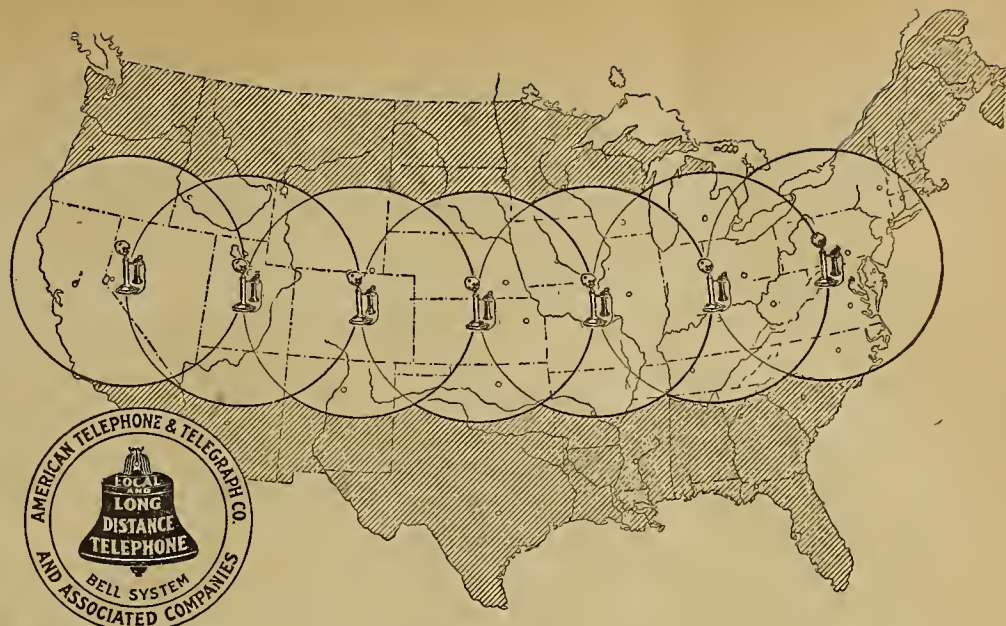
The chickens were not in the swim because they are not built that way, but people are not in the swim because they lack the gumption to put their wisdom to work. If there had been such a word as gumption in the time of Solomon, I am sure that he would have said, "Gumption is the principal thing; therefore get gumption." The boy had gumption.

Every man has it in him to become an expert at something, if he begin early enough, and keep at it earnestly enough. He may have dislikes and weaknesses. Practice will make him like what he once disliked, and will make his weakest point his strongest, for he shall practice strength into it. Practice is wisdom at work. Such a man will be what the world calls in the swim, and he shall have all the good things that he desires.

Get wisdom, therefore, and put it to work!

Reprove your boy when he needs it; but if his companions should happen to be with him at the time, better do it gently, or wait until they are gone.

The man who sows wild oats always pays too much for the seed. W. J. B.



The Chain of Communication

EACH Bell Telephone is the center of the system. This system may be any size or any shape, with lines radiating from any subscriber's telephone, like the spokes of a wheel, to the limits of the subscriber's requirements, whether ten miles or a thousand.

Somewhere on the edge of this subscriber's radius is another who requires a radius of lines stretching still further away. On the edge of this second subscriber's radius is still a third, whose requirements mean a further extension of the lines, and so on.

This endless chain of systems may be illustrated by a series of overlapping circles. Each additional subscriber becomes a new

center with an extended radius of communication, reaching other subscribers.

However small the radius, the step-by-step extension from neighbor to neighbor must continue across the continent without a stopping place, until the requirements of every individual have been met.

There can be no limit to the extension of telephone lines until the whole country is covered. There can be no limit to the system of which each Bell telephone is the center, up to the greatest distance that talk can be carried.

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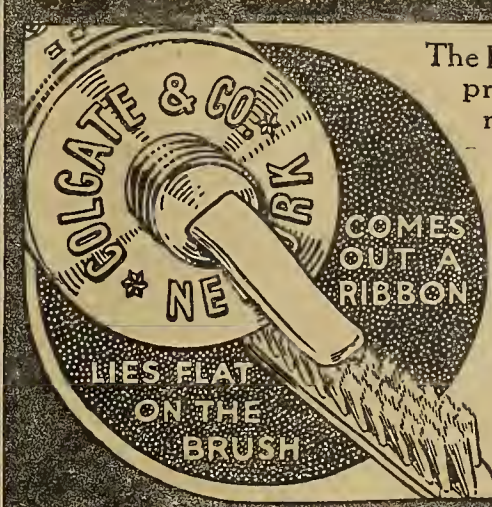
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No. 831—Baby's Outfit (including 17 patterns). Cut in one size. Price of the set, 30 cents



No. 1926—Yoke Wrapper



No. 1925—Bishop Dress

No. 1926—Yoke Wrapper
Pattern cut in one size only. Quantity of material required, three and one-half yards of twenty-seven-inch material, or two and one-fourth yards of thirty-six-inch material. The yoke, finished without an extra collar, and the loose-flowing sleeves make it an easy one to slip on and off. Price of pattern, ten cents

No. 1925—Bishop Dress
Pattern cut in one size only. Quantity of material required, four and one-half yards of twenty-two-inch material, or two and one-fourth yards of thirty-six-inch material. For the tiny baby's every-day dresses, no design could be more satisfactory than this one. It does away with arm-holes and fitted sleeves. Price of pattern, ten cents



No. 1927—Plain Slip

No. 1927—Plain Slip
Pattern cut in one size only. Quantity of material required, four and three-fourths yards of twenty-two-inch material, or two and one-half yards of thirty-six-inch material. This garment will be convenient to slip on while baby is sleeping. It should be kept very simple, with but a bit of lace for trimming. The price of this pattern, ten cents

The young mother who does not know much about sewing, but who wants to make her own little baby's clothes, will find Woman's Home Companion patterns just the right sort to use when making the little garments. They cost ten cents, each, and may be ordered from Pattern Department, Farm and Fireside, 381 Fourth Avenue, New York; Pattern Department, Farm and Fireside, Springfield, Ohio, and Pattern Department, Farm and Fireside, 1538 California Street, Denver, Colorado.



No. 1924—Cloak with Cape

Pattern cut in one size only. Quantity of material required, five and one-eighth yards of twenty-two-inch material, or two and three-fourths yards of thirty-six-inch material. This attractive baby's coat may be made of fine corded silk and trimmed with Valenciennes lace edging, or it may be of cashmere, with the ruffles of the same material embroidered in some dainty design. Price of pattern, ten cents



No. 1928—Princesse Robe

Pattern cut in one size only. Quantity of material required, four and three-fourths yards of twenty-two-inch material, or two and one-half yards of thirty-six-inch material. The princesse robe is always a welcome addition to the baby's outfit. This one can be made especially attractive if the panel is embroidered in a simple but effective design and trimmed with lace. Price of pattern, ten cents

The Home Interests' Club

The Present-Day Problem of Married Women and Money

By Margaret E. Sangster

THE topic for discussion when the Club met with Mrs. Reynolds in May was one that deeply interested the mothers of growing children. The question of teaching children the right use of money is a vital one, and the responsibility of the mother in this direction begins with the moment when the little hand tightly holds a penny within its grasp, and the little head begins to plan how that penny shall be spent. Most of us are well aware that there is real pleasure in spending money, and some of us are of the opinion that there is a greater enjoyment in saving it. To save money, for the majority, implies thoughtfulness, choice between at least two courses and the exercise of self-denial. The word miser describes the person who hoards for the sake of hoarding, and the word miserable comes from the same Latin derivation. To hoard that one may accumulate with no object beyond that of piling up coins and hiding them away, is to emulate the folly of the crow. What earthly good can be conserved by heaping money together or putting it in the bank at interest when the aim is only to have more and more and not to distribute wealth so that it may serve the needs of the family or the community?

The mothers who met with Mrs. Reynolds were not disposed to excuse the miser or apologize for the spendthrift. They desired to ascertain how they might best develop in their children a right appreciation of values, bring them up with high ideals of honesty and honor, and most successfully cultivate the grace of generosity. In the parable of our Lord in reference to stewardship, the man was praised who said, "Lord, thy pound hath gained ten pounds," and the reward was that this man should be made ruler over ten cities.

Individual Tendencies

The first speaker of the afternoon was Mrs. Albright. "I think," she said, "that we ought carefully to watch the tendencies of our children and train them accordingly. In the same household we find opposites in character. My John, for example, has had holes in his pocket ever since pockets were put in his trousers. A penny burns a hole the instant it gets into his possession, and he is not contented until he can part with it for a stick of candy at the grocer's. His brother Fred has an instinct for trading. His marbles are exchanged to his profit. He likes to sell things, and I am often much disturbed because his is the better bargain. My husband says that Fred has in him the making of a financier. I asked Fred one day what he meant to do when he became a man. 'I shall buy everything as cheap as I can, Mother, and then sell it for the largest profit I can secure.' I am doing all that I can to turn Fred's ideas into a less selfish channel, but he had a money-making grandfather and inherits a disposition to bargain. My little Susie gives everything away for the pure pleasure of bestowal. Her dolls, picture-books and bonbons are scattered about lavishly among her little friends. The other day her Aunt Kate gave her a dime. Susie kept that dime just one hour. A poor man came to the door saying that he was hungry and asking for a meal. While I was in the pantry looking for bread and meat, Susie slipped her silver coin into his hand. Pardon my speaking so frankly about my own children. They are the ones I know most intimately. I have now decided to pay each child a certain sum for restraining his or her inclination to do the wrong thing. I shall let them earn their wages, and I mean to keep a record of my success or failure in the attempt."

The Earnings of Children

Mrs. Elderbury, addressing the Chair, said: "Is there not a little danger that we may produce mental confusion in the children if we pay them to do what they ought to do from conscientious motives without receiving a reward other than that of the mother's word of praise? Mrs. Albright has the right principle in view. Bringing up boys and girls is a very serious matter, and she has indicated three distinct types. For my part, I am always glad when I meet in a child a strong characteristic. I dread weakness far more than strength. There are duties that children should perform because they belong to home life. A growing boy who has the time, may very properly earn money outside of his home by services for other people. He may run on errands, build fires in winter and pick fruit in summer, and receive payment as a wage-earner, and if he can in this way save something to buy his clothing or lay aside for future use, this develops a really strong character in him. He ought not to be paid for the chores he does at home. The little girl has not so much chance to earn money outside her home as her brother, yet I would meet her problem by the method of a definite allowance. What she does by way of washing dishes, hemming towels and dusting living-rooms belongs to her province of mother's helper. She may, it is true, receive an extra sum occasionally when she gives up a picnic or a visit and stays at home to take care of the baby. Ah, me!" said Mrs. Elderbury, sitting down, "when one comes to the end of the day and looks back, one sees how she made mistakes. You mothers who are young, may save yourselves from some of the blunders your mothers made."

The Amount of an Allowance

"What particular benefit, may I ask, accrues to a child from possessing an allowance?" The inquiry was made by a friend of Mrs. Reynolds, who was taking notes of the discussion.

The minister's wife filled the brief pause that followed the question. She said, "An allowance in a child's possession stands for an income, or, if you please, it represents capital. Receiving a stipulated sum every Saturday night or Monday morning, a boy or girl is to the extent of the allowance rendered independent. There is no running to father or mother for Sunday-school money, for little treats, for alms-giving like Susie's, or bargaining like Fred's, or spending like Jack's. The child knows precisely on what to count and should be made to understand that the allowance covers the usual incidental expenses of the week. With the older girls and boys an allowance may cover car-fare, pads and pencils, drawing-paper, hair-ribbons and the ordinary articles that need to be replaced from time to time. When a girl is fourteen or fifteen years old, her allowance may be made large enough to pay for her gloves and shoes and perhaps for her entire outfit. A girl of fifteen is old enough to learn the art of sensible shopping, and there are mothers who at this age throw the responsibility of carrying all their personal expenses upon their daughters. Boys, too, may be equally trained in looking out for themselves when they are in

the teens. The amount of an allowance depends upon the style of home living, the means of the parents and, of course, upon the possession of ready money and cash in hand by the heads of the house. An exact account should be insisted upon and a balance-sheet shown to and audited by the father at the end of every month. The reckless child who spends the entire allowance, whatever it is, should pay the penalty of squandering by having nothing at all until the next pay-day. The advantages, as anyone can see, are in forming the habit of economy and trustworthiness in children, and in teaching them self-discipline. My husband and I believe in giving the tenth of the income to the Lord's work, in which charity is included. If children are taught to put by a portion of their money every week for the needs of others, the Sunday-school and missionary collections, they will grow up to be generous and conscientious givers. This habit cannot be formed too early in life."

Fines for Misdemeanors

"We have found it efficacious," said Mrs. Mallory, "to institute a system of fines for misdemeanors. Whether the child's allowance is a penny a day, or less, or more, we have it understood in our house that naughtiness is punishable by fine, as well as by imprisonment. I sometimes send Lucy or George to bed in the daytime for disobedience, or oblige William to spend an entire day in his room if he has offended his father or myself by wilful neglect of duty or an impertinent answer. I was myself very strictly brought up by New England parents, who taught their children that a penalty followed wrong-doing. I do not want you all to think that I am continually punishing the children, for I try to be entirely just, and I always pardon a transgressor who is penitent. I have found that the exaction of a fine is a great incentive to good behavior, and the children's father agrees with me. We always pull together. If we criticize one another, we never do it in the hearing of the children. Not long ago Lucy had a headache and could not come down to breakfast. I arranged her tray and asked her brother George to carry it up-stairs. Instead of taking it, as I expected, he said, crossly, hunching up his shoulders and pushing out his under lip, 'I don't see why I have to wait on Lucy. Let Will do it. You are always sending me somewhere when you let him sit still.' I stared in amazement, George being the amiable one of my two boys, but his father saved me the trouble of speaking. 'Give me the tray,' he said. 'I will carry it to Lucy. George, you are fined three cents for your disobliging behavior, and your disagreeable manner of speaking to your mother.' As George's allowance is seven cents a week, the loss of three was a sufficiently severe punishment."

The principal of the high school added her approval in emphatic terms to Mrs. Mallory's method. "The difficulty with most mothers of the day," she said, "is that they are so very compassionate that they condone wrong acts on the part of their children much too readily. There is a student in one of my classes who might do fine work if her mother were not constantly excusing her for negligence. The girl herself is very winning, and when she has appeared unprepared in a recitation or handed in a slovenly theme and is detained after school, she has an air so sweet and a smile so appealing that the teacher's temptation is to let her off before she has performed her duty satisfactorily. If this girl were on an allowance, and if her mother had enough iron in her temperament and enough will to enforce a penalty, she might easily be trained by the loss of her income to be more thorough in her school work."

"I see," said Mrs. Elderbury, "that the wisdom of one whom we know to be an expert in pedagogy approves of fines for misdemeanors. May I ask whether in the view of the teacher a plea for forgiveness should never be accepted?"

"Never, dear Mrs. Elderbury, is a word with a long meaning. I certainly believe in suspending sentence and pardoning youthful wrong-doers when they are actually sorry. There are some who slip through the net and do not pay for their sins of omission or commission as they ought, because they have found out that explaining their regret or saying that they did not think reinstates them at once. I believe in loving the little sinner too wisely always to overlook the sin."

The Swiftly Flying Years

Mrs. Madison, who had listened attentively to all that had been said, gave it as her opinion that many mothers, although desirous to furnish their children with a little cash capital every week, could not do so, because they had so little in hand themselves that they must find some other way of teaching their children financial responsibility. "You cannot make bricks without straw," she said, "and the wife who never has a cent in her pocketbook should secure her own allowance before one is given to the children. Homes are often very pleasant and, on the whole, quite comfortable, when little currency is in the man's purse, and when it must be plain living and high thinking all along the line. We may teach our children in the fast-flying years that every home is in its way a business firm. In the home, everybody, from father and mother to the youngest child, has a definite share. I have been impressed to-day," she continued, "by the extreme seriousness of the different speakers. I grant that our topic is very serious. Nevertheless, let me put in a plea for fun. Let me put in another plea for honor. I was once making a call in a city intersected by trolley-cars. A boy of twelve ran in and interrupted my talk with his mother by showing her a bad quarter-dollar that he had somewhere taken in change. 'Get rid of it, my son,' she said, 'as soon as you can.' If by 'getting rid of it' she had meant him to throw it in the fire, the only honorable way to dispose of counterfeit coin, if one happen to take it, there would have been nothing wrong, but this was not her meaning, as I presently discovered. Before my call was over the lad returned and triumphantly showed his mother two good dimes and a nickel. 'How did you manage?' she said.

"The cars were blocked at the corner," he replied, "and I jumped on the back platform of one and asked the conductor to give me change. He was in a hurry and never glanced at the quarter, so I am not a loser."

"I felt that this boy, through his mother's strange dishonesty, was a loser for life. He had learned a lesson in theft. He had passed on to the conductor a bad piece of money. His sense of right had been trampled upon and he was on the way to become a wholesale highway robber in due time. Friends, let us remember that our children's years are fast rushing them on to maturity."

The time was exhausted and the Club adjourned.

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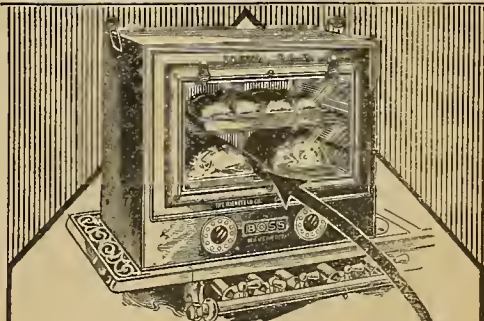
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Our Young Folks' Department

Conducted By Cousin Sally



The Children's Vegetable-Garden

By Samuel Armstrong Hamilton



IN THIS article, children, I am going to tell you how to have a vegetable-garden for your very own and grow some of the same kinds of vegetables which are grown in the gardens of the grown-ups. Of course, father will have your little plot dug for you, but I am sure that you are large and strong enough to rake it, especially if the digger chops it up well with the spade as he goes along. It is not hard to rake newly dug soil. It first should be gone over with the rake with a "chopping" motion, and when the soil is as fine as you can make it, it is ready to be leveled. To assist you to do this, tie the two ends of a twine to stakes, and drive them into the ground, and stretch so that the twine will be just the height of the top of the soil when raked. Rake to this level, moving the stakes and twine as often as may be necessary until the whole bed is level, smooth, and fine as sand. A bed thus prepared should grow a fine crop.

Take a look, children, at the diagram which accompanies this article, and make a study of the vegetables named thereon. You will note that all are those which can be grown from seed, excepting the potatoes, which are grown from tubers, which really are potato-seed. Some of these will need to be planted earlier than others, such as the onions, dwarf-peas, spinach and lettuce. The others, Lima beans, squash, wax beans, carrots, cucumbers and potatoes, dare not be planted until all danger of a late frost is past.

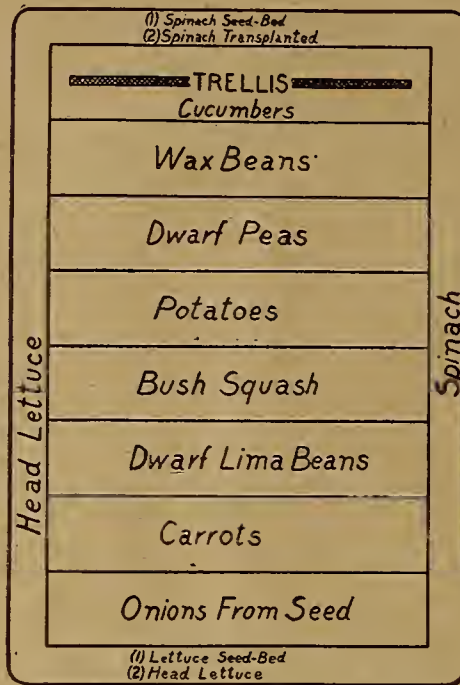
As soon as the ground is in condition to work, and has been made ready as above outlined, prepare to put in the lettuce-seed. This is hardy, and a late frost will not hurt it when grown from seed outdoors. Use one end of the border for a seed-bed, as you will desire to grow plants for head-lettuce, doing the same with spinach at the other end for plants for that crop. It is best to sow the seeds in little furrows called "drills," which can be made by laying a board with a straight-edge across the narrow way of the seed-bed and with a pointed stick drawing shallow lines, four inches apart.

This applies to both lettuce and spinach, and in these drills the seeds should be dropped at the rate of three or four to the inch, to insure a good stand of plants. But when they get an inch above ground, they should be thinned out to two inches apart in the drill, and when they touch, they are ready to be thinned out further to eight inches apart, using some of the ones removed for salad. You had better use the small-growing head-lettuce, called "Tom Thumb," which can be had of any seedsman. Some of the removed plants, also, should be used to plant the edgings along the long sides of the plot, which will give you good space for these two vegetables.

The drills for the peas should be made two inches deep, which you can do, and get them straight, by again using the two stakes and twine. Set the stakes so that the twine will be even with the top of the soil and four inches from the side of the pea-bed. With the back of the rake make a drill along the twine. Move the twine another four inches and make another drill, and so on, until all are made. In these drills drop the pea-seeds two inches apart (we always use plenty of seeds and remove the surplus), and with the back of the rake push the soil over them and level smooth. Then walk along on top of the drills on the soles of the feet—keeping the heels up—so there will be a good contact between the soil and seeds. We do this always with pea and bean seeds, in order to be sure of good germination.

When safe to plant the wax, and Lima, beans, do so by using the "hill" system. Instead of planting them in drills, make a small cut in the top of the soil with a hoe, lifting out a portion two inches deep and the breadth of the hoe. These cuts should be made a foot apart, and six bean-seeds be laid therein at equal distances, and covered with the soil taken out, and trod firm with the foot just where the seeds are. When these bean-plants get above ground and make their third leaf, thin out to three to a hill. Sometimes there will be but one or two plants which come up, although six seeds were planted, owing to poor seed. In this case, as soon as the vacancy is noted, soak some seeds overnight, and plant them the next morning where the missing ones should have been, and they will likely replace them.

The squash-seeds are planted in a different way. With the hoe make little mounds six inches high and as broad on top. With the two first fingers of the right hand make six shallow holes two inches deep, and in the bottom of each stick a squash-seed, on its edge, with the sharp point down. Carefully fill in the soil about them, and press firmly with the foot. When they have gotten four inches high, take out three, and when they are safely past the striped bugs, remove two more, letting the best one remain for bearing. This, children, is almost like school, is it not? Watching



Plan for Our Vegetable-Garden

for the plants to appear, counting how many come up and removing the surplus ones, and other regular work with them? And it is, too! The School of Outdoors, in which all children should study.

The potatoes should be planted when the soil is warm. Watch until you see people setting out their flower-plants in the summer beds, and it will then be time to plant the potatoes. It can be done sooner, but if there comes an early warm spell of weather, followed by a cold rain, cloudy weather and clearing-off during the night, the little potato-plants are likely to get frozen and the crop be damaged. The potatoes should be cut into quarters, in such a way that there are one or more "eyes" (buds) in each. Make holes three inches deep with the hoe, and drop one piece of potato in each, with the cut side down, and cover. Do not tread these. The holes should be eight inches apart. It will make a better crop if a larger hole is made, say a foot across and six inches deep. Put a handful of manure in. Cover with several inches of soil, and lay the potato as told above, and cover.

The carrots are planted the same as the onions, but are thinned out to four inches apart when two inches high.

The last in the plot is the cucumber, for which there may be a trellis erected by driving stakes in far enough to hold them securely, allowing them three feet out of the ground. One-by-one-inch lath can be nailed, or tied, across these, on which to train the cucumber-vines. Also, one lath along the top. Plant the cucumber-seeds the same as told to do for the squash.

In each case after the seeds have been planted, stick small stakes, the size of lead-pencils, at the end of each row of drills, as markers, to tell the very young plants from weeds, which may come up before the vegetables. If you are not familiar with the appearance of the

vegetable-plants, you will know them by the straight row of one kind growing between the stakes. Always water the rows after planting, doing it softly so as not to wash out the seeds. The first weeds should be pulled out by hand when an inch tall, doing it thoroughly, and by the time the second crop comes to that size, the vegetable-plants will be large enough to cultivate with the hoe, for which use one of the small ones known as an "onion hoe," which father can get for you at any seed or hardware store, and "trimming" around the plants by pulling out with the fingers any not reached with the hoe. The success of the garden will depend very largely on your keeping down the weeds and hoeing it as soon after every rain as the soil can be worked. Be careful, thorough and persistent, and you will succeed. Pick all vegetables as soon as fully ripe. In hot, dry weather, water the garden as often as may be needed. Study the diagram carefully, and it will help you.

Cousin Sally's Letter

DEAR COUSINS—
I want to have you get me one thousand new members for our Club by the first of July! I am getting such lots of new members that I am going to offer a little prize for the girls and boys who get new members.

Our rules are very easy to keep. Each girl or boy joining the Club must take FARM AND FIRESIDE or must be living in a home where FARM AND FIRESIDE is a bi-weekly visitor. You see no one can belong who does not read about the various contests, and the letters to Club members only. The only other rule is that each girl or boy joining must send five cents for the Club button and a copy of the rules.

And that brings up another thought. I often receive letters from girls and boys wishing to enter our contests, saying that they are not members of our Club. You will understand that we are not selfish when we ask that only Club members send in answers to our contests. We have a limited number of prizes, and it is only fair and just that our members have the right to earn these prizes. But we are very glad to receive applications for membership from any girl or boy under seventeen years of age. And, as a payment of five cents makes a girl or boy a life member, I do not think that we are asking too much.

There is a question that a number of cousins have asked me and which I want to answer. Although we do not admit any new members who are older than seventeen, yet no one is ever asked to resign from the Cousin Sally Club because he or she is over seventeen. Once a member, always a member! Of course, as you get older you will not take part in the contests, because you will want to leave that field open to the younger cousins. But we welcome letters from our cousins at all times and hope no one will ever grow too old to be a member of the Cousin Sally Club.

Now for our idea of a thousand new cousins by July 1, 1912!

Any boy or girl in whose home FARM AND FIRESIDE is taken is eligible for the Cousin Sally Club. Every time you get a new member send in his name and address and the five cents for the Club button and set of rules. If the new member is a new subscriber, send the money for the subscription with the name and address. Be sure to write very carefully and well. I intend giving a first prize to the cousin sending in the most names, and five prizes to the next five highest numbers of cousins brought into our Club. And everyone sending in even one new name will receive five pretty post-cards as a message of thanks and love from Cousin Sally.

Now, girls and boys, get ready! I know you can do it! You have the whole big United States and Canada and Mexico to draw from. There are thousands and thousands anxious to join us if only they knew about us.

Here are some of the things we do! We have twelve contests every year, one each month, with prizes for girls and boys. We have a post-card exchange, and girls and boys who live miles from town are making friends and writing to cousins in all parts of the country. We are talking over ways of making pin-money for boys and girls. We hope to hear from our tomato, corn, poultry and garden clubs next fall. We publish plans and ideas for these things on our page. We are all the time writing to each other, asking for new plans and ideas. Besides all this, we have a fine page every two weeks on which, besides all this good reading, we have stories, poems, pictures, riddles and our Bulletin Board. Isn't that a list of good things?

Here's my wish for the best of success!
Affectionately yours,

Cousin Sally

Our Bulletin Board

How many of my cousins are Boy Scouts? I have one enthusiastic cousin in Littleton, Colorado, named William Franklin Ford, who is one of the Boy Scout cousins. He tells me that he has named his branch of the Boy Scouts the "Cousin Sally Club Patrol." And they have a yell. Do you want to hear it? Here it is:

"Boy Scouts of America, Rah! Rah! Rah! Littleton C. S. C. Littleton Sis, Boom, Rah!"

Cousin William says that it is rather rough when they all do it together, but as yells are intended to make a noise, I am probably right in thinking that this is a very good kind of a yell.

* * *

Maude and Jessie Cubitt of Prescott, Wisconsin, write that one of the pupils in their school took FARM AND FIRESIDE to school on the last afternoon before the spring vacation, and that they read the young people's story on Our Page to the scholars. Isn't someone else going to try this, too?

* * *

Will Cousin Pearl Myers please send her address to Cousin Sally? She has sent in her five cents for the button and the rules, but there was no address on her letter. She says that she is just seven years old. We don't want to lose any dear little cousin of this age, and we hope that she and her address will be found by means of this notice.

* * *

Violet Steidtmann of Merrimack, Wisconsin, has written me a very interesting story of her visit to the new capitol building and the museum at Madison, Wisconsin.

* * *

Newberne Patterson of Fayette, Alabama, is going to try to raise one hundred bushels of corn on an acre of land this year. Are you a member of the corn club in your vicinity?

* * *

Cousin Bessie Chamberlain of Terryville, Connecticut, writes that she is studying about birds. She hung out meat and put bread-crumbs on the pear-tree for them in the winter, and now she is going to coax them in other ways to visit her. You know the wise farmer has birds a-plenty visiting him all summer. Are you encouraging the birds?

The Third-Reader Class

A Page of Lessons for Beginners in Agriculture

"Written So You Can Understand It"



The fairies go into the mixing-bowl

The Little Girls' Class

An Introduction to the Food Fairies

By Jennie Roberts

DEAR GIRLS: You have never heard from me before, and I do not know you as yet, but the editor says that we may all come to the Fireside part of this paper for a good visit every two weeks and have a little girls' class all by ourselves.

When we were littler girls, we all played dolls and house and school. Perhaps some of us like to play with dolls yet. I am a woman now, but I still have my old doll. Just the other day I brushed her dress and made up her bed, but I don't pick her up often now, so she gets dusty. But we don't care so much for dolls any more, and articles like grown-up people have in the rest of the paper are so dry and uninteresting that we don't care for them in our class either. Suppose we try having a domestic science class.

Do you all know what domestic science means? Those of you who have big sisters away at domestic science schools,

For the Young Agriculturist to Read, Write and Remember

By M. G. Rambo

A handful of "tries" is worth a wagon-load of wishes.

Cheer lightens the burden of chores.

There is no soap that will wash out the soil of dirty thoughts.

Being neighborly with the birds is better than shooting them.

One can never climb up on a high temper.

Never play jokes on a colt, for it has no sense of humor.

The shirker tries to favor himself, but he cheats himself out of favor with others.

If tempted to say an angry word, count ten, and then keep it to yourself.

A lazy person seldom sings about his work.

You may not be able to tell what the wren is saying when it sings, but you may be sure that it is not gossiping about its neighbors.

The fruit of idleness never wins any prizes at the fair.

A holiday is worth the most to one who makes good use of his work-days.

give us strength to play or work, and, three, make us warm. And there are three kinds of food to do this.

Oh, I tell you what let's do! Let's pretend there are three kinds of little fairies that live in the food and do these things for us: The first kind are the Protein Fairies, the second kind are the Carbohydrate Fairies, the third kind are the Fat Fairies. Carbohydrate is a pretty long name for you to remember, but it isn't any longer than the names of some of the little girls and boys we know, so we shall remember the Carbohydrate Fairies real easily after we get acquainted with them. Say it slowly now, Car-bō-hy-drāte.

Now, the Protein Fairies are the ones that make us grow, the Carbohydrate Fairies give us strength to play and work, and the Fat Fairies make us warm.

The Protein Fairies are little folks, and there aren't so very many of them, but they are very quick and good and busy.

Now, the Carbohydrate Fairies—the ones that give us strength to play and work—are jolly little folks, and there are just lots of them, lots more than there are of other kinds of food fairies. They are good, kind fairies, too, and help the Fat Fairies a lot in making us warm, but they just don't seem to know how to help the Protein Fairies make us grow.

Of course, the Fat Fairies are the little roly-poly fat ones that make us warm, but they are happy little youngsters too, so like to help the Carbohydrate Fairies give us strength to play.

There are lots of other food fairies: the Water Fairies, the Salt Fairies, the "Taste-Good" Fairies and, oh, lots of others, but we can't very well get acquainted with them just yet.

Food does three things for us, but we are going to pretend that it is three kinds of food fairies that do these things for us.

1. The Protein Fairies, that make us grow and that help the other fairies all they can.

2. The Carbohydrate Fairies, that give us strength and help the Fat Fairies keep us warm.

3. The Fat Fairies, that keep us warm.



One of the fat fairies



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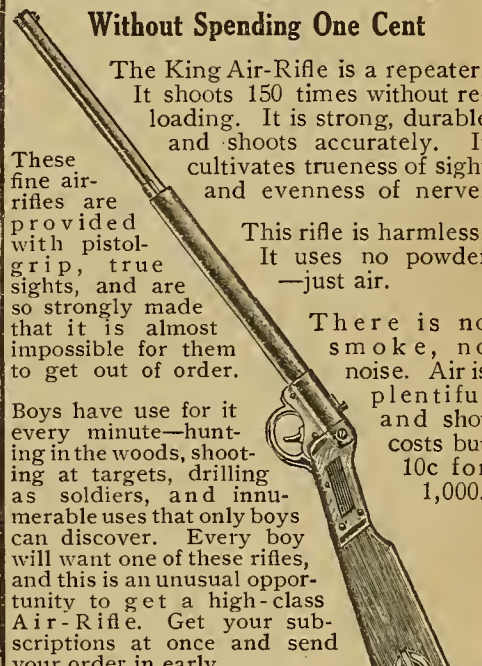
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Stewart Hartshorn

The Gift Club's Mail-Bag

By Jean West, Secretary

A BIG, full, overflowing pouch of mail from my Gift Club girls has just come in, and I'm so eager to get at it and read the jolly letters that you have written me.

Let's pretend that you are here with me sitting in a big comfortable chair beside my desk. We'll look at some of the letters together. Here's the first:

DEAR MISS WEST:

I cannot begin to tell you how glad I am that I joined The Gift Club! It's been one never-ending blessing to me. I don't mean the gifts alone, fine as they are. Your friendly letters and help have been an inspiration to me to do a great many things that once seemed impossible. It's great to be in such close touch with other girls. Thank you very much for the Embroidery Outfit which I received. It's so nice. F. L. T., Missouri.

And here's another:

I received all your lovely presents: the beautiful painting, stationery, and last and best of all, the lovely gold locket and chain. I am very much pleased with them all. Accept my hearty thanks! MABEL B., Wisconsin.

Isn't it fun to know that our Club girls so heartily appreciate the gifts that they receive?

The beautiful damask napkins just arrived, and to say I'm delighted does not half express it. Really, I had no idea the napkins could be so lovely, for I did almost nothing to earn them. I've made up my mind what I want next—a table-cloth to match them. I also received the beautiful picture and was delighted with it. META M., Virginia.

The picture is a lovely thing, and I don't wonder that Meta was delighted with it. It is reproduction of a beautiful Venetian scene, full of light and color and charm. You imagine that you are right there in Italy when you gaze at this picture. Every member of The Gift Club is presented with this exquisite painting just as soon as she becomes a member of the Club. Now do read this letter with me!

I received the toilet-set all O. K., and also the writing paper, as you will see. Think they are just lovely. I will certainly keep on with the Club work. ALICE M. J., Illinois.

You see, they are all so delighted to be members of The Gift Club, and I don't wonder, do you?

I received my beautiful stencil outfit to-day. I thought it the most beautiful thing I ever saw, and, besides, I did not have to pay a cent for it. I think the Club has a good name, for it certainly is a Gift Club. I am going to get a locket and chain in a short time. MABEL F., Ohio.

And I could show you dozens and dozens of letters just as interesting and just as enthusiastic, but there isn't space. I want to tell the girls who are reading this talk for the first time a little about the aims and purposes of The Gift Club.

The Gift Club was organized almost a year ago for the purpose of bringing our FARM AND FIRESIDE girls more closely together and to help them to earn for themselves the many little luxuries and dainty things that they cannot afford to buy.

Of course, it is necessary for our Club girls to do a little bit of work in order to get all these lovely things—silverware, jewelry, pictures, leather hand-bags, Irish lace coat-sets, etc. But the work is delightfully easy and simple. Any girl, after the least bit of training, will be able to do our Club's work most successfully. Do let me teach you. I shall be only too happy to do everything in my power to put you in the way of earning these gifts for yourself. Of course, these gifts would be lovely, anyhow, but I know you'll think this way of getting them is just the loveliest idea. And it's so easy!

That's one of the secrets—the easy way to get all those things you've wanted for so long.

Remember that it won't cost you a penny to join The Gift Club, and there are no dues or expenses of any kind. The benefits are all yours. I suppose that sounds very mysterious. But just wait until you receive my reply to your inquiry, then you will understand all about it and just how we are able to make such splendid offers. Write me to-day and let me tell you all our secrets.

Jean West

Secretary, The Gift Club, FARM AND FIRESIDE, Springfield, Ohio.

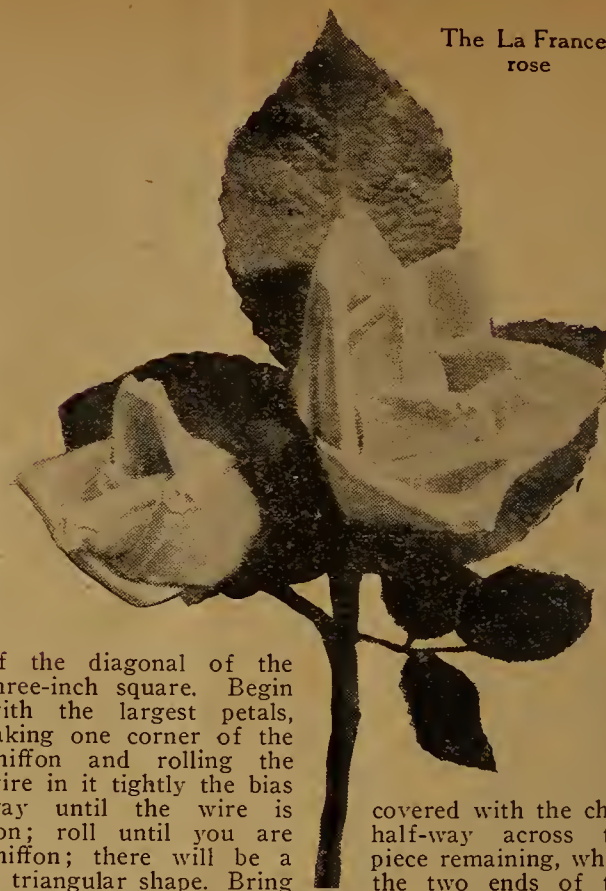
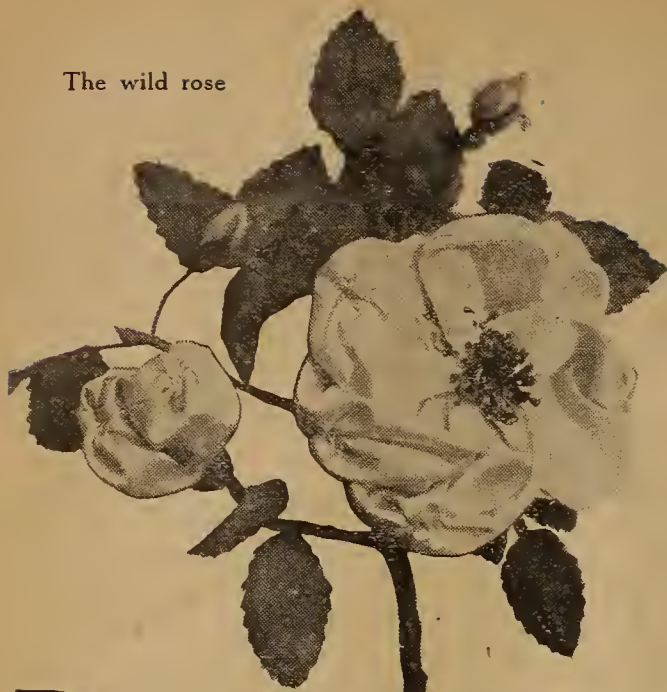
Artificial Flowers

The New Fancy Work

By Georgiana C. Davis

The La France rose

The wild rose



EDITOR'S NOTE—This article is written by a young woman who not only makes these roses, but who sells them and finds the sale of them profitable. She lives in a town in which there are a number of hotels frequented by tourists. This statement is made in the hope that it may help others to try the same sort of thing in their own nearest town or city. Miss Davis took orders and had but few roses made up. She made flowers to match hats, dresses and costumes.

The recent craze for these pretty ornaments may prove a boon to skilful-fingered makers of fancy work.

ROSEs that vie with those of French manufacture may be made at home by anyone with even moderately skilled fingers. The roses illustrated in pale-pink satin ribbon. But any desired color or combination of colors may be used.

For the La France rose and bud, 2 1/4 yards of pale-pink satin ribbon, two inches wide, are needed. That used in the rose illustrated was No. 16. A spool of green covered wire, a spool of pink sewing-silk and some rose-leaves taken from a discarded bunch of artificial flowers complete the needed materials for making the spray.

Take a piece of green covered wire twelve inches long, double and twist it, making a loop at the end, twisting it to make a solid stem. To make center of rose, take a piece of satin ribbon two and one-fourth inches long, double it over the loop of the wire, roll in sides, and fasten securely at bottom. For first petal, take four inches of ribbon double, roll one of the doubled corners over three times, and blind stitch very neatly, so stitches will not show on either side of petal. About three-eighths-inch from the roll which is about to be made take short double stitch in the ribbon, and before beginning to roll pull tightly, making an indentation at top of petal, then roll other side, and stitch as in first case. To finish off petal at bottom, make a single box-plait, as shown in illustration.

Around center arrange three of these petals, each of the same size, so that center of rose is completely surrounded. If the rose is to be used as a part of a corsage bouquet, a bit of sachet-powder sifted between the two folds of ribbon and sewed in when the box-plait is made at bottom will impart a realistic perfume to the rose.

When the three petals are tacked to the rose, the next three are made in exactly the same fashion, except that each petal is cut four and one-half inches long. These petals are arranged in alternate fashion around first three petals. The third and last row is made of three petals, each made from a piece of ribbon five inches long, but made exactly as those in first and second rows.

Remove the calyx end from a discarded artificial rose, and slip it on the stem over the finished bud.

One of the greatest charms of a rose made in this fashion is the indentation at the tip of each petal, which provides the natural effect of a half-blown La France rose. By comparing it with the rose at the lower right of the page, the difference is apparent at a glance.

If you have no calyces at hand, they may be obtained at a store where stationery is sold or in a pinch from a millinery shop. Usually, two sprays of artificial rose-leaves, obtained in the same manner, are used to complete the spray. Rose-leaves from the same discarded bunch of artificial rose-spray, if carefully wiped off with a slightly dampened cloth and wire straightened, will answer the purpose very nicely.

A single large rose and bud will be found ample trimming for a small hat. A wreath composed of three of the larger roses and six of the buds, interspersed with leaf-sprays, will make a most attractive trimming for a hat. Nature does not dictate the colors for such trimming, for these roses are as attractive in goblin blue, old rose, dull gold or sage-green as they are in pale pink or American Beauty red.

When rosebud and leaves are arranged to form the bunch, wind all stems together, and wind the stem with green baby ribbon.

In order to make the wild rose, you will require twenty-two and one-half inches of No. 16 ribbon (which is two inches wide), twelve inches of green covered wire for the stem, several sprays of artificial rose-leaves, preferably smaller in size than those used for the La France rose, a calyx and torus, or cup, and a center of yellow stamens and pistils, such as may be obtained at a fancy-goods shop along with the calyx.

of the diagonal of the three-inch square. Begin with the largest petals, taking one corner of the chiffon and rolling the wire in it tightly the bias way until the wire is fon; roll until you are chiffon; there will be a triangular shape. Bring the wire together, shaping the petal; draw down chiffon neatly, and stitch firmly with silk. Continue until you have all petals made. Cut a piece of buckrum circular in shape, about one and one-half inches across, cover with silk the shade of the lily. Sew the first row, comprising fifteen petals slightly overlapping the other, near the margin of the covered buckrum. Sew the second row of petals within the first row, ten in number, and the third row is made of the five small petals. A bit of the chiffon gathered into a tiny rosette completes the center of the lily.

To make the bud, make three petals, same as made for the one large lily, and place together, as shown in illustration.

Small Rosebuds

A very good and useful way to utilize odds and ends of colored silks and ribbons is to make bouquets of French rosebuds, which are so popular nowadays.

Take ten pieces of green covered wire, this being the number of buds to the bouquet, about three inches long, and make a small loop at one end of each piece. Then cut your silk into squares about one and one-half inches square; fold one piece over a piece of wire, folding your silk corner-ways to form a bias; turn in edges neatly, and sew firmly at bottom of silk, thus making first petal; next, take another square of silk, folding same way to form bias; lay it over first petal almost like a hood, roll in edges, and stitch firmly at bottom of silk; make the next petal same way and put on opposite to first; this completes the bud, with the exception of finishing off at bottom with a small rose-leaf put on in such a way as to cover stitches in petals; if rose-leaf is sewed on with green silk, stitches are almost invisible. Make each bud in the same way, only using differently colored silks; some of the buds, even, may be mixed colors, if nicely blended in pretty shades. When you have completed ten buds, arrange them prettily in a bunch, mixing a few small rose-leaves in between, place a spray of three larger leaves at back to form background, and wind all stems together with green baby ribbon.

The rose shown in the illustration below was purchased in a store. It has more of the characteristics of the American Beauty rose. The petals would be made in the same way as are those of the La France rose, except for the short catch-stitch at the tip of each petal. The five outside petals are made of loops of velvet ribbon of a slightly darker shade than the messaline forming the other petals. A three-cornered turn-in at each edge of the petal is the only attempt at making it flowerlike. Instead of the calyx and cuplike torus at the back, the flower is finished with a shirred green ribbon cup and a green wire stem. The that rich shade "American Beauty velvet" ribbon is a tone. The wire rose and leaves are narrow green satin ribbon - covered messaline is of known as red," and the tint darker in stems of the covered with ribbon.



The chiffon water-lily

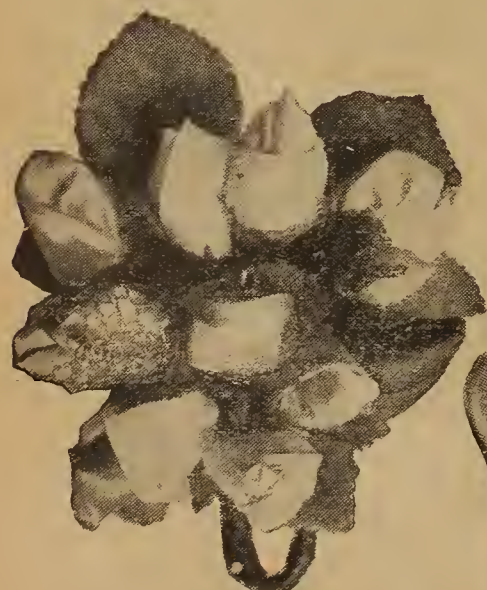
Cut five petals of the ribbon, each one of which will be four and one-half inches long, double each petal in two, and run a draw-string of silk of same shade directly through center of ribbon. Gather draw-string until petal at this point is just one inch wide. Put same sort of box-plait at base of petal, as is used in La France rose. When five of these petals have been made, arrange them in circle, each one slightly overlapping the next, and sew center of stamen and pistils securely in place, fastening all to end of wire stem. Slip the purchased calyx and wax torus, or cup, in place, and attach leaves.

To make bud of wild rose, take two pieces of ribbon three inches long, fold one piece double, and draw in center, same as in large rose; draw these petals a shade narrower than rose-petals, and fold two together, as in illustration, thus forming bud; slip on the torus, or cup, at back of bud, and finish by attaching to wire stem.

The Chiffon Water-Lily

One-half yard of chiffon, one spool of wire and foliage are required for making this very attractive pond-lily, which can be used for hat or dress trimming.

Cut fifteen pieces of chiffon four inches square, ten pieces three and one-half inches square and five pieces three inches square, then cut fifteen pieces of wire, each piece the length of the diagonal of a four-inch square, ten pieces of wire the length of the diagonal of the three-and-one-half-inch square and five pieces the length



The bunch of French rosebuds



Lily-bud



Starting the water-lily petal over the wire



Center on rose-stem



Center and first three petals in place



A rose-petal

Above is one finished petal for the water-lily

A bought rose which varies from the La France in having petals made of messaline and surrounded by five large petals made of heavy velvet ribbon. The method of their making is clearly shown in the photograph

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Order Patterns from: Pattern Department, Farm and Fireside, 381 Fourth Avenue, New York;
 Pattern Department, Farm and Fireside, Springfield, Ohio; Pattern Department, Farm
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 Cut for 32, 36 and 40 inch bust measures: small, medium, and large
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 Pattern cut for 32, 34, 36, 38 and 40 inch bust measures
 No. 1889—Double Blouse with Frill
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 No. 1826—Six-Gored Skirt: High or Normal Waist-Line
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 The length of this plain tailored skirt is 41 inches
 The special price of this set, including four patterns, is twenty-five cents
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No. 1838—Russian Suit with Pockets
 Pattern cut for 2, 4 and 6 year sizes. Quantity of material required
 for medium size, or 4 years, three yards of thirty-six-inch material
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 six-inch, three-fourths yard of thirty-six-inch contrasting material
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 yards of thirty-six-inch material; one-half yard of contrasting materi-
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No. 1898—Overcoat with Double Collar
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 No. 1891—Shirt-Waist with Yoke
 Pattern cut for 32, 34, 36, 38, 40, 42, 44 and 46 inch bust measures
 No. 1865—Waist with Collar and Cuffs
 Pattern cut for 32, 34, 36, 38, 40, 42 and 44 inch bust measures
 No. 1866—Four-Gored Skirt
 Pattern cut for 22, 24, 26, 28, 30, 32 and 34 inch waist measures
 No. 1816—Collarless Blouse with Guimpe
 Pattern cut for 32, 34, 36, 38 and 40 inch bust measures
 No. 1817—High-Waisted Skirt
 Pattern cut for 22, 24, 26, 28 and 30 inch waist measures
 The special price of this set, including six patterns, is thirty-five cents
 Single patterns, ten cents



No. 1873—Plain Circular Walking-Skirt
 Pattern cut for 22, 24, 26, 28 and 30 inch waist measures. Materi-
 al for 26-inch waist, four yards of thirty-six-inch material
 No. 1540—Dressing-Sacque with Sailor Collar
 Pattern cut for 32, 34, 36, 38, 40, 42 and 44 inch bust. Material for 36-inch
 bust, two and seven-eighths yards of thirty-six-inch material
 No. 1266—Housework Apron
 Cut for 32, 36 and 40 inch bust measures. Material required for
 36-inch bust, four and one-half yards of twenty-seven-inch material
 The special price of this set, including three patterns, is twenty cents
 Single patterns, ten cents

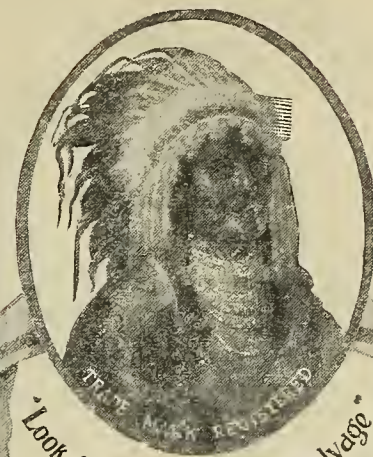


No. 1879—Guimpe Dress
 Pattern cut for 6, 8, 10 and 12 years
 No. 1790—Box-Plaited Dress
 Pattern cut for 4, 6, 8, 10 and 12 years
 No. 1811—Empire Dress
 Pattern cut for 2, 4, 6 and 8 years
 No. 1687—Girl's Nightgown
 Pattern cut for 6, 8, 10 and 12 years
 No. 1824—Princesse Apron
 Pattern cut for 6, 8, 10 and 12 years
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No. 1804—Misses' Tucked Dress
 Pattern cut for 12, 14, 16 and 18 year sizes
 No. 1706—Misses' Peasant Blouse with Guimpe
 Pattern cut for 12, 14 and 16 year sizes
 No. 1888—Blouse with Sailor Collar
 Pattern cut for 32, 34, 36, 38, 40, 42 and 44 inch bust measures
 No. 1881—One-Piece Dress with Pockets
 Pattern cut for 32, 34, 36, 38, 40, 42, 44, 46 and 48 inch bust measures
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Established 1848



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What They Brought From the Fair

By Henry Wolfe

THE household was astir early that morning, for it was fair day. There were chores to do, horses to brush, breakfast to get, a lunch-basket to fill and best clothes to put on.

I had offered to take charge of the boys and the potato-digging if Mr. West would take the girls to the fair. At first he had raised objections, but the girls changed his mind. When Mary appeared, I was sorry I had been so generous; I wanted to go myself—with Mary.

We did great work in the field that day. We wished to show Mr. West that we could take care of ourselves—and the potatoes. I had a backache, headache, two armaches and two nearly paralyzed legs when night came, but every hill had been dug, and we had done in one day what Hiram had thought would take two.

"Well now! I'm goin' to the fair ag'in, next year, if you'll look after the pertaters," was Hiram's greeting at the breakfast-table.

"Yes, and I'm goin', too," chimed in Mary. "I had a dandy time."

"Nothing doing," said I, looking at her. "No digging potatoes for me while you go to the fair."

"You'd better ask Mary about Professor Smith," suggested the older sister.

"What's that?" I asked. Then a wave of color covered Mary's cheeks until I wished that the orchard grew peaches with as pretty a blush.

Hope College was sending its lecturers over the State to preach better farming. I had so enjoyed Professor Smith at the summer school that I had suggested his coming up into the hill country, when I heard that he was to speak at the fair. I had urged Mr. West to go, for I wanted him to get at first hand some of the good things I had gleaned at college. To make more sure of this, I gave him a letter to the Professor.

"Pa gave your letter to Mr. Smith while he was judgin' the cows," said Mary. "and he asked us to come hear him lecture. I was tired of pies and quilts and jellies and was awful glad to sit down."

"When the Professor saw Mary, he urged us to come real hard," added Hiram.

"Now, Pa!" And fresh blushes chased each other over her pretty face. "I liked what he said real well, for he showed us why we have to work so hard. Now, I bet you don't know about a single cow on this place. You just guess they pay. I'm goin' right to work to find out, so there!"

I smiled to myself, for my scheme was working better than I had hoped. This was the sort of thing we had learned from the summer school, this determination to find out for ourselves.

"Steady, Mary; don't go so fast. Your Pa heard that talk, too, and he's older'n you," said Hiram.

"That's just the trouble. You've gone on in the old way so long that you won't change," answered that young lady.

"Now, see here, Mary, if you'll do your part, I'll do mine. I'll keep the milk from each cow separate and bring it in to you. Then you can weigh it and keep a list of it all."

"Oh, that's fine!" exclaimed Mary. "Then I'll take samples to the creamery every month to have them find out how much fat there is in it. Then, some day, we'll know about every cow and can sell the poor ones."

How this brought back our lectures in the dairy class! "Weigh the milk and test it regularly for its percentage of butter-fat. No man can guess at the return from a cow without this record," had been the substance of many an hour's talk.

"Why, I don't believe you even know how much it costs you to feed a cow," said the new agriculturalist.

"No, Mary, I don't. I've been too tired to keep the figgers and work it out."

"But don't you remember that's what Professor Smith said? It's the farmers that work their arms instead of their heads that don't make any money."

Again I saw those figures on the blackboard as Professor Smith showed us how to reckon the cost of a cow, and I remembered he had said that, except under special conditions, he believed dairying had ceased to be profitable in New England. The farmer never takes the time to figure out income and cost; he works the same way that his father did before him and counts his time as worth nothing. If he comes out even at the end of the year, he is contented.

"Yes, daughter, but I'll need your help."

"Oh, you'll get that all right. I feel like we never knew anything about running a dairy. Let's try doing exactly as he said, and then, maybe, some day—"

"Yes," added the older sister, "some day Hope College may send Professor Smith to see your dairy."

Not Worried

FATHER (impressively)—"Suppose I should be taken away suddenly. What would become of you, my boy?"

IRREVERENT SON—"I'll stay here. The question is, 'What would become of you?'"

—Westchester Critic.



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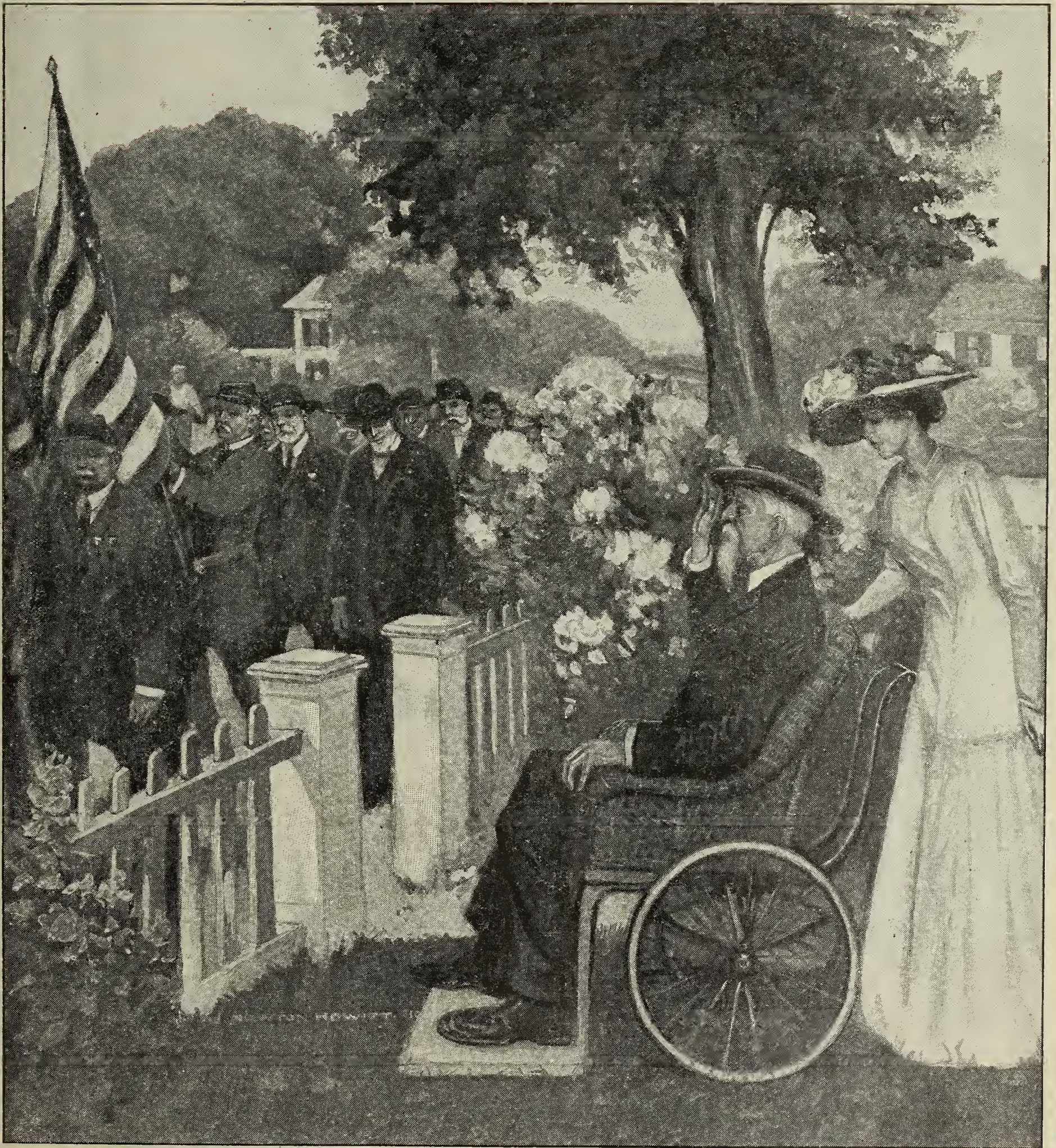
FARM AND FIRESIDE

THE NATIONAL FARM PAPER

EVERY OTHER SATURDAY

ESTABLISHED 1877

MAY 25, 1912



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Waiting the judgment-day;

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Francis Miles Finch.

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PATENTS

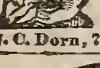
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With the Editor

I SUPPOSE we are all equally interested in any business matter in which we are jointly engaged. Aren't we? Let me illustrate. I have in mind a country in which the roads run every which way, and it's hard for anyone not to get lost, unless he makes a business of knowing about the roads. All the travelers along these roads carry money in their purses, because they are going to market. The places where they expect to buy are scattered about the country on all sorts of highways and byways, and among them are a lot of tradesmen who are honest and some who are not. It's a region of all kinds of men. Mixed with the good, honest, industrious dealers are the lazy incompetents who think the public owes them a living and who aren't particular how they collect the living, so it comes easy. There are some knaves and confidence men and swindlers who have all the appearance to the unwarned traveler of good dealers and honest citizens. And just because most of these places are kept by good men whose displays tell the truth, and because the crooks are so mingled with the straights, it is hard for the inexperienced to get by with their pocket-books intact.

So there has grown up in that land the business of Guide, men who stand by the roads all day and all night and guide people to places where they may buy what they want, and advise travelers as to where they will be safe from pilferers and sure-thing men.

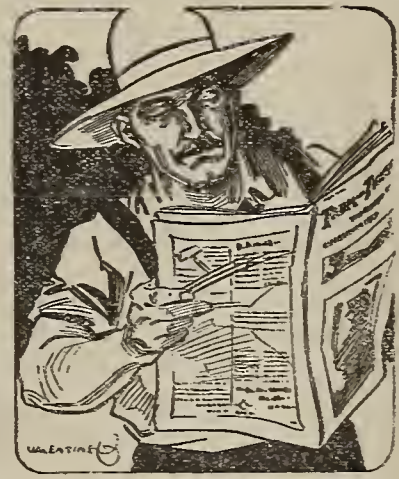
These Guides are in the business to make a living. Some of them will guide you to any shop that pays them for the job. They will send you when you are sick to places where the druggists will put up water and whisky and opium to ruin your health and debauch your appetites. They will send you to scaly swindlers who offer you worse than nothing for something. In other words, the scaly shops have their Guides posted by the way-side, to answer all inquiries in the interests of Graft. This is a very bad thing for everybody.

SO, LONG ago, there occurred to one of these Guides—one who wanted to do the Square Thing—that he would not only refuse to act as Guide to any shop which he had not looked up and found good, but he would actually guarantee all of the people inquiring at his crossroads against loss by following his advice. So he nailed up on his Sign-Post the words:

"Trade With My Clients, and if you aren't given a Fair Deal, Come Back to Me with your Complaint, and I'll make Good your Loss. And then I'll fight it out with the Shopkeeper! If you follow my Instructions, I'll Protect You Against Unfair Dealings!"

This Good Guide prospered and waxed great. For the people knew that if they went to the shops recommended by him they were in good hands.

Now these Guides—Good and Bad—do not charge the Traveler anything—or at least not much. The Travelers, having stopped and got their directions, go on to the stores, and when they buy, they tell the storekeeper what Guide sent them. And the Storekeeper pays the Guide. That is, the Storekeeper employs the Guide who is most successful in sending Customers to his store. A Guide who sends many Customers gets lots of business from the Storekeepers. He prospers. He can get better pay from the Crooked Storekeepers than from the firm of Goodgoods & Fairdeal. So there is a temptation to take the Guiding Business of Catchem & Skinnem. But the Wise Guide knows that the business of Catchem & Skinnem is a wicked business to take. And, moreover, he knows that all this crooked business—this lying and cheating—is bad for the Guide business. As an honest man, he prefers honesty. And as a good business man, he knows that Honesty is the Best Policy. So he watches the people whose Guiding he is asked to do, like a hawk, and sends people to the firm of Goodgoods & Fairdeal only, and gives Catchem & Skinnem a wide berth—and if by any means a branch of Catchem & Skinnem's wide-spread business succeeds in getting into the Guide's books, the Guide settles promptly with the Traveler who is victimized.



In other words, the Guide puts his money back of his recommendation.

Now FARM AND FIRESIDE is the Good Guide to the Buying Public. It lets into its books no tradesman who is not looked up and found worthy. And if it makes a mistake which costs one of its customers anything, it pays up like a little man and fights the matter out with the Advertiser itself. It even undertakes to settle honest differences of opinion between its subscribers and honest advertisers. It doesn't ask its readers to make the fight. It has a good set of Fighting Clothes always hanging on the peg to put on in the interest of its subscribers.

Do you see the point? Well, have you any duty in the matter? I think you have. I think that when we, through our advertisements, guide you to a shop where you get good treatment, you owe us something. Remember that, as Guide, we get the trade of the Advertising Shopkeepers according to the number of Travelers who report to the Advertisers that FARM AND FIRESIDE GUIDED THEM TO THE SHOP OF GOODGOODS & FAIRDEAL.

IN OTHER WORDS, WHEN YOU WRITE TO AN ADVERTISER, SAY "I SAW YOUR ADVERTISEMENT IN FARM AND FIRESIDE." IT WILL PUT EVERYBODY ON RECORD. THE ADVERTISER WILL KNOW WE ARE BACK OF YOU IN THE DEMAND FOR A SQUARE DEAL, AND HE WILL GIVE US CREDIT FOR SENDING HIM A CUSTOMER. THIS WILL BE GOOD FOR YOU AND GOOD FOR US.

I DON'T often make such a personal appeal to readers. But here's a respect in which every reader owes FARM AND FIRESIDE a real duty, doesn't he? Many of them may never have thought of the matter. I'm just asking them to think for a moment when next they write to an advertiser. Make good to us, and make us make good to you!

Herbert Quick

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ABOUT ADVERTISING

FARM AND FIRESIDE does not print advertisements generally known as "readers" in its editorial or news columns.

Mention FARM AND FIRESIDE when you write to our advertisers, and we guarantee you fair and square treatment. Of course we do not undertake to adjust petty differences between subscribers and honest advertisers, but if any advertiser in this paper should defraud a subscriber, we stand ready to make good the loss incurred, provided we are notified within thirty days after the transaction.

FARM AND FIRESIDE is published every other Saturday. Copy for advertisements must be received three weeks in advance of publication date. \$2.00 per agate line for both editions; \$1.00 per agate line for the eastern or western edition singly. Eight words to the line, fourteen lines to the inch. Width of columns 2 1/2 inches, length of columns two hundred lines. 5% discount for cash with order. Three lines is smallest space accepted.

FARM AND FIRESIDE



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Springfield, Ohio, May 25, 1912

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BI-WEEKLY

Page Bill vs. Lever Bill

THE *Country Gentleman* seems to favor the Lever Bill for federal aid to agricultural college extension work, as against the broader Page Bill for extending federal aid to the common schools of the land. "As was pointed out in the hearings on the Lever Bill," says our excellent contemporary, "there are several States which do not really need federal appropriations. In Wisconsin, Iowa, Indiana, Ohio, New York and Massachusetts work is being developed rapidly; but in a score of other States it would probably be several years before the first steps would be taken. The federal act will start work here immediately." What is said may be true as concerns the Lever Bill, but this measure may be accepted as the pet bill of the people who prefer to help the colleges and the experiment stations and to sow the land with demonstration farms rather than help the children. The crying need of the land is better rural schools. This need is as great in the States mentioned as anywhere else. The extension work of Wisconsin, for instance, is excellent, but the rural schools are not what they should be. The educational system of every one of these States is top-heavy. Ohio is doing more for her rural schools than any other State, perhaps, but her schools need the help of the Page Bill, and need it badly. Even in the Southern States extension work is flourishing through the demonstration farms instituted by the late Doctor Knapp. But everywhere the common schools are not real rural schools at all, but are mere bad copies of poor city schools. Vocational instruction as called for by the Page Bill will ruralize them in ten years. The extension work provided for in the Lever Bill is also provided for in the Page Bill; but the latter measure does not neglect "the cry of the children." The real statesman never does neglect that cry.

Beyond the Chemist's Ken

FOR fifty years feeders have thought that their only problem is to secure economically a "balanced ration"—that is, a ration properly balanced as to the proportions of fats, carbohydrates and proteins.

This notion has been rudely disturbed by the celebrated Wisconsin experiment in which "balanced rations"—that is, rations made up of perfectly proper proportions of fats, carbohydrates and proteins—have been extracted from single plants and fed heifers for long periods of time—until they have matured and freshened. Roughage and all, some were fed from the wheat plant alone, some from the corn plant alone, some from the oats plant alone, and some mixed feed. Of course, the feeding was wasteful. A great deal of the plant had to be thrown away, in order that enough protein, for instance, could be extracted from corn to balance the fats and carbohydrates. But the experiment was meant to show effects of feeds, not to make profits in feeding.

So far as the chemist was able to see, the one feed ought to have been as good as the other. In fact, they should all have been equally good, chemically considered. But the wheat ration alone, even when perfectly balanced, was disastrous. Cows fed on a "perfect" diet of wheat produced weak, undersized calves and gave little milk. Those fed on corn alone did well in all respects. Oats were not so good as corn, not so bad as wheat. And strange to say, the mixture of all three was not as good as oats alone. In fact, the value of the ration seems to be, where wheat is used, in inverse proportion to the amount of wheat in it.

This does not mean that we should feed corn alone to our cows, because the corn diet on the farm cannot be balanced, except by feeding something else. It shows, however, that, as the basis of feed, nothing is better than corn. Chemistry says many things of value to us, but it has not the last word by any means.

It costs to make soil. Thirteen acres of Boston Common have been resoiled for the purpose of saving the existing trees and making conditions better for park purposes. It cost \$7,500 an acre.

The English sparrow has been caught with "the goods." It has been determined that in lining his nest with feathers he becomes the carrier of chicken lice and mites. His habit of going from farm to farm makes him a menace to the flock.

A law has been passed in Denmark under which the government makes loans to farm laborers who desire to become small farmers. The "farm" on which a loan is made must be less in area than about two and a half acres, and the largest loan to any such person is \$2,200. Since the law was made, over 5,000 such loans have been made by the government, averaging \$1,160 each.



Secretary Wilson—"I wish the drift from farm to city hadn't caught me!"

The Uses of Adversity

THE people of the South are likely to forget how much in the way of blessing they owe to the boll-weevil. Congress appropriated money to the Department of Agriculture to use in devising ways to circumvent the pest; and the late Doctor Knapp, seeing no way to do this except by successful mixed farming, used the money, and every other cent he could get, in showing the southern farmers how to grow cotton and corn. Out of this grew the great United States Coöperative Demonstration Work of the Bureau of Plant Industry—and the dawn of a new day for the South.

As indicating the extent of this work, the fact may be cited that the Bureau has 32 negro demonstrators at work, who have enrolled about 4,000 negro farmers as coöperators. There are numerous negro farmers enrolled under white demonstrators. The Department estimates that 25,000 negro coöperators will be reached directly and indirectly by its work this season. No class of farmers need demonstration more sorely, and no one can estimate the benefit to the nation, to the South and to the great cause of soil maintenance of this work among the blacks.

It sometimes seems a pity that the North can't have a scourge once in a while! We need demonstration farms as badly as does the South.

"Guide to the Insects of Connecticut" is the name of a new publication. Few of them seem to need guides.

Are Floods Necessary?

THE people of the lower Mississippi Valley have good grounds of complaint against the nation. The floods which have devastated the valley from Cairo to the Gulf constitute a national problem, not a local one. The United States government has invited people to make homes in the protection of government levees. Those levees should be made adequate. Otherwise the government has merely invited people to destruction. Moreover, the Appalachian States have permitted the cutting off of the forest cover at the headwaters and made the floods worse. In this respect the floods are of human creation. Nobody but the general government can cope with the matter. It has long since been shown that a system of headwaters, controlled by reservoirs for the purpose of holding back storm-water, may be made to lower the peaks of the floods, and in almost if not all cases save the levees. Such reservoirs would develop immense water-power, which would be useful to the nation; and the water as released during low water would help navigation in the Mississippi and its tributaries. The levees now in existence are not more than two thirds finished. They should be finished. One flood such as we have this year experienced in its course from Pittsburgh to the Gulf causes damage in an amount which would go far toward the payment of the expense of building the works necessary to prevent most, if not all, of these catastrophes.

In Royalty's Sacred Presence

COMMON scum of the earth should be very careful how they behave in the presence of royalty. The plebeian back must never be turned to the exalted. This is necessary. The eyes of the recreant commoner must always be directed in dread and reverence to the Lord's anointed, so that the slightest command even by look or gesture may be caught and obeyed. "To hear is to obey" is not enough—seeing the imperial gesture should be sufficient. No person of the masses should be seated while royalty stands. Shall the lower classes—and all classes are low as compared to those whom God has chosen to rule over us—take their ease whilst the great stand? A thousand times, No! When the royal party comes to occupy the royal box at the theater, let the national air be played, and let all stand. No matter about the play or the opera. What is the enjoyment of the herd of playgoers or actors to the keeping in their places of the common people? When our rulers say to us "Be covered!" it is time for the yokels and the base-born to put on their hats. Not before. When leaving the presence, walk backward with loosened knees and apprehensive eye, lest the divine right be outraged. And in this connection, the other night the dictum went forth that in official Washington society none shall sit while Mrs. Taft is standing. "Mrs. Taft is standing," said Mrs. George W. Wickersham at a social function in the Blue Room of the White House when many guests remained seated. "The hint was taken," says the report of the affair, "and the women remained standing until Mrs. Taft withdrew." Ye gods! ye gods!

Finding Honest Commission Men

THERE are honest commission men in almost any large town. The difficulty is for the farmer to find such. FARM AND FIRESIDE has gone to a good deal of expense to prepare itself for the work of finding reliable men with whom it can advise its subscribers to deal. We have not said much about the matter in the past, but for two years we have been giving this service, free of charge, to such of our readers as have asked for it. Up to this time we have had nothing but good words from those whom we have guided to the offices of the commission men selected by us as honest and reliable. If you want the name of a good firm in any city, write us.

Getting by the Drought

By William Johnson

BUY a binder? No; if we get another season like the last two, I won't need any farm machinery. If you were selling a reliable rain-making machine, I might be interested."

"Hire a man? No; I'm going to do what I can alone. It's enough to risk seed and my own work, without risking two or three hundred dollars' worth of hired labor besides, on what the season will be. Where'd I be if we got another dry year?"

That is the way some farmers are talking; others are just listening and taking plenty of time to think. Suspicion has fallen on the weather man, and in farm homes from the Atlantic to the Pacific curiosity is open-eyed as to what this summer's weather will be.

More or less the farmer is gambling with the sky and the winds. He does his work as well as he can and awaits results that depend on many conditions. It is a big game to play, but we are gradually getting a grip on facts that make the winning surer. There will always be a little of doubt—there is in anything—but science has lifted agriculture pretty well out of it, brushed the dust from the young giant's clothes, and said: "Trot along now, sonny, you're getting big enough for your job of feeding a hungry world."

The drought still remains a menace, not so much because we do not know how to prevent its ravages as because we do not know when. We have been perhaps a little too willing to take chances on rain coming when it was needed. It was pleasant to believe that June rains were a climatic fixture, but the two seasons past have certainly been a shock to any such optimism. We will profit by the lesson, though, that it took so much burned grain and withered corn to write. Standards of farming must go up; soil preparation is going to mean more than it used to.

Said a farmer to me the other day: "We need irrigation. It's getting so we can't depend on rain any more, and a crop won't do anything when it is standing in a red-hot brick for the most important month or six weeks of its growth. If we had a system of irrigation, we could turn on the water when it was needed, and there are mighty few years when a dose of it wouldn't be of benefit at some time."

I asked him why he did not irrigate.

"Irrigate!" he exclaimed, "why, it costs money to irrigate; one man can't do it alone."

Every Farm Should be Irrigated

"Depends on how you do it," I told him. "If you run water over the soil and let it soak down, why, that certainly will cost; if you get all the moisture that falls, into the soil, and arrange for it to soak up, it will not cost so much."

He scratched his head for a moment as a man will when a new idea is itching his brain. Then he began to hand out objections. Our soil wouldn't hold water, it wouldn't take water as it should; it washed, leached and baked; three weeks of rain in April wouldn't make any difference in July.

I talked humus, and when I got pretty well along with it, brought in deeper plowing and thorough cultivation as "chief aid and first assistant." He finally admitted the essential fact that soil will neither take nor retain water satisfactorily unless it contains something other than the basic rock grains.

That something is humus. A soil will resist drought in proportion as it is supplied with well-decayed organic matter. If this be lacking, the tendency to lumpiness when disturbed, or to baking from the heat, is difficult to overcome; and it is just those two conditions which make the drought dangerous. If a soil is mellow and crumbly, we can fit a preparation to it that will protect the crop against an ordinary duration of dry weather. If not, we are working at a decided disadvantage.

Mellow soil is just another way of saying a soil rich in humus; either way the fact is unchanged that it is the ideal soil—a root pasture permitting free circulation of moisture. That is the important point, and it is only attained when the soil grains have contact, not cohesion; humus secures this structural arrangement which more than any other thing marks the difference between a productive and an unproductive soil. We would not be much in error if we viewed the tendency of soil to bake and lump as a sort of soil disease; but error or not, it would be excusable if it led us to apply the prime remedy—humus. The methods that must be employed to save soil moisture are most easily carried out on a humic soil. It responds to treatment better because you are strengthening a natural tendency. There is moisture in it to save; rains and melted snows were absorbed; there simply remains the necessity of a few careful methods to keep them there. On humus soil much less rain is needed to break a drought, because the same porosity which brings moisture up to the roots will take it easily and quickly down to them. A soil without that porosity tells a tale, with its little drains washed on every slope after the rain, of where surface soil and moisture both went to. When a man's farm goes down hill with the rain, his farming is always up-hill work. That is the contrariness of things. *Humus for the soil*—let us make a slogan of it. Clover and cows point the way; the two seasons past point the time—*now*.

I have in mind a farm which a few years ago was running low on humus and fertility. Persistent cropping had brought the soil very near the state where commercial fertilizers and ideas of going to Canada step in. But the owner thought a way through his

difficulties that seemed promising enough to try—just the clover-and-cow path to rich acres and independence. He went into cattle and clover as fast as limited means and a horror of debt would allow him to, and supplemented that wise move with the fine-as-a-flower-bed method of tillage. Did he succeed? Sure. A man does not often fail who looks his difficulties between the eyes and hands them the swat of scientific methods. He has brought his yields steadily up to something profitable. Last season, and the season before, his fields came through the dry weather with a yield good to look at. Humus and cultivation worked the wonder—and a little grit that had some thinking behind it.

Persistent cropping without free use of green and stable manures will certainly leave soil in poor condition to endure dry weather. Every stray bit of humus has been searched out by millions of hungry roots. The fertility may have been maintained by mineral fertilizers, but in this soil game we are playing with nature, whereby we expect a golden multiplication of what we give; fertility alone cannot win. The plant must have its food in a liquid shape, and that requires water, not at intervals, but every day from seed-time to harvest. We are careful by tillage and manure to supply the plant-food a crop will require. Why are we not equally careful to conserve the moisture that will be needed? It is just as important and not any more difficult. That immense tank, the subsoil, is under the farm we are working for that purpose. Let us make use of it. The eight or ten inches of surface soil we till must be made a handy arrangement for the raindrops to pass through, if they are going to be put away in the subsoil for future need. Raindrops, like many larger things, follow the line of least resistance. If it is easier for them to run over the ground than into it, they will do so, but if the soil is rich in humus, myriad pores will stand invitingly open. The moisture will drop down through them to be caught up by that same humus and circulated around among the soil grains. It will come back to the surface again though, however deep it may have penetrated. Nature was just yankee enough to devise some scheme of getting fertility that might be four or five feet down, up to the roots that could go only half that far. So she got out a cast-iron law that water must pass from one soil-grain to another; it must never remain at rest; and it never does except when it comes up against the particles of a soil mulch. They were invented after Nature quit making laws, consequently she did not provide a way for moisture to get through them into the sky. If capillarity be free and if clover roots have left humus in the subsoil to make it better, that moisture which returns to the surface will bring considerable plant-food with it. The same humus that helps it to climb makes some fertility available for it to carry. In these soil processes there are always two birds to kill with one stone and sometimes a whole flock.

In this case, the more humus there is in the soil, the more water will be taken in, and the more soil-grains it will be circulated over. The result is a larger amount of a stronger solution of plant-food. That means larger yields, an abundant reason for doing all we can to help the thing along. I saw an excellent illustration last summer of what humus does for the soil. It was a field of rye, about seven or eight acres. An acre or so of it had been manured two years previously; all of it has been cropped continuously for a number of years. From the first the rye on that manured portion showed up a little better, but the dry weather in June set up a difference that could be seen a quarter of a mile away; the grain on the manured strip being so much taller and greener. Harvesting showed the real difference. On that strip which had been previously manured there was a big load of bundled grain, more than any other strip of equal size in the field, and every bundle heavier. It could not have been the fertility which the manure added to the soil that made the difference; two crops before the rye must have pretty well exhausted that. Of course, the humus of the manure had an effect on the soil fertility in helping to make it available, but principally that humus influenced the water content of the soil. Its physical condition was improved, and there was freer absorption and circulation of moisture. A crust did not form with the first hot days, to hand out the soil water to every hot wind looking for it. If that farmer, or any farmer, had only gotten this humus effect on more of his acres, even if he had to farm less of them to do it, harvesting would have brought more of the golden glow that poets rave about.

With humus, deep plowing and surface cultivation complete the conquest of the drought. I know that statement has a familiar sound, but there is still need of its repetition.



Campbell, the dry-farming missionary

Advocacy of shallow plowing has not yet entirely gone the way of the sickle and cradle. In a limited sense it never will; there are some light, leachy soils that require shallow plowing, but soils like that are the exception which plenty of organic matter would gradually prepare for the deeper furrow that brings crop results. Continued shallow plowing of heavy soils is an error still practised occasionally and always punished; nothing makes the drought so much at home as a field of grain starved down to the insufficient

water-supply of a four or five inch furrow. The field that is going to carry a profitable crop through four or five weeks of brassy skies and hot winds must be plowed as deeply as the nature of the soil will permit. It is not wise, of course, to drop from shallow plowing to deep, all at once; things that are done well are always done by degrees. Some implements, such as the disk-plow, are always needed for this work. Cutting the furrow an inch deeper each year is keeping well on the safe side; that will provide after a while the nine or ten inch furrow, which takes those quick, heavy rainfalls in the good old-fashioned way the soil used to, when it was virgin and new.

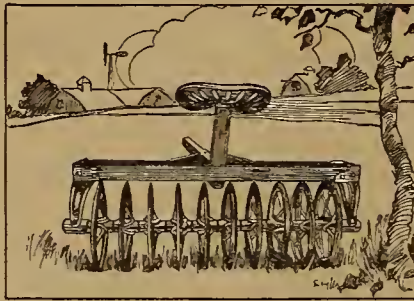
"Plow deep?" I heard a farmer ask. "What sense is there in that? Spoil a farm, that's what it will do. What are you going to do with that raw subsoil when you get it to the surface?"

There is just this sense in it; every inch added to the furrow depth is about one-fifth inch added to the water content of the soil. A six-inch furrow will take about one inch, perhaps a little more, of rainfall. A ten-inch furrow will take two inches, easily. With four hundred pounds of water required to grow the average pound of dry matter, that extra inch of moisture is a prize worth capturing; it represents a few bushels of grain that will come mighty handy around thrashing-time. As for "spoiling a farm," I know of nothing that will help to do it more effectively than shallow plowing. I can see a picture now of a field that I do not think has ever been plowed more than six inches deep. The owner did not believe in bringing up "raw subsoil." What have the heavy rains of years past done to that field? I will tell you. There is now a rock ledge showing through it in places which were covered with eighteen or twenty inches of soil a few years ago. That man is farming "raw subsoil," and the dry weather hits it pretty hard. Deeper plowing a few years back, and a rotation in which manure, clover and sod played a larger part, would have kept that field in proper tilth and in the location nature gave it. Shallow plowing of soil, compact and heavy from lack of humus, is a swift way of getting in the midst of some difficulties that make farming a near misfortune.

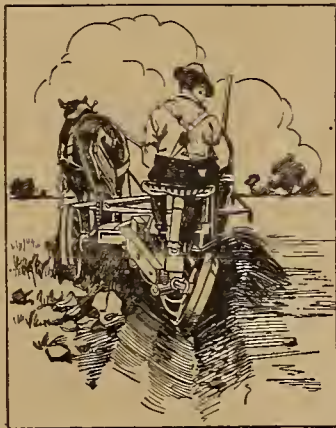
Make Room for the Surface Water

The fresh subsoil brought up each year on land that is kept familiar with clover is not very raw. Frost, sunshine, manure and tillage will soon fit it for plant growth; accompanied by occasional subsoiling and the growth of crops that will carry the mellowing influence of humus into the subsoil, drought will not seem so big a word.

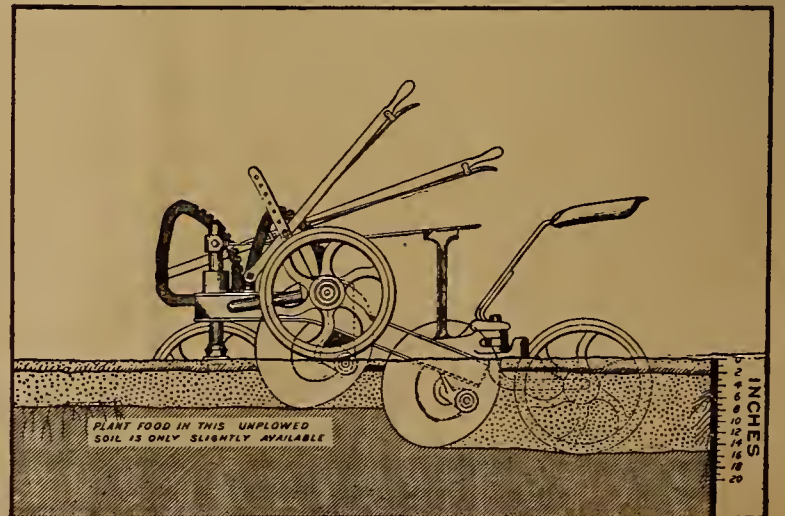
Surface water and free water are two forms of moisture to get rid of. We can usually make room for the first, in the soil, with the plow and humus. It should never be allowed to run off over the surface; it always takes some of the surface soil with it, and we want to keep the farm where the deed will cover it. There are soils which require artificial underdrainage to carry off surplus moisture. There is always something wrong when even a pretty heavy rainfall lays long on the surface; if shallow plowing or lack of humus are not the fault, then it is apt to be a hardpan, or layer of impervious clay, through which the water will not pass. The hardpan, perhaps, may be broken up with dynamite, followed by some deep-rooted crop as clover or alfalfa to keep it so; in other cases tile drainage may be necessary. It is positive that an oversaturated soil, or one in which the free-water level [CONCLUDED ON PAGE 9]



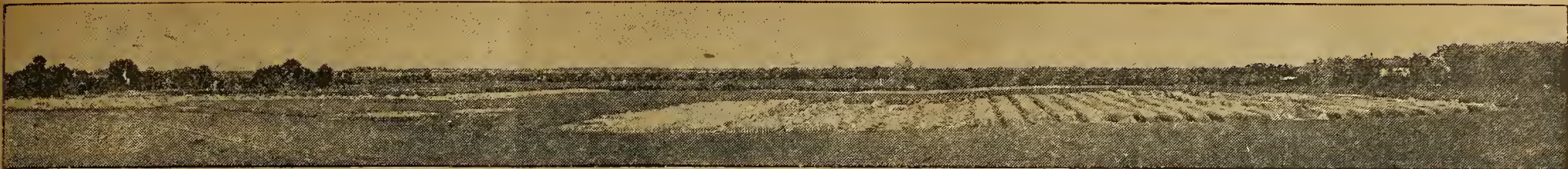
Campbell's sub-surface packer



The deep-tillage machine in the field



The machine goes deep, but leaves the sub-surface soil underneath



The beautiful and fertile farm at Ames, Iowa, where Mr. Burnett is doing his work

Breeding New Wheats for the Corn Belt

By L. C. Burnett, Cereal Breeder, Iowa State College

EVERY field of wheat is made up of approximately 1,000,000 plants per acre. These plants are grouped together more or less in families, but every acre contains many hundreds, and each, like the cows in the dairy herd, has individuality and character all its own.

Some families have peculiar shades and combinations of color, some are dwarf, and some are tall in stature. Some have a striking rosette habit and spread their leaves flat on the ground at the first sign of cold weather, so as to protect the tender roots and crowns from freezing. Some have strong, elastic straw, some are brittle and break down under the load of grain, or when driven by the storm. Some families produce grain that is soft and starchy, while their neighbors give a hard, nitrogenous product.

Not all these families give these individualities true from year to year, but as a general rule the characteristics of the wheat-plant have been so fixed by inbreeding for hundreds of generations that they are dependable. Once we have the family separated from its fellows, we may feel reasonably certain that a given kind of soil and season will produce the same results year after year.

We Want No Loafers in the Wheat Family

Every up-to-date dairyman knows that his herd is made up of individuals whose performances are as unlike as the lives of an equal number of men, but it is only in very recent years that the idea of keeping cattle records has become common. Now the milk sheet and test brands the loafer for the slaughter-house. It is not guesswork. The herd is not treated as a whole. Each individual has a chance to make good or get out.

So it has been with the wheat crop. A variety was considered good, fair or poor in a community, as the larger percentage of its families made returns for the grower. No one until recent years suspected that there were perhaps a thousand families in his "herd" of wheat. In every field thousands of families are grown each year at a loss. Others make enormous yields, and the vast majority are just about the average, paying expenses generally, but really very "common" and not the kind of grain the farmer would have on the place had the better ones been separated out.

Six years ago the writer started out to separate a wheat-field into its families so that the loafers and the mediocre strains could be discarded and so that wheat could be produced, not at the rate of twenty-five bushels per acre, but on a much higher basis. This field contained eleven so-called varieties. From each variety we picked from twenty to one hundred heads. The only demand we made was that each head have twenty-five kernels and come from a plant that stood erect and which was free from rust and smut.

Each head was thrashed out separately and planted in a row by itself. There were four hundred and twenty

of these rows, and at harvest-time in 1907 we found that we had almost four hundred different kinds of wheat.

These wheats varied over two weeks in date of maturity. When harvested, there were all gradations from rows that stood perfectly erect to those that were lodged so badly that they could scarcely be kept separate from their neighbors. Two of the rows shattered so badly that the seed was saved only with difficulty, a trait that had not been noticed in the parent variety.

One thing was strikingly noticeable: if a row showed early maturity, it showed it in every plant. If a row showed weak straw, it showed all through the row. If the heads were not set evenly, the same was true all through. If the heads were heavy and hung down on one plant, all the plants in that row showed the same characteristic. Heavy producers showed twenty to twenty-five plants of the same size and strength, while the light producers were inclined to be uniformly puny.

The harvesting and testing of these wheats, keeping each separate from its neighbor for five generations, has been a task that has required no end of care and patience. If any doubt is entertained regarding a sample's purity, it is at once discarded. For seed for the following season, we have gone back to stock that we have known to be pure.

The most primitive methods have been used in planting and harvesting, because we never dared trust automatic devices. Everything has been done by hand. Should a kernel stray over from one row to another, the chances were only one to fifty that its grain would be used for seed the following year.

When the rows were cut, their heads were covered with paper sacks, each one numbered to correspond with the row it contained. This sack not only protected the heads from being riddled by the birds, but allowed the heads to dry out without weathering.

The second and third years this test was repeated on a larger scale. Each year we selected ten good heads for the seed of the next generation. Each year they were planted, harvested and thrashed by hand so that no mixture occurred between neighbors. Mixture spells failure. The next step was to increase the better strains and

test them in the field beside our old and established varieties. This increase was planted with a common garden-drill and cut with our experimental binder. The field test has now been in operation for two years, and the results shown in the table at the bottom of this column are the award of all this labor.

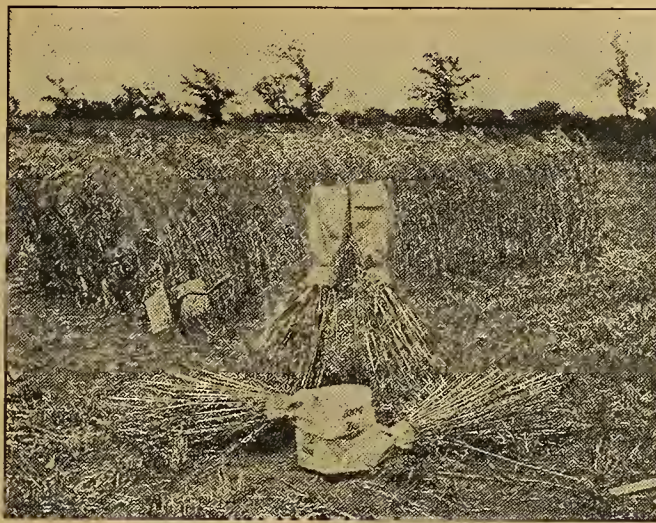
The results of the field tests showed us we had some varieties that out-yielded any we had raised before. Our next problem was to know whether these wheats were satisfactory flour-wheats or not. To answer this question, samples were sent to the laboratories in Minneapolis where they were milled. Loaves of bread were baked from each. Every one of the wheats milled a patent flour without being blended or tempered, and only four fell below Turkey Red in yield of flour.

Iowa No. 404 has yielded twelve bushels per acre more than Turkey

Red and is worth two per cent. more, bushel for bushel.

This season we are watching with interest the performance of these new wheats under farm conditions. They are being grown in nineteen places in Iowa, three in Minnesota, three in Arkansas, one in Illinois, one in Montana, one in Oregon and one in Kansas.

EDITOR'S NOTE—Mr. Burnett has been working at Iowa State College for a number of years. The results he has secured are reliable, and what he says about them may be taken as authoritative. Besides his work with winter wheats, he has been experimenting in many practical ways with spring wheat, barley, and especially with oats. In fact, his work with oats covers a larger area and is more extensive in its scope of thought than any similar work being done in the United States. His work with oats is carried on in cooperation with the United States Department of Agriculture. From time to time Mr. Burnett will direct the attention of FARM AND FIRESIDE readers to practical grain breeding.



Each bundle of the small grain must be covered with a water-proof paper bag



Much tedious hand-work is required

Iowa No.	1910		1911		Average Yield Bus.
	Yield in bu.	Weight per bu.	Yield in bu.	Weight per bu.	
14	61	60	36	60	50
404	60	60	38	62½	49
91	58	58½	40	59	49
92	52	59	42	60	47
38	56	59	36	61	46
327	50	58½	38	61	44
406	55	59	40	60	42
307	47	58½	35	59	41
384	47	58½	35	59	41
385	41	60	39	62	40
218	41	60	37	60	39
Turkey Red	30	60	44	62	37 Check
49	35	60	37	60	36
328	38	59½	35	59	36
187	35	59	34	59	34

A Promising Dry-Land Legume

By Albert N. Hume

Agronomist, South Dakota State College

JUST at present a good deal of interest is evidenced in an annual legume which is sometimes supposed to be a new plant. The plant is frequently called "Hamus," and is, in fact, the Syrian chick-pea. Its botanical name is *Cicer arietinum*, and its species is found described in most all American botanies. The new significance given to the plant as an agricultural crop, and especially as a dry-land legume, comes about in part from the fact that within comparatively recent years certain strains of it have been introduced into the United States by the Department of Agriculture, and perhaps especially by Prof. N. E. Hansen, of South Dakota State College. The writer is told by Professor Hansen that the legume in question grows in Syria and Turkestan in great abundance and that it may easily be imported in great quantities if it should prove to be valuable, as it doubtless will.

Where Will the Plant Prove Valuable?

A question of interest to practical farmers is whether or not the plant will prove valuable, and if so, under what conditions. This question is of special interest to so-called "dry-land farmers," because in the arid or semi-arid regions of the United States the nitrogen content of the soil is frequently low. This fact may be due in part to the fact that vegetation is not rank, but especially to the fact that a great variety of leguminous plants do not grow. One of the paramount issues for the agriculture of dry-land regions is the establishment of legumes which will grow successfully and make profitable crops. There is some possibility, some people might say even a probability, that the Syrian chick-pea will supply a long-felt want in this respect.

We find that it has already given some evidences of ability to make a quick growth under rather dry seasonal conditions.

These peas were tried in a small way during the past season by the South Dakota Experiment Station at its Sub-station Field at Highmore. The amount of seed

used was small, and it was put out by the row method after the late summer rains began, there being no great amount of rain in the early part of the season. Growing

under these rather unfavorable conditions, the plants in this limited trial yielded about one ton of green material per acre. Such a yield must only be considered in connection with the fact that the conditions under which the plants were produced were decidedly unfavorable. Moreover, the plants would possibly have yielded seed in considerable quantity had there been just a little more time for the seed to mature. In the accompanying photograph, which was taken from a dried plant that happened to be preserved in the laboratory, it is still possible to observe that on these plants, grown at Highmore, the seed-pods had formed, and, in fact, the seed had attained considerable size. Whether or not the legume will mature seed under dry-land conditions is a matter of utmost importance, because, in order for the legume to supply the long-felt want, mentioned above, it must be capable of producing abundant seed so that seed will be cheap.

One of the serious difficulties with disseminating the Canada field-pea in South Dakota is the apparent

difficulty of getting seed enough on to the market to bring the price within easy range of all farmers who would wish to secure it. It has been stated in a number of places that a resident of Stanley County, South Dakota, who is a native-born Syrian, has produced Hamus successfully on a considerable scale. This report is apparently correct, although the writer has had only indirect communication with Mr. E. Rizk himself. Some quantity of seed has already been sold, which was purported to have come from Mr. Rizk and to have been grown in South Dakota.

Hamus Has Been Imported

Certain it is that a number of importations have been made into the United States, and it is even possible, in case the plant proves to be something good, that considerable supplies might be secured by means of importations. The plant is not a rare plant at all in the Orient, and it is stated that the supply of seed there would not be expensive.

One may accurately summarize agricultural knowledge concerning this crop, called "hamus," by saying that it is botanically a chick-pea, an annual legume of which several introductions have been made into the United States. It is a legume of some promise as a crop, especially for dry-land regions, and as such is exceedingly interesting, but as yet its introduction is not out of the experimental stage. The development of Hamus as a dry-land legume will be watched with no little interest by farmers generally.



Hamus, the new dry-land crop

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Write for our book about the San Joaquin Valley now—before you forget it.

There are low round trip fares all summer. Berths in Santa Fe tourist sleeping cars cost only about half the usual Pullman charge. A trip through this wonderful San Joaquin Valley will convince you that California is the place to go. I'll be glad to answer your questions about the details of such a trip.

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The Making of a Market-Gardener

By John R. Spears

MY FRIENDS say that I was originally composed of most unpromising material for the making of a market-gardener, and I cannot help agreeing with them in the matter. To give the reader an idea of my mental attitude toward such work before I began, it may be said that, while I did many kinds of work in my early youth, my real career began when I became an apprentice—behind the press—in a country newspaper office, and it was continued in newspaper offices until I was a trusted reporter on the staff of the best written daily of the nation.

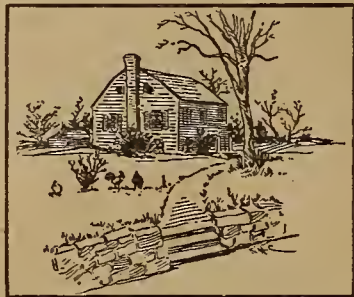
Some historical writing came next, but I was, without warning, or a chance to say a word, "fired" from this staff. The loss of the job proved to be one of the most fortunate events in my life.

Some years before this event I had bought a country home, an old farmhouse with five acres of land devoted entirely to trees and grass. There I settled down to write things for the magazines and Sunday papers as a side issue and books as a main occupation.

That was an ideal life, if you could believe what my friends said, but the truth is we had difficulty in keeping "the howling,

prowling, growling wolf at bay."

Meanwhile, although living four miles from a railroad, I had difficulty in getting garden-vegetables.



"An old farmhouse with five acres of land"

The farmers were all dairymen and did not produce adequate supplies of truck for their own use. I feel sorry for myself now as I recall the joy with which I welcomed the peddler who came at rare intervals to sell wilted and even decaying stuff bought in a city thirty miles away! All at once the possibilities of my back lawn loomed high, and all the higher because success with greens meant the saving of the annual cost of potatoes and other things. I did not know enough about the work to plant potatoes at the right time, but I hired a neighbor to plow up the sod—and the first step in the making of a market-gardener was at hand.

As the sod was rolled up to the light of the spring sun, I noticed the grass-roots. I picked one up for a closer look, and then the plowman laughed.

"You're going to have some fun with the quack," he said; "that is, if you enjoy using the hoe and rake and things."

The sod was quack, and if I didn't have any fun, the neighbors did as they watched my work. Let me say that I have since learned to enjoy eradicating the stuff, and I do not use a hoe in the process, either. But I certainly had a strenuous time in the beginning.

After plowing I asked the man when to plant various things. He was a man of common school education, but he insisted on my taking observations of the state of the moon when putting seeds into the ground. The country schools then, as now, put children through courses of study adapted to fit them for college instead of life, and in the ways of life this man followed his fathers. So I turned to hooks on agriculture for information.

I Never Thought of Selling Truck

At this time, remember, I was interested only in supplying the family table. Had anyone suggested raising truck to sell, I should have laughed at the idea. I had lived in a town where "farmer" was an approbrious epithet. In fact, I prided myself on the fact that I was not a business man. For recreation I read such books as those of Thoreau and Ruskin. Like other people who thoroughly enjoy such books, I had a lofty contempt for "business." Finally a neighbor—a farmer at that—whose patch had been ruined by the blight, came to ask me if I had any potatoes for sale from my unblighted patch.

As this is a string of confessions, let me say that my blood stirs a little even now as I recall that event. For I had sprayed my potato-vines while the farmers smiled

indulgently at a practice that did not seem to them worth the labor, let alone the cost of materials. The sale of those potatoes gave me a far lift on the way to the push-cart!

Then I experimented with tomatoes. I was in a region where frosts sometimes come in July and August. No one had ever picked ripe tomatoes in that neighborhood, but the third year I tried it I gathered one hundred and twenty-five ripe tomatoes from one vine. Later, from a patch of thirty-odd vines, I sold twenty-two cents' worth of tomatoes from each vine to people who came to me for them!

Finally an event of marked influence occurred. The State determined to take for public uses a breadth of land that included my home. In anticipation of this event I bought a little farm within one mile of the edge of a thriving manufacturing town of more than twelve thousand inhabitants. I had the money to pay for this, and I had great expectations of improving it with the money to be received from the State for my old home.

What Vegetables to Plant!

Having been driven from my old home, I reached the new a month after the local gardeners of the region had planted their first seeds. The land to which I had come had been handled in the usual fashion of the region. It had not received a load of manure within the memory of any neighbor. The best I could do in securing manure was to contract for a supply of three loads a week for a year to come. Then I bought (on credit) a ton and a half of the highest grade "phosphate" on sale and put in the plow.

It was then that a question suddenly arose which was almost wholly unexpected; and in spite of the fact that I had been growing vegetables for ten years and selling them for several, I was unable to answer it. What vegetables should be planted and how



"I had sprayed my potato-vines while the farmers smiled indulgently"

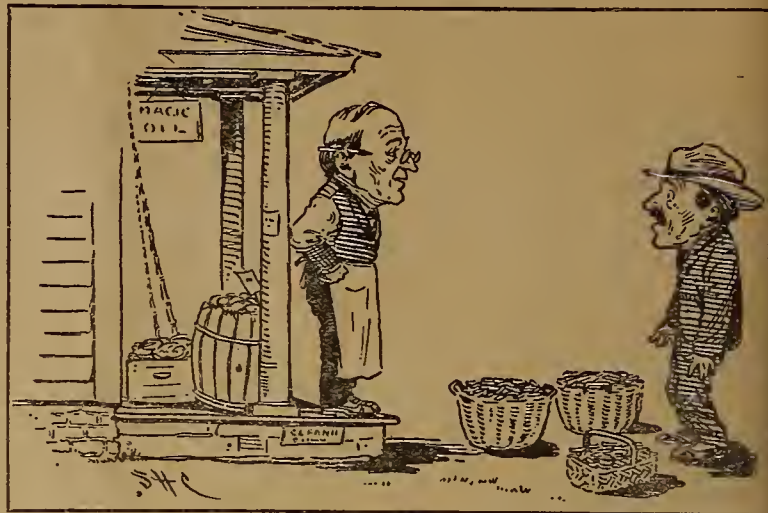
much space ought to be given to each? I talked to a leading grocer about it. He assured me that the outlook was rosy, because he had never been able to get enough good vegetables to supply the demand. I know now that was so, and I know why, too. After some more talk, I said:

"That's encouraging. Now what would you suggest that I raise as a specialty?"

"Chickens," said he with enthusiasm. "They are in demand all the year."

In short, I was unable to get any definite idea of what to plant. Accordingly, as I

was short of cash, and in debt, I determined to proceed with caution. I devoted much of the space to root crops, because if they fail to sell in bunches, one can get something for them by the bushel later. For specialties I chose beans and cucumbers. I greatly regretted later that I did not buy tomato-plants at some greenhouse and raise tomatoes.



"—said they were fine and then told me the price was \$1.00 per bushel"

Pardon my open boasting—it seems necessary to say bluntly that I made things grow. I had learned how in the little garden in the old home, and that is worth saying to the man in town with open ground behind his house. You can learn how to grow things there so as to make them grow by the acre elsewhere. But it is necessary to read garden books as well as to work your small space. The day when "any man can farm it" is gone. The grower without book-learning is to the well-read country gentleman what the pettifogger is to the lawyer.

My beans were the first crop to mature. Having calculated on selling to the grocers only, I went to town and got some orders on which I delivered two bushels and a half. The grocer looked them over carefully, said they were fine and then told me the price he paid was a dollar a bushel.

A dollar a bushel is just over three cents a quart. But beans were selling at retail, that day, for eight cents a quart—mine were sold by that grocer at that price. He made a gross profit of nearly five cents on an investment of three.

Up to that time I had been controlled by the idea that all a market-gardener had to do was to produce the best quality of vegetables and pack them so they would look well. I had read that selling was an important feature of the business, but it had seemed to me that first-class stuff must sell itself. As a matter of fact, I was partly right—fancy vegetables properly packed will sell themselves, but they cannot make grocers pay remunerative prices when a market is well supplied with ordinary grades. The price offered me was far too low.

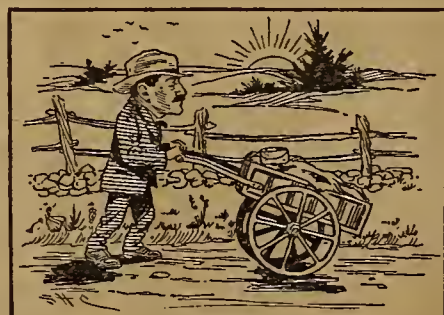
Making the First Sales

I saw that as to the grocer it would do me no good to "kick." To get a paying price, I must distribute my truck to the consumer. I had no horse, even though I was growing two and a half acres of truck, and I had no money with which to buy one. But I had a good little push-cart that had recently been purchased for use in the field. On reaching home I washed that cart until it was as clean as anybody's dining-room table. Then I picked it full of beans, covered them well to keep out the dust, put a pail on top for a measure, and in the "dewy" morn I shoved the outfit down the pike.

Perhaps the reader will be interested to know that this was done on the thirteenth of July and that I sold my first pailful of beans at the thirteenth house visited! I confess that I got cold feet while visiting the twelve houses where no sales were made, but as soon as I had made one sale the luck changed.

While trying to live by my pen I reached a mental condition where the sight of a long envelope in my mail made me shrivel, a long envelope being the kind commonly used for returning rejected manuscripts! But that feeling seems a long way off now, for on July 13th I got my final lesson in market-gardening. Since that time I have not only been able to get the full retail price for all that I have been able to produce, but some things that were really fancy have sold well above the price charged by the grocers. And I confidently believe that anyone who has the material to sell can do as well as did I. It becomes a matter of producing the best and advertising it. This was the system that turned the trick for me.

The market-gardener who can produce and sell first-class vegetables does not have to worry about anything.



"—and in the 'dewy morn' I shoved the outfit down the pike"

If You Like a Little Quiet Fun

Ask some pompous person if Grape-Nuts Food helps build the brain.

Chances are you get a withering sneer and a hiss of denunciation.

Then sweetly play with the learned toad.

Ask him to tell you the analysis of brain material and the analysis of Grape-Nuts.

"Don't know? Why, I supposed you based your opinions on exact knowledge instead of pushing out a conclusion like you would a sneeze.

"Well, now your tire is punctured, let's sit down like good friends and repair it."

The bulky materials of brain are water and albumin, but these things cannot blend without a little worker known as Phosphate of Potash, defined as a "mineral salt."

One authority, Geohegan, shows in his analysis of brain, 5.33 per cent total of mineral salts, over one-half being Phosphoric Acid and Potash combined, (Phosphate of Potash) 2.91 per cent.

Beaunis, another authority, shows Phosphoric Acid and Potash (Phosphate of Potash) more than one-half the total mineral salts, being 73.44 per cent in a total of 101.07.

Analysis of Grape-Nuts shows Potassium and Phosphorus (which join and make Phosphate of Potash) is considerable more than one-half of all the mineral salts in the food.

Dr. Geo. W. Carey, an authority on the constituent elements of the body, says: "The gray matter of the brain is controlled entirely by the inorganic cell-salt, Potassium Phosphate (Phosphate of Potash). This salt unites with albumin and by the addition of oxygen creates nerve fluid or the gray matter of the brain. Of course, there is a trace of other salts and other organic matter in nerve fluid, but Potassium Phosphate is the chief factor, and has the power within itself to attract, by its own law of affinity, all things needed to manufacture the elixir of life."

Further on he says: "The beginning and end of the matter is to supply the lacking principle, and in molecular form, exactly as nature furnishes it in vegetables, fruits and grain. To supply deficiencies—this is the only law of cure."

Brain is made of Phosphate of Potash as the principal Mineral Salt, added to albumin and water.

Grape-Nuts contains that element as more than one-half of all its mineral salts.

Every day's use of brain wears away a little.

Suppose your kind of food does not contain Phosphate of Potash.

How are you going to rebuild today the worn-out parts of yesterday?

And if you don't, why shouldn't nervous prostration and brain-fag result?

Remember, Mind does not work well on a brain that is even partly broken down from lack of nourishment.

It is true that other food besides Grape-Nuts contains varying quantities of Brain food.

Plain wheat and barley do. But in Grape-Nuts there is a certainty.

And if the elements demanded by Nature are eaten, the life forces have the needed material to build from.

A healthy brain is important, if one would "do things" in this world.

A man who sneers at "Mind" sneers at the best and least understood part of himself. That part which some folks believe links us to the Infinite.

Mind asks for a healthy brain upon which to act, and Nature has defined a way to make a healthy brain and renew it day by day as it is used up from work of the previous day.

Nature's way to rebuild is by the use of food which supplies the things required.

FROM THE EDITOR

He Forgot That He Had a Stomach

Talking of food, there is probably no professional man subjected to a greater, more wearing mental strain than the responsible editor of a modern newspaper.

To keep his mental faculties constantly in good working order, the editor must keep his physical powers up to the highest rate of efficiency. Nothing will so quickly upset the whole system as badly selected food and a disordered stomach. It therefore follows that he should have right food, which can be readily assimilated, and which furnishes true brain nourishment.

"My personal experience in the use of Grape-Nuts and Postum," writes a Philadelphia editor, "so exactly agrees with your advertised claim as to their merits that any further exposition in that direction would seem to be superfluous. They have benefited me so much, however, during the five years that I have used them, that I do not feel justified in withholding my testimony.

"General 'high living' with all that the expression implies as to a generous table, brought about indigestion, in my case, with restlessness at night, and lassitude in the morning, accompanied by various pains and distressing sensations during working hours.

"The doctor diagnosed the condition as 'catarrh of the stomach,' and prescribed various medicines, which did me no good. I finally 'threw physics to the dogs,' gave up tea and coffee and heavy meat dishes, and adopted Grape-Nuts and Postum as the chief articles of my diet.

"I can conscientiously say, and I wish to say it with all the emphasis possible to the English language, that they have benefited me as medicines never did, and more than any other food that ever came on my table.

"My experience is that the Grape-Nuts food has steadied and strengthened both brain and nerves to a most positive degree. How it does it, I cannot say, but I know that after breakfasting on Grape-Nuts food one actually forgets he has a stomach, let alone 'stomach trouble.' It is, in my opinion, the most beneficial as well as the most economical food on the market, and has absolutely no rival." Name given by Postum Co., Battle Creek, Mich.

"There's a Reason" for

Grape-Nuts

POSTUM CEREAL COMPANY, LIMITED, BATTLE CREEK, MICHIGAN, U. S. A.

Getting Two Profits

Owner of These Prize Producers Uses Tubular Exclusively



Shrewd dairymen seize every chance for making two profits instead of one. That is why they make the most money. They buy heavy milking cows because such cows make an extra profit which no other cows can make. They use

SHARPLES

Tubular Cream Separators

exclusively because Tubulars have twice the skimming force of others, skim twice as clean and make an extra profit no other separator can make. Mr. John A. Ness, Maple Grove Farm, Auburn, Maine, is a veterinary surgeon, breeder and importer of fine stock, and owner of the high-producing Ayrshires shown above. He is but one of many who shrewdly pocket Tubular "Velvet"—the extra profit only Tubulars can make. He says:

"I have used the Sharples Tubular Separator seven years. Have recently purchased a larger one, a turbine-driven Tubular. The Tubular has given entire satisfaction."

The remarkable dairy Tubular contains no disks to wear or wash, or injure cream. Guaranteed forever.

Do You Want a Free Trial? Do you want to exchange your present machine in part payment for a Tubular? If so, write for Catalog 112

THE SHARPLES SEPARATOR CO. WEST CHESTER, PA.

Branches: Chicago, Ill.; San Francisco, Cal.; Portland, Ore.; Dallas, Tex.; Toronto, Canada; Winnipeg, Canada. Agencies Everywhere.

Live Stock and Dairy

Placing the Hog-Coops

BY A little discretion in selecting a location and arranging hog-coops, one can greatly increase the protection, as well as eliminate much of the work required in constructing pens.

Where a large number of coops of the same size are used as individual quarters for brood-sows, no large pen is required. In such a case, all the coops may be placed along the side of a building, each with the end containing the door about two feet from the side of the building, or a distance just sufficient to allow the hog convenient room in entering. Thus the row of coops all face the building and stand parallel to each other.

A distance of several feet is allowed between the coops, depending on the space to be allotted to each sow when confined separately. The space is enclosed by connecting the rear end of the coops with boards, which may be easily nailed to the coops. A small door, as wide as the distance between the coop and the building and high enough that the hogs cannot get over it, is then constructed for each coop. It is hinged to one side of the coop and allowed to swing against the side of the building. The door should be kept on the same side of the coop-entrance at each place; thus each pen is separated from the pen on either side.

By simply swinging the doors back upon the coops, the entire series of pens may be thrown together. If such an arrangement is intended for permanent quarters, it is well to have one end of the row of lots connect with a large feeding pen. In this way the hogs may all feed and sleep together in the large pen until the sows are near farrowing-time, when one by one they are separated and placed in the small lots, beginning with the lot at the far end.

Each sow can be fed and watered in the little pen beside the coop, the feed being passed over the low board fence. If at any time it becomes desirable to relieve the small lots of the accumulated cobs and manure, the spreader may be drawn along the rear of the coops and the manure thrown over the low fence into it.

Where the coops are available, this system is easily improvised. Among the advantages are these: the building affords a wind-break, the entrance to the coops are well sheltered, the hogs are close together and easily attended, and but little work and material are required to fence off the lots. P. C. GROSE.

Keeping sheep is a help and not a hindrance to the feeding of cattle and hogs. They are closer and more dainty feeders. The spring feed for sheep and lambs as they come from the yards will prove a source of trouble to many who have neglected to sow forage crops in the fall and winter; there is plenty of time, however, to provide for the summer and fall by a plentiful seeding of the spring varieties.

Hog-House and Corn-Crib

ON THE farm of S. E. Dameron of Clarkesville, Missouri, a unique use is made of the central driveway in the large corn-crib, which has a capacity of five thousand bushels. This otherwise waste space is bedded deeply in fine oat-straw, over which is then sprayed a mixture of kerosene, machine-oil and cresol in order to control all insect germs and is utilized as the night quarters for the mature hogs in the herd of one hundred and twenty Chester Whites which are maintained on the place. It opens directly on the general hog-runway and exercise-yard and, as the animals in this herd are kept out of doors the year around except during exceptionally severe weather, this shelter in the corn-crib is all that they need. It would be far from economical to construct a special building for them when this space in the corn-crib so adequately satisfied the requirements.

Subsequent to farrowing-time the sows and their litters are assigned to individual A-shaped, portable houses which are kept out on the range, and as soon as possible the young stock are run outside in order to develop constitutional vigor and vitality as a result of plenty of exercise in the fresh air. Just inside the entrance to the crib a concrete dipping-tank sixteen by five by two and one-half feet in dimension is imbedded in the ground, and all the swine are immersed in a solution of coal-tar and creosote two or three times each year, as in this way the animals are maintained in first-class condition and kept free from the ravages of contagious hog diseases. In order to keep the digestive tracts of these swine in tiptop shape, all the refuse farm odds and ends are reduced to wood-ashes, which are fed to the hogs in addition to soft coal and a mixture of crushed limestone, sulphur and salt. G. D.

Use the Brush

THE time of year will soon be at hand when the horse will be working hard, and in spite of the cool days of early spring he will be sweating. This does not hurt him, provided he is given proper care. It does not hurt a man to work and sweat if he takes care of himself, for sweating is nature's way of casting off impurities.

The horse that is working hard needs the best of care. Of course, he needs proper feeding, but to USE THE COMB AND BRUSH FREELY will help much in keeping the horse in condition. You have heard the saying that a good currying and brushing each morning will save two quarts of oats. I hardly think it will save that much, but if it were necessary and put to the test, one could make good grooming save a little of the feed-bill.

There is a right and a wrong way to curry a horse. We might just brush over him and rather smooth down the hairs and make him look half-way like he had been curried. That would do the horse himself but little good. If we did the job right and first removed the old dried sweat and dead hair that had grown there during the winter, and then made the horse look slick, our work would be worth while. If the horse has been sweating quite freely the day before, take the curry-comb and rub over him and loosen up the dried sweat. After you have done this, take the curry-comb and brush him down the way the hair lays.

Knocking the comb on the stall often will remove most of this surface dirt. After this you can take the brush and brush him well. The brush will collect much of the dirt that the comb failed to get. This will put the horse in fine shape, but if you want a still better shine on him, take a cloth and rub him again.

We cannot give the horse too much care these days. Better spend ten minutes more on the team in the morning and be that much later in getting to work. More liberal use of the brush will keep our horses in better shape. Consequently more work can be done. R. B. RUSHING.

If some men could hold not more than a thimbleful, they could still be easily self-contained.

We were troubled by sparrows getting into some vines which were growing around the porch. Three or four fruit-cans covers half filled with a mixture of bran and Paris green and placed on small substantial shelves soon reduced their number. This mixture will not be easily dropped by the birds and so poison other birds or chickens. Neither will it be easily found by other than sparrows, if placed only where sparrows are in the habit of roosting.

Puffed Joints

A FARM lad in Illinois tells of having trouble with his yearling colt because of the presence of puffs on the animal's legs. Dr. A. S. Alexander says, as to these diseases:

The puff in front of the joint no doubt is a "bog spavin" and that on the side of the joint a "thoroughpin." The latter puff, when pressed upon, will bulge out on the side opposite that on which pressure is made. The puffs are filled with synovia (joint-oil) and are practically incurable. It is lucky if they do not cause lameness. Should they ever give rise to lameness, have the entire hock-joint line-fired and blistered by a graduate veterinarian. Meanwhile treat as follows: Clip off the hair and brush the skin clean. If the skin is not sore from previous blistering, at once rub in a little ten per cent. iodine vasogen, and rub until the skin dries and becomes hot. Repeat this treatment daily until the skin tends to become blistered, at which stage stop the rubbing and merely apply a little lard daily. Repeat the iodine applications, if necessary, as soon as the skin becomes sound. This may do some good, if you persist and give the parts lots of rubbing and massage at each treatment; but I cannot guarantee success.

A Colt Cribber

"A COLT we have has a habit of chewing when standing idle or out on the pasture. He stands and chews and chops the same as if he were eating corn or some hard substance and stretches his neck and sometimes froths at the mouth. He also has a gurgling in his throat, as if he were troubled with gas. He eats and works all right and is in fair condition. He is three years old past. He has had that trouble ever since I have owned him, which is over a year." Thus writes an Iowa farmer.

I find it pretty hard to judge by your description, and without seeing the horse, what is the matter with him. My guess, under the limitations, would be that he is a cribber, or wind-sucker. If so, there is but one means of treatment, and that is to have a wide, thick strap made and buckle it around the smallest part of his neck pretty tight. This will effectually stop the habit—that is, if I am right in my supposition. A very little careful observation will enable you to tell. Observe him closely, and see whether he sucks wind into his belly and then belches it out again. If so, you may be certain he is a cribber. DAVID BUFFUM.

What He Needed



A NEW MEXICO homesteader received from the Department of Agriculture a quantity of dwarf milo maize seed, with a request to plant it and report the result. Here is his report:

"MR. WILSON: "Dear Sir—I planted your dwarf maize, and it did fine. It was the dwarfest maize I ever saw. "But the jack-rabbits ate it as fast as it got ripe. "Please send another lot of seed, and send along a lot of dwarf jack-rabbits to match the maize."

Destroying Maggots

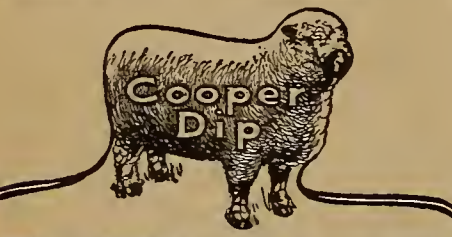
IF THE owner of a flock of sheep knew that some enemy were coming into his flock and mutilating the sheep by eating raw flesh sores under the wool, he would stop everything and remedy the trouble. Such is happening every day during fly-time in many farm flocks.

Last summer I visited a flock of sheep. As soon as I saw them I knew my neighbor was suffering loss from maggots in his lambs. Here and there among the flock were young lambs standing with heads down, twisting and squirming in an endeavor to scratch the soiled wool off their tail-heads. My friend did not realize it, but that was the maggot danger-signal.

We got busy at once to fight the pests. He bought a four or five per cent. solution of a crude coal-tar dip and a brush, shears and syringe. Each lamb affected was caught and shorn of all dirty foul wool around the tail end. This exposed the enemy and certainly they were there legion. Great masses of wriggling, crawling maggots were working. Some were already deep under the skin, some imbedded only in the wool. Their work in the wool fretted the lambs thin. When they bored deeply into the flesh matters became serious. In fact, one little lamb soon died from his maggot wounds.

The stiff brush soon scattered them out of the wool after the application of the dip had sickened them and caused them to loosen their hold. In the flesh wounds the syringe or squirt-gun washed them out. Those deeply imbedded in the flesh caused some trouble, but by filling the wound full of the fluid and then working around into all the "pockets" with a blunt probe they were dislodged. The smell of the dip prevented later infection in the wool and clean pine-tar kept the flesh wounds clean.

If we had not had the coal-tar dip, a strong brine would have done fairly well, or a solution of five parts water and one part turpentine or kerosene. These should be washed out however, for they might irritate the skin. A lard and sulphur and turpentine salve may also be used. J. C. COURTER.



ONE DIPPING KILLS ALL TICKS Used on 250 million sheep annually. Increases quantity and quality of wool. Improves appearance and condition of flock. Handsome 1912 calendar free—a post card brings it. Schieffelin & Co., 170 William St., New York, N. Y.

THICK, SWOLLEN GLANDS

that make a horse Wheeze, Roar, have Thick Wind or Choke-down, can be removed with

ABSORBINE

also any Bunch or Swelling. No blister, no hair gone, and horse kept at work. \$2 per bottle, delivered. Book \$1 free. ABSORBINE, J. E., liniment for mankind. Reduces Gout, Tumors, Wens, Painful, Knotted Varicose Veins, Ulcers. \$1.00 and \$2.00 a bottle at dealers or delivered. Book with testimonials free. W. F. YOUNG, P. D. F., 23 Temple St., Springfield, Mass.

\$25 and up United States Cream Separator

Read Its Advantages

Skims Cleanest

Others claim it, but the U. S. has the Proofs. It holds the World's Record.

Turns Easiest

The Interlocking style U. S. is operated with half the power of older models.

Washed Quickest

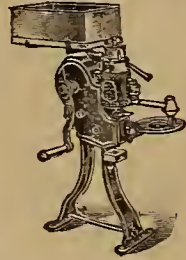
The Interlocking Skimmer is the only skimming device made

You owe it to yourself to examine a United States Cream Separator before buying any other.

Ask your local agent for a free demonstration right on your farm, or write direct.

VERMONT FARM MACHINE CO.

Bellows Falls, Vt. Distributing warehouses in every dairy section of the country.



that can be mechanically washed to perfection.

Non-Rusting

The skimming sections are now made of nickel silver. No other separator uses nickel silver.

Wears Longest

20 years' actual service in thousands of dairies has proved its great durability with the least outlay for repairs.

The Old Silo Troubles Banished—no more hooping, painting or repairing.

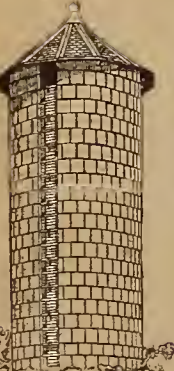
THE IMPERISHABLE SILO

is guaranteed. It is made of Patented Hollow Blocks of Vitrified Clay. Storm-proof, decay-proof, expense-proof. The first cost is the last. No more expensive to erect than a good stave silo and beyond comparison in efficiency and durability.

Being moisture-proof, The Imperishable keeps your silage clean and sweet up to the wall. Simple to construct. Every owner recommends The Imperishable. Its use is an economy. Send at once for free catalog.

NATIONAL FIRE PROOFING COMPANY

Agricultural Department J Pittsburgh, Pa.



Farm Notes

The Sleepers

(Apologies as Usual)

By Berton Braley

"SAY, what you got that fog-horn for?" inquired the Farmer's Maid.

"To wake 'em up, to wake 'em up," the busy Farmer said.

"And do you think it's loud enough?" inquired the Farmer's Maid.

"I have my doubts, I have my doubts," the busy Farmer said;

"But I've tried the best alarm-clocks, and it ain't a bit of use,

And I went an' bought a bugle that was louder than the deuce,

And I've gone and got this fog-horn, and I'm going to turn it loose,

When I try to get the boys up in the morning!"

"Suppose the fog-horn's not enough?" inquired the Farmer's Maid.

"I'll go and get a cannon next," the busy Farmer said.

"I've seen 'em sleep through worse than that," returned the Farmer's Maid.

"Well, then I'll try a lyddite bomb," the busy Farmer said;

"For the cows are in the stable, and the pails are empty still,

And the horses want their breakfast, and the piggies want their fill;

But the boys are sleeping soundly, and I guess they always will,

When we try to get 'em waked up in the morning."

"Well, I can get the fellows up," remarked the Farmer's Maid.

"I bet you can't, I bet you can't," the busy Farmer said.

"I'll simply ring the breakfast-bell," explained the Farmer's Maid.

"I never even thought of that," the busy Farmer said.

"For you ring 'em up to breakfast, and they'll make it in a leap,

Though the bed is mighty comfy and the slumber mighty deep,

For the thought of cakes and coffee wakes the laziest from sleep,

When we try to get the boys up in the morning."



Harvesting the bees

Farm and Fireside Index

How to Use It to the Best Advantage

THE publication of an index to each volume of FARM AND FIRESIDE makes this paper a permanent encyclopedia of farm information almost invaluable, if the subscriber wills.

By carefully preserving the papers and keeping them by volumes and in order of publication, an intelligent use of the index will make it possible to find at a moment's notice any article that has appeared in the volume.

We believe that every reader at some time or another has wished that he might turn instantly to some bit of information read weeks or months before, but without a key has abandoned the idea of finding it; or, more persevering, has spent valuable time searching, perhaps without avail.

The index has been made with the idea of bringing together all the references to any one subject and of indicating very briefly by the title what each article is about. Every issue has been examined carefully, and every article considered from the standpoint of its value, rather than its length.

After all the articles have had subjects assigned to them, these subjects have been arranged in one alphabet like words in a dictionary.

When a subject might be looked for under two or more names, a cross-reference has been made from the word not used to the one under which references will be found. For example, all articles about chickens will be found under POULTRY, but under CHICKENS will be found a reference to POULTRY.

When a subject has a great many references, it has been subdivided to facilitate finding the exact information wanted; for example, poultry in the index requires an entire column for all the entries. All gen-

eral articles are grouped first under the word poultry. In this grouping care has been taken to choose, as the first word of each title, a catch word that will be distinctive, and that will bring like articles together; for example, there are four titles under poultry beginning with the word coop, this shows at a glance all the articles that have been found about coops, and the remainder of each title indicates what is said about them.

Poultry accounts, keeping	S 25: 16; D 10: 13
advice to beginners	Ja 25: 16
broody hens, curing	My 25: 10
caponizing a cockerel	Jl 10: 9
catching a chicken	Ap 25: 6, 11
chicken-proof flower-bed	Jl 25: 4
cleaning houses	Jl 25: 8
cleaning houses for manure	Ag 25: 11
concrete floor for hen-house	Ja 25: 15
coop, easy to clean	Je 10: 8
coop for fattening	O 10: 24
coop to prevent chicks from piling up	F 10: 6
coops versus diseases	Mr 25: 12
culling out lazy hens	Jl 10: 9
December hints	D 10: 13

In addition to these general articles there are three subdivisions following: POULTRY BREEDING, with fifteen titles; POULTRY DISEASES AND PESTS, with thirteen titles, and POULTRY FEEDING, with twenty-four titles.

It will readily be seen from the foregoing that the subscriber who was not interested in poultry last year, but who later wants to find some information dimly remembered can do so quickly by the aid of this index, without examining the twenty-six numbers for the year, and reading each of the one hundred and thirty-nine articles on poultry to find what he wants.

Not only has each article been given one entry, but for greater convenience and to avoid numerous cross-references, often two and sometimes three. For example, most articles found in the Headwork Shop Department have been indexed under MACHINERY AND TOOLS, for convenience in seeing what machinery and tools have been mentioned or described. Each tool or machine appears again under its individual name in the index, and sometimes under a subject; for example, DISK PLOW, which has only one reference, will be found under DISK PLOW, under MACHINERY AND TOOLS and under PLOWS in the alphabet; this is to avoid overlooking articles which might properly be found under any one of several names. But it is always safe to look under another word if you do not find the one you think of first in the index.

Another good illustration of double or triple entries is INSECT PESTS. This heading has been used to bring together references to all insect pests mentioned, but references will be found to insect pests affecting APPLES, TOBACCO, TOMATOES and other trees and plants, under their names as well as under the name of the pest itself; for example, CODLING-MOTH, SAN JOSE SCALE and others.

Not only have the strictly farm articles been indexed, but under AMUSEMENTS, GAMES, etc., will be found the reference wanted to a forgotten game, and under LAUNDRY, KITCHEN, SEWING, etc., will be found the item which the busy housewife has overlooked, or forgotten, until the need has arisen for it.

The INDEX to volume thirty-four, 1910-1911, has been published and will be sent free to any subscriber who will write for it. The INDEX to volume thirty-five will be issued soon after the last number in September, 1912.

By using this INDEX you may increase the value of your subscription many fold. TRY IT!

If you feel sure you have seen what you want to know in the paper but do not find it in the index, write us; it will help us to answer your question and to make a better index next time. JULIA E. ELLIOTT.

Getting by the Drought

[CONTINUED FROM PAGE 4]

is too high, both need remedial treatment. Under either disadvantage, plant growth is slow and roots are developed only near the surface until evaporation and slow seepage have restored favorable conditions. By that time the dry weather may be setting a hot crust close enough to the roots that the crop is injured before it can adjust itself to changed conditions. Deep roots and steady growth early in the season prepare the plants to endure the dry, hot weather that may follow. That requires an aerated, mellow, moist soil; conditions not attained unless melted snows and rain are absorbed.

The moisture that goes into the soil is just a visitor; its home is in the sky and the sea, and it will get back there if the soil door is not closed, locked and barred with a dust mulch. That is the last step in beating the drought and so important that we hardly dare put it second to anything. But like many other good things, it may be overdone. Cultivation should not be so frequent nor so shallow that the surface is too much fined; the rains following a drought are usually hurried and heavy affairs, and will not be readily taken up if the soil particles are too much fined and lay too close to-

gether; I have found that after weed growth is killed, just enough surface stirring to maintain about two to four inches, depending on the soil, of dry, loose earth is effective in checking evaporation—say a cultivation once in five or six days. One ought to cultivate as soon as a crust forms under the mulch. That cultivation, if given across the natural drainage, will assist in giving each acre a just share of the rain when it comes.

We must declare war on the surface crust wherever it forms; it robs the soil of water that may be highly precious before harvesting. It is estimated that an inch of water will evaporate every week from soil, once the surface has baked. That inch of water may be just the difference between a good crop



"Who's that comin'?"

and a poor one. There are very few years when the total rainfall is not sufficient to produce a normal crop; there are also very few seasons when enough of it will remain in the soil to grow the best crop we could, if cultivator, disk and smoothing-harrow are not freely used. Where there is chance for intertillage, keep the cultivator-teeth bright; the corn, or whatever the crop may be, will look that way, too. On stubble-land use the disk; a crust steals just as much moisture there as anywhere, and it takes some long-distance-ahead moves in dealing with dry weather. For the fields of young grain use the smoothing-harrow with teeth well santed back, if hot weather begins to lay a crust on the surface. The grain will not be damaged if it is six inches or even a little more in height. I have seen some good results from dragging grain that was pretty well along. Last year a neighbor had some oats sowed on a piece of pretty stiff, clayish soil. The crop had failed on that field a number of times; the owner knows why, now. When June came with its dry days, those oats seemed to forget all about growing; they just stood still and began to turn a discouraging yellow. The crust was beginning to get in its work, but my neighbor went onto the field with a smoothing-harrow and stirred the surface up pretty thoroughly. "They're not going to amount to anything anyway, so it's a good time to experiment," he said. The experiment was certainly a happy venture; every day the oats looked a little thriftier. They left grain-fields that were not similarly treated, but on much more fertile soil, away behind. When thrashing-time came, they yielded about thirty-two bushels to the acre, while oats that had simply been left to take care of themselves fell below twenty bushels.

This dry weather has been setting lessons for us anywhere we happen to look; the more of them we get right, the less we are apt to get left. The danger is not in the dry weather, it is in the dry soil.

Intelligence

News of Interest to Every Farm

Kansas State Agricultural College has a course of instruction on table etiquette.

Out of 430 subordinate granges in Maine, about 350 own their own halls. These halls vary in value from \$1,500 to \$16,000.

Several granges are expressing themselves against the free-seed-distribution folly. Probably all granges have that sentiment to express if they cared to put the matter to words.

This past year diseases have claimed an abnormal number of hogs. For every one thousand head more than eighty-nine have died. This rate is double that of the preceding year.

The Ohio Experiment Station has been emphasizing the importance of properly preparing wool for the market. A recent bulletin tells about this and lays down some practical rules.

Some predictions say that, because of our late spring and consequent high-priced eggs throughout the spring season, eggs will be high next winter. That comes, say our prognosticators, because spring eggs were late in going into cold storage.

15⁹⁵ AND UPWARD

AMERICAN SEPARATOR

THIS OFFER IS NO CATCH. It is a solid proposition to send, on trial, fully guaranteed, a new, well made, easy running separator for \$15.95. Skims hot or cold milk; making heavy or light cream. Designed especially for small dairies, hotels and private families. Different from this picture, which illustrates our large capacity machines. The bowl is a sanitary marvel, easily cleaned. Gears thoroughly protected. Western orders filled from Western points. Whether your dairy is large or small, write us and obtain our handsome free catalog. Address: **Box 1058 AMERICAN SEPARATOR CO. BAINBRIDGE, N.Y.**

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Big Factory, Big Sales, 23 Styles

No traveling salesman, small expense, prices low. Everything guaranteed. Free samples by mail. Prices of leading styles freight prepaid to all points north of the Ohio and east of the Mississippi River:—

Wires	Inches high	Medium Weight	Extra heavy (all No. 9)
9	39	23c per rod	36c per rod
10	47	26c per rod	40c per rod
12	55	32c per rod	48c per rod

Special rates beyond this territory.

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Shoo-Fly THE ANIMALS FRIEND

Keeps flies and other insect pests off of animals—in barn or pasture—longer than any imitation. Used and endorsed since 1885 by leading dairymen and farmers.

\$1 worth saves \$20.00 in milk and flesh on each cow in a single season. Heals sores, stops itching and prevents infection. Nothing better for galls. Kills lice and mites in poultry houses.

SEND \$1, if your dealer can't supply you, for 200 cows, and our 8-tube gravity sprayer without extra charge. Money back if not satisfactory. Write for booklet, FREE. Special terms to agents **Shoo-Fly Mfg. Co., Dept. X, 1310 N. 10th St., Phila.**

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What do you do with your old bags? Don't throw them away, we will buy Feed bags of all kinds—Gluten, Beet, Pulp, Bran, Oats, Corn, Cotton-Seed Meal Bags, etc., and pay you highest prices. Write us today for prices and particulars. We pay the freight.

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One Price—One Quality—Now

60,000 best Columbus Buggies ever made—exactly alike—one quality—**one price**—offered this year direct at only 81 factory profit on each to us. We've reorganized whole factory to make this. 6 weeks Free Trial—2 year guarantee. Satisfaction or money back. Write. Big Facts Portfolio Free.

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The Market Outlook

Take Care of the Calves

UNLESS you have cattle on the market, it is hard to appreciate how well the commoner grades of cattle are selling. Cattle in little better than good stocker condition are selling very high, and are really making more money for the feeder than the long-fed cattle; and this condition will continue until grass cattle begin to run freely. We are now up against a proposition in cattle-feeding hard to figure on. Corn at seventy-five cents per bushel locally is pretty high, and it takes considerable nerve to buy feed at that figure. The same thing to do is to take a profit whenever there is one. Cattle may go higher, but it is an unsafe gamble. I see no reason why all kinds of live stock will not sell high during 1912, nor is there any question but that all crops will sell at good prices. Taking the country as a whole, there will be a very large acreage of corn. There are several reasons for this. First, the present price; second, the killing out of the clover last year, and, third, the cheapness of the seed as compared with other crops. The chances, therefore, are that the other crops, barley, alfalfa, winter wheat and even oats, will have less acreage and therefore sell well.

We generally have every spring newspaper talk about the loss of cattle on the range through the severe winter. This year there is little talk and great loss. In fact, the loss is so great it will seriously affect the grass-cattle supply. It now seems generally conceded that the Pacific Coast must be reckoned with in our future supply of grass-fat cattle. A large proportion of the range grass-fat cattle are now shipped west instead of east. Farmers who keep cows for milking ought to take good care of the calves this spring and summer. A little oil-meal added to the skim-milk will surely pay well, and if ever it paid a man to take good care of everything, it will be this year.

W. S. A. SMITH, Iowa.

Sheep Prices Satisfactory

THE "Year of Jubilee," at least for the sheepmen, seems to have come, and prices in almost every class of sheep and lambs are already up to those of 1910, the banner year. Wholesale and retail beef and mutton are higher in New York and other eastern cities than they have been since 1881. A little more faith in the future, and a little less of that panicky feeling during the early months of this year, which caused thousands of sheep and lambs to be sent to market but half fit, to realize from four to six cents per pound, would by now be reaping its reward in realizing from seven and one half to ten cents for those same animals, in ripe condition. It is, however, useless to "cry over spilt milk;" it is better to determine to hold on tighter to the pitcher in the future.

The very varying deliveries of western sheep and lambs at the principal markets during the first three weeks of April caused considerable ups and downs in prices; but by the last week of April and the first of the present month buyers seem to have found out that it was no use any longer to fight against eight-cent mutton and ten-cent lamb. The best-informed salesmen are un-

willing even to give a guess at what prices will be in June and July. It is well, however, not to be too greedy, and for those who have sheep or lambs really fit, present prices should be satisfactory. They are high enough to cover the big feed-bills.

But few spring lambs are yet appearing on the markets, and it is likely that, on account of the late winter and high feed prices, not much will be done in that line until June, when it is probable that those little gold nuggets will be eagerly sought for. In many cases the problem will be how to keep the weights down below the sixty-pound mark, which is the utmost limit at which spring lambs are admitted into the "top" rank.

It being of no practical use to say more here about prices, a few words as to the precautions which should be taken on turning sheep, and especially lambs, out of the yards may be of use. The avidity with which they "go for" the early grass is apt to tempt the sheepmen to withdraw their grain ration too suddenly. The young grass is washy, apt to induce scouring and is wanting in nutritive value. To maintain the quality of the ewe's milk, on which the lambs will greatly depend until weaning-time, at least one half of the grain ration they have been receiving in the yards should be allowed in a morning and evening feed. If lambs are allowed to fall back at this time, a serious check to their growth will be sure to occur.

JOHN PICKERING ROSS, Illinois.

Hog-Market Unchanged

DURING seeding, as the receipts became light, the speculators worked the market up until the price was within twenty cents of the high mark of 1911. This stimulated a liquidation on the part of country shippers, and with its appearance a break of thirty-five cents occurred.

While the market was on its upward movement, the large packers failed to support it, but bought freely as soon as the break occurred. Evidently they wish to maintain a market around eight dollars until the bulk of their heavy stock of provisions has been disposed of. The yards have contained many hold-overs left there because of bullish feeling on the part of sellers, and because of the efforts of the buying side to stop advances. Seasonable improvement of quality and weight are present, and the average is the heaviest since September. Heavy sows and light hogs are discriminated against.

Eastern demand remains good and takes the bigger share of the medium-weight offerings.

The provisions market is the most active for some time, and while prices fluctuate considerably, they are gradually attaining higher levels. Both the hog and the provisions markets are on the choppy order and will remain so until there is a material change in the receipts. Yards talent is prone to forecast the market conditions for the early part of the summer, as information is conflicting. Frank E. Scott, manager of Clay Robinson Company's branch at South Omaha, in summing up the outlook for the summer, states that because of the lateness of the coming of spring and of grass and because of the general shortage of feed many farmers were forced to market their shotes that otherwise would have appeared during the summer. Corn and hog values advanced and prompted liquidation.

Close marketing was done during the winter, and there are almost no hogs behind cattle in feed-yards. The character of the current offering shows that there are but few prime heavy hogs still in the country. There were twenty-five or thirty-five per cent. less sows bred in the corn-belt States than last year, and the reports of early farrowing show heavy mortality. With such a condition heavy marketing during the summer does not seem probable, and the price will remain well up until heavy receipts do occur. LLOYD K. BROWN, South Dakota.

Scarlet Tanager

SPRING is rapidly passing, and mid-May with its flood of warm sunshine is responsible for the abundance of insect life, as well as for forcing into maturity the tender leaves upon which this detrimental host always feed. But with this welcome sunshine there also comes the army of birds that consume these insects so lately hatched. By so doing they render to man a most beneficial and inestimable service. On the crest of this migratory wave comes this fiery colored individual, the scarlet tanager. Coming, as he does, directly from the tropics, where birds are noted for their gay colors and where he would scarcely be noticed among such a company, his fiery



coat, ornamented with coal-black wings and tail, offer such a marked contrast to our more plainly colored birds that he can readily be picked out from among them. His red color, instead of being a danger-signal, warning his enemies to beware, serves only to attract them as he flies among the tree-tops—a flaming arrow. Nature, however, soon relieves him of so conspicuous a color, and after the nesting season he dons the sober hue of olive-green, the color of his mate. The transition often produces a queer variegation.

During the few weeks that the scarlet tanager remains with us his services to the farmer, as above stated, are inestimable. He should, with his kindred, be protected, for he saves the forest-trees from destruction by harmful insects. H. W. WEISGERBER.

Thinking that clover-seed is too high to buy is the ruin of the farm.

Recently we saw a woman get her silverware out of a covered tin pail. She said that it never needed scouring and never turned color. This idea is especially a benefit where gas is burned in the house. Gas will cause silverware to tarnish more quickly than where there are none.

Inexpensive Bedding Plants

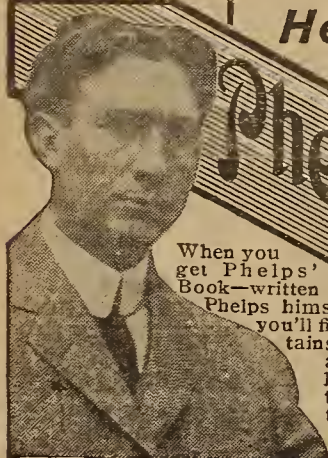
I FIND that with a little care and patience one can have a very attractive and showy garden from annual plants at very little expense. Some of the seed will have to be started in boxes in the house, while others can be planted in the beds where they are to grow. For two or three years I have grown and admired the *Kochia Scoparia*, or Summer Cypress, and, although I have considered it a valuable decorative plant that was easily grown, yet I never realized its possibilities as a decorative plant until I saw it in the parks, and on the lawns of a northern city last summer. Here I saw it grown in masses, single specimens in vases, and great hedges where they were miniature trees, so very graceful and beautiful. It grows quickly from seed planted in the open ground, the foliage is finely cut, is a dainty green all summer, and in the autumn turns to a brilliant dark red, making a gorgeous display that is in harmony with its surroundings. This forms neat, compact bushes, from two to four feet in height. Give each plant two feet space, and have the soil rich.

There is no finer summer or fall flowering plant than the *Salvia Splendens*. It becomes a brilliant mass of scarlet as the cool nights of August and September appear. This is grown from seed, and comes into bloom earlier if the seed is started in boxes, in the house or pit, in February or March. Do not crowd these plants, but give each plant room to grow and be cultivated. The finest bloom is that of flowers grown in rich soil, well cultivated. They are beautiful in beds by themselves, or as an edging for a circular bed of cannas or coleus. There are other varieties of the salvia, but the *splendens* is the surest to grow and bloom, and is the most brilliant variety. I find the seed will self-sow. If the bed is covered with leaves in the fall, a number of fine plants will appear the following spring. These bear transplanting well.

The zinnia is an old-fashioned flower, and we have always relegated it to the side garden, but after seeing large beds of the improved, dwarf, giant-flowered variety in parks and on the lawns of public institutions, I considered this a very showy, beautiful and inexpensive bedding plant that was worthy a place on any lawn. It is little trouble.

The nasturtium and verbena are well-known and indispensable plants for bedding, but the flowers must be picked often for continuous bloom. LAURA JONES.

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Poultry-Raising

Poultry Economy

IN THE world of business to-day, system is recognized and practised as a science. And system, if applied to the poultryman's business, pays, and pays not only in dollars and cents, but also in time and labor. And by system I mean not merely a system of feeding, housing, etc., but system in the broader sense of scientific management, as applied to a saving of time and labor.

The first recommendation I would make is in regard to housing. For the poultryman who keeps several hundred hens, the long, continuous house, preferably one with open fronts, is the most economical. All being under one roof, much time going in and out doors from the feed-room can be saved. By the use of a car suspended from the rafters, or an ordinary feed-and-litter carrier, one man can easily take care of a greater number of birds than would be possible with the colony-house plan. The feed and water is placed on the car, which is then pushed the length of the building, and the hens are fed and watered in a very short time, even though there may be many of them. It is easier to gather the eggs, it is not necessary for the feeder to be out of doors in all weathers, and in winter it does away with shoveling paths, which in this Maine latitude is quite an item. In the curtain-front house, there is almost no loss of birds from sickness or disease, such as roup, and the difference in the death rate is an item well worth considering.

In the continuous house, the doors in the partitions may be fastened open or left out entirely, and thus each hen has the privilege of roaming over the entire building, and anything which tends to make the flock better contented and happier results in more eggs. The vegetables or cut clover can be fed from the car, and it can also be used to advantage in removing the droppings from the building by having the track run outside of the building to the manure-shed itself.

There is a great saving of time and labor in the housing and care of young chicks in a continuous brooder-house, over the method of individual brooder-houses or outdoor brooders. The cost of heating and the care of lamps in the individual brooders is greater than is the cost of heating the continuous brooder-house. I believe the heat is more even and the loss of life not so great, as with the single brooders, and this being true, a great saving is here realized, because a dead chick means quite a loss, potentially so at least. As with the laying-house, all the chicks are under one roof and are thus more easily cared for, and the worry over this or that individual brooder is eliminated.

Much economy may be practised in the feeding of the laying hens and the chickens on the range if a dry mash is used. Enough dry mash may be mixed in one hour to last five hundred hens a month, and it is not necessary every morning or evening to heat water to wet the mash, then mix the mash and then wait to allow it to cool. There is no grain to sour in summer and freeze in winter, as is the case with a wet mash. A power feed grinder and mixer may be installed if one has enough hens to warrant the expense, and a saving of time at least would thus be made.

In feeding chicks after they have been transferred from the brooder-house to the range, a horse and low-down wagon save considerable time. The feed and a barrel of water are placed on the wagon and drawn all over the range, one trip a day being all that is necessary.

As all large business houses practise the most rigid economy in their sales departments, so ought the poultryman to do. He ought to market his products in such a way that they will command the highest market prices. If the poultryman, ten days or two weeks before he intends to market his poultry, will shut them in a darkened room and feed them three times a day on whole corn, his birds will be in better condition to kill or to ship alive. If, when he dresses his poultry, he will only exercise a little more care and be a little more fussy about the packing and the package, he will be amply repaid when his birds arrive in the market; because looks go a long way with all of us, when we are buying our food.

There is no satisfaction, and but very little money in exchanging eggs for groceries or grain. By being careful in gathering the eggs, so that they won't become chilled in winter and so the hens won't sit on them overnight and using a little care in sizing and selecting, quite an advance over the common prices may be obtained. When possible, sell your eggs direct to the consumer. If not possible, get a market in your nearest city with some grocer who deals in strictly fancy groceries and provisions. Agree to furnish him only strictly fresh eggs, and then, for your own sake, live up to your agreement. Carefully clean all the eggs; don't send any small, misshapen or large ones. Stamp each egg with a rubber stamp, using your initials or the name of

your farm, and in a short time you will have created a demand for your eggs, and when you have created such a demand, your eggs will bring the highest prices, considerably more than your storekeeper would pay.

Several neighbors could send their eggs together, paying a cent or two per dozen to one of their number for doing the business, and in this way all would gain a little.

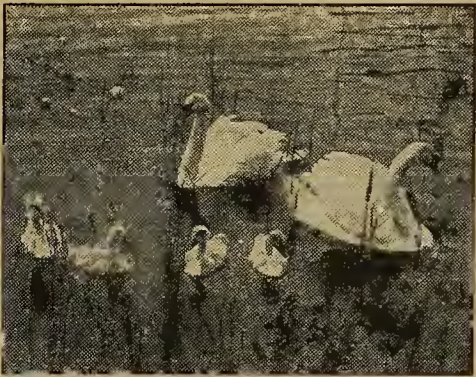
Economy may also be practised by several poultrymen in one locality, cooperating and buying their grain in car-load or half car-load lots, direct from the miller; in this way saving the profits of the local grain-dealer.

A. W. RICHARDSON.

A Mixture of Eggs

IHAVE hatched goose eggs in an incubator, but have not given the thing a fair test. My machine is a two-hundred-egg size, which I was unable to fill with goose eggs, having only forty. The rest of the space was filled with about twenty duck eggs and one hundred chicken eggs, and the temperature kept at about 103 degrees. In twenty-one days sixty-four chickens hatched, and in twenty-eight days, seven ducklings. A few days later nineteen geese came out, but neither the ducks nor the goslings were treated properly, because when the chickens were taken out of the machine the other eggs got chilled. Goose eggs need a little higher temperature than chicken eggs and those that hatched were very slow in coming out. After the first goose eggs were pipped, three days elapsed before the goslings were out. The temperature ought to be one hundred and five degrees or a little more. Of the nineteen goslings, seventeen grew remarkably well. They were put in a pen twelve inches high and fourteen feet long. This was covered with wire netting to keep the chickens out at feeding-time. At first their feed was wheat bread soaked in milk when I had it and in water other times. Sometimes the birds received corn or moistened meal. The pen was moved twice a day so that the little birds could get all the grass they would eat. I find that this is very necessary, as geese live mostly on grass and will not eat much dry food. They also require a dry, warm place to sleep in at night. I did not put the goslings in a brooder, because the weather was not cold, and I thought they could do well enough without. It would be better, however, to use a brooder for at least a week after hatching.

A. E. VANDERVOORT.



Swans and cygnets at home

Handling Young Ducks

YOUNG ducks should be crowded every day until they are marketable. For the first two or three days we feed the ducklings corn bread, soaked in milk and squeezed till it is in the form of a crumbly mash. This is sprinkled over with fine, clean sand and given five times a day. Light, frequent feeding is the rule. Plenty of clean drinking-water is essential.

In three or four days we feed a crumbly mash, consisting of two parts corn-meal, one part cheap flour and one part cut clover. If grass range is available, the clover may be omitted and the amount of meal increased. In a few days the flour portion is left out. We then begin to feed equal parts of fine corn-chop and bran, or chop and crushed oats, the oats having the hulls sifted out before feeding. We have also fed equal parts of crushed oats, ground wheat and corn-chop. Plenty of water and grit are available. When the weather is hot, we feed the corn-chop very sparingly. It is productive of too much heat, and may cause serious digestive ailments. Shade is also a pressing essential. Ducklings cannot stand the direct sun, especially during the first few days of their lives.

When ducklings are about a month old, it is difficult to overfeed. From this time on, we try to keep them where it is shady and cool. We make the corn-chop the greater per cent. of the rations. It is now much coarser than that fed in the start. In fact, it is only cracked corn they get at night. At this stage of growth (six weeks or two months) we find that the ducklings actually will eat more than they will when nearly full grown, and while we stuff them to the limit if they are for marketing purposes, a sharp lookout is always kept on their feed-supply.

Where the ducklings are intended for breeding purposes, we do not crowd them quite so rapidly, and the amount of corn is cut down somewhat, giving the milder and less heating ground-grain feeds in preference to it.

M. COVERDELL.

Avoiding Chick Diseases

MY YOUNG chickens have been remarkably free from bowel troubles, gapes, roup and other diseases which are common among young chickens. I find that the first essential to healthy chicks is to hatch only eggs of vigorous stock. Hens that have a low vitality, that have been pampered, stimulated for unnatural egg production or else underfed will not produce healthy chicks. The roosters need also to be vigorous and of good stock; and there should be no in-breeding. Not so much depends on the age of the bird as on its vitality. Last spring I had only pullet eggs to set, and these were from late-hatched pullets at that; yet I never had better success in hatching. The fertility of the eggs and the vitality of the chicks were at least ninety-eight per cent.

I find that early-hatched chicks are less liable to disease than those hatched later or during the hot months of the summer. I did not lose one chicken from any of the flocks hatched out in April, May or first weeks of June; but lost a few from the flocks hatched in the last of June and in July; these were hatched in extremely hot weather, which I think accounted for some of them lacking vitality.

Notwithstanding these facts, out of a flock of twenty-seven hatched out in July I reared twenty-two.

Vermin breeds much faster in hot weather than it does in cooler weather, so one must be more vigilant in caring for the chicks and seeing that everything is scrupulously clean. In warm weather it is doubly necessary that plenty of shade be provided for the chickens in their runs and that they have plenty of pure, cool water before them all the time. If confined to yards, they will also need to be provided with plenty of green food; but if they are allowed free range, of course this will not be necessary, as they will provide for themselves. Cleanliness is of prime importance at all times. The coops or boxes in which they are confined should be cleaned and moved frequently. If straw is used in the coops, it should be changed frequently. But I think this is necessary only in the spring, when the ground is damp and cool. To keep the soil in their runs pure and healthy it should be pared or turned under frequently. If the chickens are confined to yards, the entire lot should be turned under at least once a month. I solve part of this problem by planting the part not taken up with the house, plum-trees and red-raspberry bushes to early potatoes. If the soil in the runs is kept pure, there will be no danger from gapes.

M. M. WRIGHT.

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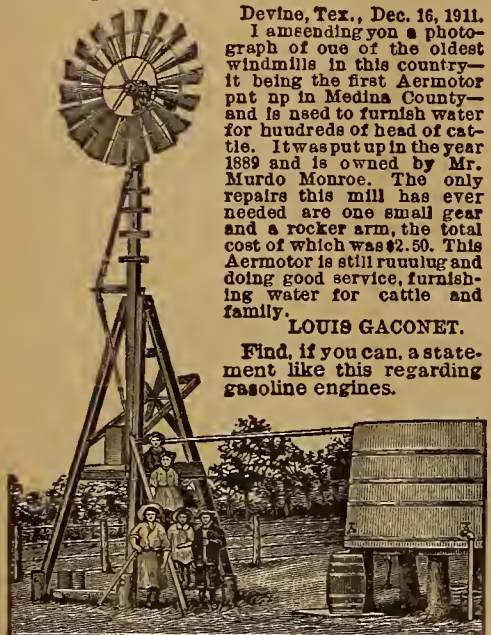


The Aermotor with the automatic regulator stops when the tank is full and starts when the water is lowered 4 inches. You oil it once a week. A gasoline engine has to be started and stopped and oiled and attended almost constantly, and you have large expense for gasoline and oil. The wind is free.

We make gasoline engines (exceedingly good ones) but, for the average water supply for the home and 150 head of stock, an 8-foot Aermotor with a storage tank, which is a necessity with any kind of water supply—is all that is needed and is by far the more economical. The supply of wind for the Aermotor is more to be relied upon than the supply of gasoline, batteries and repairs for the gasoline engine.

The cost of gasoline, oil, batteries and repairs in pumping for 150 head of stock with a gasoline engine, will buy an 8-foot Aermotor every year, and you are still to the bad the amount of time you spend over the gasoline engine.

But the gasoline engine has its place on the farm notwithstanding the fact that 100 people are maimed or killed with gasoline where one is injured by a windmill, and that 100 farm buildings are burned with gasoline where none is injured by a windmill. For the water supply, the windmill is the thing. Thousands of farmers who have done their first power pumping by a gasoline engine have become tired of it and are buying windmills. That is one reason why our windmill business increases from year to year. We can furnish you much testimony like the following:



Devine, Tex., Dec. 16, 1911. I am sending you a photograph of one of the oldest windmills in this country—it being the first Aermotor put up in Medina County—and is used to furnish water for hundreds of head of cattle. It was put up in the year 1889 and is owned by Mr. Murdo Monroe. The only repairs this mill has ever needed are one small gear and a rocker arm, the total cost of which was \$2.50. This Aermotor is still running and doing good service, furnishing water for cattle and family.

LOUIS GACONET.

Find, if you can, a statement like this regarding gasoline engines.

Of course, there are places where a windmill cannot be used. There you will have to use a gasoline engine, with all its disadvantages. We will furnish for that place a small engine which costs but \$37.50 complete, so it can be set to pumping in 30 minutes. Or we will furnish you a pump jack—the best made—for \$6.00, to do pumping with a larger gasoline engine. Send for catalogue giving full information about water supply. Aermotor Co., Chicago, Branch Houses: Oakland, Cal.; Kansas City, Mo.; Minneapolis, Minn.

Crops and Soils

Corn and Soils

Do Varieties of Corn Adapt Themselves to Different Kinds of Soils?

WITHIN the last few years increasing interest has been shown in the testing of different varieties of farm crops. In practically every case, where a number of different varieties have been included, there has been a decided difference in the yield of some of the varieties, and this fact has stimulated interest in this line of work. In the case of corn, differences of 10, 15 or 20 bushels were not infrequent. Where such differences exist, it is evidently a matter of very great importance to the farmer to obtain the variety which will give him the best results.

In order to determine if possible the variety of corn that is best adapted to a given farm, the Ohio Experiment Station a number of years ago began cooperative variety tests with members of the Ohio Corn-Improvement Association and other farmers of the State, and the results of a number of these tests have been brought together. A comparison of the results from different tests has shown that the variety that did best in one case has sometimes proved a very poor yielder on another farm, although the two farms may be located very closely together. Such being the case, it was evidently impossible to draw definite conclusions from the data at hand. Such results were, to say the least, disappointing and suggested the need of further study in order to determine, if possible, why such differences should exist.

Where these tests were located in different parts of the State, the difference in climate might furnish a satisfactory explanation, but where they were located in the same county, it was evident that the climatic difference was not sufficient to furnish a satisfactory explanation. It seemed, therefore, that we should have to look to the soil, or underground, environment of the plant for the explanation rather than the climatic, or above ground. It was decided, therefore, to go over the data and see if the differences in soil would furnish an explanation for the results which had been secured. It was soon found that the facts in regard to the soils was so incomplete that it would not be possible to make any very satisfactory comparisons. As all of the check plots, however, were home-grown seed, it was possible to make a comparison of the yield of the home-grown with the other varieties.

A number of different varieties of corn were included in the tests, but only a few of them were planted in more than half a dozen. Of these varieties only nine will be considered in this connection.

The variety which was included in the largest number of tests was Reid's Yellow Dent. Out of a total of 41 tests there were only 9 in which it exceeded the yield of the check or the home-grown seed. The average of all the tests was 2.3 bushels less than that of the checks.

There is probably no variety of corn grown so extensively in this country as the Leaming. It was included in 29 different tests, and in 15 of these the checks gave a larger yield. The average, however, of the Leaming was .4 bushel more than the home-grown seed.

The Ohio Pedigreed No. 75 was included in 21 different tests, and out of these in only 8 cases did it exceed the yield of the checks, the average yield being 1½ bushels in favor of the latter.

The Clarage corn was used in 14 different tests, and in only 2 cases did it exceed the yield of the check plots, while the average fell 3.3 bushels below.

A comparison was also made of Funk's Yellow Dent, which was included in 19 tests. In 11 out of the 19 the checks exceeded the yield of the variety, the average being .9 bushel in favor of the home-grown seed.

Medina Pride was included in 12 different tests, and in only 3 of these did this variety exceed the yield of the checks, the average being 1.3 bushels less.

Darke County Mammoth was included in 10 tests, and in 6 of these it exceeded the yield of the checks, the average yield being 1.3 bushels in favor of the variety.

Boone County White was included in 12 different tests, and in 8 out of the 12 the checks exceeded the yield of the variety, the average difference being 5½ bushels in

checks, the average yield being 1.4 bushels in favor of the latter. This would seem to indicate that the Leaming corn has become adapted to the different soils and climatic conditions of the State. It is generally admitted that plants will become adapted to different climatic conditions. Is the same true in regard to soils, also?

In order to see if the facts we had collected would throw any light upon this question, an average of the tests in the eastern part of the State, which had been planted with Leaming corn, the seed of which had been secured from someone in the eastern part of the State, was compared with that where the seed was brought from the western part. This comparison was made because the soils in the eastern part are residual sandstone and shale soils, with a low lime content, while those in the western part are composed largely of limestone, which was ground up by the action of the ice when the great continental glacier moved southward over this part of the State, and therefore contain very considerable amounts of lime. As the two sections were in the same latitude, it was possible to practically eliminate the climatic factor. A comparison of this kind gives a yield of 3 bushels in favor of the Leaming, where the seed was secured from the eastern part of the State, while the seed which was brought from the western part gave a yield of 3 bushels less than the checks. This would seem to indicate that the Leaming corn had become adapted to the different soil conditions, as there was an average difference of 6 bushels in the yield between the seed brought from the different soil regions.

The influence of the soil in determining the variety of corn which a farmer can most profitably grow has not been fully appreciated by the farmers, but it is believed that the data which has been presented here is sufficient to justify them giving much more attention to this question. It corroborates the statement made by experiment station and institute workers that it is better for the farmer to obtain his seed from his own locality. It also emphasizes the importance of his securing the seed from a soil similar to that upon his own farm. It is believed that the farmer who selects or breeds his own seed-corn and is careful to put it back upon the soil upon which it was grown the preceding year, will be able to secure the best results.

GEORGE N. COFFEY.



Satisfying the farming instinct

EDITOR'S NOTE—Doctor Coffey is an authority on soils, and is in charge of the Ohio soil survey. This article is commended to the study of farmers who think that corn "runs out" if grown "too long" on the same land, and who are apt to run off after strange seed-corn. The strange corn may be better for soils to which it is accustomed, but, as this article shows, the home-grown seed for the first year—and we do not know how much longer—is likely to be better than the improved sort, unless the improved is used to the soil of the farm. Improve your own seed.

The Hundred-Bushel Yield

THERE are three elements in crop production which can be controlled to a large extent by man: seed, soil fertility and cultivation. The sun and showers cannot be controlled, but Nature usually does her part better than man.

There are approximately 3,500 hills of corn on an acre, if the corn is planted three and one-half feet each way; so two one-pound ears to the hill will make one hundred bushels of corn to the acre. Just two moderate ears to the hill.

The first essential to the one hundred-bushel yield is good seed, seed that is in the habit of making big yields. Then be certain of the germinating power. Buy your seed on the cob, unless you have full confidence in the party you are buying of.

To grow one hundred bushels to the acre, our Illinois conditions demand two good, strong-bred grains to each hill. This even drop of the planter can be accomplished by using carefully graded seed-corn and testing the planter with it before planting-time.

The corn-plant will not thrive among weeds, nor in a hard, packed, dry soil. Cultivation must continue during the whole growing season, and not stop with the "third" or "fourth" time over. The largest varieties, especially, must be cultivated with one horse after the corn is too big for the two-horse cultivators. A hard, baked crust should never be all allowed to form in the corn-field until the roasting-ear stage is reached.

If, on account of unfavorable weather, the corn gets weedy, any kind of cultivation that destroys the weeds most effectively is the best. The kind and condition of the soil should determine the kind of cultivator. The disk does best in one place, the eagle claw in another, and the two, three and four shovel gangs also have their places. On good, clean, well-drained land the two-row cultivator can be used to great advantage, while on rough, stumpy or stony land the two-shovel spring-trip gang must be used.

Hence, to grow one hundred bushels of corn to the acre, plant the right amount of pure seed-corn from a grower whose corn has been bred into the habit of yielding a one-pound ear to every grain planted, and then care for the crop by cultivation. Of course, I am assuming that your soil fertility is normal.

R. B. RUSHING.

Steel Shingles Save 5 Times Their Cost

Edwards "REO" Steel Shingles

outwear four wood roofs and cost only two-thirds as much.

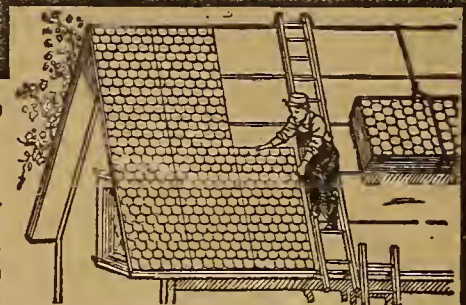
One \$60 steel shingle roof is worth four \$90 wood roofs and there's \$300 difference in cost. A roof which could be shingled with Edwards "Reo" Steel Shingles for \$60 could be covered with composition tar for \$50. But one Edwards Steel Shingle Roof outwears six others and saves \$240.

Besides, "Reo" Shingles are fireproof and reduce insurance rates from 10 to 20 per cent.

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Each and every Edwards Steel Shingle is made rust-proof, rot-proof and acid-proof by the famous Edwards process of galvanizing.

Each of the high-grade Bessemer Steel Shingles is dipped singly into molten zinc. This gives heavy uniform coating and covers all edges. No

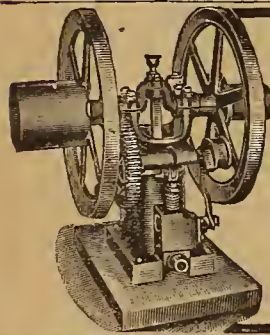


raw edges exposed to weather. Edwards interlocking feature makes solidest roof. Lasts a lifetime. Comes in sheets 6 to 12 feet long, 24 inches wide. Galvanized or painted, all ready to put on. Hammer and nails all that is required. Anyone can do it. Can be applied over wood shingles, or sheathing 12 inches apart.

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We agree to refund the amount paid in every case where a roof covered with Edwards interlocking "Reo" Steel Shingles is destroyed by lightning. This guaranty is backed by our \$10,000 Ironclad Bond and stands forever. Ask for Big Free Roofing Catalog No. 563, with special low prices. Freight prepaid from factory. Send dimensions of your buildings and we will quote you cost. Write today.

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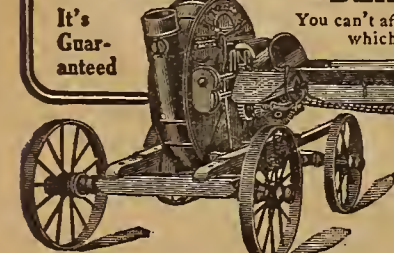
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The FARMERS' LOBBY.

A Farmers' Express Company

By Judson C. Welliver

ON APRIL 25th the House committee on interstate commerce reported favorably a bill that I think is worth more to this (or these, according to whether you are a Hamiltonian or a Jeffersonian) United States than any other measure now seriously under consideration in Congress. It certainly means more to farmers than any other measure that is likely to pass soon. I refer to the Goeke-Lewis postal express bill. This bill directs that the government take over the express companies and run their business as a part of the postal service. It proposes to hook up the rural free delivery, the post-office, the railroads and the city delivery service in one direct conduit from the farm producer to the city consumer. It beats, in my opinion, any parcels-post proposition that has been made. It means solving the whole question at once, instead of spending a generation with hopeless experiments. Personally, I have been afraid of some of the experiments that have been proposed. Some of them, indeed, have looked suspiciously like jobs set up with this very purpose in view: to provide an utterly useless, unworkable and unprofitable thing, call it parcels post, turn it out to score a rank failure, and then come back and announce—through the publicity agents of the express companies—that parcels post never was any good, can't be made any good, isn't adapted to the needs of this country and is only an idle dream. Better a thousand times never have any parcels-post experiments than one of this sort.

For instance, here's one of the postal propositions that got serious consideration. It was proposed, by a rider on the postal appropriation bill, to carry fourth-class matter at five cents for the first pound, and two cents for each additional pound up to a total of eleven. This rate, however, was not to be universal; it could be used only on the set of rural routes radiating from one center. If you're on Route No. 1 out of a given village, you could ship under that provision to anybody on any other route out of that same center; but you couldn't get your goods sent off that set of routes, nor could you get them delivered by mail-carrier in the town where they all converge!

That sounds bad enough. But it's only the beginning. There are just two things in the fourth-class list of mailable matter that are produced on the farm, and what do you guess they are?

Queen bees and dried fruits!

How Many Tons of Queen Bees do You Ship?

THAT'S all. You could ship a pound of queen bees for five cents to any point on your own particular radiating system of rural routes! Wouldn't it be a comfort to know that? True, the fourth-class list contains many things the storekeeper sells, but there would be no chance for the farmer to ship anything away from his farm, except dried fruit and queen bees. I don't know much about your annual tonnage of queen bees, but out our way lots of farmers don't ship forty pounds of queen bees a season.

And that was to be called a parcels post! Wouldn't it sting you?

All such makeshift propositions looked bogus to the Hon. David J. Lewis of Maryland. Mr. Lewis is a coal-miner by trade; worked at it most of his life. If there's a self-made man in Congress, it's Lewis. At nineteen years he hadn't learned to "do" long division, though he could read everything. He read it, too. He got the notion that he needed to know Latin, and learned it by the cheerful process of lugging a grammar and reader down into the mine, and studying it by the light of his mining torch at the lunch-hour! Doesn't that sound like the real thing? Now he's just about to publish a work on transportation economies. He knows the subject, and because of that fact he fell on these bogus parcels-post measures. He decided to write his own parcels-post bill. He spent most of his first congressional term studying specific problems about it, and then brought in his bill. It provides:

That the actual transportation properties of the express companies be condemned and taken over by the government.

That the postmaster-general shall run the business as part of the postal service.

That the postmaster-general shall make rules, regulations, rates, etc.

That express-railway transportation contracts shall be renewed by the postmaster-general when necessary.

This bill was referred to the interstate commerce committee. Of course, it hadn't a chance; everybody understood that. Too radical; too socialistic; too populist; subversive—you know all those mean words.

But back of that bill was the boy who had learned perseverance. He got Congressman Goeke of Ohio, who was on the interstate commerce committee, to father the bill in committee. Mr. Goeke is entitled to real credit for his part in the work.

A Book on the Subject

THE next thing Lewis did was to write a book on "The Economics of the Transport of Small Shipments." It was a study of the express and parcels-post systems of the world, and has been printed as a government document. You can get a copy by writing for it; no charges; don't enclose stamps. Just ask for it, that is all, and Lewis will do all the rest that is necessary. Lewis and Goeke figure that it would cost from

The Way Out

OUR trouble is that neither the producer nor the consumer deals in wholesale lots. In order to utilize the wholesale transportation facilities, there must be one set of middlemen in the country to gather together these small lots, mass them into big lots and ship them in huge bulk. Then at the other end of the railroad shipment there must be another system of distributing middlemen who break up these big bulks into small packages for the consumer and make the local delivery to him. What we need is a single accounting system, a single directing intelligence to run the whole thing.

\$15,000,000 to \$20,000,000 to do the trick. True the express companies' consolidated balance sheet shows them worth \$204,710,036.91, but all the government would need would be about \$9,000,000 worth of equipment, perhaps one third of the real property, or \$5,000,000 worth, and possibly it would have to pay some \$5,000,000 that the express companies have advanced to the railroads on their transportation contracts.

Mr. Lewis, you will observe, doesn't write any hard and fast rates of transportation into his bill. He doesn't fix any zone limits, or other details of the service. That sort of detail can always be provided with accuracy and confidence by a man who has studied parcels post, say, an hour or an hour and a half; a man who has been at it twenty years knows he doesn't know anything about it. Nothing but experiment and experience will enable fixing rates confidently and accurately.

Mr. Lewis believes in the zone system of rates. "You can have a flat rate, like a postage stamp on a letter, good to any part of the country, in a small country like Belgium or Switzerland, but not in the United States. Germany, which is a little bigger than Texas, has two zones. The first includes about a forty-three-mile radius; the second includes the whole empire. In a huge country like this we would require, I suspect, several zones. But I don't know what experience would prove, so I want to leave all that to the administrative officials. There isn't a legislative body on earth wise enough to make rates; they should be made by commissions, under legislative authority."

What Would Parcels Express do for Us?

NOW we come to the question of what parcels express would actually do for us. Mr. Lewis stated his general principle so clearly that I can't do better than to quote him again.

"This measure would do more to solve the cost-of-living question than any other," he said. "Our whole transport system makes no provision for the small shipment. We have provision for wholesale, not for retail, transportation. Yet the things the farm produces are finally sold in small retail lots, and the things it buys are mainly bought in retail lots. How many consumers buy one hundred pounds of butter, or ten cases of eggs, in a lot? The consumer wants three pounds of butter and one dozen eggs at a time. We have transportation facilities and rates adjusted to the purpose of moving the one-hundred-pound or one-hundred-

ton shipment, but not the three-pound one. Now note the result of that system:

"The railroad is a great main transportation conduit. It does its work at rates, broadly speaking, reasonable and fair. It isn't the railroad cost, the real transportation, that makes goods cost so much to the consumer.

"Our trouble is that neither the producer nor the consumer deals in wholesale lots. In order to utilize the wholesale transportation facilities, there must be middlemen in the country to gather together these small lots, and distributing middlemen in the city, who break up these big bulks into small packages for the consumer. What we need is a provision to articulate together the great main railroad conduit, the delivery system that the post-office conducts in the city, the rural delivery and collection system it operates in the country, and make a single operation, a single accounting system, a single directing intelligence, run the whole thing.

"See what that does. A farmer doesn't have ten crates of eggs; if he saved up till he had, they'd spoil on his hands. But he has a few dozen fresh ones a day. He puts them in a little case, directs them to his customer in town, and puts on a red stamp for, say, ten cents. That red stamp contains a blank space in which he writes the C. O. D. amount that is to be paid by the consignee, and the post-office brings back the amount to him next day. Or, he may put on a blue stamp, which means no collection is to be made. That is the way it would work."

Last year the farmers sold produce for about \$6,000,000,000; that is, they got the \$6,000,000,000; but the consumers paid, by the time it got to them, about \$13,000,000,000! More than one half the consumer's cost was represented by the expense of getting it to him.

And contemplate these figures, showing what per cent. of the consumer's price actually got to the producer. They have been carefully worked out by the Department of Agriculture. They tell a good deal about why the farmers' profits are usually small.

Poultry	55.1	Turkeys	63.4
Eggs by the dozen....	69.0	Cabbages by the head..	48.1
Celery by the bunch....	60.0	Apples by the bushel..	55.6
Strawberries by the quart.	48.9	Apples by the barrel...	66.0
Oranges by the dozen..	20.3	Onions by the peck....	27.8
Melons by the pound...	50.0	Green peas by the quart.	60.0
Potatoes by the bushel.	59.3	Parsnips by the bunch..	60.0
Watermelons, singly...	33.5	Turnips by the bunch..	60.0

A Ratio of 16 to 1!

IT DOES not require argument to show that express rates in this country are excessive. The average ton of freight in this country pays \$1.90 freight; the average ton of express pays \$31.20. The ratio is sixteen to one! That ratio never has been very successfully defended, and it never will be by the express companies. The average of ten important countries shows their express rates a little over five times their freight rates. That is, our express rates appear to be about three times as high, in proportion to freight rates, as they ought! And figures show, too, that these excessive rates greatly reduce the proportion of express business here.

We will do well to study the Lewis Bill.

Have you heard what they did to Jonathan Bourne out in Oregon the other day, and why? Jonathan has been senator from Oregon for six years and, having become chairman of the Senate post-office committee, has been working hard for effective parcels post or parcels express legislation. Well, that got the express people and the country merchants on his trail. He was a candidate for renomination in the primaries in April, and was defeated. The explanation from Oregon is that he carried the big towns and the farmers, but lost the country towns solidly because the country merchants had been organized against him. They worked tooth and nail, and beat him.

There will be a lot more sacrifices to this cause before we get such legislation as we should have. There are many congressmen who, if the issue gets squarely up to a roll-call, will be defeated by the small-town people in case they vote for parcels express, and by the farmers if they vote against it. There is no escape for them. It's tough, and it's awfully unfair, for the country-town people have been misled about what it will do of harm to them. No difference. Parcels express, or a parcels post that will amount to the same thing, is coming, and it's going to leave a gruesome trail of political sacrifices.

The Flag of Charity and Honor

A Decoration-Day Story

By Rose Seelye-Miller

JOE swung into the house, his straight hair flying in stringy strands about his thin face, his long, lean body exuding excitement from every pore.

"Hullo!" cried Hiram. "You're late for dinner. I was afraid the 'goblins with green glass eyes' had got yeh, as nothin' but grim death would be likely to keep you from your eatin's."

Joe ignored Hiram as well as his words, and striding directly to Ma Petty's chair, he thrust his hat on the table in front of her and opened it to her wondering gaze, exclaiming:

"There, if them hain't handsum enough to put on a grave, then what is?"

"Violets!" cried Ma Petty, not much less excited than Joe himself. "How lovely they are!" and Ma touched the flowers delicately.

"They're blue, too; you said blue flowers were hard to get! They're just the true color for decoratin' the soldiers' graves, if there was only more of 'em. You was sayin' the other day you didn't have anything but red geraniums. Now here's blue, and I guess I can find some of those big white buttercups down by the creeks. It's about time for 'em. Then we'd have the real colors: the red, white and blue." Joe's eyes were shining.

"Why, Joe!" cried Ma. "Why, Joe, you've thought of something most of us forget. I don't know as they ever really try to use all red, white and blue flowers. They use all kinds. It's a pretty idea, though, and I'll take care of these violets. Some of them ought to keep till Decoration Day."

"Sure," encouraged Pa Petty, "I think I've seen just such flowers blooming on the ground where Custer died."

"It might probably be that these were on the grave of some brave," Joe responded, his imagination fired at the thought.

"Some Red Injun's!" snorted Hiram, not to be overcome by the sentiment that was swaying the balance of the family.

"Red, or black, or white, or yellow," Ma said thoughtfully, "I wouldn't wonder if all human beings seem about the same to the One who sows the wild flowers, and it is likely that most of them bloom over the ashes of someone or some creature."

"Say," cried Joe, scrubbing his face with the big crash towel, "say, what's the reason they always leave one grave in the buryin'-ground without no flowers, when they put 'em on all the rest?"

Ma Petty looked at Pa, and he returned her look seriously. "Jere Martin's," Pa murmured quietly.

"Was Jerry Martin a rebel?" inquired Joe, bent on information.

"No, he wasn't a rebel, not in the way you mean, Joe; though he did rebel against his fate—or something—" Pa paused abruptly.

"Oh, Pa," cried Ma Petty deprecatingly, "Jere was as good a man as ever lived. He was the best father and husband, the best neighbor and the biggest-hearted man to everybody. I never knew before that they neglected his grave," Ma finished indignantly.

"I was never more put out in my life than I was last year, when I saw the old soldiers and Relief Corps sweep past, with the children scattering flowers all around, but avoiding Jere's grave."

"We'll see," said Ma Petty, "we'll see," and she rose from the table and pressed upon the surprised and anxious Joe the food she had kept warm for him, but Ma forgot her own unfinished dinner, and she did not sit down again. Pa Petty, too, pushed back from the table and went into another room.

"What is it all about?" Joe whispered softly to Hiram, who sat regarding him whimsically.

"Deserter!" Hiram said tersely.

"What?" Joe gasped.

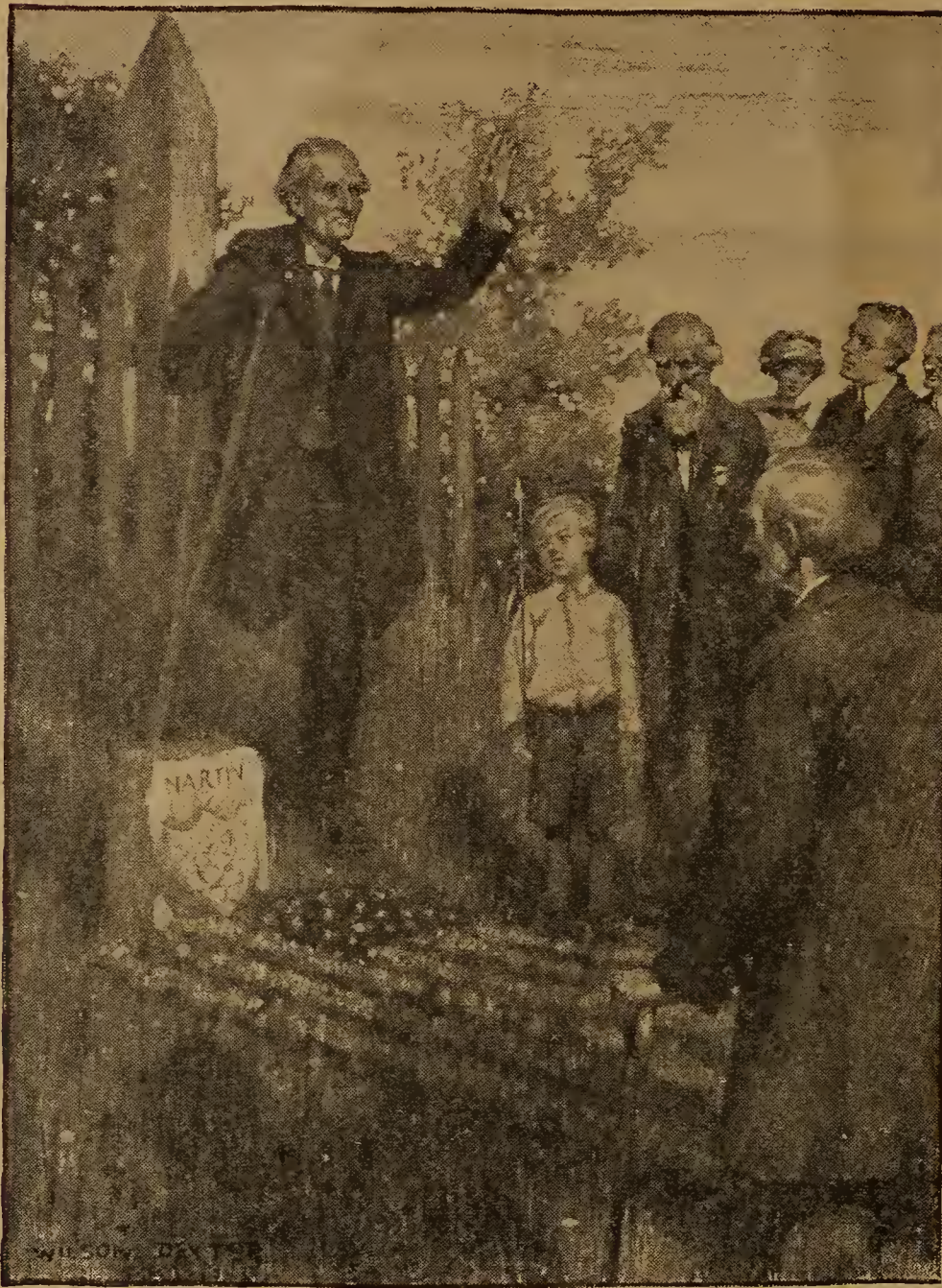
"Pulled out and left the army; ran away and came home. He couldn't face the music. I kin understand how it might play most too loud and git onto the nerves," Hiram explained, his face working curiously.

"In fighting time?" cried Joe, aghast at such perfidy. "Why, he don't deserve no flowers, but then—mebbe—there was some reason." Joe wanted to be fair to all concerned. "Did—did—they shoot him?" Joe's voice was full of awe and anxiety.

"No, they didn't court martial him; he was dead sick with typhoid and died pretty soon after he got home, and that was worse'n bein' shot down with a gun in the spurt and gush of war. I think it takes more courage to face some things than't does others," Hiram added judiciously. "But his wife and his children was sure glad to stand by him in that last fight, and he fit, and fought brave, too."

"And they hold that over him after he's dead!" There was scorn in Joe's voice. "After a man's dead, and has fit in many brave fights, just because he give out fer a minit, when he was sick, and heartsick, and homesick to death, too!"

The next day Joe was scurrying over the prairies on an errand ten miles from the Silver Ribbon Ranch. His mind was upon the neglected grave and the cruelty of fate in general to one who fails or falters just once in the stern fulfilment of duty. So deeply was Joe engrossed in thought that he scarce noticed his road until the spotted pony galloped over a rise of ground, bounded down the decline and then stopped short at the brink



"Even in his crippled state, he raised his hand for silence"

of a broad and deeply flowing stream. So abruptly did St. Nick stop, his onyx hoofs gathered in a bunch beneath him, that Joe was flung forward, and plunged head first into the stream below.

"Glorimpus!" stormed Joe, floundering in the water, "it's as cold as a tub of ginger ice-cream! And you stand and laff, you little Slaggiggle you!" Joe addressed the pony, who still stood on the bank, his ears back on his white neck, his blue eyes rolling wickedly at Joe, his whole little body as indicative of fiendish joy as a freakish Indian pony's could be. "You're an imp!" Joe cried, splashing the water vigorously, hoping to dash some of it into the impudent blue eyes, but St. Nick still stood nonchalantly watching Joe as he swam ashore, but just as Joe reached for the bridle, Nick's pink velvet nose went up in the air, and his small hoofs clattered away. After a futile half-hour of fine play for the pony, and the hardest kind of racing for Joe, Nick kicked up his impertinent heels and galloped homeward.

"I've warmed up, anyway," Joe reasoned philosophically, "and it isn't the first time I've had to walk ten or fifteen miles. It'll be more fun anyway to walk than ride, for I can see so many things and stop and look at 'em." Joe walked along the creek bank alertly, until he came to a wagon-trail that looked as though it had been used to ford the creek. It was shallow here, and there were even some large stones at wide distances, upon which Joe jumped and with only one or two missteps he reached the other side. The creek bank was not steep, but it sank into a sharp decline, and in the small valley thus formed Joe discovered such a mass of blue violets he caught his breath in sheer delight.

Joe went on his way swiftly, for it was like Joe to do all he did with his might, partly because he loved action, and partly because there always seemed to be so many entrancing things beckoning onward. Joe accomplished his task duly, and in less than an hour he was sprinting back to the violet valley, where he bent to his task with alacrity. At last Joe realized that, with some eight or ten miles to walk before chore-time it behooved him to start homeward. He gathered up his precious burden carefully, knotting the jumper sleeves together, and thrusting one arm through the knot, he crossed the creek without mishap and started on his way joyously.

"Hullo! Hullo, there!" came a voice, and Joe turned to see a man's head just above the water, evidently in the deepest part of the creek.

"Why don't you swim?" inquired Joe, as he ran panting to the bank.

"I've got a horse and buggy in here somewhere," came the swift rejoinder. "Horse is caught some way."

Joe plunged into the stream, to the horse's head, where the nostrils were still above water. A piece of debris had caught in the reins, and the more the horse had tried to go ahead, the stronger came the pull on the bits, until the mouth was torn and bleeding. The buggy, too, had been cramped nearly to overturning. In a moment the freed horse swam to the shore, the buggy overturning, throwing the man entirely into the water.

"I can't swim," the man said simply, holding up to view an empty coat-sleeve.

"Keep your head up, hold your breath, put your short arm over my shoulder, and I'll tow you along as well as I can," and in a very short space of time Joe and the man were upon the bank.

"Why!" cried Joe in surprised consternation as he looked at the man. "Why!"

"One leg and one arm," the man said, smiling into Joe's puzzled face.

"No wonder you couldn't do anything! Why, why!" gasped Joe.

"I thought this was the ford, all right, and my tires were a little loose, so I drove right in. There's a trail leading right down to the water's edge."

"They did ford here some, but last year they scraped out a lot of dirt to build up the bank and keep the water in the creek-bed and out of Mr. Joram's field. That left a big hole. There should be a danger-signal put up." Joe was busy fussing with the disordered harness, with the buggy and with the man.

"Here," said Joe, dumping his cherished violets on the ground, "you'd better put this dry jumper on next your skin, and we'll hang some of your things on the buggy, and they can dry as we go along. There's a good place to get fixed up, about three miles farther on. We'll get there in just no time."

"I suppose my crutch and medicine-case have gone down stream," the man said quietly. "I can get along, though. I was called here to consult on a case of typhoid. The less medicine the better, I think, but then we've got to have semblance to make folks think we're doing something—Nature and—"

"There's your crutch now," cried Joe, jumping into the water again. In a few minutes he returned with the salvage. Then he gathered up his flowers and placed them carefully in the bottom of the wet buggy. "They're for Decoration Day," he explained simply.

"Soldiers' graves out here?" the man inquired, getting into the buggy with Joe's strong help.

"Yes," Joe replied, climbing in beside the man and taking the lines in his own hands, giving a sharp chirrup to the horse. "Everywhere, I guess. The government gave special land privileges to old soldiers, you know. There are ten graves they decorate, and one they don't put no flowers

on. Besides, they have a stone cross or something they cover with flowers for the men who died brave, but had no burial."

"Yes, yes, many brave men died in battle, and many brave men died without fighting at all. The men who had to wait and finally die of fever, without ever following the cannon, were the bravest men of all."

"What!" cried Joe. "The men that died of fever were the bravest?" Joe's voice rose in an excited cry.

"It was the waiting and waiting, in the camps, the deadness of the life, the privations, the fevers and all, some way the crucifixion of the men's souls, who wanted action and were given nothing to do but—WAIT!"

"Did any of 'em pull out?"

"Yes, a few, but when they were caught, they met what was coming to them bravely."

"Court martial?" exploded Joe.

"Murder!" said the man fiercely. "There's lots of things harder than facing a cannon in battle."

"Does typhoid come quick?" Joe asked tensely, for his mind was still on the fever question.

"No; it comes slow. A man with typhoid in his veins can hardly show courage, yet I knew one man, one of the best too, who kept up and fought, and did worthy work long after he ought to've been in bed, and then—"

"Did he desert?"

"How did you know, you boy you?" stormed the man.

"I guess—I know—of one, too. There's a man buried out here, and they just slight his grave; they don't put a flower on it," Joe said avidly.

"Whose grave is it?"

"Jerry Martin's!"

"Jere Martin's grave dishonored! Jere Martin's! We'll see, we'll see!"

"We just will," assured Joe. "I'm going to dig up the hull prairie and plant it on that grave, and let 'em see that the Lord makes flowers grow for Jerry Martin, even if the wimmen and kids pass him by." Joe paused and drew rein at a farmhouse. "Here we are; you'd better go in and get dried out and fixed up."

"Good-by, boy. You saved my life to-day all right. I'm glad I met you for that, and I'm glad I met a friend of Jere Martin's, but I'm more glad to meet you for yourself than any other thing. I hope I'll see you again some day."

"I hope so," Joe responded heartily, "though I didn't do anything more'n anyone would've done." Joe handed the lines to the farmer who came out, explained simply, gathered up his violets and started homeward on winged heels.

"I've met someone who knew Jerry Martin," said Joe, as he thrust his hatful of flowers into Ma Petty's hands. "And he says men don't feel good when they have the typhoid and that it takes more courage to lay and wait and get the fever than it does to fight and get killed right and proper."

Decoration Day dawned bright and clear, but Joe was nowhere to be found when the family assembled at breakfast-time, nor did he put in an appearance when

the surrey came around at ten o'clock to take the crowd to the Decoration-Day services in the little plains city.

"I guess we can't wait any longer for Joe," Pa Petty said briskly, coming out with his G. A. R. badge in his hand. "He's either off on some chase because it's a holiday, or else he has some scheme afoot for something."

"Oh, Joe'll be at the decoration all right, if he doesn't get so busy getting ready he forgets the time," Ma said with some emphasis. "I guess we may as well drive along, though, or you'll be too late to head the march of the old soldiers."

It was not until the hall was well crowded that Joe appeared on the scene. His Sunday clothes were somewhat rumpled, from having been rolled up in an ignominious bundle under the buckboard seat for many hours. His hair had been combed without a mirror, and his necktie possessed that species of depravity common to that variety of decoration and adorned almost any portion of Joe's neck save its proper one. Still, there was something about Joe's face that atoned for all toilet discrepancies: a look of life and joy, of quiet exultation in a task well done. He stood far back in the hall listening intently to all that was said, but when a man with one arm only, and walking with a crutch, appeared to give an impassioned address to the living soldiers and to eulogize those gone before, when he spoke of the pathos of hope deferred, of the fever camps, of the slow course of disease seeping away all courage from its victims, and, last of all, when he told the story of Jere Martin, and told it with all the fervor of an orator and an eye-witness, then did Joe feel exultant, then did he glory in the day and its doings.

There were some hasty revisals in the plans of the flower-bearers, after that speech. And when the soldiers, the Woman's Relief Corps and the white-robed children marched to the cemetery to decorate the graves, there was a provision made for that grave hitherto neglected and dishonored. But what was this they saw as the concourse swept onward on this tardy mission of approval? Surely someone had been there before them, for all about the grave lay a sward covered with blue violets, and upon the grave a flag made entirely of flowers. Closer inspection showed the red stripes to be of scarlet geraniums, while the white was of a low-growing plant sometimes seen near the creek banks. The stars shone out bright as gold from their bed of blue violets, and the whole thing seemed a marvel of beauty and glory.

"Joe, Joe, you did it, you did it," cried Ma Petty as she wiped her eyes, near that flag-covered grave. "Why, there's Pa," and she caught her breath, for Pa Petty was placing on the sod beyond the floral flag a flower piece of greater magnificence than had ever been seen in that little community before. Then the one-armed man, leaning upon his crutch, approached and placed upon the violet sod a shield of white, and as he stood there splendid, even in his crippled state, he raised his hand for silence.

"This white shield," he said, "is in memory of one of the bravest men I ever knew—Jere Martin—who stood at his post, who did his duty, who never left his place caring for the sick and dying comrades, comforting, enheartening, encouraging them—the heroes of WAITING! For they also serve who only stand and wait. Jere Martin had fought in many battles, he had borne both defeat and victory, but the bitterest battle he ever fought was the battle with himself, when he was retired for a period of waiting, waiting for the war, for service, for action. This is the hardest requirement of the soldier, and but for a boy, a simple country boy, brave-hearted and true-spirited, I should hardly have known that my old comrade, aye, commander, who left camp in delirium, in delirium, I say, lay here in a dishonored grave. To him be all honor," rang the brave old voice.

Every hat was lifted, and a shout went up, "All honor to Jere Martin."

Then came silence, broken after a brief moment by the same grand old soldier.

"It remained for a boy to remind us of

our duty, our privilege. A boy's hand fashioned this flowery flag. A boy's heart conceived it. He went many miles for this violet sod," as I well know, and he worked nearly all night to cut it, to lift it carefully and to bring it fifteen miles that this grave might have the most beautiful, the most unique, decoration of any in the cemetery. Not that the boy told of his work, not by any means. I came here early this morning, and so I chance to know whose hand accomplished this emblematic decoration. He covered the dishonored grave with the flag of charity and honor, and I prophesy that the boy, who is so just to one whom others maligned, who is so faithful in doing his small duties in life, will in some way and some time be given larger things to do."

The crowd passed on wondering, but Joe was scuttling homeward, the old buckboard rattling with every jump of the gay little spotted pony.

Compare Your Children With These

By Helen L. Sumner

THIRTEEN boys and girls from fourteen to sixteen years of age recently appeared before a committee of the House of Representatives at Washington. They were little children, only two or three of them bigger than a normal ten-year-old child, but their faces were shrewd and keen, and they were dressed in the Sunday best of the very poor. As they sat dangling their legs from the tall chairs, they stared wonderingly about the big room where the committee met, at the rich carpet, the heavy hard-wood doors and the lofty ceiling.

The children were there to tell the committee of Congress what they knew about working conditions in the woolen mills of Lawrence, Massachusetts, and to ask it to report favorably the resolution introduced by Representative Berger of Wisconsin for an investigation of the woolen industry. Each child in turn sat in the big leather chair which served as witness seat, while several hundred congressmen and their wives and daughters, and even the wife of the President of the United States, rubbed elbows with working men as they leaned forward to catch the shrill, childish answers.

"Do you work in the mills?" was usually the first question asked by one of the kindly faced gentlemen who sat at the long table on the slightly raised platform. All had worked in the mills.

"Are you a striker?" was the next question.

"Yes," answered the boys proudly, sometimes defiantly.

"Yes," answered the girls timidly, but with a little proud smile as they saw the astonishment in the face of the questioner.

Once, indeed, when a little girl, with a face that was almost chubby and short brown curls, declared herself a "striker," the big men opposite laughed. But it was a laugh with a choke in the throat.

It was the same kind of a laugh the men gave afterward when it came out that black bread with a little molasses on it (butter is entirely too expensive) is about all the children have to eat in Lawrence. "They like it," said a witness who was trying to defend the mill-owners. But the men behind the table wondered whether they wouldn't like milk and eggs and butter and fresh vegetables better.

Every child was asked, "How often do you have meat at your house?"

And the answer was always, "On Sundays and holidays." One child added, "If we have it any other day, it's a holiday."

As for clothing, a New York woman who was on the committee which took a party of children from five to twelve years old from Lawrence to New York during the cold days of early February, stated that among one hundred and nineteen children only four had underclothing of any kind. And not one wore a stitch of woolen clothing, though their parents all worked in woolen mills.

Large numbers of men who work in textile mills, indeed, are not able to give their families proper food, clothing and shelter. Three or four years ago the United States Labor Bureau made a study of the earnings and the cost of living in cotton-mill families. It was found that in Fall River, where conditions are very similar to those in

Lawrence, for what the Labor Bureau calls the "typical, normal family" of father, mother and three children too young to work, the absolute necessities of life cost \$484.41. And this covered only food, clothing, fuel, light, rent and "sundries," the latter including only soap, starch, bluing, washing-powder, brooms and scrubbing-brushes. It left nothing whatever for doctors, medicine, insurance, amusements, household furnishings, school-books, newspapers, etc. Yet about the same time the Immigration Commission found that the average yearly earnings of male heads of families engaged in the woolen industry were four hundred dollars. This means that, in thousands of cases, if a man has a child born to him, or if his old mother dies, he can meet the additional expense only by cutting down the food and clothing of the rest of the family below the level of mere physical efficiency, or by taking lodgers in already overcrowded rooms.

No wonder children are sent to the mills to work before they are of legal age! One girl of fourteen, who appeared before the House committee, went to work two years ago on a forged certificate, because her family was in dire need of the pittance she could earn. Unused to the noise and confusion, unused to the whirling belts and the regular motion of the great power-driven machines, one day this child of twelve got her hair caught in the machinery and part of her scalp was torn from her head.

Even when children, or wife, or both, are at work, however, in many cases the combined family earnings are not sufficient to obtain for the family the standard decided upon by the Labor Bureau as the minimum for human existence. It has been found that the total family earnings of one out of every five southern cotton-mill families, families in which at least two and often five or six members are at work, are below this minimum level. And in the woolen industry the Immigration Commission found that the total yearly earnings of nearly two out of every five families were under five hundred dollars. In these families about a third of the wives were at work, and over half either had some employment or kept boarders or lodgers.

At the hearing in Washington the city solicitor of Lawrence was asked under what law the police were acting when they prevented the strikers from sending away their children.

"Under the law of Massachusetts in regard to neglected children," he replied.

A congressman behind the long table leaned forward, interested.

"I would like to ask," he said, "whether, in your opinion, this law in regard to neglected children could be used to take away from their parents the children of men working in your Lawrence mills who do not receive enough wages to support properly their families?"

For a moment there was silence in the big room. Then the lawyer said he thought not. But the city authorities looked grave, and the representatives of the woolen companies winced. For the question threw a flood of light upon why a reduction of wages of only four per cent. had proved the straw that broke the back of the patient camel that has long carried the financial burdens of the textile-mill workers in Lawrence. It also suggests why the mill-owners, after two months of struggle, have granted practically all the demands of the strikers, increasing wages from five to nearly fifteen per cent., not only in Lawrence, but generally throughout the woolen mills of New England and New York.

Since 1865 race after race has poured its sons and daughters into Lawrence, until it is said that within a radius of a mile half a hundred tongues are spoken. And the southern mills have lived on the flow from the mountains. All goes well until the "ready-made" man or woman marries, or the "ready-made" child grows up and finds a mate. Then the babies come, perhaps only two or three, but two or three are enough to plunge the little family into the direst poverty, to deprive all its members of things essential to their physical efficiency. For babies are unproductive, and the tariff-protected textile industries of the United States do not fill unproductive mouths, or clothe unproductive bodies, or shelter unproductive heads.

Nature's Sanatorium

By Warren Ferde Wilcox

AFTER four years' residence in the arid region of the West as an exile from the East and from chosen work, a four years spent in chasing "the cure" under turquoise skies, I have come to the conclusion that there is something of a divine plan in it all. It seems to me that there is something in common between Nature's great sanatorium and the means employed in settling up the "Great American Desert" of our school geographies of a generation ago.

It would be interesting indeed to know, if such were possible, how many of the inhabitants of the Southwest were there because of a desire to stay the ravages of the white plague. One cannot judge by appearances. You will meet a robust-looking man of generous proportions and with every sign of good health. Sooner or later you will learn that he was brought to the land of sunshine on a stretcher in the hopes of prolonging his life.

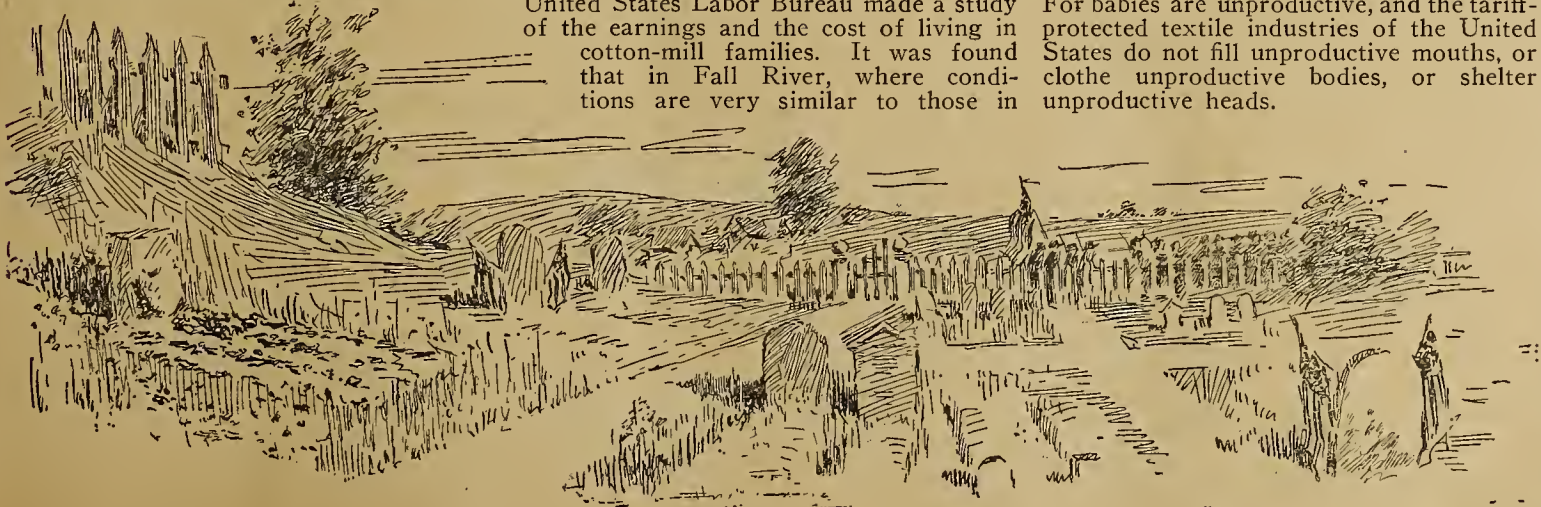
Sanatoriums dot the Southwest everywhere, those of private enterprise as well as those of fraternal and religious societies. Yet what a very small proportion of those who are health-hunting ever stopped at a sanatorium?

During all of the four years that I have been chasing the cure in different altitudes and in various occupations trying to find something that would assist the most in effecting a cure, I have studied the problem in every detail, from every viewpoint and at every angle. During all this time I have not ceased to be employed. It is best to be employed at light outdoor work, as mere loafing around with insufficient exercise is bad. On the other hand, to be obliged to rustle and hustle to make one's way often delays the cure, and, in a great many cases, overexertion and too hard work even in the open have caused premature death. But what is one to do when he must eat and has no bank account? Work he must if he can find it and has no rich relatives to help him. Finally, after a couple of years, I thought I could return to newspaper work. I tried reporting and it went fairly well, though I did not feel as well as I did on the ranch. Then I was offered a very tempting editorial job, such as I had always wished for, and, of course, I accepted. In six months the inside work, the bad air and lack of exercise got me, so I was mighty glad to quit. Then I went to ranching on my own hook, buying an undeveloped place on faith and going in without much of an equipment or anything else. So here I am, in a two-room log cabin amid the sage-brush, piñon and cedar, 6,500 feet up in the foot-hills of the western slope in southwestern Colorado. I am outdoors practically all of the time.

I have read what physicians have said regarding climate and its effect upon tuberculosis. I have tried different altitudes and climates. I have studied the thing through and through. I find that some authorities place rarefaction of the air in the first place in the classification of the attributes which influence the disease. Rarefaction compels the use of proportionately more air to get the same amount of oxygen for one's needs in the heights than in the lowlands. In the altitudes, one's lungs take fuller and deeper breaths. Then there is the dryness of the air which is an essential quality of the atmosphere which is best suited to arrest tuberculosis. And again there are two other important attributes, sunshine and atmospheric electricity.

Everything is in favor of good health where the air is pure, the sunshine abundant, the water cool. The air of the Southwest is a stimulant; the appetite increases and general nutrition improves. The health-seeker can live out in the open most of the time. In Denver, for instance, there are only 45 cloudy days in the year, while Jacksonville has 87 and New York 110. Excepting 32 days, the sun was visible, some part of the day, at Denver for a period of 13 years. In the Southwest we have annual precipitation of 10 to 20 inches against 50, 60 and higher in the East. The humidity is a great deal less in the "great sanatorium" than elsewhere.

The erstwhile "Great American Desert" is peopled with those who are chasing the cure. Physicians, lawyers, preachers, teachers, all professions are represented with the common aim—health. Many keep up their original professions and also secure health. Others are obliged to take up new work, and in many a ranch-house on the plains, mesas and foot-hills you will find college men and women living contentedly yet simply, glad to be alive in such a magnificent climate, amid such gorgeous scenery. And when the cooling zephyrs sweep down from the snow-capped peaks, through the acres of wild flowers and sweet-leaved pine and cedar and sage, until purged with the divine incense of Nature's blossoms, the elixir of life enters the nostrils, the health-hunters in Nature's great sanatorium lift their eyes to the hills, where indeed, as the Psalmist wrote, "cometh his help."



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OUR YOUNG FOLKS' DEPARTMENT

Conducted by Cousin Sally

Cousin Sally's Letter

DEAR COUSINS—On our page to-day are two articles of special merit. One is that wonderful speech of Abraham Lincoln, a speech that is as new to-day as it was when he spoke these stirring words forty-nine years ago. I hope every one of my cousins has committed it to memory. If you haven't, this is a good time to do so.

The picture on this page was drawn by a school-girl in the Los Angeles high school. It shows how well a high-school training in drawing can fit pupils to do good work. I hope my cousins will study it carefully.

Of course, all the good things sent me cannot be printed on our page, but I can get in a few of the best ones, and I know you will enjoy reading what your cousins have written.

I hope you have not forgotten the thousand new cousins by July 1st, and are working just as hard as you can to get them for me! We are growing very fast! Every day come stacks of letters asking for more information or for club buttons. Isn't it nice to think that we belong to such a happy, prosperous club?

Here is an interesting letter from a friend in New Mexico. The cousins will enjoy reading it. I'm sure. We all believe in kindness to animals and to hear that a state is so interested in taking care of them is surely good news. Here's the letter:

"Oh! I must tell you about my latest pet, even if it is past bedtime. It is a young antelope that has sort of adopted me. At all events it makes Dove House its headquarters at night, and hangs around the print-shop daytime. It is about a year old and belongs to Tom Collins about four miles south, if an antelope may be said to belong to anybody.

"In New Mexico the antelope is the most highly protected animal in the list. There is a \$100 penalty for killing them at any time. You are not allowed to fence them up, and are not allowed to sell them or give them away, except to some zoological institution.

"So this little fellow goes where he (or she rather) pleases, and it so happened that I had nothing for her to eat except crackers, which seem to be a great treat. Anyway, she eats about so many as I do, and I don't give her all she wants, either. I think she is in the pay of the cracker trust. But she makes an interesting and playful pet, and I am willing to stake her to the crackers."

Let me hear how you are coming on with your attempts at getting new cousins, but don't expect me to answer all your letters personally. It would take ten Cousin Sallys to do that. That's why we have a printed page. But be sure to read my letter every two weeks. If you don't, something important may escape you.

Affectionately yours,
COUSIN SALLY.

From a Branch President

DEAR COUSIN SALLY—I have some good news for you. I received the first prize (\$15.00) on my bread at the boys' and girls' industrial club. I also received the first prize (\$3.00) on judging the bread. Wasn't that just splendid?

FOURSCORE and seven years ago our fathers brought forth upon this continent a new nation, conceived in liberty and dedicated to the proposition that all men are created equal. Now we are engaged in a great civil war, testing whether that nation, or any nation so conceived and so dedicated, can long endure. We are met on a great battlefield of that war. We have come to dedicate a portion of that field as a final resting-place for those who gave their lives that that nation might live. It is altogether fitting and proper that we should do this. But in a larger sense we cannot dedicate, we cannot consecrate, we cannot hallow, this ground. The brave men, living and dead, who struggled here have consecrated it far above our power to add

or detract. The world will little note, nor long remember, what we say here, but it can never forget what they did here. It is for us, the living, rather to be dedicated here to the unfinished work which those who fought here have thus far so nobly advanced.

It is rather for us to be here dedicated to the great task remaining before us, that from these honored dead we take increased devotion to that cause for which they gave the last full measure of devotion: that we here highly resolve that these dead shall not have died in vain: that this nation, under God, shall have a new birth of freedom, and that government of the people, by the people and for the people shall not perish from the earth.

A Good Puzzle

DEAR COUSIN SALLY—I have been reading our page. I always like to read the Bulletin Board. I have been very busy all winter at school. I am studying for the final examination now.

I am going to send you a puzzle that is new to me, and it is a good one. I have tried it. It is a "T" to cut into four pieces and put together. Here is the way to cut it. Cut this out of stiff cardboard and hand it to someone, and see if they can do it. RUTH ADAMS,
R. 1, Maroa, Illinois.

A Cousin Sally Club Idea

DEAR COUSIN SALLY—When I was a small girl, I had a smile-box. This helped me a lot when I felt cross, so I am going to tell you about it, and maybe it will help some other little girl when she feels cross and "out of sorts."

My smile-box was made of tin, with a lid that fit down tightly, so the smiles could not escape. Whenever I felt cross or wanted to cry, Mother would say, "I think your smile-box needs you, little girl." Then I would get my smile-box and smile right down into my face, which was reflected in the shining bottom of the box. After this I felt so much better I didn't feel like crying. We called the smiles "smile sunshine," and on rainy days I took the lid off the box and let out the smiles, and so made sunshine in the house when there was none without.

Your loving cousin,
MAY Y. ANDERSON,
Thornton, Idaho.

Prize-Winners

TEN members of our C. S. C. will be presenting gifts to their schools, next fall. You see, our March contest offered something needful to ten schools whose pupils wrote the best letters on school needs. So Cousin Sally has sent flags and books and framed pictures to the schools attended by the following pupils.

Here are the prize-winners:

Frank Paschket, age 14, Pequot, Minnesota; Noel Woodhull, age 13, Eddy, Oklahoma; Gladys M. Hodgdon, age 14, Pittsfield, New Hampshire;

Ruth Bowersock, age 14, Doylestown, Ohio; Ernest Sanders, Keenes, Illinois; Rhea Cathon, Alliance, Ohio; Marjorie Chamberlin, age 11, Wilcox, Washington; Nellie Grieg, age 9, Camden, South Carolina; John W. Coffey, age 9, Sunmerfield, North Carolina; Katharine R. Sears, Traverse City, Michigan.

Our May Contest

I WANT each one of you to draw a landscape from nature. You may use water-colors, pen and ink, pencil, crayon, whatever you wish. Only you must not copy a picture.

Each drawing must be four by five inches. It must be sent flat, not rolled nor folded. It must reach me before June 15th. On the back a parent or guardian must state that the picture is not copied. Don't forget your own name and address. Send pictures to Cousin Sally, FARM AND FIRESIDE, Springfield, Ohio.



"We've got a dog to give away"

Who Wants a Dog?

WE'VE got a dog to give away. Pa just won't keep him another day. He calls him a bumbly, lop-eared pup, and says we've got to give him up.

Ma says he isn't worth his salt, But we're quite sure that's not his fault. And he don't need salt anyhow, For salt is what they give the cow.

We're sure he'd like to work all right, If there weren't so many dogs to fight, And cats to chase up into trees, And clothes to chew, and folks to tease.

I hope, if you will take him in, You'll let us come and play with him. We think he's beau'ful and just a dear, And that big folks are awful queer.

CARLOTTA KING EAGAR.

Speech at the Gettysburg Cemetery

By Abraham Lincoln

FOURSCORE and seven years ago our fathers brought forth upon this continent a new nation, conceived in liberty and dedicated to the proposition that all men are created equal. Now we are engaged in a great civil war, testing whether that nation, or any nation so conceived and so dedicated, can long endure. We are met on a great battlefield of that war. We have come to dedicate a portion of that field as a final resting-place for those who gave their lives that that nation might live. It is altogether fitting and proper that we should do this. But in a larger sense we cannot dedicate, we cannot consecrate, we cannot hallow, this ground. The brave men, living and dead, who struggled here have consecrated it far above our power to add

or detract. The world will little note, nor long remember, what we say here, but it can never forget what they did here. It is for us, the living, rather to be dedicated here to the unfinished work which those who fought here have thus far so nobly advanced.

It is rather for us to be here dedicated to the great task remaining before us, that from these honored dead we take increased devotion to that cause for which they gave the last full measure of devotion: that we here highly resolve that these dead shall not have died in vain: that this nation, under God, shall have a new birth of freedom, and that government of the people, by the people and for the people shall not perish from the earth.



Daily Performance

By William J. Burtscher

"Now therefore perform the doing . . . of that which ye have."

THERE is more excuse for the man who tries to perform that which he cannot than there is for the man who won't perform that which he can. Now therefore perform, those of you who have it in you, and, reading that phrase backward (perform therefore now), perform daily.

A new post-office, so a story is told, had been established in a small village in the West. A native of the soil was appointed postmaster. After a while complaints were made that no mail had been sent out from the new office, so that an inspector was sent to inquire into the matter. He called upon the postmaster, and stating the cause of his visit, asked why no mail had been sent out. The postmaster pointed to a big and nearly empty mail-bag hanging up in a corner, and said: "Well, I ain't sent it out, 'cause the bag ain't nigh full yet." The man had neglected to perform daily.

Each of our talents—those performing abilities that we have—may be likened to that mail-bag, holding little or much of what the world wants. Let us, then, not wait until our talent-sacks become full, or perfect, before we send them out. We must perform daily.

If you are going to preach, do not withhold your sermons from the public until you can preach like a Talmage.

If you are going to make music, do not disappoint your friends until you can perform like a Paderewski.

If you are going to paint, do not hide your pictures until you can present work like a Whistler.

If you do, you would be violating the highest law in the universe just as much as that postmaster was violating the laws of Uncle Sam.

So then daily perform the doing of that which ye have.

The Faith That Overcometh

By Elizabeth Clarke Hardy

VERY much of the unhappiness that enters into the lives of mature men and women, in this world, comes from a lack of faith in the goodness of God. This is especially true of men and women who have passed the noonday of life and are now facing the evening shadows with fear and forebodings.

We see many men and women who, having led an active life, seem to grow morbid and melancholy and to lose all hope and buoyancy when they feel that their physical strength is beginning to wane and their powers of accomplishment becoming less efficient.

This is the time of life when religion, the true religion of the living God, should be the staff upon which men and women should lean; and leaning on this staff, and trusting in the infallible promises of God, surely His children have nothing whatever to fear.

True religion is the most joyful thing that a human soul can know. It is an agent of peace and joy and happiness, and it enables us to reach out and lay hold of the blessed promises that God has given to His people, and to make them our refuge and our defense.

What have we to fear, when God has proclaimed to His children: "Fear not, nor be dismayed; be strong and of good cheer"? Why can we not trust Him when He assures us: "I am thy God, and I will uphold thee"? And why should we not be joyful when He has given us this blessed promise: "Fear not, for I am with thee, and I will bless thee"?

When Christ left His disciples in sorrow and sadness because they knew that they should see His face no more, He promised that He would send them a

comforter, and this comforter is the spirit of God in the hearts of men. If we keep our hearts closed to this comforter, we deprive ourselves of the staff upon which all humanity must lean for support in the trying exigencies of life. When we learn to open our hearts to the divine inflow of the infinite spirit of light and life, we shall be so filled with hope and joy that there will be no room for fears or forebodings, because the Comforter will have entered in to abide with us forever.

And in the measure that we open our lives to this divine inflow will we come into a knowledge of our oneness with God. We shall realize that He is within us, above us and around us, that He desires that we shall be well in mind and body, and that no evil thing shall befall us. And the more we open our minds and hearts to these truths, the more abundantly they will come flowing in upon us, until all our old distrust, our fear and melancholy forebodings will fall away from us as a worn-out garment, and we shall be able to enter into our rightful kingdom of peace and joy and perfect happiness.

The Relation of the Church to Practical Farming

By Edwin P. Owen

IN THIS article we have no thought of discussing a farmer's need of personal religion, nor of the church's need of the farmer and his family, though it is probably true that when the gentle cow kicks over the well-filled milk-pail, or the calves and the pigs and the hens seem to have decided that the garden was put in for their most especial benefit, the farmer needs a full dose of religion as badly as does the preacher when the back rows of seats are invaded by an army of youthful rowdies intent on flirting and general disorder. It is also clear that when the church stands in the midst of an entirely rural population the church without a farmer would be in as importunate a condition as the man without a country.

The question before us is whether farming and religion are subjects so essentially separate that they should be kept entirely apart or whether it is in any sense the duty of religion—of the church—to concern itself with the material life of the farmer. Is the purpose of the Bible—the text-book of religion—merely to guide us past the mud-puddles of life to a heaven entirely above—and by and by—or is its intent rather to enable us to drain those mud-puddles, and bring the kingdom of heaven into every-day life here and now.

A detailed perusal of the book Leviticus shows us most clearly that Mr. Campbell did not invent the system of summer fallow. The only difference is in the length of the rotation period and in the nature of the tools to be used. The Jews under the guidance of Jehovah preferred a seven-year system. Eastern Canada, when I lived there some thirty years ago, was using a ten-year system, and in the drier sections of the Middle West the better farmers are varying from a six-year to a four-year rotation.

It is, of course, a fact that in the New Testament things spiritual and eternal are given precedence over matters material, but we nowhere find the Savior of men or His early followers indifferent to the physical needs of the world. Sickness and poverty were cared for most thoroughly. The deacon of the early church was first chosen on account of the physical needs of the widows and the orphans in the early church. We are told that life does not primarily consist in the abundance of the things that we possess, but we are clearly told by Christ Himself that the Creator is constantly caring for our material needs, as well as the needs of the animal and vegetable kingdom.

A fair conclusion after a careful study of the whole Bible will tell us that religion is interested in all the needs of man. The church of the city is right in fostering the

night school, or if necessary the model lodging-house, and the church of the country would be neglecting its full duty if it did not take the lead in encouraging a thorough study of up-to-date methods of farming. If Jehovah could see the advantage of science in farming fifteen hundred years before Christ, surely His followers should see a need for science when the soil has been depleted by the use of the centuries, and when the population of the world has so vastly increased that the statesman is inclined to tremble for the bread-supply of to-morrow.

I Will

By W. D. Neale

ONLY two words, but they spell the power of the man. Back of them is a purpose and a rock-ribbed determination to carry out that purpose. These words speak final success for the life. There may be the sneers and scoffs of his fellows, but the "I will" causes the man to believe in himself and press on. Sometimes he may be on the verge of failure, but he turns from it to success with an unconquerable spirit. He keeps heart in any fate.

The "I will" man is never content with his present attainments. Plus ultra is his motto. He is not satisfied with the candle when it is possible to sit in the light of electricity. He will not plod along on foot when he may ride in an automobile or a passenger-coach. From the good to the better, and from the better to the best he ever moves. He puts no bounds to his possibilities, and no one can ever say his ideals are shrunken.

The "I will" man is not ambitious for praise. He rather expects criticism at the start. Someone will get in his way and lash him with their envy and skepticism. But insults and abuse do not swerve him from his purpose. He has stamina enough to stand alone and struggle for his ambitions until they are attained. The praise or criticism of men are chaff to him. These must pass away, but the things of life for which he battles abide forever. He knows the laurel grove lies over the mountain and that it is courage and toil, not the praise or criticism of men, that will bring him to it at last.

The "I will" man forges to the front in spite of opposition. He may be physically weak, but the time has passed when great muscles are essential to leadership. The mind has become more powerful than the flesh. The man of thought and vision leads on to-day. Wealth or station may not be his, but men willingly follow a man who blazes the way into new fields of thought and action. This is true whether he advances in the business, political or religious world. The question is not "Where did the man come from, and what is his standing socially and financially?" but "What has he to offer better than the things already possessed?" So the "I will" man may have a diseased body, he may be pinched with poverty, he may even come from a gypsy tent, but if he can offer men something greater and better than they now enjoy, they gladly follow him to the possession of it. This brings him success, and thus he wins his place as a leader.

When the Appetite Lags

A bowl of

Post Toasties

with cream

hits the right spot.

"Toasties" are thin bits of corn; fully cooked, then toasted to a crisp, golden-brown.

This food makes a fine change for spring appetites.

Sold by Grocers, and ready to serve from package instantly with cream and sugar.

"The Memory Lingers"

Made by
Postum Cereal Company, Ltd.
Pure Food Factories
Battle Creek, Mich.

FIFTY Beautiful Birthday and Greeting Post-Cards

For Farm and Fireside Readers

Here is your chance to get a set of 50 handsome Floral and Greeting Post-Cards. We are now closing out our entire stock of Post-Cards.

These cards are without doubt the acme of post-card production. They are lithographed in many colors, and the designs are new, original and attractive.

You Will Want These Cards

And we want you to have them. The subjects are many and varied, and can be applied to all occasions, such as Birthday Greetings, Best Wishes, Good Luck, etc.

We give you our positive assurance that a finer assortment of Post-Cards cannot be obtained anywhere. These cards are the best in every particular.

You Must Write To-day

We will reply immediately showing you how you may obtain this fine assortment of high-colored, high-finished, high-priced Post-Cards without a cent of cost to you.

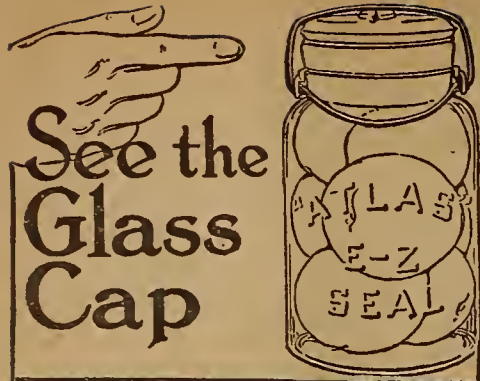
Write at once. Address,

FARM AND FIRESIDE
Post-Card Department
Springfield, Ohio

What It Cost

By R. H. Aldrich

IN THE Civil War on the Union side there were 844,588 boys enlisted seventeen years of age or under. There were 2,270,588 enlistments, and only 118,000 were over twenty-one years old! Men make the wars and then push the boys up in front of the enemy's guns! The greatest mortality is not there, but in sickness, disease and death on the cots. Herod is out-heroded. "Herod was exceeding wroth, and slew all the children in Bethlehem. Then was heard lamentation, weeping, Rachel weeping for her children and would not be comforted."



See the Glass Cap

The very best jar from the cap—down!

It is no trouble to "jar" things these days. Even many vegetables that you never thought of "canning"—it is *easy* in these all-glass jars.

No spoiled vegetables or fruit—no sweltering over hot stoves for nothing! Just put up most fruit and "garden stuff" *whole* and get *best* results from the

E-Z SEAL JAR

This jar is *safe*. The glass cap fastens with a wire spring—it closes with a *touch* and opens with a *tilt*—no wrist-turning, no neck-twisting, no shattering or splattering!

Then—the heavy, green-tinted glass keeps out the light. Your fruit opens fresh and plump instead of faded and *wilted*. Try the E-Z Seal way.

Free Jar—Free Book

Cut out this coupon, take it to your grocer—he will give you one E-Z Seal Jar—FREE. Be sure and write us for FREE Book of Recipes—it tells many things you should know. Get the Jar from the grocer. Get the Book from us.



HAZEL-ATLAS GLASS COMPANY
Wheeling, W. Va.

1-Qt. E-Z Seal Jar BL FREE for the Coupon

Please note—in order to secure free jar this coupon must be presented to your dealer before Sept. 1st, 1912, with blank spaces properly filled out.

HAZEL-ATLAS GLASS CO.,
Wheeling, W. Va.

This is to certify, That I have this day received one "Atlas" E-Z Seal Jar Free of all cost and without any obligation on my part. This is the first coupon presented by any member of my family.

Name _____

Address
TO THE DEALER:—Present this to jobber from whom you received E-Z Seal Jars. All coupons must be signed by you and returned before Nov. 1st, 1912.
DEALER'S CERTIFICATE. This is to certify, that I gave away one "Atlas" E-Z Seal Jar to the person whose signature appears above.

Dealer's Name _____

Address _____

Big Profits in Home Canning with a STAHL CANNER

Stops surplus fruits and vegetables going to waste. Very little money required—big profits—a wonder money maker on the farm.
Stahl Canning Outfit
All sizes. Fully guaranteed. I start you out with everything needed. Over 100,000 in use. Prices \$4.20 up.
Write for big illustrated catalog today—Now.
F. S. Stahl, Box 283, Quincy, Ill.



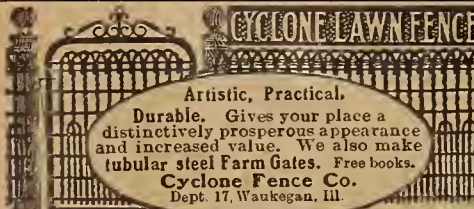
ORNAMENTAL FENCE

Our handsome All Steel lawn fence costs less than wood and is much more durable. Write for Special Prices and free Catalog showing 25 designs. WE CAN SAVE YOU MONEY.
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Artistic, Practical. Durable. Gives your place a distinctively prosperous appearance and increased value. We also make tubular steel Farm Gates. Free books.
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Dept. 17, Waukegan, Ill.

New Ideas in Knitting and Crochet

ON THIS page are two interesting ideas in crochet. One is a plate-doiily in which simple crochet stitches are used with a bought lace braid. The result is an odd, pretty and quite unusual lace. A set of these plate-doiilies would make a very attractive gift for a bride.

The Irish crochet center-piece is unusual in its simplicity, yet the effect gained from the two stitches used in its construction is extremely attractive. Doilies of the same pattern might be made in any size and are sure to be very pretty.



Crocheted plate-doiily

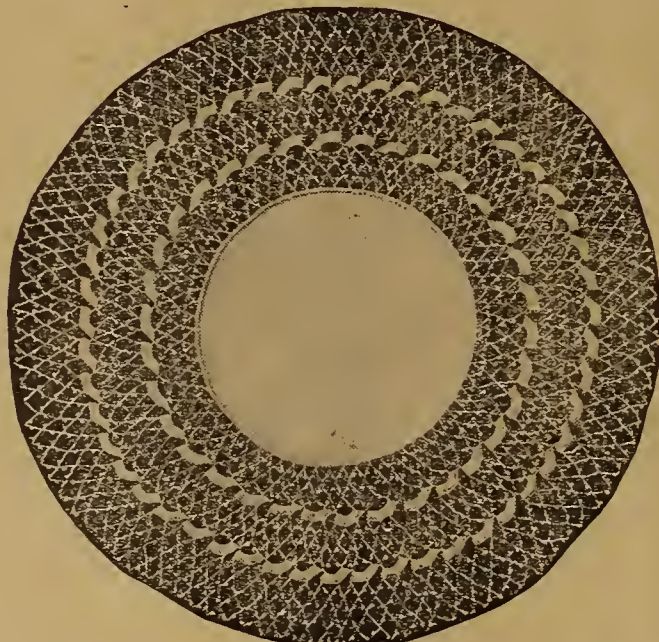
Requests come so frequently for knitting designs that the knitted doilies and knitted insertion for a towel-end are sure to interest devotees of the knitting-needle. These designs are quite as good to look at as the usual crocheted doily. Towels with fancy borders being so much a fad of the present moment, the knitted insertion, which suggests elaborate draw-work, makes a variation as unique as it is pretty in place of the more usual towel-end. Furthermore, it is, as you see, quick and easy to make and to apply.



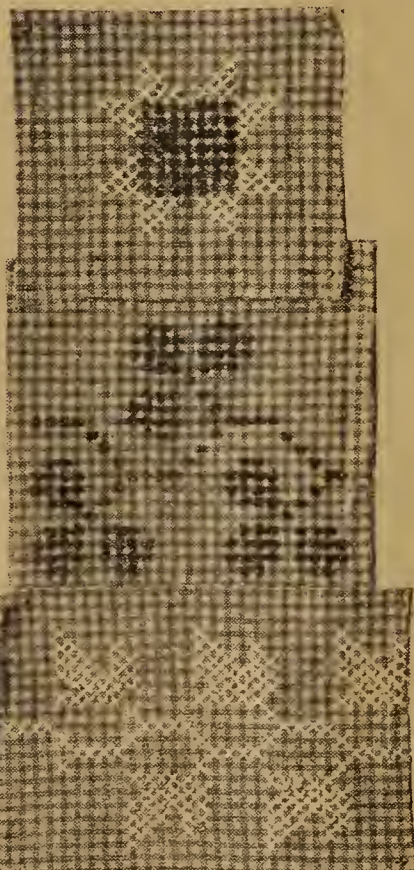
A doily of knitted lace, known as the diamond pattern. In the directions it is called No. 1



Another knitted doily, known as the forget-me-not pattern. In the directions it is called No. 2



An Irish crochet centerpiece in which only two stitches, known as the "picot" and the "fan," make an attractive lace border



Knitted insertion for towels

No instructions are necessary to understand these interesting cross-stitch patterns that have been carried out in checked gingham. They may be used to trim dresses and aprons, adorn sofa-pillows and for any other use to which a decorative border is necessary. The patterns given are "The Star," "The Clover Leaf" and "The Maple Leaf."



The Economy of Frozen Creams and Ices

Ice cream is a food—the most delicious of all foods. The one palate-delight that doctors tell everybody to eat. It used to be a luxury. Today it is an economy—an economy of time, effort, money, if you have in your home a

Triple Motion White Mountain Ice Cream Freezer

Reduces the freezing time to a minimum—makes finest ices. That famous triple motion—can revolving while two dashers turn in opposite directions—increases the bulk, makes the cream lighter.

You'll find new dessert delights constantly if you have a White Mountain and our recipe book, "Frozen Dainties." We will gladly send you a copy of the book FREE. Address



THE WHITE MOUNTAIN FREEZER CO.
Dept. Y
Nashua, N. H.

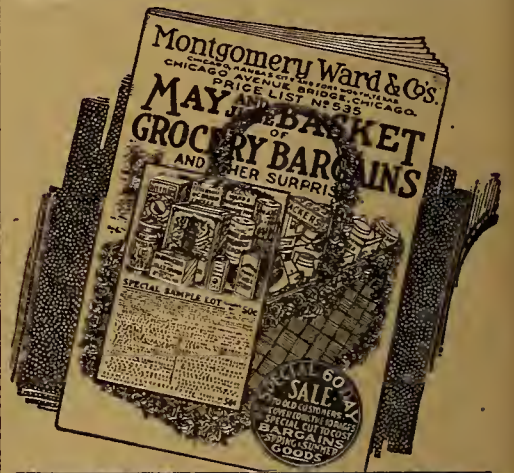
Look for the Diamond trade mark on the wrapper.

AGENTS MAKE \$30 PER WEEK

SEE THAT SHUTTLE

This Awl sews a lock stitch like a machine. Just the thing for Repairing Shoes, Harness, Buggy Tops, etc. Sews up Grain Bags, Tents, Awning's and Wire Cuts on Horses and Cattle.

Makes a neat, durable repair and quickly, too. Has a diamond point grooved needle, a hollow handle, plated metal parts, a shuttle, and a bobbin holding 24 yds. of best waxed linen thread. No extra tools needed. Can be carried in the pocket. Special discounts to agents. S. Perrine says "Sold 9 on way home with sample." W. Spenser writes "Sold 11 first 4 hours." Reg. price \$1.00. Complete sample with 1 large, 1 small, 1 curved needle, a shuttle, and a bobbin of thread sent postpaid for 60c., 2 for \$1.00. Get one, keep it a month or so, mend all your Harness, etc., and then if you are not satisfied return the Awl and we will refund your money. Send quick for sample and instructions.
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THIS FREE BOOK CUTS DOWN YOUR GROCERY BILL 20%

Can you afford to be without it? Can you afford to spend 10 dollars when you can get more and better groceries for 8 dollars—or can you afford to spend 15 instead of 12 dollars, 25 instead of 20 dollars, 50 instead of 40 dollars? Can you afford to do this when you might be saving from 2 to 10 dollars?

You know that you can not—but that is exactly what you are doing if you pay three or four profits to small dealers.

This book represents the World's Largest Retail Grocery Store. It gives money-saving quotations on the very finest food products of all kinds. It shows you new and better food supplies. Besides, it has several pages of wonderful bargains on a variety of merchandise.

It is issued every two months. In every issue you find new and novel grocery items, a new list of special bargains—all the necessary staple groceries—at the lowest price—at prices that mean at least a saving of one-fifth to you.

Will you use this little coupon and send for this book at once? Send us your name and we will put you on our mailing list to receive this value-giving grocery list every two months.

Clip this coupon, sign it, mail it at once!!
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Chicago Ave. Bridge 19th and Campbell Sts.
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NAME _____
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All About the Summer Fashions

With Useful Clothes for the Children and Grown-Ups

Designs by
Grace Margaret Gould



No. 2023—Normandy Cap and Sunbonnet
Cut for 1, 2 and 4 year sizes. Material for Normandy cap, one and one-fourth yards of twenty-two-inch material, one-half yard of insertion and one yard of narrow embroidery. Material for sunbonnet, one yard of twenty-seven-inch material. The price of patterns, including both bonnets, is ten cents



The pattern for this Sunbonnet is No. 2023, which also provides for the Normandy cap illustrated on the opposite side of this page. Bright-toned gingham develop prettily for sunbonnets, while the Normandy cap should be of a sheer white material, trimmed with fine white embroidery. Tiny rosettes of pink or blue ribbon give an extra dainty finish



No. 2042—Misses' Graduating Dress

Cut for 12, 14 and 16 years. Material for 14 years, five and one-half yards of twenty-four-inch material, or three and three-eighths yards of thirty-six-inch material, with nine and five-eighths yards of embroidery, three and one-fourth yards of insertion, and one eighth of a yard of inserted tucking. Price of pattern, ten cents.



No. 2026—Sailor Suit Fastened at Side

Pattern cut for 4, 6, 8, 10 and 12 year sizes. Quantity of material required for medium size, or 8 years, five yards of twenty-four-inch material, or three yards of thirty-six-inch material. Price of pattern, ten cents



No. 2029—Kimono with Sailor Collar

Pattern cut for 2, 4, 6, 8, 10 and 12 year sizes. Material for 6 years, four and one-half yards of twenty-two-inch material, or two and three-eighths yards of thirty-six-inch material. Price of pattern, ten cents



THIS is the time of year when most people are planning good times for the younger members of the family who are graduating from district or high school. The all-important commencement day comes and with it the thought of the correct costume for the girl graduate. Something simple and dainty it must be, and simple and dainty it will be if a sheer fabric is used and it is trimmed with not too much lace or embroidery.

Illustrated on this page in pattern No. 2042 is just the right sort of a gown for the girl graduate who likes to be well dressed. Though extremely simple in style, it is especially dainty, as well as stylish.

Good materials to use in developing this model are dotted Swiss, fine lawn, batiste or washable voile. Lace may be used as trimming, though embroidery is smarter in style and washes far better. Of course, the dress should be kept all white, unless a bit of color is introduced in the sash. Then again, a band of ribbon matching the sash in color may be worn in the hair. This is an excellent way of wearing the class or school color, and is often adopted by girls who want their dresses to be white, but who want to show to what school or class they belong, by wearing its emblem or color.

It is not a difficult task this year to make up smart little tub frocks at very little cost. The new washable fabrics are so unusually good looking and the trimming so especially smart that even the simplest of models is sure to be stylish. The new madras, gingham, chambrays and percales show many striped effects, ranging from the narrow hair-line to the inch-wide stripe. These materials develop most attractively in the simple designs and are effective when trimmed with plain material matching the stripes, or with cotton ratine or Turkish toweling. These two latter fabrics are used on many of the season's new models, whether they be of washable materials or cloth fabrics.

The dress shown on this page in patterns Nos. 2017 and 2018 looks well developed in any of these striped materials, with the collar and cuffs of Turkish toweling or the cotton ratine. For more dressy wear it is pretty made of plain linen, with the collar and cuffs of embroidery. A black tie and buttons give the right trimming note.

The sheer fabrics for dressy summer gowns also show striped effects. They are combined with flowered borders, and there are many flowered organdies, batistes and cotton voiles that look very pretty trimmed with just a bit of lace or embroidery and tiny buttons covered with colored silk. Fashionable trimming colors this season are geranium red, dull blues, bright greens, and shades of yellow that harmonize well with tans and browns. Always bear this important fact in mind however, do not introduce in your trimmings a color that will not harmonize well with your hats or the trimming on your coat. The secret of the well-dressed woman is that all her clothes are harmonious in their colorings.

Some of the trimmings for this year's summer gowns are unusually effective, though very simple. There are many heavy, coarse embroideries that combine most satisfactorily with the gingham and other inexpensive wash fabrics. There are other trimmings with scalloped edges done in color that can be easily and quickly sewed to the edges of collars and cuffs or used to outline seams, which give the same effect as hand-work and which take almost no time to sew in place. Another trimming idea which is very stylish is to have collars and cuffs of plain linen buttoned on to a striped or plaid dress. The buttons are sewed on with colored thread, and the buttonholes are also worked in this same color. For instance, a pink-and-white striped gingham dress would have pink linen collars and cuffs. The buttonholes in the collar and cuffs would be worked in black, and the white pearl buttons sewed on with black cotton.

Illustrated on this page are some designs for the younger girls in the family, as well as two bonnets for the really little girl.

The sunbonnet is always a necessity when warm days come, and it is nice to be able to make these little bonnets at home.

For every design illustrated on this page there is a ten-cent paper pattern. The patterns may be ordered from any one of the three following pattern depots: Pattern Department, FARM AND FIRESIDE, 381 Fourth Avenue, New York City; Pattern Department, FARM AND FIRESIDE, Springfield, Ohio, and Pattern Department, FARM AND FIRESIDE, 1538 California Street, Denver, Colorado.



No. 2024—One-Piece Dress: Kimono Sleeves

Pattern cut for 2, 4 and 6 year sizes. The price of this pattern is ten cents



No. 1446—Room Gown with Side Closing

Pattern cut for 32, 36 and 40 inch bust measures—small, medium and large. Quantity of material required for medium size, or 36-inch bust measure, ten and one-half yards of twenty-seven-inch material, or seven and one-half yards of thirty-six-inch material. The price of this pattern is ten cents



No. 2017—Blouse with Sailor Collar

Pattern cut for 32, 34, 36 and 38 inch bust measure. The price of this waist pattern is ten cents

No. 2018—Two-Piece Skirt with Yoke

Pattern cut for 22, 24, 26 and 28 inch waist measure. The price of this pattern is ten cents

The Housewife's Letter-Box

Do You Need Help?

Have you been looking for a special recipe for years? Do you need any information on household matters? And do you meet with little problems in the home that you wish someone would solve for you—someone who has had a little more experience than you? Then, why not make use of YOUR OWN department and ask the questions which have been troubling you? This department has proved that the spirit of helpfulness is abroad in the land, especially among the women of the farm. That our readers have the mutual desire to help one another is evidenced by the large and prompt response we have had to the questions which are printed here monthly. There is no payment made for contributions to these columns. All answers and inquiries should be addressed to "The Housewife's Letter-Box," care of Farm and Fireside, Springfield, Ohio.

If an immediate answer is desired, it will be sent, provided a two-cent stamp is enclosed.

Questions Asked

Will someone please tell me—

- How to make timbales? T., New York.
 How to make cherry wine? H. H. B., Washington.
 How to make a hair-switch? Mrs. H. H. R., Colorado.
 How to make clotted cream? E. C. J., Pennsylvania.
 Pattern for log-cabin quilt-block. Mrs. E. L. B., Maine.
 How to make blackberry wine? J. E. C., Mississippi.
 How to make a sunflower quilt? Mrs. R. A. K., Virginia.
 How to pack grapes for winter? S. E. M., Virginia.
 How to make a feather comfort? Mrs. C. D. H., Washington.
 How to make "Shoo-Fly" Cake? A. M., Missouri.
 How to knit honeycomb slippers? Mrs. L. L. J., Virginia.
 How to take out grease on a floor? Mrs. M. B., New Jersey.
 How to make good country sausage? Mrs. J. H. W., Ohio.
 How to cover a cotton felt mattress? J. W. L., Nebraska.
 How to make steamed chocolate pudding? Mrs. V. B. C., New York.
 How to remove bluing stains from clothing? Mrs. C. C. S., Idaho.
 A pattern for making a worsted comfort top? Mrs. G. A. H., Iowa.
 How to keep the copper tank on the range bright? Mrs. M. S., West Virginia.
 Where I can get seed for Gibraltar onions? Mrs. H. E. P., New York.
 How to cross-stitch oak or maple-leaf pattern? B. H., Washington.
 How to make a good pie-crust (lemon and custard)? Mrs. L. V. S., Utah.
 How to make Spanish pork-chops; also French baked beans? Miss M. M., Michigan.
 How to make portières of old silks and what to use for the warp? I. W., Kansas, and A. D. F., Idaho.
 How to melt small pieces of soap to make over into cakes of soap? Mrs. J. W. N., Massachusetts.

- How to put new feet in old stockings?
 How to make angel-food cake? SUBSCRIBER, Mississippi.
 How to make plum duff? How to make good, rich, dark molasses cake? S. A. R., New York.
 How to wash écu lace curtains so they will be of the same shade after washing? Mrs. A. M. K., Ohio.
 How to make bread with gluten flour, using yeast, for one who must use no sugar and very little starchy foods? Mrs. J. H., Ohio.

Will Mrs. N. R., Ohio, who contributed the album quilt-block, please tell Mrs. H. S., Nebraska, the number of blocks she put in her quilt and how many inches across she makes them?
 HOUSEWIFE EDITOR.

How to remove mildew from white clothes which have been mildewed for some time; also a good recipe for mince-meat?
 Mrs. J. B. H., Ohio.

How to cook the "Windsor or English Broad Bean," sometimes called horse bean? How to retain the pungent taste in nasturtium seeds picked in the green state for pickles?
 W. S., Washington.

How to start a simple piece of tatting? If the instructor will kindly send a sample, leaving the threads unfinished, to the Editor of the Housewife's Letter-Box, I will send a stamped and self-addressed envelope for it to her.
 Miss I. B. M., Alabama.

What kind of a grinder to use to make beads of rose-petals? How many rose-petals does it need to make one chain? How much tincture of iron to use? How many days will it take to ripen and how often must it be stirred during this time?
 I. K., Nebraska.

Questions Answered

For R. A., Virginia—Take rice left over from a meal. One quart of rice, well cooked, two cupfuls of sweet milk, one cupful of sugar; three eggs and one cupful of currants or raisins.
 Mrs. R. W., Wyoming.

For Mrs. C. E., Washington—Cover your pickles with a flannel cloth. The scum will cling to the flannel and can be removed, washed and set over the pickles again. Or use green horseradish-leaves in place of grape-leaves.
 Mrs. J. B., Michigan.

Rice-Pudding, for R. A., Virginia—Put one-half cupful of rice in covered dish with water, and stew very slowly for about one hour. Add beaten yolks of three eggs, then stir in one quart of scalded milk. Cover with the whites of three eggs beaten stiff, one-half cupful of powdered sugar and one-half teaspoonful of vanilla. Brown in the oven.
 Mrs. R. R. D., Iowa.

The following is an excellent recipe for rice pudding without eggs: Two quarts of milk, two-thirds cupful of rice, a piece of butter the size of a walnut, a pinch of salt, one cupful of sugar and enough nutmeg to flavor. Put into a deep pudding-dish well buttered, and bake in a moderate oven. Stir it once or twice until it begins to cook. Let it remain in the oven until it is the consistency of cream. Serve cold.
 Mrs. C. E. M., Connecticut.

Meat Scrapple, for Subscriber, New York: Take a hog's head, singe, cut the eyes out, split to make right size to go into the kettle. Put in just enough water to cook thoroughly done. Remove every bone, season with salt and pepper, then pour in what broth was left from cooking. Place on the stove, and stir in slowly corn-meal until it is like mush. Put into a pan or any vessel to become cold. When cold, slice, and fry.
 Mrs. R. R. D., Iowa.

For Mrs. C. E., Washington—Here is the way I make green-tomato pickles: I put my pickles to soak overnight in salt water, and then wash well before cooking them, cook them until almost done, and then put in sugar, vinegar, mixed spices, and cook until done. They are fine.
 Mrs. R. W., Wyoming.

For N. A., Indiana—To grate lemons, use a coarse potato-grater, and grate the yellow rind only of lemons.
 Mrs. L. L. J., Virginia.

For Mrs. A. J. C., Indiana—It is the intention of FARM AND FIRESIDE to answer your request at length on some other page of FARM AND FIRESIDE in the near future.

EDITOR'S NOTE—If Mrs. A. McC., Illinois, will send a stamped and addressed envelope to the Editor of the Housewife's Letter-Box, we will send her directions for crocheting a baby's cap which has been sent us by Mrs. E. S. C., Virginia.

Molasses Cookies, for Miss J. E. R., North Dakota—One and one-half cupfuls of molasses, one cupful of granulated sugar, one cupful of lard, one teaspoonful, each, of salt, ginger and cinnamon. One cupful of cold water, in which two heaping teaspoonfuls of soda have been dissolved; flour enough to roll out rather soft.

To Can Dandelions, for Mrs. H. H., Massachusetts—Parboil in soda water, then put clear water over them, and boil till tender. Add one teacupful of good vinegar to each gallon of greens, and can boiling hot. Turn cans on tops for twenty-four hours. I can green beans in this way and have never lost a can.
 Mrs. J. W. L.

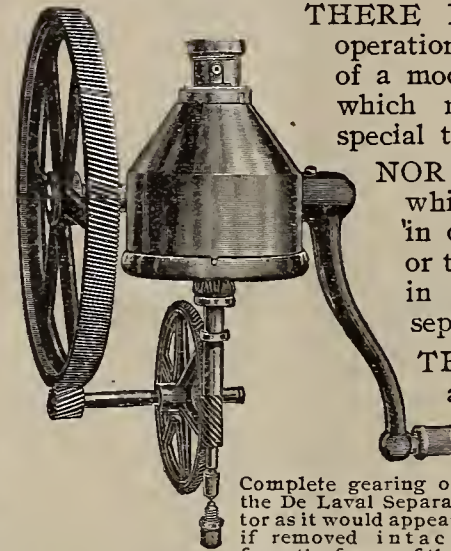
How to Make Soap, for Tennessee—Few housekeepers realize what a simple and rather pleasant matter it is to make the kitchen soap; not the harsh, unpleasant soap of commerce, but clean white soap, and costing next to nothing. It is an easy way to dispose of grease not needed for cooking purposes. The formula calls for five pounds of grease, one can of lye, one tablespoonful of powdered borax and one quart of cold water. Melt the grease, and carefully strain into a five-pound lard-pail. Cover to keep the dust out. Take large dish-pan. In it put one quart of cold water and the lye, and add one tablespoonful of borax. The lye makes the water hot, and while it is cooling get out your lard-pail full of grease. When the water is cool, pour in the melted grease, which must not be very hot—just warm enough to pour out nicely (avoid the sediment). Then stir water, lye, borax and grease together until thoroughly mixed, and pour into large dripping-pan. Let it get cool and hard, and cut into cakes.

If you care to flavor the soap, you can do so while you are mixing the ingredients together. A fifteen-cent bottle of oil of sarsaparilla will do for three makings. Or, use oil of wintergreen, or oil of cloves, or rose, or any odor you desire.

DE LAVAL CREAM SEPARATORS

Their Great Simplicity

DE LAVAL CREAM SEPARATORS EXCEL ALL OTHER separators not only in thoroughness of separation, sanitary cleanliness, ease of running and durability—but as well in their great simplicity.



Complete gearing of the De Laval Separator as it would appear if removed intact from the frame of the machine. Note the remarkable simplicity of construction.

THERE IS NOTHING ABOUT THE operation, cleaning, adjustment or repair of a modern De Laval Cream Separator which requires expert knowledge or special tools.

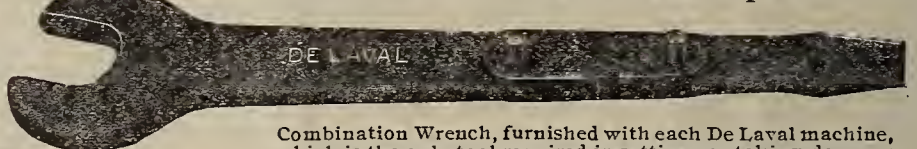
NOR ARE THERE ANY PARTS which require frequent adjustment in order to maintain good running or to conform to varying conditions in the every-day use of a cream separator.

THERE IS NO NEED TO FIT and adjust parts to get them together right. They are so carefully and accurately made that they cannot help go together right. All bearings and bushings are easy to replace. There are no complicated springs, keys, ball bearings or other fittings, that only an expert can properly adjust.

IN FACT, SO SIMPLE IS THE CONSTRUCTION OF A De Laval machine that a person who has never touched a separator before can, if need be, take a modern De Laval machine completely apart within a few minutes and then put it together again as quickly. This is something which cannot be done outside a shop with any other separator.

THERE IS NOTHING ABOUT THE MACHINE THAT cannot be taken apart, removed or replaced by any one who can use a wrench or screw driver. In fact, the only tool which is needed in the use and operation of a De Laval Cream Separator is the combination wrench and screw driver illustrated below.

THE ONLY WAY TO PROPERLY UNDERSTAND AND appreciate De Laval superiority to other separators, is to look over, and better still to try, a 1912 De Laval machine. Every De Laval agent is glad to afford prospective buyers the opportunity to see and try a De Laval Separator.

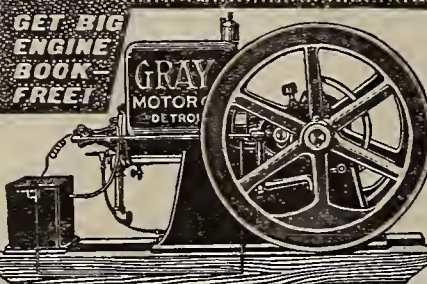


Combination Wrench, furnished with each De Laval machine, which is the only tool required in setting up, taking down or using the De Laval, the most simple cream separator ever built.

THE DE LAVAL SEPARATOR CO.

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No extras to buy with the Gray engine - A compact outfit - no complications. Starts easy and delivers big power. Water cooled - fuel tank in base - comes wired up ready to run in 8 minutes after unloading. Use Kerosene or Gasoline - A wonderful engine for economy - will run all day and do a remarkable amount of work for only a few cents worth of fuel - Uses gasoline, alcohol, distillate, kerosene (coal oil). 12 Sizes to Select From. If you are not sure of the power you need get the advice of our service department. Tell us what you want an engine to do - our engine experts will give you an honest estimate of the best outfit for you with rock-bottom price. Write for big Engine Book. Ask about complete Electric Light Outfits for country homes.

Record Breaking Pumping Outfit Here's a compact pumping outfit that will easily pay for itself with one season's work. Runs in any kind of weather. Engine is portable, can be used for many other jobs on the farm. A lot of power for little money. Will pump 3000 gallons of Water for 5 Cents.

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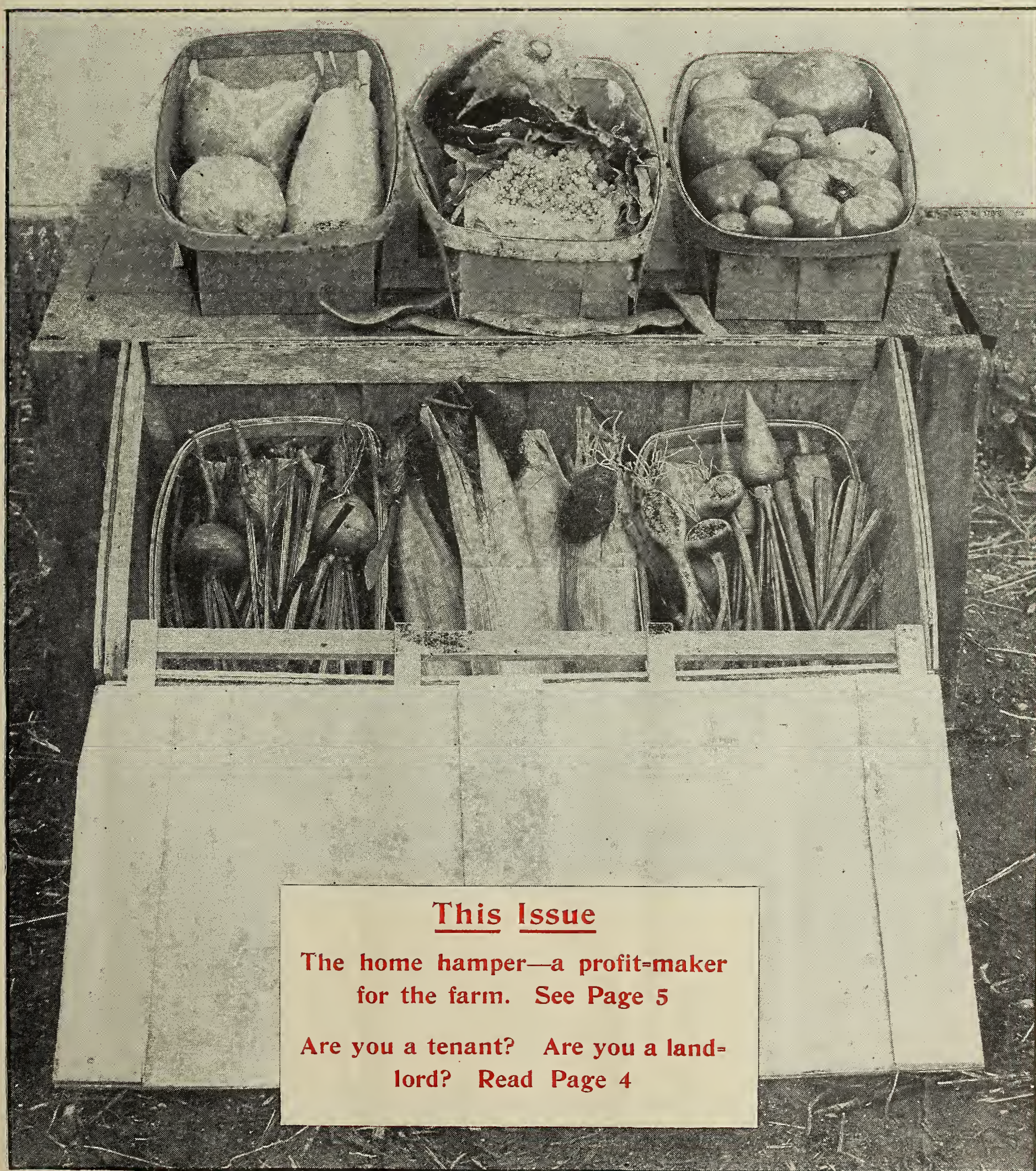
FARM AND FIRESIDE

THE NATIONAL FARM PAPER

EVERY OTHER SATURDAY

ESTABLISHED 1877


JUNE 8, 1912



This Issue

The home hamper—a profit-maker
for the farm. See Page 5

Are you a tenant? Are you a land-
lord? Read Page 4



(Placing the Charge)

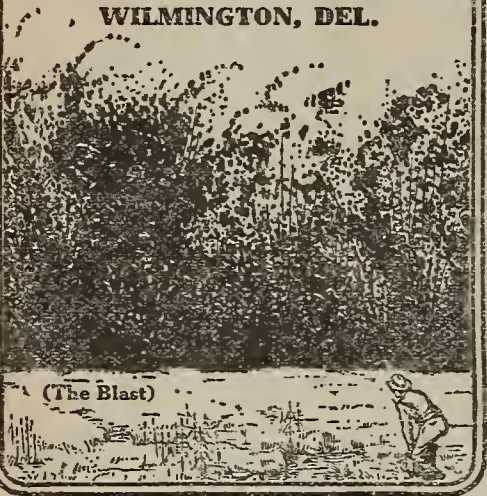
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WILMINGTON, DEL.



(The Blast)

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With the Editor

TO A person living in the country, it seems impossible that there are people who never see flowers or trees, or who can never lie down on grass, or look up through the foliage of trees and watch the clouds floating in mystery and glory across the sky. But there are thousands so shut in by cities.

The birds never sing for them. They think of milk only as something white sold them at high prices by milkmen. They wear cotton, mostly, but they know nothing of the beauty of the cotton-plant with its splendid blossoms. And they cannot associate with wool the thought of the white sheep dotting the green meadows—moving flecks of light,—nor of the lambs playing as if their little hearts would almost burst with joy.

I have seen men—hundreds of them—lying on the grass in city parks, face down, as if nursing at the great breast of Nature, with their arms spread as though to embrace their great Mother Earth in longing and yearning. And there are hundreds of thousands who never see the parks. It takes street-railway fare for that.

I have seen a young woman passing from office to office in Chicago, selling to the weary, country-hungry men bunches of the commonest flowers of the prairies. To us of the country they are weeds. To these city-dwellers they are full of the tenderest suggestions. One sees in a rosin-weed blossom, rough and coarse, only a yellow weed; but another remembers roaming over the prairies a care-free boy and gleaning the gum from that very weed for chewing. Another is carried back to the pond at the foot of the hill on the old farm home by the arrow-head leaves and the silken blossoms of the *Sagittaria*. A yellow cowslip transports another to the marsh where in childhood he went for the earliest blossoms for his teacher in the little white schoolhouse.

If you are well known in a slum district in a city, and get an occasional box of flowers from a friend in the country, you will be stopped by people who would scorn to beg for money, but who will plead for just one flower! And the flower you give may impart to some stunted child his first clear idea of the meaning of the word "flower."

WOULD you like to help such people? Would you like to bring joy to women and children to whom the sight of even a pigweed or a dandelion is an event? I am going to show you how you can do so. You cannot give money perhaps, but you can give joy.

There is a National Plant, Flower and Fruit Guild which has for its good work the bringing of your plenty to the scarcity of the city. It brings to the children and women and men of the verdureless cities little shipments of rural life, little glimpses of heaven, little bits of insight into the lilies of the field, and how they grow. Please write down its address: The National Plant, Flower and Fruit Guild, 70 Fifth Avenue, New York City. And when you feel like doing something for those who are in need, more than of anything else, of sweetness and tenderness and light, write, asking instructions for the shipment, without cost to you, of the green things, the growing things, and the "country" things so cheap with you, to those who need them, and whose hearts will be touched by them, and whose lives will be made better by your unselfishness.

You have no money? Well, you can pick flowers, can't you? The Guild will send you labels which you can paste on the boxes and thus ship them free. I think they will send you boxes, too. Anyhow, they will write you and tell you how you can help. It is now June, the month of flowers—but what does this mean to the flowerless millions? Help to make it mean something to them.

These people would like to have you send them buttercups and daisies. Clover-blossoms will be wonderful to them. They want roses, iris, strawberry blooms and fruits, blackberry and raspberry, huckleberry-branches, grape-cuttings showing the blossoms and young fruit, branches showing all kinds of young fruit, wheat, oats, rye, corn, barley, grasses, garden-flowers, and all sorts of wild flowers and plants. And if you get in touch with the Guild, they will guide you for the later months.

There are more than three hundred branches of the Guild. Most of them are in the New England and Middle States, where there are factories and huge towns, but they exist as far to the south as Cincinnati, and as far west as Portage, Wisconsin. The New York City branch will place you in touch with the people in the cities nearest you.

If I were to select the manner in which the children of a country school, or a rural Sunday-school, might give themselves the purest and sweetest pleasure possible, I believe I should suggest this method of touching the minds and hearts, and of slaking the nature-thirst of the children and women who live in the unnatural surroundings of the cities. I notice that Gifford Pinchot is honorary president of the Guild, and that Jane Addams, who has spent her life among the slum-dwellers of Chicago, is one of the vice-presidents. The one knows the love of trees and flowers. He has given his life to the cause of preserving our vanishing forests from the spoiler. The other knows the needs of the lowly and poor in the cities. It is safe to follow where they lead in these things.

THE object of the Guild, according to its own declaration, is twofold: First, to "carry brightness into the lives of the poor and sick of our great cities, and to minister to their comfort." You want to help in that, don't you? And the second object is "to give kind-hearted people in the country an opportunity to share with the less fortunate the surplus of their flowers, fruit, vegetables and jellies."

Do you see? It is a benefit to them and an opportunity to you. An opportunity. It costs nothing except a postage stamp or so, and a little time in the woods and fields. Why, you can find things for these people of which they never heard—beautiful things. The Guild will tell you of hundreds of the common things precious to them, and which you would never think of sending. To teachers and parents in the country, I bring this thought from the printed matter of the Guild:

YOUR children play in summer under the open sky, with beauty all around. There are children who live where "the buildings won't let them see the stars, and the pavements won't let the lilies grow at their feet."

I should like to see more country children working for the city children. If anyone who reads this should enlist in this good work, I should like a report, later, from him, her, or it. I say "it," for I believe that many schools will find in this work a great pleasure and a greater—spiritual—profit. Remember the name, the National Plant, Flower and Fruit Guild, and the address, No. 70 Fifth Avenue, New York. We have plenty, and they are in need!

Robert Quick

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Mention FARM AND FIRESIDE when you write to our advertisers, and we guarantee you fair and square treatment. Of course we do not undertake to adjust petty differences between subscribers and honest advertisers, but if any advertiser in this paper should defraud a subscriber, we stand ready to make good the loss incurred, provided we are notified within thirty days after the transaction.

FARM AND FIRESIDE is published every other Saturday. Copy for advertisements must be received three weeks in advance of publication date. \$2.00 per agate line for both editions; \$1.00 per agate line for the eastern or western edition singly. Eight words to the line, fourteen lines to the inch. Width of columns 2 1/2 inches, length of columns two hundred lines. 5% discount for cash with order. Three lines is smallest space accepted.

FARM AND FIRESIDE



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Subscriptions and all editorial letters should be sent to the offices at Springfield, Ohio, and letters for the Editor should be marked "Editor."
 Silver, when sent through the mails, should be carefully wrapped in cloth or strong paper so as not to wear a hole through the envelope.

Direct Drive on Government

WHATEVER may be the case with other people, the only hope of the farmers of the country, in their struggle for better government, lies in having a direct drive on the government through their votes. In caucus, convention and legislature, the farmers are betrayed by their representatives. The reason is plain—the voters of the cities and towns are able to make themselves felt by concerted action in a way which is quite impossible to the scattered, unorganized farmers. For this reason, the farmers all over the nation look to direct legislation, direct primaries and presidential-preference primaries as means for making themselves felt in a legitimate way. The reactionary attack on the presidential-preference primary has begun. "Holland," a Wall Street writer, has already stated in a newspaper article that in view of the fact that only a little more than half of the voters of Massachusetts voted in these primaries this year "much that has been said in favor of the primary must be qualified."

Why qualified? Qualified in what way? When before in the history of Massachusetts did even a quarter of the plain voters of the State have anything to say about a nomination? The surprise of the Massachusetts result lies in the fact that so many citizens voted. The conditions can never be very bad so long as the nominations of our parties are made by the free vote by ballot of so large a proportion of the people.

The farmers should be ready to fight for the presidential, and all other direct primaries, both where they have them and where they have not. And they should force the fighting for more perfect primary systems. The new Wisconsin law may well be looked to as the ideal. There each voter records his first, second and third choice in all primaries. Nobody is nominated until he has counted for him a majority of all votes cast. This majority is reached by counting out the low man and giving his vote on second choice to the man to whom it belongs, keeping up this operation until someone has a majority. Under this system it is practically impossible to balk the popular will. Even when a clique or ring tries to win by dividing the people's vote among several candidates, while their own is centered on one, the preferential voting comes in to give expression to the people's will. The clique candidate cannot win unless he receives a majority—in which case he should win, of course. This is the Wisconsin system. It was adopted after the scandalous triumph of Isaac Stephenson by the use of money, and was intended to prevent the repetition of such an occurrence. Had this system been in force in that election, Stephenson would have been beaten by the second-choice votes of the other candidates.

The next great fight in the primary system must be for preferential, or second-choice, voting.

Home Hamper and Parcels Post

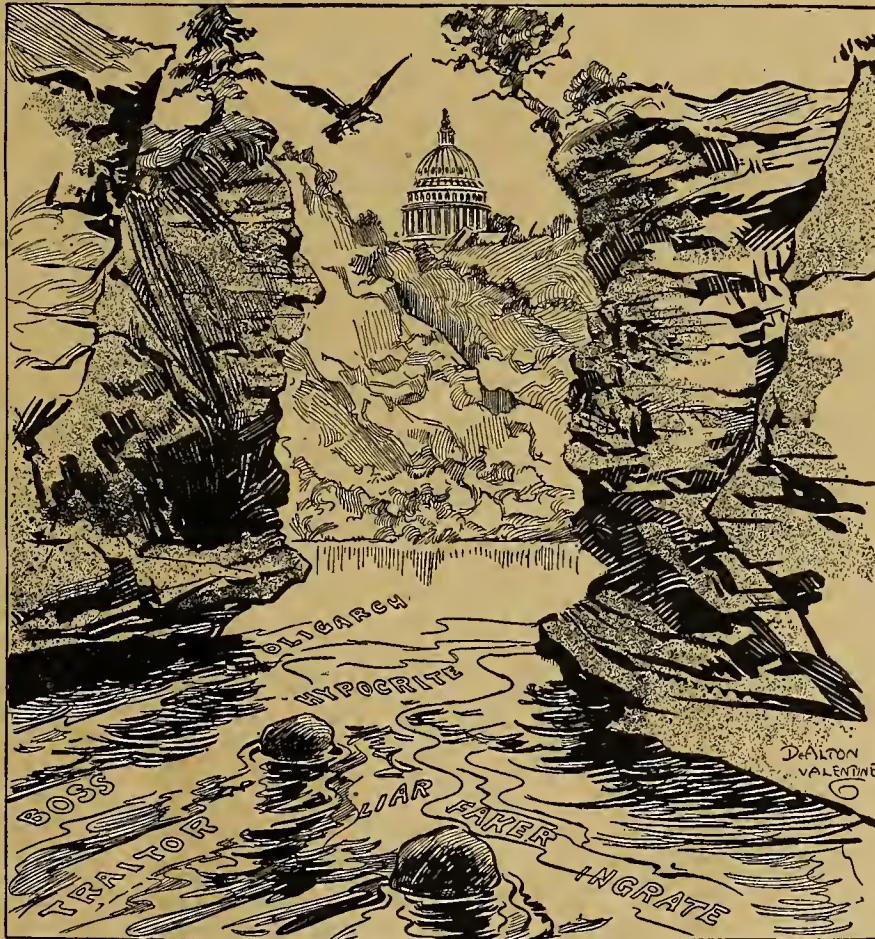
READERS of our fine article on the "home hamper," on Page 5 of this issue, will not fail to think of the coming day when the "home hamper" will go from the farm to the consumer by parcels post, instead of by express, as described by Mrs. Fullerton. And we hope they will not then fail to turn to the Farmers' Lobby and read of the contemptible parliamentary trick by which parcels post was beaten in the House. We have suggested in the past that if farmers choose to consider as enemies those members of Congress who oppose this reform, and to make common cause against them at the polls, no one can say that the farmers are wrong. And the same rule applies to a Speaker of the House if he shall be nominated for president. No

"houn" has been kicked around more than parcels post, and Mr. Champ Clark appears to have delivered the latest, if not the last, kick.

Pear-Thrips in the East

CALIFORNIA fruit-growers have suffered to the extent of \$7,000,000 in the past seven years from a pest of which farmers in other States are ignorant—the pear-thrips. Our blissful ignorance is over, however. The pest has appeared along the Hudson River in New York in places all the way from Albany to Poughkeepsie, and may be expected to spread over the entire country. An insect that can live in both New York and California can live anywhere in the United States. It injures pears, cherries, prunes and apricots in California, but has as yet damaged pears only in

T. R. Roland and Sir W. H. T. Leoline



To be wroth with one we love
 Doth work like madness in the brain.
 And thus it chanced, as I divine,
 With Roland and Sir Leoline.
 Each spake words of high disdain
 And insult to his heart's best brother:
 They parted—ne'er to meet again!

They stood aloof, the scars remaining,
 Like cliffs which had been rent asunder;
 A dreary sea now flows between,
 But neither heat nor frost nor thunder,
 Shall wholly do away, I ween,
 The marks of that which once hath been!

—Coleridge.

New York. Fruit-growers whose pear-blossoms show a puzzling blight after coming out, whose pear-trees seem mysteriously stunted as to foliage and whose sweet cherries have stems which are roughened and defaced by stings, should report to their experiment stations. They probably are troubled with pear-thrips.

The insect destroys the blossoms by feeding on them and injures the leaf-buds in a similar way just as they are unfolding. They feed by wounding the plant and sucking the sap which runs out. Afterward the larvæ live in the calyx cups and on the rolled margins of the leaves. The eggs are microscopic, and the adult insect is only a twentieth of an inch in length. The New York bulletin No. 343 will be found useful to those studying the thrips. The California Experiment Station has published interesting bulletins on the same subject, and bulletins Nos. 68 and 131 of the Bureau of Entomology deal with the subject. The new pest seems seriously to threaten the cherry, plum and plum industries, as well as the pear industry. It is a hard pest to control. So far, sprays of nicotine solution and kerosene emulsion seem to be the best remedies.

There is Room to Grow

THE unskilled man gets no more out of a farm than he does out of any other job. He gets a mere living, that's all. The change from the ranks of the unskilled to the army of the skilled can be made on the farm, however, without moving to a new home or hunting a new job. That's the advantage, if he could only be made to see it, possessed by the young man of ability who is a farmer. A small farm is big enough to give a big man a chance to grow. He doesn't need to leave home to make his job bigger and more profitable. All he needs to do, if he has a farm, is to use his brains, and his hands in coördination therewith. That Nebraska farmer who on a farm of twenty-one acres makes more than most of his neighbors get out of a quarter section, won the distinction of having a bulletin of the United States Department of Agriculture written about his farming, because he is a highly skilled farmer. Thirty homes just as prosperous might exist on every section of that county—and any other good county—if there were thirty men as highly skilled to work them. That sickly minister who made a competence in dairying on a farm of less than ten acres in Pennsylvania suffered under disadvantages from which most readers of this are free. There's room to grow on almost any farm. A Missouri subscriber tells of the farmers in his neighborhood who are just eking out a miserable existence on small farms which are "all worn out." He is asking for advice and instruction. He asks whether or not it will pay to build a silo. We have given him the best advice we can. We know that if he keeps hunting, he will find the answer. For there is room for the growing of a big success on his farm if he studies the matter long enough and hard enough.

A lot of nonsense has been written by easy-chair farmers about the happy lot of the farmer. His lot is not always happy and never easy. The average banker or merchant makes a success with less expenditure of ability than may find profitable employment on even the small farm; and if the farmer brings to his life work such skill and ability, he can succeed in the great majority of cases right on the old farm. Instances in which this has been done are not uncommon. And in some respects, the smaller the farm, the bigger is the man needed to make it a success.

What is Good Farming?

AN EXPERT farmer was buying a farm. It was foul with weeds and had been growing rather poor crops. But he was not concerned as to those matters. "The soil is all right" said he. "It has been farmed by scratching the surface only. It hasn't had thorough enough work done on it to exhaust its fertility!"

After all, when farming is basically wrong in principle, the poorer the work, the better for the farm. Good, thorough farming in such things as plowing, harrowing, drainage, and the like, will remove from the soil more fertility than poor farming will take out. Unless the nitrogen is restored by legumes in the rotation, the phosphorus by phosphates, and perhaps the sulphur by sulphates and the potash where needed, the "thorough" farmer will destroy the land's value while, perhaps, enriching himself for a few years. He will feed the children and starve the grandchildren.

Good, frequent shallow cultivation of corn will exhaust the soil faster than the old system precisely because it grows better crops. It will not do so for long. Taking off a great crop may be a fine thing; but how much finer to take it off with the knowledge of what its production has done for the soil, and the determination to repay to the land what it has lent us!



"Fears have been expressed that college men may not like practical farming"

UNTIL quite recently the tenant-farmer as a factor in the world of agriculture has not attracted any special publicity. But now he is being criticized by able writers as a menace to agricultural prosperity. The desire to possess a portion of the earth is common to all men, even to the meek. It is as natural that he who tilleth the soil should own as much of it as he can advantageously use as that he should be given free use of all the air he can breathe; but unfortunately, man being a predatory animal, with the instinct to "grab" very strongly developed, the land has largely fallen into the hands of the strong, while the weak have, except in the large cities, been allowed merely all the wind they could use.

When aeroplanes become as common as automobiles, radical changes in this regard may be looked for.

As civilization has advanced, this absorption of the land by the few has also advanced. In ancient times the knotted club, which obtained for a man his wives, secured to him also his land; later the mailed hand, and at the present time the long purse has served the same purpose. One-fourth of all the cultivated land is, from good authority, said to be rented, and the last census of the United States shows that the number of tenant-farmers has been rapidly increasing. This tendency will, it seems, probably continue to grow, and if it is an evil, we should try to hit upon some means to do away with it or at least to minimize its force. As the tenant-farmer as a man is no more objectionable than his landlord, we should cease to regard him with disfavor. We should place the onus of the renting evil where it belongs; namely, upon the wretched system or, rather, entire want of system on which most of our farms are now leased.

England Has Prosperous Tenant-Farmers

Why is this increase of renters likely to be a matter so vitally important? Desirable farm lands are rapidly growing in value and getting beyond the reach of poor men. Men of great wealth here, as in the rest of the world, are investing in large landed estates and need men to occupy their farms. This land hunger of the very wealthy renders them indifferent to the low rents they must ordinarily accept. They regard the investment in an estate much as they do the cost of their palatial residences or their ten-thousand-dollar automobiles—as a high-priced sort of pleasure and something from which importance in the community can be derived. Land is superior to these other displays, because it will pay a modest but safe rate of interest.

Their business instincts will prompt them to seek as tenants men of character, skill, knowledge of farming and adequate capital, and to secure that class of men they will doubtless pursue a liberal policy, at the same time guarding their own interests by proper leases.

Our young farmers, educated at agricultural colleges but with limited capital, will be apt to "catch on" to the idea that they had best keep that capital in stock and cultivate their farms according to modern requirements, and to do this the possibility of renting desirable holdings on secure conditions as to length of tenancy, fair covenants as to methods of cultivation and at rents which will not be in excess of three or four per cent. on the cost of the land will be bound to tempt them, since in a few years they should under such conditions be able to buy farms of their own, free from fears of the mortgage fiend.

England has more prosperous tenant-farmers than any other country. Kings and the nobility contend against them for prizes at the great cattle shows, but not always successfully; and often the pedigree of my lord's prize animal may be traced to the barnyard and pasture of the tenant-farmer. A few months ago a bull bred by a British tenant-farmer went to Argentina at the price of \$15,000. Tenant-farmers over there often possess from \$5,000 to \$50,000 in capital used on their rented farm. It is to the terms on which farms have been and are rented that this condition of the tenant-farmer is due, and it is worth while to consider them in view of the growing army of renters under the stars and stripes. We Americans are not much disposed to copy Old World ways, but we should not be above taking practical hints, especially in such matters as these, on which we are short of experience.

On the great English estates, acquired in feudal times and intelligently handled, a tenure largely sentimental and traditional has proved a sufficient security for tenants. A sort of "gentleman's agreement" has bound the landlord to such things as repairs, new erections and drainage. A liberal policy in collecting rents in bad seasons and retaining the tenant so long as he is worthy keeps up both the character of the tenant and the fertility of the soil. The great Assheton-Smith estates have been in that family for over nine hundred

To Lease or Not to Lease

By John Pickering Ross

years, now yield an income of nearly three million dollars per annum and are said to possess four families as tenants who have held their farms for five hundred years, and sixty-eight families for two hundred and fifty years. And hundreds of such instances of security of the tenure on these old estates can be quoted. But this sort of sentimental substitutes for leases does not hold good on estates acquired during the last fifty or one hundred years by wealthy men. These are generally managed on strictly business principles by agents whose business it is to see that the rights of both parties are duly protected by leases running from seven to twenty-one years, defining by covenants the rights and duties of both parties, and to see that these are lived up to.

Fear for College Graduates is Groundless

On the best of these no tenant is accepted until his character, his knowledge of agriculture and his financial ability have been strictly inquired into. He is sometimes expected to have in cash or its equivalent twenty-five to fifty dollars for every acre he rents. These lands range in value between \$150 and \$300 per acre and rent at from five to twelve dollars per year.



"The desire to possess a portion of the earth is common to all men"

Fears have been expressed that men educated at agricultural colleges may prefer to become teachers of agriculture or to seek similar fairly well paid positions, rather than practice practical farming. The fact that in 1910-11 out of sixty-seven agricultural graduates at Iowa State College fifty-two have chosen farming goes to show that these fears may be groundless. To such young men, some of whom commence life on very limited capital, business men with landed estates will be apt to look for tenants giving them for cash rents reasonably long terms with the rights of both parties protected by proper leases. The system of renting on shares is too antiquated to endure much longer, too uncertain and unfair to one party or the other. This class of young farmers will be sufficiently intelligent to know that it will be better for them for some years to invest their limited capital in live stock, implements and other equipment necessary to real farming, and which they will own and control themselves, rather than to encumber themselves with a lot of acres that they have not the means properly to cultivate. A few years of patient work will put them in the much-to-be-desired status of the land-owning class.

Better commence active life as a well-equipped renter than to end it as a laborer for someone else.

It is not so easy to predict the future action of the class of landowners who now rent on short terms for an immediate income and to secure needed rest.

Tenants are Secured, But the Land is Wasted

They are generally owners of from eighty to one hundred and sixty acres which for years they have tried to cultivate single-handed or with scanty help. At last, urged by such members of the family as have not already fled to the city, they rent the farm. Proposing to return to it soon or to hand it over to a son, they will not rent it for a term of years, and as they need all the rent they can get, they are very apt to take the tenant who offers the highest rent almost regardless of the welfare of the land. The tenant who has carefully

looked over the farm reckons that by the system of agriculture he proposes to follow he can get out about all the available fertility in two or three years and then find another farm to devastate. So this very loose sort of a bargain is concluded.

Such a renter may make what he regards as quite a good thing out of it, while the land and its owner "get it in the neck," to use a popular mode of expression.

This is about the only sort of tenant-farming that we in America have been acquainted with, though, of course, there are rare exceptions. But we should not accept the belief that there is no such thing as good tenant-farming. The growth of a judicious system of renting land will probably in time make the business very much less unpopular.

Laws have recently been passed in England for the compulsory sale of land in order to find small allotments for farm laborers who are unable to find steady employment, and larger ones for tenant-farmers whose holdings are too small for their families. The laborers do not seem to have availed themselves to any degree of this opportunity because, on account of their having formed unions, they admittedly were never as well off as they are now. On the continent of Europe, too, measures have been taken to find freehold lands for the peasantry. These they work as dairy and truck farms, in which lines they have proved very successful; but their holdings are generally too small and their means too limited to admit of their raising grain and cattle. These staples we must produce for half the rest of the world, and to do this must improve our farming methods. An average of fourteen to fifteen bushels of wheat to the acre will not feed Uncle Sam's growing family very long. If a man comes along with a knowledge of agriculture and capital enough to make the most of a good farm, we must accept him whether as landowner or tenant. As regards good citizenship and patriotism, the opinion has been expressed that in its highest development it must only be looked for in the owners of the soil.

Patriotic Men are Everywhere

Our own experience during the Civil War did not bear out that idea; and in the miserable trouble with the Boers, when England was almost in despair over the constant defeat of her professional soldiers, tenant-farmers and their sons by thousands volunteered for the yeomanry corps, for which they had to find their own horses, and it has been stated by some of their leading generals that they greatly helped to turn defeat into victory. It is probable that the majority of our tenant-farmers are just as ready to show this same high spirit of patriotism should it ever be our misfortune to need such services on their part.

This may be regarded as a wandering off into the realms of sentiment, when it is most desirable to be strictly practical. What I am most anxious to urge on the rising race of farmers is the importance of retaining an adequate amount of their capital to stock and run their holdings in the way best fitted to produce results; and this can, in many cases, only be done by leasing instead of buying. The proper period to which leases should run will vary with locality, nature of soil, proposed methods of farming, and so on; as also will the covenants which can fairly be agreed to. I have seen so much real misery arising from mortgages, inadequate capital and buying a greater acreage than could be properly handled that I am anxious to suggest at least one practical remedy.

Judicious systems of renting are sure to come. To men who have unfortunately yielded to the common temptation to buy more land than they have capital properly to cultivate, the chance to sell at a remunerative price is likely to prove a temptation; for nothing can be a greater cause of vexation to one who knows what good farming is than the knowledge that for want of capital he is unable to do justice either to his farm or to himself. The sight of half-cultivated land, apart from the loss of revenue it occasions, is, as anyone will admit who has ever fallen beneath the teeth of that harrow, about as unpleasant a one as a good farmer can experience; and men of sense would often rather give up the very natural pride of owning the land they cultivate—or rather half cultivate—if they could be sure of being able to get out of their troubles by renting.



"In ancient times the knotted club secured for a man his wives"



"When aeroplanes are effected"



"The nobility contend for prizes"

Fresh Vegetables for City Consumers

How Farmers May Increase the Returns from Their Work—a Suggestion for Cooperation

By Edith L. Fullerton

THE Long Island Home Hamper has come to stay; it is away past the experimental stage and is an established success.

In 1906, after the L. I. R. R. Experimental Station No. 1 (fondly known as "Peace and Plenty") found itself with 380 varieties of plant growth where eight months before nothing but burned-over woodland, sweet fern and huckleberry had existed, it was evident that the edible growths (which, of course, were much in the predominance; for the station was a market-garden, though flowers, shrubs and trees adorned the homes) must be marketed in some way, and the more ways the better, for experimental work along that line was needed sorely.

It was soon found that the returns from commission merchants were so small and uncertain this method of marketing was hopeless. It was also found that our experimental plots (where we had 19 varieties of lettuce, 9 varieties of potatoes, 10 varieties of tomatoes, 12 varieties of cantaloups, and so on, ad infinitum) gave us too small quantities of a given variety to supply hotels and restaurants direct.

Radishes Were Shipped Loose

We met with some success with the latter trade, however, and found that radishes shipped loose in a crate which had been lined with paraffin paper were a boon to the people handling these in large quantities. It saved the necessity of bunching at the producer's end and the necessity of unbunching at the caterer's end. The radishes were carefully washed, pinched to ascertain whether sound and counted. That completed our work.

Sweet corn, beans, peas and many other vegetables were sold to the hotels and restaurants, but we were not satisfied at all. We were not reaching the man in his home and, worse still, we were not reaching the families with children who could not afford to go into the country for the summer. These were the people who needed fresh country vegetables and fruits in variety, and we determined to give it to them if possible. We also determined to secure for the producer (for our work only stood for the producer, and what worked to the advantage of the experimental station financially would work to the advantage of any grower) a profit he was not gaining through the ordinary mediums.

Perhaps I do not make myself clear—there was too great a difference between the amount the grower received and the consumer paid for daily food. This was because they were too far apart, and we determined to bring them together.

This was our scheme. Secure a package—one which was already on the market—and pack it with a variety of produce and send it by express to the home where it was to be used. We found a "nesting" crate, which held two tiers of three baskets each, and each basket held about four quarts. This crate measured ten inches high by fourteen inches wide by twenty-four inches long, and the average weight when packed was thirty-three pounds.

Our first hamper contained beets, newly dug potatoes and early cabbage in the lower tier; peas, lettuce, cucumbers, young carrots and onions in the upper tier.

Three of these were packed and sent to city friends; a letter went previously heralding their arrival and saying: "If the hamper is worth \$1.50, we would be glad to have it; if not, no harm is done; but please let us know in what condition the vegetables reach you."

Each hamper brought back its price and orders for three and one-third more; and the answer to our queries were: "They were almost too beautiful to eat; we did not know such food existed."

From that moment to this the Long Island Home Hamper has been an established success.

The packing varies as the vegetables come into their seasons, but the price remains \$1.50 the year around, and we pay the expressage within the limits of our express company.

In midsummer, eggplant, tomatoes, cauliflower, corn, melons, etc., take their place in the packing, and we seek to vary the pack as much as possible. And our endeavor is to pack enough of each vegetable for a family of four, which is the average city family.

As our experience grew, we found that paraffin paper lining each basket kept the vegetables in better condition. It conserved the normal moisture and kept out

dry heat. We use a good shade of light green paper, which makes a very beautiful package. All vegetables are carefully sorted. Those that should be washed are washed under a spray (not immersed in a vat of diluted mud as many market vegetables are), then well shaken before packing.

One of our hampers was given a severe test. It was sent to a hotel in Chicago for use at a lecture. The lecture did not transpire, and the hamper remained in the coat-room in midsummer for three days. It was then sent to Fort Wayne, Indiana, to a box-factory, where we wished the manufacturer to take dimensions for a paper case.

You Can Ship Vegetables Anywhere

The president of the company wrote us the vegetables were just as fresh as though picked from his own garden. We have shipped to Canada, the far South, have regular customers in Massachusetts, Pennsylvania, New Jersey and Maryland, and we have even shipped to Paris, France.

Some Americans wished to serve sweet corn on the cob at a large dinner in Paris, and we were asked to ship the corn. It was very early in the season, and we had a hard time to find enough in fit condition, but diligent search gave us the requisite number of ears. Then came the question of how to pack them. We decided to use photographers' lintless blotting-paper rolled into tubes. The corn was well cooled after picking (for corn has a great tendency to "heat," or ferment), it was then wrapped in paraffin paper and a roll of the blotting-paper securely fastened around each ear.



Fresh vegetables for all; greater profits for the farmer

The hamper was placed in the cool room—not the refrigerator—of the steamer. A cablegram of congratulations came to us in due course of time. The corn was sweet and delicious and eaten for the first time in Paris.

Several years ago an unknown friend wrote us from Colorado, saying he was supplying Deadwood, thirty miles over the mountains, with its vegetables, and the home hamper "looked good to him;" would we give him further data. We did so cheerfully, and he now markets his entire output that way; uses fewer teams and men, and is making a sure profit. He delivers his hampers to the grocers, who are pledged to sell them for a certain sum, which is a fair profit, over his price, for handling them.

The Slogan: "Farm to Family Fresh"

Many places in New England and the South are marketing this way, and a letter just received from the Canadian Experiment Station for Central Quebec at Cap Rouge says:

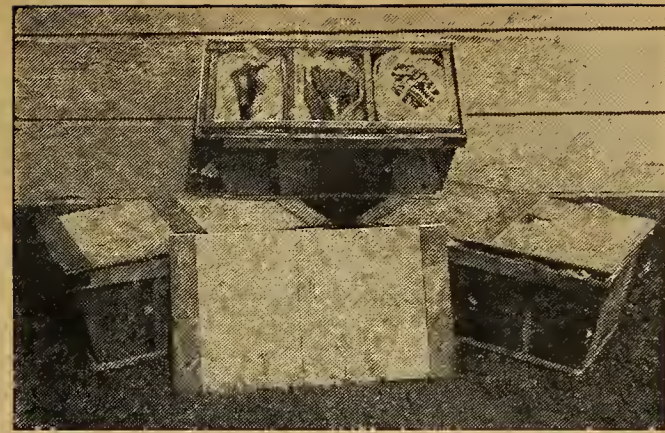
"The hamper and method of packing are, to my mind, so good that I have asked the Director to allow me to put up vegetables on the market in this shape next year. Imitation is flattery—nuff said. Gus Langelier, Superintendent."

One grower at Haddonfield, New Jersey, has sent out his circular of hampers, which is such a duplicate of the Long Island Home Hamper that even the reading matter is the same—the only variation being "Fresh from the Garden" instead of "Farm to Family Fresh." The illustration even is one of our own hampers.

There is a Michigan grower shipping to Chicago a smaller hamper than ours, which he sells for \$1. A North Philadelphia grower is supplying them to Philadelphia and delivers them by automobile.

We ship all winter using the winter vegetables with such green things as young onions, beets, lettuce, spinach and radishes, which we raise in the double glass sash, and endive or "Barbe de Capucin," which we have in cellars.

A typical January hamper would contain a selection from the following varieties: Potatoes, squash, turnips,



This form of carrier has proven satisfactory

cabbage, lettuce, parsley, endive, parsnips, bulb onions, young onions, celery, radishes, spinach and young beets.

This is a mail-order business and should be handled as such and can be worked up to as great proportions as anyone might desire, even going into the coöperative among neighboring gardeners.

Our shipping days are Tuesdays and Fridays; some customers take one hamper every ten days, others take one a week, still others two a week, and some take one on Tuesday and two to four on Fridays for week-end guests. We have shipped as high as seventy per week and have not attempted to work up a trade at all.

As the fruits and berries come into bearing they are added to the hampers so that now we include strawberries, raspberries (red, yellow and black), gooseberries (English and American), currants (red, white and black), peaches, plums, pears and quinces. These, of course, in their various seasons.

Our greatest joy in the home hamper is the fact that it has brought fresh food to the city dwellers for a smaller sum than they can purchase the same amount of stale food at the greengrocers'. The price was made to meet the need of the great middle class, whose summers must be spent in sweltering cities with but a few weeks' respite at the most. And at the same time that quality vegetables have been supplied at lower cost to consumers we have been getting financial returns that overbalance the work and expense to which we have been put.

The home hamper pays—it pays the consumer, and it pays the producer.

Profits in Iowa Onions

By Florence L. Clark

AS IOWA land threatens to pass the two-hundred-dollar mark, there are many evidences to show that intensified farming is likely before long to supplant, in different localities throughout the State, the present historic Hawkeye custom of "buying land to raise corn to feed hogs to make money to buy more land to raise more corn to feed more hogs." Indeed, in not a few localities the change has come about already. Pleasant Valley Township, Scott County, is an interesting example. There esthetic onion has beaten out King Corn. Result: land which formerly yielded forty dollars' worth of pork a year nowadays produces two hundred and twenty dollars' worth of onions.

Much of Pleasant Valley Township is made up of level bottom-lands. On this rich black soil admirably suited to onion culture a large number of farmers for several years have been raising onions with an average yield for the period of nearly five hundred bushels. They have marketed them at an average price of forty-five cents a bushel. Yields of eight hundred bushels have been known in some of the best years.

The story of the origin and growth of the onion industry in the township is told as follows by one familiar with it:

"The pioneer in the onion-raising industry at Pleasant Valley was H. Schuetter, now retired from active farming life. From 1875 to 1894 he devoted from fourteen to nineteen acres to onions every year and kept an accurate account of the results obtained. When he retired, his son, F. F. Schuetter, succeeded him, and he has also kept a close record of cost and production.

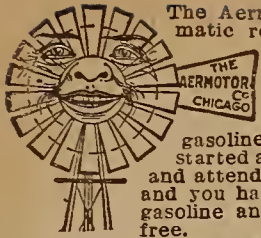
"The nineteen-year record of the father shows that the average yield under his management was 325 bushels per acre, and the average price received, 43 cents. The figures of the son, kept from 1895 up to the present time, show that during these last years the average yield has been 490 bushels, and the average price, 45 cents. The cost of production for the same period amounted to about \$70 an acre a year, leaving a profit of \$150 to the acre. By reason of his success in onion-raising, Mr. Schuetter has not only been privileged to turn down an offer of \$1,000 an acre for his land, but to set an example which many of the farmers of his vicinity have emulated with great profit to themselves.

"Best scientific methods are being used by all the growers. The fields are kept perfectly clean, as the onion smotherers easily. By using the same soil for the crop year after year the land has become so free of weeds that it is now kept clean with little difficulty. Once each summer the farmers flood their fields with a formaldehyde solution to prevent blight. Every season a small portion of the land is set aside by each grower for the raising of his own seed, and on this part of his field he plants the best bulbs selected from the crop of the season before. Careful selection of the bulbs for seed is one of the chief reasons for the size and quality of the Pleasant Valley onions.

"When harvest-time comes, all of the unemployed men and boys in the township are put to work in the fields pulling, cleaning, drying and preparing the onions for shipment. Most of the crop is shipped out of the valley through the County Fruit-Growers' Association, to which most of the onion-farmers belong. Two hundred and seventy-five cars were sent east last year."



A great variety of products may be shipped



The Aermotor with the automatic regulator stops when the tank is full and starts when the water is lowered 4 inches. You oil it once a week. A gasoline engine has to be started and stopped and oiled and attended almost constantly, and you have large expense for gasoline and oil. The wind is free.

We make gasoline engines (exceedingly good ones) but, for the average water supply for the home and 150 head of stock, an 8-foot Aermotor with a storage tank,—which is a necessity with any kind of water supply—is all that is needed and is by far the more economical. The supply of wind for the Aermotor is more to be relied upon than the supply of gasoline, batteries and repairs for the gasoline engine.

The cost of gasoline, oil, batteries and repairs in pumping for 150 head of stock with a gasoline engine, will buy an 8-foot Aermotor every year, and you are still to the had the amount of time you spend over the gasoline engine.

But the gasoline engine has its place on the farm notwithstanding the fact that 100 people are maimed or killed with gasoline where one is injured by a windmill, and that 100 farm buildings are burned with gasoline where none is injured by a windmill. For the water supply, the windmill is the thing. Thousands of farmers who have done their first power pumping by a gasoline engine have become tired of it and are buying windmills. That is one reason why our windmill business increases from year to year. We can furnish you much testimony like the following:



Devine, Tex., Dec. 16, 1911. I am sending you a photograph of one of the oldest windmills in this country—it being the first Aermotor put up in Medina County—and is used to furnish water for hundreds of head of cattle. It was put up in the year 1889 and is owned by Mr. Murdo Monroe. The only repairs this mill has ever needed are one small gear and a rocker arm, the total cost of which was \$2.50. This Aermotor is still running and doing good service, furnishing water for cattle and family.

LOUIS GACONET. Find, if you can, a statement like this regarding gasoline engines.

Of course, there are places where a windmill cannot be used. There you will have to use a gasoline engine, with all of its disadvantages. We will furnish for that place a small engine which costs but \$37.50 complete, so it can be set to pumping in 30 minutes. Or we will furnish you a pump jack—the best made—for \$6.00, to do pumping with a larger gasoline engine.

Send for catalogue giving full information about water supply. Aermotor Co., Chicago, Branch Houses: Oakland, Cal.; Kansas City, Mo.; Minneapolis, Minn.

Garden and Orchard

A Summer Fungicide

LIME-SULPHUR, as a summer spray, is used primarily as a fungicide, although it controls to a certain extent plant-lice and scale-insects. It is very important to realize that there are two different sprays containing lime and sulphur, each playing its own part on our spray calendar. The one is a chemical combination of lime and sulphur in the form of a wine-colored solution. It can be bought in the concentrated form for seven to eight dollars a barrel. It may also be made at home, but it does not pay to do so unless many barrels are needed. This concentrated solution may vary in strength. The strength is determined quickly, however, with an instrument that can be bought for seventy-five cents, called a hydrometer. Since the range at which the diluted solution does the work effectively, but without foliage injury, is small, one must dilute with great accuracy. The following table shows the amount of water required to dilute the lime-sulphur of different strength.

FOR SUMMER SPRAYING OF APPLES

Reading on hydrometer. Degrees Beaume.	No. gal. of water to one gal. lime-sulphur solution.	Reading on hydrometer. Degrees Beaume.	No. gal. of water to one gal. lime-sulphur solution.
20	19 3/4	28	32 3/4
21	21 1/4	29	34 1/4
22	22 3/4	30	36 1/4
23	24 1/4	31	37 3/4
24	26	*32	40
25	27 3/4	33	41 1/2
26	29 1/2	34	43 1/4
27	31	35	45

*Standard strength.

The other spray is known as the self-boiled lime-sulphur. This is a physical mixture of finely divided sulphur and lime, the latter used simply to dilute the former. This spray is always made up at home and used directly after preparation. It is made thus:

Eight pounds of lime are placed in a barrel and enough water poured in to almost cover it. When it starts to slake, eight pounds of sifted flowers of sulphur are added. Stir vigorously and constantly, and add water to at first form a thick paste,

gradually diluting to a thin paste. The lime supplies the heat to boil the mixture several minutes. When it is well slaked (in about three minutes), enough water is added to cool and prevent further cooking. (The danger in more cooking is the formation of soluble sulphides which are injurious to the fruit and foliage.) This is strained into the spray-tank and enough water added to make fifty gallons of mixture.

The lime-sulphur solution is the strongest fungicide of the two, and when diluted to the proper strength, is used principally on the apple for scab, rust and certain "mild" fungus diseases of fruit and leaves. However, it will not control the so-called apple-blotch and bitter-rot diseases as well as the standard Bordeaux mixture will. Peaches, cherries and plums have more tender foliage and are, therefore, more susceptible to spray injury. Consequently this led to a hunt for a spray less harmful to foliage, but equally efficient in controlling diseases. The self-boiled lime-sulphur has fully demonstrated itself to fill the bill, at least in controlling two very important diseases of these fruits; namely, brown rot and scab.

Both of these sprays are with us to stay, each having its own value; but for some "strong" fungus diseases our old Bordeaux mixture is the best, even though it causes some foliage and fruit injury.

Here is a practical spray calendar for the summer spraying of apple and peach trees:

Insect or disease.	Time for spraying.	Spray material.
Apple— Scab. Rust. Curculio. Codling-moth.	1. As blossoms begin to show pink.	1 gal. lime-sulphur at 32° Beaume to 40 gal. water.
	2. Within a week after petals fall.	Add arsenate of lead at the rate of 2 lb paste to 50 gal. of spray.
	3. About three weeks later.	
Peach— Scab. Brown rot. Curculio.	1. As calyxes are shedding.	Arsenate of lead and 2 lb pure rock-lime.
	2. Two weeks later.	Self-boiled lime-sulphur and arsenate of lead.
	3. Four to five weeks before fruit ripens.	Self-boiled lime-sulphur.

A. J. ROGERS, JR.

Berry-Box Holder

FOR convenience and speed in berry-picking I took a piece of old leather boot-top six inches long by four inches wide, cut four slits, each over an inch long, near the ends and passed a shawl-strap through the slits with the holder in front and belt buckled around the body. By drawing the belt just tight enough, four or six quart boxes can be held securely between the abdomen and holder, while the picker picks with both hands, making double time. C. E. DAVIS.

GARDENING

By T. GREINER

How to Plant Tomatoes

HARDLY ever set tomato-plants into open ground much before the first of June. They will not grow much until soil and weather have become warm. Besides, in this climate there is always some danger of a late frost at end of May. Yet if the weather is real nice and warm in latter part of May, we may risk at least a portion of our plants, keeping enough in reserve, however, to replace any that may come to grief by accident or frost. Under the same conditions, the home gardener who plants but a few, may set them early and watch them afterward. If a cold spell happens to follow, the plants must be protected in some way, perhaps by putting a peach-basket (old and discarded ones will do), a box or any old thing over each plant. My earliest and best plants are in wooden plant-boxes, four-inch cube. These plants are short and stout, with dark-blue stems, perfectly upright and stiff, and often already set with a cluster or two of fruit. The day before taking them out to the open, I give the soil in the boxes a good soaking so that it is quite wet and shift the boxes about so as to get the plants over what little injury they may receive by the shift as quickly as possible. I also aim to plant them considerably deeper than they stood in the boxes in the greenhouse. And the taller the plant, the deeper I set it. They will soon make top enough, anyway. Plants with little root and long stalk I often bury almost out of sight, leaving only a few inches of the top above ground. Thus they seldom fail to grow.

Manure is the Foundation

A Maine subscriber asks me how best to enrich his garden, which he says he has now been planting six or seven years (annually changing the location of the different vegetables for proper rotation), yet which does not produce any more the fine crops as at first. It can hardly be expected of any garden to yield bountiful crops year after year without full and free applications of plant-foods. If the soil is a good sandy loam, it is possible that by means of the free use of high-grade fertilizers, in proper proportions, good crops of vegetables may be grown for a long term of years. In that case I would try an application, broadcast, of a so-called complete vegetable or potato manure, at the rate of a ton per acre. For a home garden of, say, 80 by 100 feet, or a little less than one-fifth acre, this would mean an application of 450 pounds and an expenditure of about \$8.

In my own case, and for my somewhat strong loam, the use of even the best commercial fertilizers alone does not seem to give me full satisfaction. I must and do rely more largely on stable or stock-yard manures, using certain chemicals, especially superphosphate, and to some extent nitrate of soda and muriate of potash, in a supplementary way. I find the free use of farm manures of much more importance than rotation of crops, although the latter is right.

Perhaps the inquirer can arrange with some farmer of the neighborhood to haul a number of loads of manure or barn-yard scrapings, or the accumulations from a near blacksmith shop, etc., on his garden. In view of the high prices of vegetables, should one have to buy them in the open market, and their doubtful quality, one can well afford to spend a few dollars in order to be able to grow a full supply in his own garden. We cannot do that without manure. And the more manure we use, within reason, the bigger and better our vegetables.

Rhubarb Satisfactory

In winter and spring, and sometimes in summer and fall, rhubarb pays us as well as any other garden crop. Perhaps better. With little trouble and expense, we can enjoy full messes of it even in the middle of winter. All we need is a warm cellar, or a space under a greenhouse bench, where we can plant some clumps of roots dug up at the beginning of winter and left outdoors or under a shed to freeze until wanted for planting. It will grow in the dark and make most brittle, most appetizing stalks, and a lot of them in a very small and crowded space. Nor does it require more than a very moderate temperature, say from forty or forty-five degrees Fahrenheit up to sixty or sixty-five degrees.

To raise it for sale on a larger scale, the one thing most necessary is a corresponding number of clumps of roots, and provisions for them to give a crop next winter should be made now. Plant at once a good-sized new bed so that the old clumps or a part of them can be taken up at the beginning of next winter for forcing.

The new bed, if started from good strong roots this spring, even if a little late, will make growth enough under good culture to give a full crop next spring and summer, and the stalks will be fewer in number, but much larger and fatter, and more valuable.



Minnesota

has millions of acres still awaiting the right kind of men to develop them and make them productive.

Much progress has been made in building up Minnesota's farms, towns and villages, its schools and churches, its roads and bridges, its telephone lines and rural mail service—yet there are still too many large farms, and more farmers are needed to cultivate the soil as well as men to build up the towns.

The northern part of the state is very largely a region of most fertile soil still unoccupied, where homeseekers can get government lands, or state lands, or cut-over timber lands at low prices. These lands are specially valuable for dairying and stock raising. Sales of state land are held each Spring and Fall—write for information.

Minnesota climate is healthful; the air dry and clear. Minnesota is a beautiful state, with rolling well-drained land and thousands of lakes, large and small, inviting to summer outings, boating and angling. The woods in the Northern part afford game of various kinds for the sportsman.

In short, Minnesota is a delightful place in which to work, to live and to enjoy life.

The great markets in close proximity at the Head of the Lakes (Duluth-Superior) and the Twin Cities, (St. Paul-Minneapolis), offer a ready and convenient disposal of farm products.

Let us tell you more about the "bread and butter state" and the low round-trip Homeseekers' Fares in effect to many points on 1st and 3rd Tuesdays of each month. Write today to

L. J. BRICKER, Gen'l Immigration Agent or A. M. CLELAND, Gen'l Pass'r Agent Northern Pacific Ry., ST. PAUL, MINN.



The Northern Pacific and Minnesota & International Railways have nearly 1,200 miles of steel highway in Minnesota, serving important and growing cities and towns. Its arteries of travel pulsate day and night with the commerce and life of the commonwealth.

OPPORTUNITIES were never better in Minnesota, for the farmer, dairyman, merchant, manufacturer, artisan and investor.

Send for free copy of our OPPORTUNITY book in which are listed Northern Pacific cities and towns in the state, with descriptions of conditions, needs, and names of Secretaries of Commercial Clubs, who will gladly help you to get located.

Northern Pacific Railway

10,000 Cars at \$1,055 To Introduce Reo the Fifth

By R. E. Olds, Designer

To the Thousands Who are Buying

I am not writing this to sell more cars. The present demand taxes our utmost capacity. And the cars in use will sell our future output better than words of mine.

In all my experience of 25 years I have never seen a success like that of Reo the Fifth. I have never seen a car so popular.

What I have to say now is to you who are buying, largely through faith in me.

I want you to know that, despite this rush, there are hundreds of us watching every car. We are giving more than we promised.

And you who took my word—who are buying first—are getting an underprice.

Just the Start

Reo the Fifth is not built for a season. The present demand is just the beginning.

This car, remember, is the final result of 25 years spent in car building. It marks my limit—the very best I can do. And no car of the future can greatly improve on it.

The cars we sell now are sent out to sell others—to create reputation for My Farewell Car. And you may be sure that not a car goes out until we know it is utterly perfect.

Our Costly Care

We analyze the steel that goes into this car. Every part is inspected over and over. Every part with a flaw is rejected.

Every important part is put to radical test before it goes into the car.

The engines are tested for 48 hours. The finished cars are given more severe try-outs than in any other factory I know.

Parts are ground over and over to get utter exactness. Absolute silence in every part is demanded.

Each body is finished in 17 coats. The upholstery is perfect. To every part we give the final touch, regardless of time or cost.

For each of these cars is a salesman. Each will tell to hundreds of people the story of Reo the Fifth. And all our success in the future depends on the tale they tell.

The Underprice

There was never a car so underpriced as Reo the Fifth at \$1,055. Every man knows this who makes any comparison.

This price is ridiculous. It is too low to endure. The coming advance in the cost of materials is bound to send it soaring.

But we are content to sell 10,000 cars without regard to profit. So the present price will doubtless continue during the spring demand.

It goes to original buyers—to the men who first come to this car. And they will create our future

market. Their cars will be our future advertisements.

You early buyers are getting an inside price, and I am glad to know it. But men who expect the present price to continue are bound to be disappointed.

The Center Control This Year's Best Innovation

The success of Reo the Fifth is largely due to our new center control. Here, for the first time, we

three inches, in each of four directions. It is done with the right hand.

Both brakes are operated by foot pedals, one of which also operates the clutch.

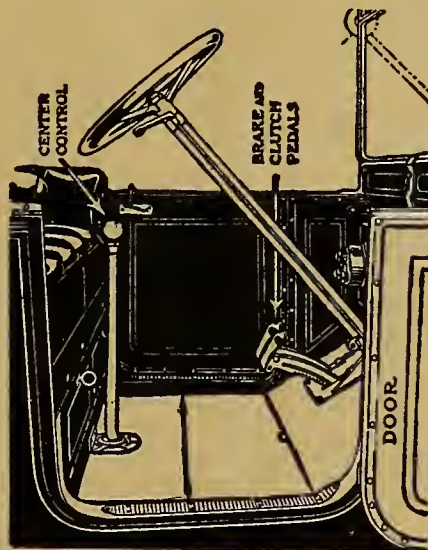
This arrangement permits of the left side drive, heretofore possible in electric cars only. The driver sits, as he should sit, close to the cars he passes and on the up side of the road.

The old side drive will appear very awkward when you once see this.

1,000 Dealers

Reo the Fifth is sold by dealers in a thousand towns, so everyone can easily see it.

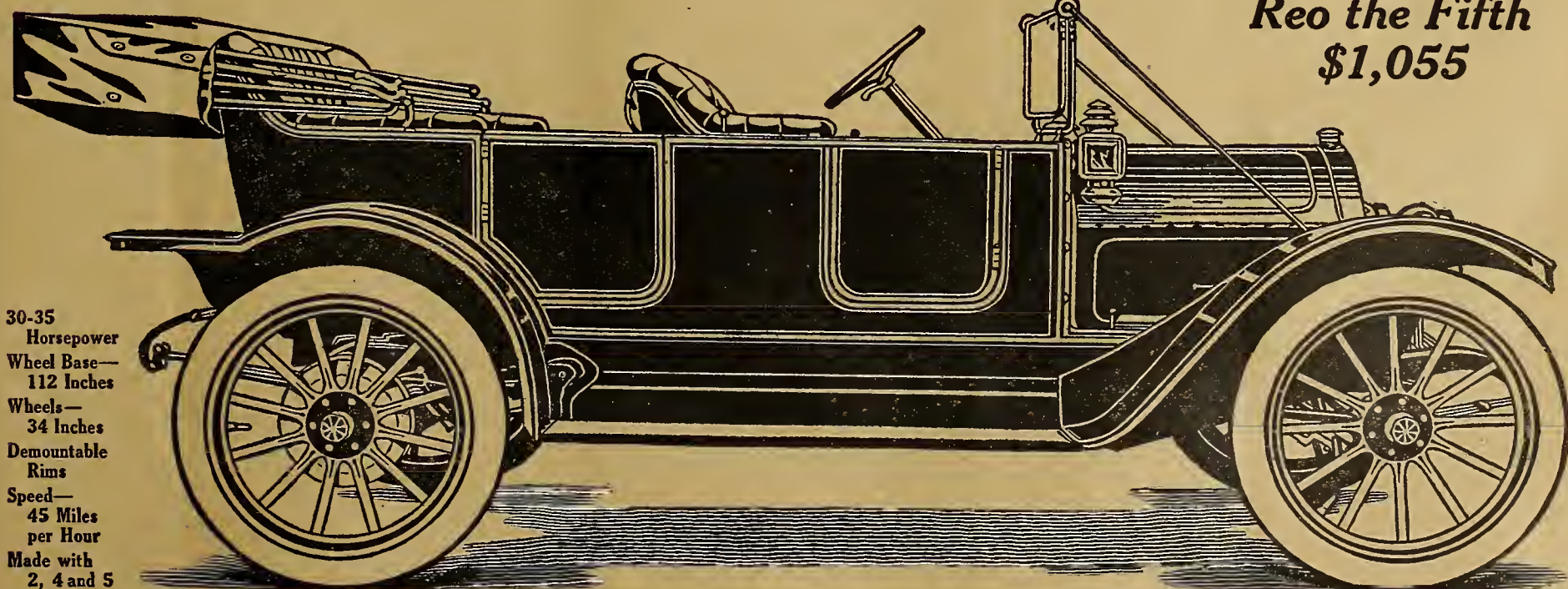
Our catalog shows the various bodies and gives every detail. Ask us to mail it to you. Address



get rid of all side levers. Both doors in front are clear.

All the gear shifting is done by moving this center lever less than

R. M. Owen & Co. General Sales Agents for **Reo Motor Car Co., Lansing, Mich.**
Canadian Factory, St. Catharines, Ont.



Reo the Fifth
\$1,055

30-35
Horsepower
Wheel Base—
112 Inches
Wheels—
34 Inches
Demountable
Rims
Speed—
45 Miles
per Hour
Made with
2, 4 and 5
Passenger
Bodies

Top and windshield not included in price. We equip this car with mohair top, side curtains and slip cover, windshield, gas tank and speedometer—all for \$100 extra. Self-starter, if wanted, \$20 extra.



If you own an auto by all means read this tire ad.

Tire prices do not determine tire values. But actual tire value is the only thing that can determine actual tire cost. First costs may be alluring (and they will influence a certain number of buyers) but experienced motorists know that last costs are the real costs, and that it is far safer to buy the greatest possible tire value than to take advantage of the lowest possible first cost. The motorist who does not buy his tires on the service-cost basis is buying on the wrong basis—and his tire bills are the best proof of it. It would be easily possible to build

United States Tires are Predominant by virtue of four-fold strength

United States Tires by the customary method, the method formerly employed (a year and a half ago) in building the individual brands of United States Tires. These individual brands—made as well as it was possible to make them with but one factory's experience and facilities to draw upon—easily competed in service quality with any other tires in the world made in the same way. That was under the single-factory method of building—the method still employed by the manufacturers of every other tire made except United States Tires. Today United States Tires stand absolutely alone in the matter of combined skill in manufacturing. They combine in one tire the strongest features of four world-famous brands, and are as near tire-perfect in strength, size and general design as four immense factory organizations, working as a unit, can make them. Think that over—and get its full meaning to the motorist who is interested only in last costs.

In buying four-factory-tested United States Tires you are protecting yourself against excessive end-of-the-season tire bills as only tires of four-fold strength can protect you. Made in Clincher, Dunlop (straight side) and Quick Detachable Styles.

Sold Everywhere
UNITED STATES TIRE COMPANY, NEW YORK

Think what it means in actual mileage economy to have four corps of expert tire builders—each of which formerly made a tire easily the equal of any other single-factory tire—putting into United States Tires all the skill and all the experience and all the secret processes known to the four organizations. Nothing like it has ever before been attempted in tire making. Possibly it will help you to get a more definite idea of the immense importance to you of this four-factory method if you ask yourself this question: If four of the largest and best-known tire companies now manufacturing single-handed should undertake to build a single brand of tire that would be the composite of all the best features and the most advanced methods known to these four companies, would the product be of a better grade than would be possible to any one of the companies working alone?

Most emphatically, YES! And would the motorist be warranted in paying a slightly higher price for such combined-skill tires than for the single-factory kind? Most emphatically, YES! So long as four heads are better than one, four organizations of tire specialists, working together, can give the motorist a longer-lived, less-troublesome, more economical tire than any single organization can possibly give him. When the season's touring is over and the bills for tires and tire repairing are all paid it will be an easy matter for the users of United States Tires to understand why we are laying all our emphasis upon four-fold strength rather than upon attractive pricing.

PATENTS Send sketch or model for FREE SEARCH. Books, Advice, Searches and Big List of Inventions Wanted. Watson E. Coleman, Patent Lawyer, Washington, D. C.

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Regardless of how much money you are planning to spend in building or remodeling a home, a garage, a barn, or any other building, it will be far superior if roofed with

KA-LOR-OID (Colored Ruberoid)

It is the only permanently colored prepared roofing. As long as a particle of it lasts the color remains. KA-LOR-OID outlasts metal or shingles; it is easier to apply. Tile and slate crack, shingles warp and decay, metal corrodes. KA-LOR-OID does neither.

It is RAIN-PROOF SNOW-PROOF HEAT-PROOF COLD-PROOF TIME-PROOF FIRE-RESISTING

KA-LOR-OID (Colored Ruberoid) is the same durable material as RU-BER-OID with the added attraction of the beautiful colors:

TERRA COTTA RED—IVY GREEN—RUSTIC BROWN

RU-BER-OID roofs laid over 20 years ago are still flexible, still water-proof and weather-tight. Watch for the RU-BER-OID Man on the outside wrapper. He guarantees the roofing to be genuine KA-LOR-OID or RU-BER-OID.

We want every reader of this excellent publication to have our new book, "Around the World." Write today for it and free samples of KA-LOR-OID.

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TRADE MARK REG. U. S. PAT. OFFICE

The Market Outlook

Look Out for a Drop

THE prices of dressed meats continue to steadily advance. Lamb has become a luxury only to be enjoyed by those who can afford extravagance, and beef is following close on its heels. But America's mortgage-lifter is standing nobly by and furnishing the workman the only reasonably priced meat to be had.

Nearly all other food-stuffs have increased in price along with meats, and this condition has called forth much newspaper and magazine agitation concerning its cause and methods to economize in the cost of living.

Such a situation of high prices is injurious to both sides of the trade if it continues for a length of time. Many people are forced to substitute other foods, and so are educated away from the use of meat, and the demand is lessened that much. Agitators of vegetarianism are taking advantage of the opportunity and are freely expressing the arguments for their method of living. Many small butcher-shops in the cities have been closed because they were unable to make a living profit.

On top of this comes an agitation in Congress for an investigation of the federal meat-inspection. At a time when prices are in a strained condition, as they are now, such an investigation is untimely and is apt to have a larger injurious effect than a beneficial one. Packing-house methods have been in the spot-light for several years, and during that time federal inspection has become efficient. The promoter proposes to have all live stock sold subject to inspection.

The live-stock industry has always been on a spot-cash basis, which means a low operating cost. Under the proposed method the producer is paid after the animal is slaughtered, thus placing into the transaction a large amount of bookkeeping for the commission man and the killer. This added expense would be divided between the producer and the consumer, as the killer could justly add this to his selling price. It is difficult to see where the public will receive any material benefit from congressional action as now outlined.

Whenever the hog-market has climbed above the eight-dollar line, shipments have increased and reactions occurred. Then the packers would buy heavily, and the curtailed supply would work the price up. The whole affair could be repeated. These heavy runs have contained many immature fall shotes which have a detrimental effect on the price of prime light and medium weight stuff. As the market is on a fresh-meat basis at this season, rough hogs suitable for packing are discriminated against.

The marketing during May has been heavier than was generally expected and showed that the country was not so bare of hogs as it was thought to be, but the condition is similar to that of last fall—the number is a poor criterion of the dressed meat produced.

With beef and mutton prices sky-high and pork prices well up, there are apt to be some drops, although the relations of supply and demand would not seem to warrant it. LLOYD K. BROWN, South Dakota.

Make the Lambs Perfect

RECENT experiences in the sheep-market seem to prove that there is a point at which prices may become prohibitive and force the mutton-eating public to adopt some substitute for it, until their action forces a return to normal rates. The sudden extraordinary jump in prices early in May, which soared up to \$10.75 for top woolled lambs, \$9.75 for shorn lambs, \$8.00 for wethers and \$7.50 for ewes—both clipped,—caused many retail dealers to declare that their customers declined to pay thirty-five cents to forty cents for legs, loins and ribs, and twelve cents to fifteen cents for the "chuck," for which they had been used to pay from five cents to six cents, and that they were compelled to cease buying sheep and lambs; added to this was the fact that speculators filled the markets with stuff that was utterly unfit and which was sold in many cases as low as \$3.50 to \$4.00 the hundredweight. In a few days these and other causes combined to produce a drop of from \$1.00 to \$2.00. High-class animals, however, could always command satisfactory prices, and still continue to do so.

Since it appears quite unlikely that any permanent fall from such prices will occur for a long time, and, on the other hand, that the causes mentioned above will serve to check any sudden and exorbitant rises, the best policy would appear to be to make one's sheep and lambs as perfect as possible and then at once to market them regardless of the temptation offered by a few days' casual advance.

As long as top prices remain at from \$7.50 to \$9.00 or more, it is almost impossible, save through some unusual misfortune, to lose money on sheep or lambs that are fit to market; for neither ewes with their lambs, nor yearlings, nor wethers can consume enough of even the most costly ra-

tions in the three or four weeks necessary to put the finishing touch to them to justify marketing them unfit.

Very few spring lambs have so far been offered, and, for these few, prices have ranged as widely apart as from \$6.00 to \$12.00. There seems to be much uncertainty as to what is the desirable weight for them, as they have appeared at market anywhere from thirty to seventy pounds. Fifty to fifty-five pounds is what is wanted, and sixty pounds the limit; and weights largely govern prices.

Shearing is in full swing in the West, and growers are by no means inclined to submit to any loosening of prices. Stocks in wool-centers are low, and European markets very firm. JOHN PICKERING ROSS, Illinois.

A "Get-Together" Method

IN CLOSING the series on "How We Whipped Them," the most simple, practical, speedy and reliable manner of avoiding the Chicago terminals has been overlooked.

As a shipper of creamery butter going to Philadelphia, Pennsylvania, in car-lots a short time ago, I had trouble getting cars and prompt service through Chicago.

The conditions were met in this way: The tonnage solicitors of the eastern lines, like the New York Central, Erie, and Wabash, visited us frequently, and the butter was routed for four weeks at a time over the line that would furnish clean refrigerator cars and report progress on each car. As the freight on this butter was worth one thousand dollars per month to these eastern lines, it was worth while. I found the Wabash, through The Merchants' Despatch Transportation Company, gave the best service and would furnish cars according to agreement and report progress by wire.

Applying this idea to the case in hand, it would work like this: If the manager in Burchinal, Iowa, had a reliable dealer in the East, he should bargain with an eastern road for six months' tonnage at a stretch, the road to furnish cars and roll them through without delay. They will do this readily if they can depend upon getting the tonnage.

This can be worked out by any manager single-handed, would bring the producer and consumer together, and would cut out the Robber Barons altogether. C. W.

Subscribers who are desirous of learning the names of reliable commission firms in any part of the country should take advantage of our Shippers' Service. It is free to subscribers. We can ordinarily give the name of some commission man in the subscriber's territory to whom we can advise him to ship. We can at least tell him the name of one to whom other farmers have shipped with satisfaction, and who is financially reliable. This has been found an especially valuable service to shippers of other things than live stock. Live-stock shippers as a rule are well informed.

Scraps of News

Dr. Raymond A. Pearson, formerly New York State Commissioner of Agriculture, has become president of Iowa State College.

The National Museum is planning a "style show." Every style of gown known to American history will be displayed. The idea, in part, is copied from the Louvre in Paris.

Doctor Mawson is said to have ordered two tons of powdered milk for his Antarctic expedition. Powdered milk is valuable many places where the fresh product cannot be obtained. New Zealand manufactures much of this product. It is used for drinks and in the baking of certain biscuits.

A reader from Grand Ridge, Illinois, is of the opinion that much ought to be done to prevent the evils of hydrophobia. The work that has been accomplished in the District of Columbia, where, by muzzling the dogs, the disease has been greatly lessened, is cited as an example of what may be done where there is a will on the part of the citizens and lawmakers.

A Day in June



"Oh, what is so rare as a day in June?" inquired the poet.

"Well, days in February are a trifle over seven per cent. rarer—seven and one-seventh per cent., to be exact, in ordinary years, and half as much in leap-years."

WELL POSTED

A California Doctor With 40 Years' Experience

"In my 40 years' experience as a teacher and practitioner along hygienic lines," says a Los Angeles physician, "I have never found a food to compare with Grape-Nuts for the benefit of the general health of all classes of people.

"I have recommended Grape-Nuts for a number of years to patients with the greatest success and every year's experience makes me more enthusiastic regarding its use.

"I make it a rule to always recommend Grape-Nuts, and Postum in place of coffee, when giving my patients instructions as to diet for I know both Grape-Nuts and Postum can be digested by anyone.

"As for myself, when engaged in much mental work my diet twice a day consists of Grape-Nuts and rich cream. I find it just the thing to build up gray matter and keep the brain in good working order.

"In addition to its wonderful effects as a brain and nerve food Grape-Nuts always keeps the digestive organs, in perfect, healthy tone. I carry it with me when I travel, otherwise I am almost certain to have trouble with my stomach." Name given by Postum Co., Battle Creek, Mich.

Strong endorsements like the above from physicians all over the country have stamped Grape-Nuts the most scientific food in the world. "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.

Advertisement for American Separator, priced at \$15.95 and up. Includes an illustration of a woman operating the machine and text describing its features and availability.

Advertisement for Shoo-Fly, described as 'The Animals Friend'. Includes an illustration of a horse and text detailing its effectiveness against insect pests.

Advertisement for Silos, highlighting their durability and strength. Includes the text 'Harder Silos, recognized as the standard because of their convenience, durability, strength and worth.'

Advertisement for Monarch Hydraulic Cider Press, featuring an illustration of the press and text describing its capacity and ease of use.

Advertisement for a Pumper and Sturdy Jack, featuring an illustration of the machinery and text describing its portability and utility for farm tasks.

Farm Notes

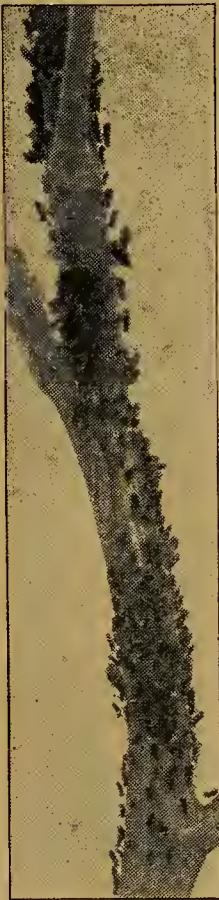
The Happy Aphid

THE aphid, or plant-louse, is a smug little nunny, but manages to do a great amount of damage. Perhaps its lack of brains is due to its physical form, which encourages inaction; for its mouth, instead of being an aperture for receiving food, is prolonged into a tube with a pointed tip; not only is it a tube, but it is also jointed so that it can be folded up like a pocket-rule when not in use. Thus all the aphid has to do to earn its living is to thrust its tubular mouth down into the tissues of some unfortunate plant and suck up the juices with as much satisfaction as the boy experiences in taking cider through a tube. However, an aphid's suction of plant-juices is a continuous performance; and while the amount that one tiny aphid needs for its nourishment is very little, yet when a plant is completely covered by these little creatures, it soon succumbs. It can do nothing else.



Aphids enlarged. One winged individual is here shown

Although each plant-louse seems merely an animated drop of sap with no mind at all, the aphid race shows some wonderful adaptations and development that stands for creative wisdom. There are several distinct forms in each species, each form playing its own part for the success of the race. During the early summer all the plant-lice we find are wingless. These are females, which produce living young in most species, and these young ones settle down around the parents. That a plant thus infested should soon dry up is quite inevitable; but, after a time, some individuals are born with wings; these flit off and find new pastures, and their progeny are wingless so long as the pasturage is good. Thus the production of winged forms depends entirely on the food-supply; as soon as it is plentiful, no winged individuals appear; but as soon as the plant begins to dry up, winged aphids are born.



Lice almost covering a stem

In the Cornell Insectary an experiment was conducted by the late Professor Slingerland which extended through four years and three months. During this time ninety-eight generations were born, without any winged individuals appearing, because the food was kept plentiful, but in check experiments, as soon as the food was allowed to dry, winged forms appeared. But even this is not all the story. These soft-bodied creatures have to provide for the winter when there is no sap in leaves to keep their bodies alive and plump. As soon as cold weather begins, there is produced a generation consisting of males and females, this being the first time in the season that males have been produced. The males may be winged or wingless, but the females of this generation are without wings. From these parents, eggs are produced which are fitted to withstand the cold winter. From each of these cold-storage eggs there is usually produced in the spring a female which settles on the plant and proceeds to stock it with her progeny. Is it any wonder that with a race history like this we sometimes fail to cope successfully with these insects?

ANNA B. COMSTOCK.

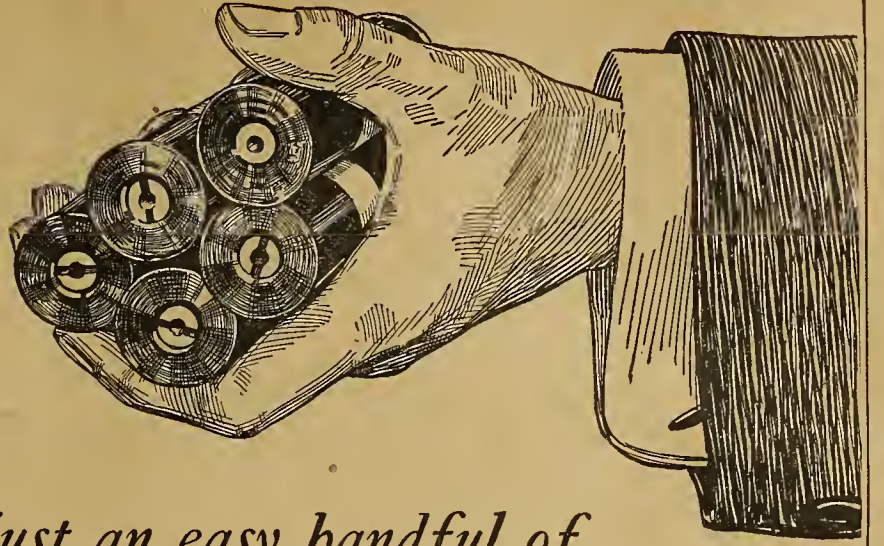
To Purify the Well

A MASSACHUSETTS reader desires to know what methods will purify a stone or brick well that has not had water drawn from it for several years and has perhaps become somewhat stagnant.

Dr. R. E. Buchanan, Department of Bacteriology, Iowa State College, says:

Pump out all the water, and scrub the walls thoroughly with a stiff brush. Then place in the well one pound of copper sulphate for every one thousand gallons of water. Allow the well to stand until it fills near the original depth; twenty-four hours, at least. Then pump out the water and that which runs in on the day following.

Lime may be used instead of copper sulphate, but is not so good. Copper sulphate may be added to the scrub-water, though this would not be absolutely necessary.



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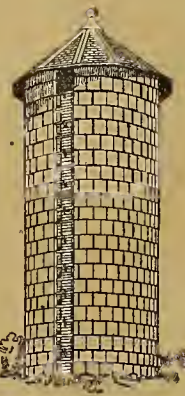
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Crops and Soils

What Does the Soil Say?

One Farmer's Experience in Testing the Soil on His Farm

LAST spring we bought an old run-down farm adjoining us. This place had been cropped to corn for years. It was sloping, and had gullied to some extent, but not seriously.

It goes without saying that the soil was utterly devoid of humus. About the only living thing on it being sassafras sprouts and rabbits.

We wrote Mr. C. B. Williams, Director of the North Carolina Experiment Station at Raleigh, asking for some sort of test which would tell us what the soil most needed aside from humus, which, of course, we realized could not be supplied in one year.

He sent us a diagram of fifteen plats 121 yards long; 3 rows to the plat; 4 feet between rows.

I planted a check-row between the plats. All plats ran up and down grade. I cross-checked three feet in the row. Each plat contained one tenth of an acre.

The fertilizer used consisted of dried blood, to supply nitrogen; Thomas phosphate, for phosphorus, and kainite, for the potash.

The plats were numbered and treated separately, the fertilizer being mixed at the barn when weighed, put in a separate bag, and numbered to correspond with the plat to which it was to be applied.

The land was plowed about seven inches deep, deeper than ever before, thoroughly harrowed and marked as stated, three by four feet.

The fertilizer was divided evenly and distributed by hand at the intersection of the marks and thoroughly worked into the surrounding soil with a hoe.

The corn was dropped, four kernels to a hill, and covered with a hand-hoe. The stand was thinned to two stalks to a hill at

the second working. Nearly every hill sprouted one hundred per cent. of the seed. The weather came dry right from the planting and remained so for several weeks. In fact, the season was exceptionally dry, and the different plats failed to show any marked difference for about two months.

A dust-mulch was maintained during the dry spell. When at length rain did come, the action of the fertilizer became apparent to a marked degree, and the contrast between the plats was easily distinguishable as far as the eye could plainly see the rows.

At harvesting-time, each plat was cut and shocked separately. Also the check-rows on each side. The shocks, after standing in the field for six weeks, were hauled to the barn floor. Each shock was labeled with the number of the plat on which it had been grown. It was husked and weighed.

Below is a table giving treatment of fertilizer per acre, also the yield of corn per acre. Of course, the yield of the best is discouragingly low, but the condition of the soil is shown by the check-rows, which are averaged for brevity. We are satisfied that humus and phosphorus will work wonders on this clay loam.

TABLE SHOWING THE RESULTS

Plat No.	Application of phosphate in lbs.	Application of blood in lbs.	Application of kainite in lbs.	Yield in Bushels
1	200			23.3
2		70		12.8
3	Nothing			9.85
4			50	10.7
5	200	70		29.2
6	200		50	18
7	200	70	50	19.2
8	Horse-manure broadcast at the rate of 2 to us			8.3
9	400	140	100	32.7
10	400	70	50	30.4
11	Nothing			3.6
12	200	70	100	31
13	200	140	50	27
14	200	210	100	28.2
15	600	70	50	29.3

What was the matter with No. 11? I am not prepared to say; there was some variation in the land, of course.

This table shows that a moderate use of phosphorus will pay, but the soil is not in condition to respond to liberal fertilization.

The average production of the check-rows was at the rate of EIGHT AND THREENTH BUSHELS PER ACRE, so, while plat No. 3, unfertilized, beat this, No. 11, on the other hand, fell off.

The horse-manure accomplished exactly nothing. The application was, of course, not liberal, and I attribute its failure to show results to the excessively dry season.

Neither can I account for the remarkable increase of No. 5 over Nos. 6 and 7, except by the fact that there had been an old sweet-potato bed and a pile of manure there the year before. W. H. SHAW.

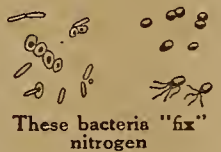
EDITOR'S NOTE—Of course, one year's results at work of this kind might be misleading, but, on the other hand, it may have much significance. The methods here described are simple, but they secured the results desired by the farmer speaking. Soil-tests, dairy-cow tests, feeding-tests, in fact many kinds of tests, can be conducted by the farmer for his own direct benefit. The work of the experiment station is intended to benefit the State as a whole. The farmer should supplement the station.

Some Nitrogen Bacteria

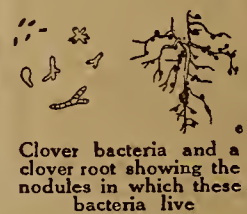
MORE than half of the air we breathe is made up of nitrogen. Nitrogen is absolutely essential as a food for plants and animals alike, but the so-called "free nitrogen" of the air cannot be used as a food without being changed.

In other words, plants are dependent upon the transformed or fixed nitrogen in the soil, instead of that in the air, for their supply. Certain bacteria in the soil can take this nitrogen from the air and change it so that plants can use it. Inasmuch as nitrogen is one of the most expensive and valuable constituents of manures, it is highly desirable that bacteria be encouraged to use this nitrogen of the air.

These bacteria are of two types, those that live free in the soil and use decaying materials as food, and those that grow in the nodules on the roots of clover, alfalfa and other legumes and get most of their food from these plants. Whenever we add straw, barn-yard manure and plow under a green crop or even stubble, we are adding to the humus, or food of the first type of bacteria, and they enrich the soil. So, too, growing clover, alfalfa or cow-peas, etc., enriches the soil, because the bacteria on the roots of these plants can add to the nitrogen from the air. R. E. BUCHANAN.

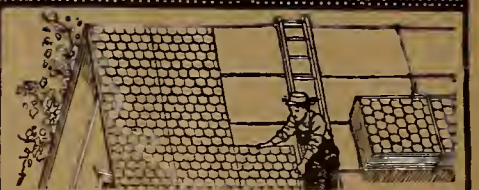


These bacteria "fix" nitrogen



Clover bacteria and a clover root showing the nodules in which these bacteria live

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\$10,000 Ironclad Bond Lightning Insurance

We agree to refund the amount paid in every case where a roof covered with Edwards Interlocking Galvanized "Reo" Steel Shingles is destroyed by lightning. Ask for Big Free Roofing Catalog No. 658, with special low prices. Freight prepaid. Send dimensions of your buildings and we will quote you cost of material delivered to your R. B. station. Write today. (77)

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It is guaranteed, by the wonderful insulating quality of the Asbestos, to make buildings cooler in Summer and warmer in Winter.

It is guaranteed, by its record of over a quarter century of wear on buildings in all parts of the country, without coating, to cost less per year of service than any other roofing.

And it is guaranteed to give entire satisfaction by our half century of experience in the manufacture of roofings and our reputation to never break a promise or shirk an honorable obligation.

J-M Asbestos Roofing is suitable for any kind of building, anywhere. If your dealer doesn't sell it, send your order to our nearest branch.

Write for illustrated Book No. 1560, and we'll also send you a piece of the curious Asbestos rock from which we make this roofing, theatre curtains, etc.

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ONE-PLY . . . Weighs 35 lbs., 108 Square Feet, \$1.10 per roll.
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TERMS CASH: We save you the wholesalers' and retailers' profit. These special prices only hold good for immediate shipment.

Indestructible by Heat, Cold, Sun or Rain

Write for FREE SAMPLES or order direct from this advertisement. Satisfaction guaranteed or money refunded. We refer you to Southern Illinois National Bank.

Century Manufacturing Co., Dept. 444, East St. Louis, Ills. or 200 6th Ave., New York City.

Poultry-Raising

The Lay of the Hen

By Percy Prior

OH, THE "Lay of the Minstrel" has sounded in rhyme,
The theme has been written in language sublime,
And the words of the poet, with exquisite art,
Have sent their appeal to the mind and the heart.
'Way down through the ages the world has admired
The time-honored lyrics by genius inspired,
And the "Lay of the Minstrel" is touching to men
Who never have heard the lay of the hen.

Sing "Cut-cut-cut-da-cut, cut-da-cut, cut-da,"
And send the glad chorus resounding afar,
'Twill bring to the farmer contentment and peace,
When eggs newly laid bring tuppence apiece.
The hen's gleeful cackle the "blues" will disperse,
More eggs in the basket, more coin in the purse,
And 'tis sung with a fervor, a vigor and zest,
Betokening pride in the egg in the nest.

The lay of the hen never fails to bewitch,
Reminding of omelets, of waffles and "sich."
We listen a while, and the appetite begs
One glimpse of a platter of bacon and eggs!
'Tis a breakfast-time symphony, given by rote,

A harmony blended with ne'er a false note;
So, proudly and gladly, I'm wielding my pen
In praise of the cackling, industrious hen.

"Mid pleasures and palaces though I may roam,"
The sight of a coop makes me feel quite at home.
Though banquet-hall speakers fair pledges may boast,
I simply would choose a dropped egg for my "toast."
Sing "Cut-cut-cut-da-cut," sing joyous and free,
Wherever the heart of a rustic may be.
Object if you will, but I'm yielding the palm
To-day to the lay of the hen on the farm.

From Laundry to Poultry

THE majority of the farmers, yes, I would say seventy-five per cent. of them, think (if they think at all) the hen part of the farm a very insignificant part. But I am glad to say that thought is changing. Twenty-five years hence I venture to say poultry will be to the farmer what the penny is to the merchant: a small but very significant factor. The American farmer is only a babe in the poultry industry, but it is being fed with food that has caused it in the last few years to grow by leaps and bounds, and it is not safe to say we are nearing the limit. Three years ago I thought of poultry only as a necessary evil.

But now I think more kindly toward the feathered tribe, in fact I have had a very severe fever, "hen fever" I believe they call it, and it seems to be contagious, for all of my family have had it. But it is quite different from all other fevers. Hen fever puts new life into sickly people, swells the pocketbook and increases the bank account. I have only a few fowls. I never did believe in jumping into anything all over at once. I have thirty Buff Orpingtons, and they are beauties. They are fine layers, and are so easily dressed, having but few pin-feathers. That is what my wife likes about them. I expect to increase my stock at the rate of about seventy-five a year until I have a flock of about five hundred. I have about twelve fine pullets that this spring I am yarding with a fine cock and raising my next year's fowls. One of these pullets hatched in March, laid twenty-two eggs in twenty-four days, then got broody. I penned her a few days, fed her all the corn and water she wanted, and she went back to business again. I use the open-front house, open to the south. I like plenty of fresh air without any draft. I feed corn and cane-seed in litter, as I believe in making the hen work for what she gets. I also have before them all the time the following dry mash in hopper: a mixture of one part corn-and-cob meal, one part bran, one part cotton-seed meal and two parts shorts. These are thoroughly mixed together. I also give them oyster-shell, beef-meal and plenty of fresh water at all times.

My fowls have free range with plenty of bluegrass, turnip-tops and rye, therefore my chickens are contented, and a contented hen is a laying hen.

I am only a very small farmer, have but thirteen acres of land and work about eight, but make enough off of this to fatten two hogs, keep two cows and the chickens, and raise flour, corn, potatoes and vegetables for a family of eight. I do this with the help of my wife and children, after my day's work at the hospital as manager of the laundry department.

C. L. SHUPING.

Shipping Day-Old Chicks

A GREAT many people are surprised to hear that chicks, before they are fairly dried off, can be safely sent by express from two hundred to one thousand miles and reach their destination alive and in good condition. But such is the case, and to-day the shipping of day-old chicks is a great business, thousands and thousands of the little chaps being shipped all over the world during the hatching season.

Some people do not know that a chick, which escapes from the shell in which it has been a prisoner for three weeks, will stand a lot of abuse and live, provided you are not too harsh with it. Nature has provided a supply of nourishment for the little fellow in the form of the yolk of the egg, from which it is hatched. The chick comes from the shell with the undigested yolk yet in its body, and this furnishes all the food that the chick needs for the first forty-eight hours of its life. When the little chicks are packed away for several hours during shipment, they continue to gain strength and are much better off than if they were exposed to the sudden changes of running in and out of the hover of the brooder. And these are the reasons why so many are safely sent.

After the chicks are hatched and nicely dried off, they are ready for shipment. I have found baskets to be excellent for shipping the little fellows in small lots of from twelve to fifty. These baskets should be strong and low. About four inches is the proper height. I line the basket well with burlap. Cut clover and chaff are placed in the bottom. The chicks are then put in and a cover of burlap sewed over the top of the basket. A label, "LIVE CHICKS," is sewed on in a conspicuous place, and they are ready for shipment. I like baskets best, for they are light and easily handled. Manufacturers can supply you with any sized basket you wish.

If you prefer to ship in boxes, make them four inches high, of light material, and line them the way mentioned for the basket. If any great number are to be shipped, the chicks can be placed in boxes containing several decks. Don't feed them anything for the journey. It is injurious to them.

The shipping of day-old chicks has come to stay. Buying young chicks will save you a lot of trouble and money, too. Send your orders early and don't expect to have your chicks shipped the day after you order them. You know you cannot get them until after they are hatched.

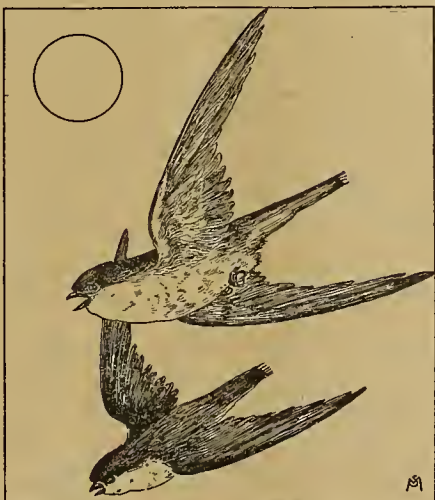
A. E. VANDERVORT.

Lice multiply rapidly in hot weather if nothing is done to check them. The dusting will help greatly. Spade up a spot in a shady corner and watch the hens enjoy themselves.

Chimney-Swift

MR. FRANK M. CHAPMAN, in his "Bird Life," says, "Swifts are the most aerial of all the small land-birds. Our chimney-swift, the only one of the seventy-five members of this family that occurs in eastern North America, is but five and a half inches long, while its spread wings measure twelve and a half inches from tip to tip. Its feet are proportionately small, and so weak that the bird can rest only by clinging to an upright surface. The tail is then used as a prop, its spiny-tipped feathers being evidently a result of this habit."

This bird, small of body and nearly tailless, with its long, curved wings that beat with rapid motion, or, with them stiffened, mounts up into the blue, or, as it constantly does while hawking, darts hither and thither,

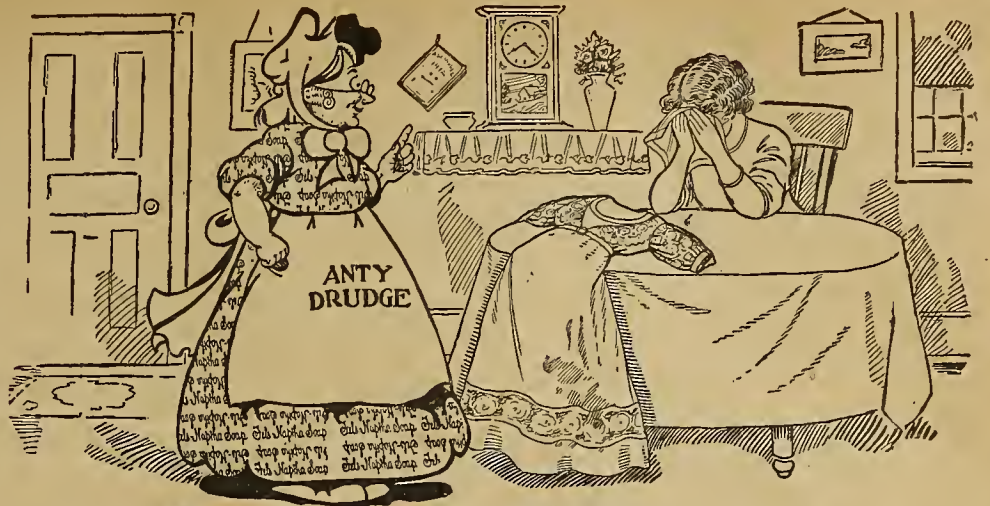


cutting sharp angles or gyrating in large and graceful circles, is a familiar summer bird.

We should never grow weary watching these tireless winged creatures, nor begrudge them the necessary nesting-space in our chimneys, for with every dart some mosquito or other pestiferous insect has been captured. All of their food is gathered from the flying insects; they never alight and perch in trees. Even the few dead twigs for their basket-like nest are snapped from dead branches of trees as the bird flies. These are moistened with a mucilaginous saliva and glued to the bricks or on the inside of a hollow tree.

The birds are sooty black, and with the short spiny tail are easily identified as they are silhouetted against the sky. Their only note is a twitter.

H. W. WEISGERBER.



Anty Drudge and the barn dance

Margaret—"Oh, I'm so disappointed! Charley Haines asked me to go to a dance tomorrow night, and I've spilled mustard all over the front of my best dress. Those city boarders will make fun of me."

Anty Drudge—"Come now, no more moping. Just run down to the store and get a cake of Fels-Naptha soap and let me have the dress. We'll wash it in some cool or lukewarm water, and presto! It'll look just as fine as any French cleaner could make it."

To a woman who lives on a farm, the weekly wash is the hardest work she has to do—if she does it in the old-fashioned way. But if she uses Fels-Naptha Soap, she has no need of a hot fire, no heavy boiler to fill and lift up and down from a stove, no back-breaking rubbing on a washboard or hard turning of a washing machine, if she uses one. All she has to do is to wet the clothes, soap them well with Fels-Naptha, roll and leave them to soak in cool or lukewarm water for a short time. Then rub lightly on a washboard or put them in a washing machine and turn a few times, rinse, blue and they're ready for the line. Follow directions on the red and green wrapper.

For full particulars, write Fels-Naptha, Philadelphia

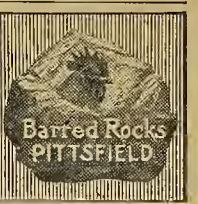
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A Ft. Worth man says: "I have always been of a bilious temperament, subject to malaria and up to one year ago a perfect slave to coffee. At times I would be covered with boils and full of malarial poison, was very nervous and had swimming in the head. "I don't know how it happened, but I finally became convinced that my sickness was due to the use of coffee, and a little less than a year ago I stopped coffee and began drinking Postum.

"From that time I have not had a boil, not had malaria at all, have gained 15 pounds good solid weight and know beyond all doubt this is due to the use of Postum in place of coffee as I have taken no medicine at all.

"Postum has certainly made healthy, red blood for me in place of the blood that coffee drinking impoverished and made unhealthy." Name given by Postum Co., Battle Creek, Mich.

Postum makes red blood. "There's a reason," and it is explained in the little book, "The Road to Wellville," in pkgs.

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

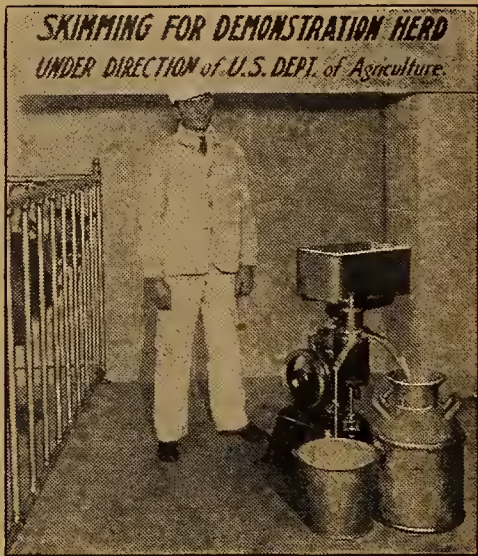
Live Stock and Dairy

It Works While You Milk

THE illustration shows a gasolene-motor-driven automatic separator at work. This apparatus consists of a four-cycle two-thirds-horsepower gasolene-engine and a seven-hundred-pound-capacity separator-bowl of disk construction with an under feed, which insures a thorough clarification of the milk before it passes into the separating-chamber. This prevents clogging and leaves the bowl easily cleaned, as there is no slime or dirt sticking to the disks after separation.

It will be seen that the engine is arranged with two pulleys so that it can be used for many other purposes besides running a separator.

It is maintained that this separator will skim as fast as ten men can milk and is suitable for any size dairy. The farmer



operating the machine starts it when he starts milking, and as fast as he fills a pail with milk, he pours it into the receiving-tank.

It is pointed out that when he is through milking he is through skimming, as it is claimed the automatic bowl is the only bowl that can be run partly filled with milk without a fresh inflow of the same for ten or fifteen minutes and still when the flow is turned on produce as good skimming results as before. FRANK G. PERKINS.

When cows stop chewing their cud at the rattle of the milk-pail, watch that milker.

One farmer was traveling two thousand miles in a lifetime to feed his stock. When he found it out, he moved his barn. How far is it from your house to your barn?

What to Feed with Corn

OUTSIDE of skim-milk by far the two most important products used in supplementing corn are meat-meal (or tankage) and oil-meal. Skim-milk when available is a most efficient supplement and is worth practically one half as many cents per hundred pounds as hogs are worth per hundred pounds, when fed at the rate of two or three pounds of skim-milk to every pound of corn. The big trouble with skim-milk, however, is that it is not available, hence some other supplement to corn must be bought upon the market.

Two years ago, here at Iowa State College, we compared the relative efficiency of meat-meal and oil-meal in producing pork. We fed three lots, one corn alone, another corn plus meat-meal and another corn plus oil-meal. The corn-alone lot averaged .793 pound gain daily. Where meat-meal was fed, the gain was 1.26 pounds, and where oil-meal was fed, 1.20 pounds. The corn-alone lot required 565 pounds of corn for each 100 pounds of gain. The corn-and-meat-meal lot required 398 pounds of corn and 31 pounds of meat-meal for each 100 pounds of gain, while the oil-meal lot ate 386 pounds of corn and 73 pounds of oil-meal for the same gain. It is found on calculation that one pound of meat-meal replaces 5.2 pounds of corn, while one pound of oil-meal replaces only 2.4 pounds of corn.

When corn is selling at 56 cents per bushel, as it is now throughout the corn belt, one could afford to pay, according to the above figures, 5.2 cents for a pound of meat-meal, or 2.4 cents for a pound of corn, and come out ahead, in that he would get more rapid gains upon his hogs and get them upon the market more quickly than if he fed corn alone, thus doing away with extra labor and risk.

Valuing meat-meal at \$2.50 per hundred-weight, oil-meal at \$1.85 per hundredweight and corn at \$0.56 per bushel, or \$1.00 per hundredweight, the cost of a hundred pounds of gain upon the above lots were as follows:

Corn alone	\$5.64
Corn and meat-meal	4.78
Corn and oil-meal	5.22

Thus it will be seen that at present market quotations the packing-house by-products are more economical supplements to corn than oil-meal. JOHN M. EVVARD.

How to Handle Pigs

WHERE a warm farrowing-house is not available on the general farm, the problem of protecting the newly born pigs from becoming chilled is a serious one. N. H. Gentry of Sedalia, Missouri, the king of American Berkshire breeders, employs the barrel of straw with great success in solving this problem. Mr. Gentry is an advocate of rearing the pigs as nearly in accordance with the laws of nature as possible, and on this account he is opposed to the use of the artificially heated farrowing-house. As an efficient substitute, he employs a barrel filled with clean, fresh straw, the open end of which he covers with a gunny sack or an old blanket.

In case the weather is especially severe, he also places a heated brick in the barrel of straw. Then as each pig is born he thrusts the youngster into the barrel; in this way any animal which is chilled is rapidly revived by the animal heat of his mates, as well as by the warmth radiating from the heated brick. It is essential that the barrel be absolutely full of straw to start with, to prevent the young porkers from becoming cold. For many years Mr. Gentry has successfully practised this method of first aid to the newly farrowed pigs; as a result of this efficient device, he has lost comparatively few pigs on account of their being severely chilled subsequent to birth.

GEORGE H. DACY.

A wise man may get fooled, but not at the same game every day.

It is just as right to marry for money as it is to marry for a cook.

It would be nice to be the mail-man in the summer-time, but who wanted his job last winter?

One's outlook on life ought to go beyond the boundaries of his own farm, no matter how large it is.

The man who works until he is tired is soon rested, but the man who plays until he is tired may be tired a long time. Moral: Always quit play a little before you get tired of it.

One farmer was complaining because he didn't get anything out of his farm last year but just a living; it was a good living, however, and that was more than a whole lot of city men got for their year's work.

How far does your wife have to travel to water her bunch of human live stock? Would it save something to have a cistern with pump in the kitchen? A sink just under a window so she could look out at the trees, the birds and flowers while she is doing the worst drudgery on the farm?

SHE PAID To Escape These Disks

Letters come to us telling how plucky women pay hard-earned money to escape washing disk-filled cream separators. Here is one such instance: A lady and her husband decided to get a cream separator. He refused to pay more than the cost of a cheap, disk-filled machine. Like other women, this lady could not bear the thought of washing 40 or more disks twice a day. She wanted the wonderful



SHARPLES Tubular Cream Separator

because Dairy Tubular bowls contain only the little piece shown in this girl's left hand. She knew Tubulars have twice the skimming force of others and skim twice as clean, thus paying more every year in extra profits than could be saved through buying any cheap machine. So she added her own hard-earned money to what her husband was willing to pay and bought a Sharples Tubular. Now she is one of the happiest, most contented separator users you ever saw. What higher praise could be given Tubulars?

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THE DE LAVAL SEPARATOR COMPANY

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The FARMERS' LOBBY.

IN MY last letter to the Lobby was given the story of the parcels-post status at the time of writing. There was a most encouraging situation, from the point of view of friends of the measure. It looked as if the House of Representatives really might pass a measure which would be of some real advantage and benefit to the farmer and to the city consumer by letting them establish a relationship, through the post, that would eliminate the middleman and much of the transportation costs in handling the farmer's products.

Now, in the present letter, I am going to tell, just as carefully and accurately as possible, the story of how the House leaders flim-flammed the friends of this measure; of how the House, when it had a comfortable majority, was jobbed out of the chance to pass it; of how the lobby of the express companies, plus the big organization of country-town merchants, plus the general fear that many public men entertain that the country town will punish the legislator who supports the parcels post—of how this combination beat the parcels post out of a hearing, a decent chance, or a respectable burial after it was dead.

I venture that if this story were known and fully understood, it would put the Champ Clark presidential boom out of business in short order. But, of course, it may not be generally known.

Champ Clark, Speaker of the House and candidate for president, did the trick; not alone, of course, but in collusion with a few other men who didn't want a vote to be reached on the proposition lest it should carry. Speaker Clark would have been fair if he had spoken against parcels post, if he had squarely and courageously told the House that he didn't think it was good business or even good politics at this time to pass the measure, and if, after putting his case squarely before the House, he had said, "Now, gentlemen, these are my views, but I am only one member of the House. You are going to get a fair chance to vote on this proposition, and what you vote will go."

Here's the Way It Was Done

THE Post-Office Appropriation Bill was before the House. Advocates of parcels post had worked long and diligently, organizing for an effort to attach an effective parcels provision to this measure. If they could do that, the Senate might throw it out, but very possibly would not dare do so; and if the House insisted with vigor, the Senate would not be able to kill the legislation, nor the President to veto it, because the appropriation bill carries some \$200,000,000 for the annual maintenance of the Post-Office Department. Manifestly, nobody is going to tie up the department and stop the mail service, because of a desire to defeat a minor feature of the bill, such as parcels post would be in comparison with the bill as a whole.

So the parcels-post people got busy with the committee on rules. That committee, at their instance, brought in a rule which made it in order, during the consideration of the Post-Office Bill, to offer an amendment providing for a zone parcels-post measure. That was a big accomplishment. The committee reported the rule, and the House, fully understanding just what it was doing and appreciating the importance of what it supposed it was getting, by a substantial majority adopted the rule. That vote adopting the rule made clear that there was almost a certainty that in due time the parcels-post amendment itself would be adopted and put into the bill.

During the general debate on the bill, several days were devoted in large part to parcels post. The argument was pretty much all on that side; nobody cared to come into the open as an opponent of such a measure. The House took keen interest in the discussion, and it proved very soon that in a record vote would certainly adopt the amendment. The House leaders, who by this time had been influenced to conclude that it would be bad politics to adopt the measure, got out and hustled among the Democratic rank and file. I don't know what arguments were used effectively to convince the latter that a parcels post ought not to be adopted at this time. I do know that the express and railroad crowds, in alliance with the country merchants' organization, have invented the arguments and have financed the big job of planting them where they would do the most good.

Anyhow, the Democratic leaders plugged up a line of arguments to the effect that it was too sudden; they wanted a commission to investigate the subject and report at the next session of Congress. That's the ancient,

The Parcels-Post Disaster

By Judson C. Welliver

approved plan of killing off measures when they get so pressing that people don't dare vote directly against them.

The express companies, you must bear in mind, are a huge financial power. They represent hundreds of millions of wealth, largely in investment holdings in railroads; they conduct an immense banking business; they are allied with Big Business in politics and in Wall Street.

A big, important bill is first made up in committee; in this case, in the post-office committee. Then it is reported to the House, which considers it in committee of the whole House. Keep in mind, now, that there are no roll-calls in the committee of the whole. Its business is, in theory, preliminary and informal; a roll-

I THINK this is one story of the present session that every farmer and every town patron of the farmers ought to know. It is so characteristic of the devious, indirect, cowardly procedure that the parliamentary sharps always invoke when they want to do a thing without seeming to do it; when they want to kill a measure without opposing it; when they want to play both ends of the game for political effect. Get next to the game—watch it.

call of the House occupies some forty minutes, and why call the roll in committee of the whole, when the same question must come up later in the House proper, and the House, if it wants, can order a roll-call? That's the theory of the thing. But see how it works.

While this bill was in committee of the whole, the anti-parcels-post leaders were active with their argument that no action should be taken at this time, but that a commission should be provided for. On the argument of political expediency, and with the powerful influence that the leaders always are able to wield over weaker members of such a body, they lined up a majority to vote in committee of the whole against parcels post and in favor of the commission. The scheme went through as slick as goose-grease, because there was no record vote, no roll-call that forced a member to take a position that could be quoted against him.

Men who had made long and earnest speeches in favor of parcels post; men who had voted, on the early record vote, in favor of adopting the rule that permitted a parcels-post amendment to be offered; men who have for years been assuring their farmer constituents that they would fight for parcels post at every opportunity;—these, under whip of party organization and the urgencies of political necessity, repudiated their opinions, views and pledges, and on the UNRECORDED vote in committee of the whole made up a majority that rejected the parcels-post amendment and adopted the commission proposal.

What do you really think of a congressman who gets up on Monday and makes a half-hour speech in favor of immediate adoption of parcels post, who on Tuesday is visited by his party whip and told that "the leaders" have decided against it, who on Wednesday flops and votes AGAINST parcels post, and who on Thursday begins mailing out to his constituents copies of the speech he had made IN FAVOR OF parcels post? It's cowardly, disreputable, dishonorable and entitles every man who does it to be defeated in his district

There Was a Lion in the Path

THE parcels-post amendment was duly defeated, but there was still one difficulty, one lion in the path.

The rules of the House provide that after the committee of the whole has perfected the bill and reported it to the House, a motion may be made, and must be submitted to a record vote, to recommit with instructions. In the case of the Post-Office Bill, Congressman Mann of Illinois, leader of the Republican minority, was going to make this motion to recommit; and in his motion he was going to DIRECT the committee to include the zone parcels post in the bill. The chances were that, on this vote, on which the roll must be called and a permanent record made, the invertebrates who had originally favored the parcels post would flop back to it again, because they would be too cowardly to do on a record vote what they had done on the division in the committee of the whole.

As a matter of fact, the parcels-post crowd knew that this motion to recommit with instructions for the parcels post would carry. Their polls showed that a comfortable, safe majority of the House would vote for the Mann motion; how could they prevent it? They didn't want it.

We have come now to the trick. Under House tradition, the minority leader is, of course, the man entitled to be recognized to make the motion to recommit. It is not always done in this way, but at least the motion to recommit is entitled to be made by some man who has been a leader in the opposition during the committee of the whole fight. In this particular instance, it was recognized that Mr. Mann was to make the motion to recommit. The friends of parcels post had made plans accordingly.

Nobody dreamed that there would be deviation from the customary procedure; nobody, except those few who were in the job. At length the committee of the whole completed its work; the bill was finished, was reported to the House, the Speaker took the chair, and the motion to recommit with instructions was in order.

Mr. Mann rose, his motion in his hand. The chamber was packed. The organization was up against the fight of its life. Mr. Mann, pulling his spectacles to the point of his nose, looked at the presiding officer and said:

"Mr. Speaker."

At the same instant another man, and on the Republican side, called out in a vigorous voice:

"Mr. Speaker."

Mr. Mann looked around in surprise. Who had any business interfering at that point with the business of the minority leader? Mr. Mann saw that his competitor was Martin B. Madden, congressman from Chicago, and one of the enthusiastic opponents of parcels post.

Both looked up to Speaker Clark. It was plain in an instant to the whole House. Madden held in his hand a typewritten paper; it was clear that he had a motion to recommit, with instructions; and everybody knew that his motion would say nothing about inserting the parcels-post provision.

Who Would the Speaker Recognize?

IF HE recognized Mann, there must be a record vote, squarely on the parcels-post issue.

If he recognized Madden, it would be a technical compliance with the rule permitting a motion to recommit, with instructions; but Madden's motion would omit the real point entirely.

What would the Speaker do?

The eyes of the whole House were on him. He turned slowly toward the bidders for recognition.

"The gentleman from Illinois is recognized."

That settled it. The Speaker had killed the last chance of the parcels post for this Congress!

The Madden motion was submitted. There was nothing in it worth while, nothing of real importance. It was promptly voted down, and the House proceeded with the bill, now assured that no more embarrassments with the parcels post would be met.

Champ Clark's one performance in this parcels-post matter makes him an impossible candidate for president.

Not because he's opposed to parcels post; not at all. No doubt he could prove that he IS IN FAVOR OF IT; probably he can pull half a dozen speeches in Congress to prove that he had always been in favor of it. But the fact remains that when he had the chance to do something for it, as Speaker, he not only didn't do it, but by a cheap, despicable trick he used the power of his position to prevent the House having a chance to do something for it.

The parcels-post incident is only one. There have been many others of the same sort. The performance is not so easy as it was under Cannon and the Cannon rules; when it is pulled off nowadays, it is rather more obvious and therefore dangerous. But in the end it is the same old game, played in the same old way; and it is the testimony that too much power should not be lodged in one man at any time, especially when that man is a candidate for president. Just as a president ought not to have the power of patronage, to use during a first term as payment for a second-term nomination, so a speaker or any other man in powerful place ought not to be allowed to use the power of that position to serve his own ends or the ends of those whom he hopes to induce to serve him. It isn't safe.

For Rory's Sake

By Pearle White McCowan

Illustrated by Edward L. Chase

THE members of the Seevers graduating class were determined about one thing. They were firmly resolved that they would not be limited as to the amount they should spend upon their graduation finery. There were twenty of them. All girls but three. One or two had tried to protest, knowing that the standard a few of the wealthier girls would set would be a severe strain upon the purses of some of the most worthy members of the class. But all such suggestions were met with a storm of disapproval, and an overwhelming negative vote definitely settled the matter. Even those who knew their parents could ill afford any extra expense, voted against the measure in a silly spasm of fear, lest their more wealthy classmates should learn of their lack.

In the excitement which followed, little Rory Demstader, who outside of school hours worked for her board and lodging at Mrs. Beekman's boarding-house, slipped out unobserved. She was just leaving by the outer door as Gladys Pettingill entered the hall and surprised upon her face a look that made Gladys, ever impulsive and loving, hurry forward with a little cry, "Why, Rory, what's the matter? Are you ill?" But Rory only hurried on, and reluctantly Gladys turned back, uncertain whether she had been repulsed or merely misunderstood. Something was troubling Rory she felt sure, and it worried her a little, for between these two had sprung up a friendship that puzzled and even annoyed some of the other girls, who would have preferred to have had Gladys be a little more exclusive. But she, with her frank, generous nature, had been quick to note the worth and general loveliness of little Rory, and with characteristic independence was not at all ashamed to claim her as a friend, though some of the more snobbish ones, glad and anxious to follow Gladys' lead in most things, for she was very popular, could not quite bring themselves to take up Rory, the unknown and ill-clad little working girl who was making such strenuous efforts to gain an education.

However, with the usual optimism and light-heartedness of youth, the incident in the hall was soon forgotten and Gladys was speeding homeward.

Once there, she proceeded, with all the importunities and allurements of an only child accustomed to the granting of every wish, to wheedle her father into parting with a fifty-dollar check. "You see, dearest Daddy," she coaxed, her arms around his neck, "Mr. Breen has already given Emily fifty dollars, and Bertha Tagent's father has promised her that much anyhow—and, of course, you wouldn't want your girlie's clothes to be less fine than theirs (she knew his weak point), and, besides, think what a lesson in economy it will be for me. You see, I'd have all the planning and buying to do myself. I ought to learn a lot in the process. And I won't ask for another penny. Truly I won't, Daddy."

Thus good-naturedly Gladys coaxed, cajoled and pestered her father until he indulgently acceded to her request, and when finally she tripped off to bed, she had his promise of fifty dollars to be deposited in the bank to her credit upon the following day. Small wonder that her dreams that night were visions of fans and gloves and white satin slippers and fold upon fold of shimmering whiteness. "She would have the most beautiful dress of them all, and her dear, precious old Daddy, wouldn't he be proud of his girlie?" Such were her rosy dreams and plans.

However, in the gray light of the morning things began to look slightly different. She was still elated over the finery that was now as good as hers (as what girl would not be?), but the innate refinement of her nature was asserting itself, and she began to see that to boast of the sum she expected to spend for her dress and its accessories would be nothing less than snobbishness. With pure school-girl love of boasting, she longed to tell her friends all about it, and yet it did sound purse-proud and arrogant when Emily Breen had flauntingly boasted of intending to spend "more than fifty dollars."

On her way to school, not quite sure yet whether she could keep her good fortune to herself or not, she decided to call at the boarding-house for Rory. "Brave, cheerful little Rory, she'll be good for me this morning," mused Gladys. "Perhaps, after I've had a good talk with her, I'll feel less like bragging."

But Rory was not to be found in the kitchen as usual, and Mrs. Beekman, busy in the dining-room, wore an anxious look.

"Rory's sick abed," she announced tragically.

"Jest clear wore herself out tryin' to get an education. She shouldn't ha' done it. She'd oughter a been content to work out 'stead o' tryin' to go to school, too. It don't stand to reason that any frail crittur like her could stand workin' and studyin' all the time, night and day both," rattled on Mrs. Beekman, glad of a listener.

"Yes, you can go up and see her if you want to, though I ain't a sayin' as she'll know you. Part of the time she's raving like."

"Of late she's been worryin' about a dress to wear to them there graduatin' exercises. Oh, no, she didn't tell me," at a mur-

mured inquiry from Gladys, "but last night she let it out in her ravin's. She kept a sayin' over and over to herself, mournful like, 'All the rest will have white dresses, and mine will be brown—brown—brown,' and sometimes she'd fairly scare me, she'd spit them last words out so spiteful like." And the boarding-house keeper furtively wiped away a tear. Then, as if ashamed of her momentary weakness, she began again in a brisk and querulous tone, "But whatever I'm to do with her is more than I know. I can't have her here, that's sure. More'n likely all the boarders 'ud leave soon's they knew I was a harborin' of a sick girl here. She ain't got no home, nor no place to go, and I don't know nothin' else to do but to telephone to the poor commissioner. I hate to do it though. She's that proud I know it'll most kill her."

During all this they had been toiling up one flight of stairs after another, and now as they paused sounds of moaning and labored breathing emanated from a door which Mrs. Beekman thrust unceremoniously open. "Rory, do you know me now?" she called out lustily. "Here's one of your friends come to see you."

Gladys, before rendered speechless by Mrs. Beekman's rush of words, now glided quickly forward and placed her cool hand upon Rory's hot brow. "Rory, Rory dear, do you know me?" she asked gently, but Rory only moaned and muttered piteously, "Rory's sick. Rory's sick." For a moment Gladys, utterly unused as she was to illness or poverty, was almost unnerved. It was all a horrible revelation to this girl, who never in her life had lacked for anything. This bare little room with its total lack of cheer and warmth. "And Rory studying here night after night in the cold—after she had worked hard all day—no wonder she was sick."

"Gladys, Gladys," cried out Rory in a sudden momentary spark of intelligence. And then lapsed off into moaning again.

But with that cry Gladys' wits returned to her, and with a capability really surprising in one so young, and a fearless shouldering of responsibility that would have astounded many a one of thrice her years, she instantly assumed command of the situation. "Mrs. Beekman, have you had a doctor? May I use your 'phone? Will you stay with Rory until I come back?" were some of the questions that followed each other in rapid succession, and in three minutes' time one of the leading physicians of the town had received a call that brought him post-haste to the boarding-house.

In the meantime Gladys learned, from Mrs. Beekman, of a Mrs. True living near, who, for a reasonable sum in remuneration, might be induced to take Rory into her home and care for her until she recovered.

"But who would pay for it all?" queried practical Mrs. Beekman. "Such things cost money, you know," she warned.

Gladys mused a moment. She, too, had been thinking of that. Then, with a sudden inspiration, "Our class," she answered confidently. "We'll never see one of our number sick and in need and not help them. No, Mrs. Beekman, you needn't worry about expenses," she continued, a little haughtily. "They will be paid when they are due."

"A threatened case of pneumonia with complications that might develop into some brain difficulty," was the physician's verdict. "Yes, she can be moved, if it is done at once. It is somewhat risky, of course, but the benefits to be derived therefrom more than offset the danger." Thus the doctor readily assented to Gladys' plans, and together they engaged a room at Mrs. True's, with the understanding that she should assume full care of the lonely little invalid. The price staggered Gladys a little, but the physician's assurance that it was really very low indeed renewed her confidence, and resolutely she put behind her any doubts as to the loyalty of her class and steadfastly stuck to her purpose and made arrangements as if her own preferences and Rory's were the only ones to be considered. Like a

Trojan, she stood by and saw Rory carefully bundled onto a stretcher and carried by willing, careful hands to her new abode. Then, when satisfied that she would receive the best of care from the kind and capable Mrs. True, she started once more for the schoolhouse, though by now it was nearly noon. But she wanted to get the thing off her mind, and was resolved to call a special meeting of the class and lay the matter before them at once.

"Maybe they'll think I've been carrying things along with a pretty high hand," she mused, "but I haven't asked them to do anything for me before since I became president of the class—and they've just got to do this, that's all. But poor little Rory," veering suddenly in her thoughts to the sick girl whom she had just left. "And she was always so proud, too. This will just about break her heart to have them all know."

Suddenly she stopped stock still. Not once, since Mrs. Beekman's tragic announcement of Rory's illness, had Gladys thought of her father's promised gift. But now, in a flash, she knew that it was in her power to keep a part, at least, of the tragedy of Rory's poverty from even the "class."

"But Daddy? What would he say?" queried her other self. "Dear, darling old Daddy, who loved to see his girlie outshine all the others." But with characteristic decisiveness these thoughts were promptly dismissed, as rapidly she walked back toward the doctor's office.

He was just climbing into his auto, but halted a moment at her call.

"Doctor Marshall, have you mentioned Rory's illness to anyone yet, and our plans for paying her expenses?" she eagerly questioned. At his negative reply, she exclaimed joyously, "Oh, I'm so glad. I've been thinking about it, and I've decided not to say anything to the class about paying Rory's bills—at least, not yet. She is very proud, and it would wound her terribly to think that she was an object of public charity, so, as I have a little money of my own, I would like to pay her expenses myself, as far as I can, at least. She would like it better so, I know, and I would be glad to do it for her. Of course, you and Mrs. Beekman and Mrs. True will have to know, but I'm going to ask you all not to mention it to anyone else, at least not for the present." The doctor readily agreed, and a call at Mrs. Beekman's and another at Mrs. True's elicited similar promises from them.

Then feeling that her morning's work was done, Gladys trudged straight home, and then on out to the barn to find her father.

"Daddy," she said, in her straightforward way, "I've started a pretty big hole in that fifty dollars already, and there'll be a lot more of it needed. Maybe all of it, and maybe more—and, oh, Daddy, I'm not using it for graduating 'togger' at all."

Then out tumbled the whole story, with a few tears and plenty of pathos. "Just think, Daddy, here I've always had everything I wanted, and that brave little thing has toiled and worked her way through school and now—almost at the end—" and she covered her face with her hands and shuddered. But in a moment she looked up. "You're not angry with me, are you, Daddy? I couldn't do any less, could I, even if it does take all my money?" And she knew that her father understood and that it was all right, for, putting his big hands gently on her shoulders, while a great and tender light shown in his eyes, he answered, "Gladys, I'm prouder of you now than I could be if you outrivaled a queen in brilliant apparel."

But it didn't take all of the money. The physician and nurse were very moderate in their charges, and Rory recuperated rapidly under the kindly ministrations of Mrs. True. So much so that in a little over two weeks she was well enough to be invited to Gladys' home, where she was lovingly compelled to stay until after graduation. At first they had trouble trying to make her understand. Her independent little spirit rebelled at having to accept what they desired to do, but finally Gladys' mother, with the kindly tact that is the special gift of some women, made her understand that they would be very much disappointed and hurt if she did not accept their gifts and use them to help in the molding of herself into a sweet and useful womanhood.

Rory submitted to the kindnesses heaped upon her by her friends, Gladys and her mother, after some hesitancy. She felt they had already done more than their share in helping her in her hour of need. And so she wished rather to repay them than to draw further upon their liberality.

With the remainder of her precious fifty dollars Gladys, still mindful of Rory's sensitiveness, purchased material for two dainty and very simple little white dresses, and the dressmaker who followed had orders to make them just alike.

On the evening of their graduation there were those in the audience who, knowing, and looking upon Gladys Pettingill in her simple white frock with its total lack of costly adornment, yet thought her the loveliest and queenliest of them all, while in both girls' hearts was blossoming forth a beautiful new flower—the flower of love and kindly sisterhood for all.



"'Rory, Rory dear, do you know me?' she asked gently"

SUNDAY READING



What Shall We Do with the "Tares"?

(St. Matthew xiii., 24-30)

By Orin Edson Crooker

THE Bible tells of a farmer who found a kind of false wheat springing up with his sprouting grain. In those times this particular kind of agricultural pest was called "tares." In these days we would probably be content to classify it simply as a "noxious weed."

The question at once arose as to how the farmer should proceed to cope with the pest. One of his hired men suggested that means be taken immediately to "weed out" the undesirable plants. In this, however, the farmer foresaw the destruction also of his growing grain, for in the immature condition of the crop it would be impossible in all cases to distinguish the "tares" from the wheat. He decided, therefore, to let both grow together until the harvest, when the true character of each individual plant could be readily distinguished and the separation accomplished without sacrifice of the wheat itself.

This may have been "good farming" twenty centuries ago, but if we were to handle in a similar manner the "tares" which make their appearance from time to time in our characters we would find it quite as valueless a method of cultivation from a spiritual standpoint as it would also appear in these days to be from an agricultural point of view. These "noxious weeds," if left undisturbed in our characters, would soon crowd out the "good grain" entirely, and there would be no harvest—save one of trouble in the days to come.

A good character, like a good garden, is one in which the weeds are not left to grow. Bad habits, like weeds, are easiest taken care of before they have sunk their roots too deeply into the soil of our lives. And just as the weeds in our garden always grow faster and seem to thrive better than the best of our choicest plants, so the bad habits and other "weeds" of character will speedily choke out the best qualities of mind and heart which we may strive to cultivate, if these are left to grow unchecked and unimpeded.

What, then, shall we do with the "tares" that get a start in our characters? There is but one thing to do. If we value the harvest that is to be, we will root them out as speedily as possible. We must have no fear of destroying in the process some of the real "wheat" or precious "spiritual plants" which it is our chief concern in cultivating, for it is certain that these cannot long survive if the "tares" are left unchecked. It were better to make some sacrifice, if need be, than to have our characters entirely choked with weeds.

The "tares," then, must come out even if we have to plow the whole field under. Better no harvest for a while, at least, than one only of "noxious weeds."

A Composition on Kindness

By Mrs. Haryot Holt Dey

A DEAR girl of fifteen has asked to be assisted to write a composition on "Kindness." A composition is esteemed a trifling affair by the great grown-up world which has so many more serious things to think about and to worry over; and yet, if the stupid, prosy, grown-

up world will stop a minute to consider, it will recall the fact that a composition was once a hard problem when the grown-up world was fifteen itself.

Kindness is an appropriate subject to be treated of by a young girl, so get your pencil, my dear, and put a point on it, and then moisten the point every few minutes while you think about the subject. You might begin by saying that kindness is the loveliest and lovingest of all the virtues. Put it down on your paper that it is a compound virtue, or a combination of many virtues. Think of all the virtues you can, and add them up, and when you have their sum, multiply that by every virtue, separately considered, and the product will be your subject—Kindness. It is the expression of the sum total of every noble, generous impulse of the heart.

You have heard of "the fruits of the spirit," haven't you? Gather them all: there are many flavors belonging to them: they are named patience, gentleness, meekness, and such as that; now put them in a dish, and stew them all together. The flavor of the solution will be that of kindness—just a pleasant blending of every flavor in a composite marmalade, just as the apricot blends the flavor of the peach and the plum.

Weave this into your composition: "Charity suffereth long and is kind." You know charity means love; so after love suffereth long it is only "kind." Say in your composition that anyone can be kind to outsiders, but only good people are kind to the home folks. This is also good to think about in the treatment of little brothers and sisters. Kindness in the home is the sunshine that makes the character expand, and it makes the home the dearest place in the world.

There are certain signs that mean kindness, and the eyes and mouth and tongue and hands have the signs in charge. When the heart is loving and beats in sympathy with the feelings of others, then the eyes hang out a sign. Children and dogs are ready recognizers of these signals of friendship. It is a good thing to cultivate a smile in the heart, for it is sure to shine out of the eyes, and it means kindness; it is the reflection of sympathy and love, and when it promotes action, it glorifies the actor. Thinking about kindness and writing a composition about it is a good idea, because it is likely to work itself out in action, and that is a thousand times better.

Paragraph Sermons

By E. L. Vincent

HALF your worries come from something in our way of living yesterday, and the other half are reflections from the first.

Before night something will happen that will lead you to say, "I don't know which way to turn. I'm so busy." We're glad this is so. The saddest, the loneliest, the most useless man is the man who has nothing to do.

When you do a thing, do it with all your might, then drop it and look for something else. Mourning over the thing that has been done and wishing you might have a chance to do it over again is worse than crying for night to come back when the morning stars are telling of the new day soon to come over the hills.

Smile!

WITHOUT sunshine in the heart there can be no warmth to the brightest day. Smile!

Many an icy heart has been thawed out by the warmth of a smile that came unexpected and unasked. Smile!

It never hurts anyone to be cheerful, and it may do more good than one would ever dream to simply carry an atmosphere of good cheer wherever one goes. Smile!

"Be a radiator and not a refrigerator." There is enough despondency and gloom in the world without any increase on your part. Smile!

Even in the dark a cheerful countenance will be felt. It is impossible to conceal it even from the blind. Smile!

There's never a day so dreary but that the cheerful heart can find a rainbow somewhere among the clouds. Smile!

O. E. C.



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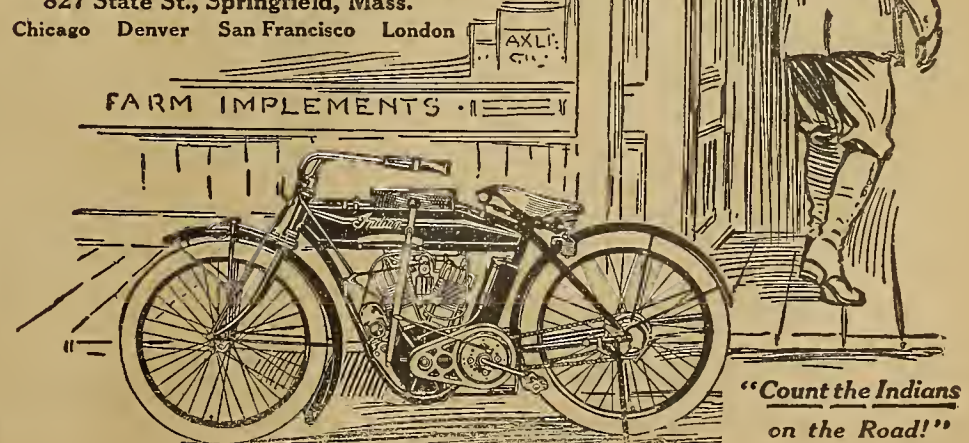
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By Margaret E. Sangster



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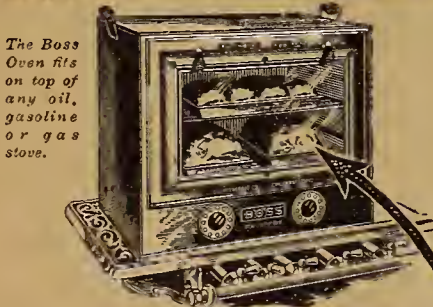
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WHEN summer comes, the city cousin begins to think yearningly about the cousin up-country, whose home is apart from the noise of streets. The roar of the city, incessant, tumultuous, insistent, is heard from morning until night, and no other thing so wears upon weary nerves as this never-ceasing clamor.

When one has lived for a while in a quiet suburban village, one wonders how city dwellers maintain their poise and keep their minds tranquil amid the many noises of the town. In summer, when the windows are open, there are the mingled sounds of traffic, the rush of elevated trains, the warning cries of motor-cars, the clanging of bells, the beating of hammers, and whatever else has to do with the activity and movement of a vast, populous city. It is little wonder that the woman in the town longs to take her children and fly to the woman in the country, who can give her hospitality and peace amid gardens and fields. The Club discussed the summer boarder and the summer guest when it met with the doctor's wife.

Her Busy Season

The hostess presented the subject for discussion. "The woman on the farm," she said, "confronts her busy season at the beginning of summer. The men on the farm, inclusive of the master of the house and his helpers, have their work appointed for them out of doors. They began their labor of plowing and planting in the spring, and as the prosperity of the nation depends largely on the crops, and each tiller of the ground has his individual responsibility for filling the granaries of the world, the man's part is no slight one. Many women in these days are themselves engaging in some department of the farm. They are raising fruit for market, and they do not altogether delegate the work to men. They take an intelligent share in it. They raise poultry and sell eggs, and are able to appreciate prices and conditions as they could not were they obliged to confine themselves to indoor management. Whether the woman of the farm limits her share to household administration, cooking, baking, washing, ironing, and the like, or sees her apples grow in her own orchard, sells them on the trees to buyers who pick and pack them, or does the latter herself and sends her fruit to market, the summer is still her busy season.

"Now it happens that this is the precise season when her city friends come to visit her, and it is an open question whether she shall, being a rich woman, have house-parties for three or four months, without reaping financial profit that she does not need, or, being a poor woman, shall let her house-parties add to her fund in the savings bank. By a poor woman is not meant one who is oppressed by dire want."

The speaker turned as she spoke and surveyed the faces around her. Her listeners were in a sympathetic mood. Not one looked bored. They paid her the compliment of eager attention. She proceeded to remark that she had in her own person tried both ways, having freely and hospitably entertained her friends for some years. In the present year she had decided upon a new departure, and had won the doctor over by much persuasion to agree that, with a son in college and a daughter preparing to go and obligations that were increasing in amount making a drain upon the professional income, there would be no harm in her trying an experiment. "I shall open my home for summer boarders," she said, "and I shall ask my friends to tell me the first requisites for giving them an honest return for what they pay. Such a return as will bring them back again."

Perfect Beds

Mrs. Madison was instantly on her feet. "When city folk come to the country, the boon they most earnestly hope for is refreshing sleep. Of course, the young people are not so keen in their wish for a good night's rest as are the mothers with little children and the wearied brain-workers, the tired teachers and society women who must call a halt. The young people, in fact, do not generally yield to the allurements of a quiet farmhouse. They prefer the gaiety of an inn, and with their parents in tow they may be found in full force at hotels on the shore or in the hills. It is not with them that we are concerned in the Home Interests' Club. As I understand it, we are considering what we can best give to paying or other guests, how we can make them most contented under our roofs and in what direction we should put the emphasis of endeavor. I say, look carefully to the beds. There are still farmhouses in this country where the choice is between billowy feather beds and straw beds that are bumpy and hard. Neither feathers nor straw can be recommended for the making of the perfect bed. A hair mattress or a felt or one with a soft cotton top surmounting a good wire spring furnishes the equipment wanted, the article warranted to let the occupant of the bed sleep in comfort.

"Sheets should be long enough to turn in well at the top for the under sheet, and well at the bottom for the upper sheet. They should also have plenty of width. A narrow, skimpy sheet is an abomination. There should be soft wool blankets, for nights in the country may be cold, and an extra tack-down or quilt at the foot of the bed. The furniture of a bedroom should be keyed to comfort. Few mere decorations are essential, but a closet with plenty of hooks, a bureau with drawers that open and shut with ease and do not stick in damp weather, and an abundant supply of large towels fill the housekeeper's ideal.

"The country house that is supplied with a bathroom and a telephone, that has good sanitation in its plumbing arrangements and can offer to guests perfect beds may count upon being well filled through the season."

What About the Table?

"The country table that is most successful in meeting every demand," said Mrs. Thomas, "is one that does not drift into a monotonous repetition of its weekly bill of fare. Of course, it simplifies matters for the housekeeper to make out a menu from Sunday to Sunday, having the same things for breakfast,

dinner and supper on Monday, Tuesday and Wednesday, so that she may decide without difficulty on her boiled-dinner day, her chicken-fricassee day, her corned-beef-and-cabbage day, etc. Her boarders are likely to grow a little weary when the first edge of their appetites has worn off, of knowing that they will have roast chicken every Sunday, with ice-cream for dessert; veal pot-pie every Monday, with rice pudding; fricassee every Thursday, and not the slightest change in the schedule the summer long. Friday is naturally fish-day everywhere, yet if one live in a land of streams, fresh fish may often be served at breakfast, and creamed codfish appear only occasionally. Berry pies are always welcome if the pastry be light and flakey. Good bread and sweet butter should be served on every country table. There should be milk and eggs and well-cooked cereals.

"The farmer's wife who serves on her breakfast-table sour oatmeal and soggy cakes need not expect the same guests to come to her two summers in succession. City boarders are often extremely unreasonable, but it was a reasonable one who wrote home to her mother that the only good things on the farm where she was boarding were the maple syrup and the water, and she did not think them worth ten dollars a week. Fresh vegetables never lose their flavor if properly cooked. Peas lose their sugared sweetness when carried to a city market. Beans and asparagus and corn taste better when they have been gathered in the morning and prepared for the table before noon than when they are eaten one or two days after they have left the farm. Some of us, it must be admitted, are not really excellent cooks. There are women who can make cake that will take a premium at a county fair, but they cannot roast a joint, stuff a chicken, nor cook vegetables well.

The Question of Domestic Help

A tired little woman next took the floor. "I am a good cook," she said. "I have perfect beds in my home, my garden will supply everything that can be called for, and my house is attractive. I need money as the thirsty traveler in the desert needs an oasis. Some of you know how many setbacks and re-

verses we had last year. You know how ill Dan was, and you have heard about Susie's operation, and pa's rheumatism, and what the drought did, and how desperate and discouraged we felt last winter. The skies are brightening. We begin to see a way out. I have room and to spare, and a city family with plenty of money have written to me in reply to my advertisement, offering to take my entire house for their party for the season. Here comes my trouble. I cannot secure capable help at any price. I thought that Mary Lee could be spared from home, and that the Lees would be glad to let me have her. It was all nicely planned, and Mary was coming to me, when her married sister in Seattle sent a letter and the money to take her there. If my Jennie and I do all the work, I shall be ill by the end of the season. I have sent out lines in every direction, have begged my sisters to come to my relief, but disappointment meets me everywhere. The question of hired help for the farmer's wife is a terribly serious one, and I see no hopeful signs for me just yet. Can someone help me here?"



"Hospitality and peace amid gardens and fields"

"A good plan," suggested Mrs. Elderbury, "is to apply to a charitable organization in one of the cities and secure the aid of a mother who has a child. The mother is generally glad to go to the country and willing to work at small wages, while the child takes up very little room and is not much in the way. There are also immigrant girls who may be had, and though they are unskilled, they learn to work quite well under direction. The difficulty cannot be solved by depending on the daughters of our friends and neighbors. We must go farther afield and have faith that the good Lord will send us the very ones of whom we are in search."

House-Parties in the Country

"I want," said Mrs. Lawrence, "to speak a word in behalf of those of us who were hospitably entertained in the city last winter, and who have the means and the time to devote to guests who come to us from their city homes in summer. I am not alluding to boarders, but to visitors. A house-party may be the most delightful of social occasions, and there are some of us who have young people at home and are glad to let them have the pleasure of receiving a group of friends and giving them a good time. I had a provoking experience once, when a young man, a classmate of my son, actually invited himself to join a house-party and monopolized the best of everything during the fortnight that he stayed. Jack could never explain it, nor could anyone else, but this uninvited guest behaved, to put it plainly, as if he were the cock of the walk. He called for towels as if he were in a hotel, criticized my breakfast-table, poured the entire supply of cream for coffee on his porridge and ran amuck through every convention from the day he came till the day he took leave. He wrote me an enchanting bread-and-butter letter after he had gone home. May I plead," Mrs. Lawrence went on, "with every one of this club not to work too hard through the summer? Work we must, most of us, but there are two methods of resting. One is to go by oneself after the midday meal, sit down in an easy chair, put the feet up on another, fold the hands and think about nothing. Another is to take a nap in the afternoon. I said two ways; there is a third. Keep on hand a good book, and every single day devote an hour to reading it. We women in the country let ourselves go to pieces far too early. No machine can be used constantly and not wear out. And there is no danger of our rusting.

The Club broke up into little informal groups, no vote being taken. There were various opinions freely expressed when everybody seemed to be talking at once, as they did when lemonade and sponge-cake were served. Something to eat and something to stir and sip are promotive of conversation. The members of the Club had many affairs to call them home early, and as they said good-by to their hostess and went away through the summer twilight, they exchanged suggestions.

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Strawberry Recipes

By Elizabeth L. Gilbert

STRAWBERRY PIE—Have a rich crust already baked. Fill with fine, ripe berries, to which have been added one cupful of sugar. Pile high with whipped cream. Serve at once. Or the berries may be baked between two crusts, if preferred.

Shortcake—One scant quart of flour, sifted with three teaspoonfuls of baking-powder and one level teaspoonful of salt. Into this work two heaping tablespoonfuls of cold lard, and mix into a soft dough with one scant pint of sweet milk. Form into two round lumps, and press flat in round cake-pans. Bake in a hot oven. When done, split with a sharp knife, and spread the inside of each half with butter. Put together in layers with a liberal quantity of mashed and sugared berries, decorating the top with large berries cut in halves. Serve with plenty of rich cream.

Angel-Food Pudding—Make an angel-food by the following recipe: One and one-half cupfuls of granulated sugar, one cupful of unsifted flour, one teaspoonful of cream of tartar, one standard measuring-cup full of unbeaten egg whites. Put all the dry ingredients into the sifter; sift five times. Whip the whites stiff, beat in the dry ingredients, and bake about forty minutes in a moderate oven. (Use a square pan for baking.) Prepare a pint of clear gelatin, lemon flavor, according to recipe or the kind of gelatin you use. When this is almost hard and your cake is cold, cut out-center of the cake, and fill with alternate layers of large berries and the gelatin. The gelatin should be soft enough to entirely fill the cavity. Just at serving-time, pile high with whipped cream, and dot with big berries. Suitable for a bride's luncheon.

Strawberry "Cups"—Bake rich yellow cakes in gem-pans; remove the centers, fill with big berries, and serve with cream and sugar. An easy and acceptable dessert for a "quick" dinner.

Tapioca—Soak four tablespoonfuls of tapioca overnight. In the morning add two cupfuls of water, juice of one lemon and one-half cupful of water, juice of one lemon and one-half cupful of sugar. Boil until clear. Pour over one quart of sweetened strawberries, and put on ice till serving-time. Good with or without cream. Serve in tall glasses. See illustration.

Strawberry Ice-Cream—One quart of rich milk, one pint of cream, one cupful of sugar, two beaten eggs, one large tablespoonful of flour, beaten smooth in cold milk. Heat, but do not boil. When cold, freeze in the usual way, adding one quart mashed, sweetened berries when the freezer-handle begins to turn hard.

Strawberry Salad—One-third strawberries, one-third bananas and one-third pineapple. Make a salad-dressing, using lemon-juice instead of vinegar, and mix with an equal quantity of sweetened whipped cream at serving-time. An unusual and very attractive summer salad.

Strawberry Sunshine—One quart of berries and one quart of sugar. Cook fifteen minutes. Spread on platters. Set these in the hot sun until the syrup thickens. It may take three days. A pane of glass may be placed over the dish. Scrape

off into jelly-glasses. Berries prepared this way will keep their bright red color.

Preserves—One pint of sugar and one-half cupful of water. Boil until it will spin a thread, then drop in two quarts of perfect berries, and cook for fifteen minutes. Can at once. Do not try to prepare in larger quantities than the above. This is a most delicious preserve.

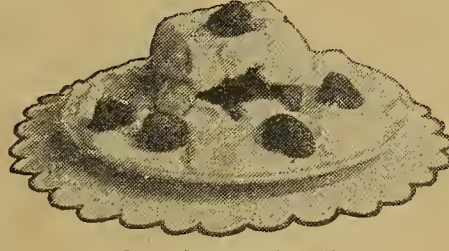
Jelly—Strawberry-juice will not "jell" alone, but has so distinctive a flavor that a small quantity of it added to other juices makes "strawberry" jelly. Strawberry and currant juice mixed, allowing one pint of sugar to each pint of juice, makes a delicious jelly. I always can several quarts of strawberry-juice, and add it to other juices in season. It will "jell" beautifully with the following: apple, blackberry, plum, quince and grape. It improves lemonade and grape juice.



Strawberry Salad



Strawberry Shortcake



Strawberry "Cups"

Strawberry Sherbet—One quart of mashed berries, one pint of sugar, juice of one lemon, one pint of cold water, in which has been dissolved one-half package of gelatin. Pour into freezer, and when it begins to harden, add the stiffly beaten whites of two eggs. When properly frozen, this is hard to tell from ice-cream.

Plain Canned Berries—Three quarts of berries, three cupfuls of sugar and one cupful of water. Let the mixture heat slowly. Then boil just long enough to cook the berries. Seal carefully, and keep in a dark place. Fine for dessert.

Jam—Take one-third mashed berries, one-third grated pineapple and one-third sugar. I always use one pint of each. Boil for fifteen minutes, and can at once.

Drinks—The juice not used for jellies is used for drinks. It makes grape-juice much better, and if used in lemonade once, will always be a "necessary ingredient."

EDITOR'S NOTE—We feel that we have been "doing things" in the matter of our recipes. Our recipes are tested and tried—and most of them are sent us from farms, not made up for the occasion, but culled from the experience of actual housewives. In that way we are sure that the ingredients and the methods called for are possible in any kitchen in the land.

Cooking in the kitchens of apartment-houses and city homes is very different from that of our kitchens. Realizing this, we have tried to make our recipes suited to the wants as well as to the necessities and supplies of our own people. We try to help with the thrashers' dinner, rather than to print recipes for a pink tea. None of the plates in the photographs shown on this page cost more than fifteen cents. The doilies are home-made, but are they not just as pretty and dainty as can be?

Of course, the principal thing is the food. It must be nourishing and economical of time, labor and material. But it ought to be pleasant to look at. For the eyes help digestion, along with smell and the functions of mouth and stomach.

If you will send in your own pet recipe, we shall be very glad to use it, if we can find room. We know you'll be glad to see how someone else does it, anyhow, even if it isn't just your way. Please tell us how you like our recipes, and why.
COAN JOSAPHARE, Fireside Editor.

A First Mortgage Railroad Bond

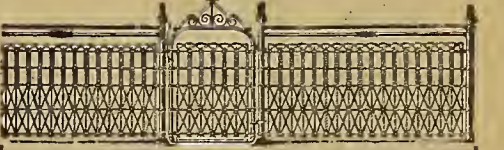
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Young Folks' Department

Boys and Good Roads

By Jessie Field



TO TRY to make the roads of the county better seems to be as catching as the "marble fever" this spring among the boys of Page County. Their slogan is, "The boys of Page County for better roads." The slogan is being carried out in hard work. Last fall at the county industrial exposition the boys of the county made model split-log road-drags and models of good roads and bad roads, charting their school-district roads and telling how each mile might be improved.

That started the road fever, and this spring they decided it would now be real drags, instead of models of drags, and that they would take these real drags and go to work with them. Any boy under twenty-one may enter in the boys' good-roads contest. In the individual work, he enters a half-mile, which is duly recorded and approved by the township trustees, who have given their official sanction and approval to the plan. The boy then receives two signs, one for each end of his half-mile. These signs read:

The half-mile of road of which this marks the _____ end is entered in the
PAGE COUNTY
BOYS' GOOD-ROADS CONTEST

by _____, age _____. Prizes are awarded for the best half-miles of road kept by boys in the townships and the county.

WATCH THIS HALF-MILE! IT MAY WIN! IT IS SURE TO GROW BETTER. THE BOYS OF PAGE COUNTY FOR BETTER ROADS!

Number of rounds dragged. Was the road moist or dry? Were the results good or not? How long a time did it take? There are also prizes offered for the best written account of: "The Work I Did on the Half-Mile of Road I Entered in the Page County Boys' Good-Roads Contest."

There will be a good-roads score-card which will be in the hands of the boys and on the basis of which their roads will be judged. This is being prepared for them by that good-roads authority, Mr. D. Ward King, the friend of all country boys who try to make better roads. All available good-roads bulletins will be sent contestants.

The last week of March was devoted to good-roads rallies throughout the county in the country districts, ending up with a big county meet of all the boys of the county. The state highway commissioner, Mr. McDonald, came to the county for a week with pictures and diagrams and printed matter and went right out in the country to country schoolhouses, the country homes of leaders of teams and wherever boys could get together who are working for good roads.

This is Page County's plan for getting good roads, and we invite you to come down next fall and see what good roads boys can make.

Cousin Sally's Letter

DEAR COUSINS—Hurrah for June! Just think of the fishing, swimming, boating, picnics and gardens to be weeded, all coming as fast as the calendar days rush by.

I wonder how many of my cousins will be helping to make good roads after read-



Miss Field and some of the Page County Road-Makers

The boys do all the work on their half-miles and do it with the road-drag and ordinary farm tools. There is a law in Iowa by which they are paid for their dragging up to a certain limit. Of course, the boys who have this good-roads fever will drag much more than they are paid for—just in order to get the fever out of their systems.

In the fall—on a date which the contestants do not know—there will be a committee of disinterested men, mostly township trustees, who will go into each township and judge the half-miles entered. The farmers in each township are offering prizes of \$5 for the best half-mile, \$3 for the second best and \$2 for the third best. Then a sweepstakes trophy will be awarded to the boy having the very best half-mile in the county.

Besides this individual work is the team work, which is in some ways even better for the boys and for the roads, for it is good to have long stretches of good roads and it is good to have boys who have learned to work together with other boys in their communities. In the team contests a group of boys together must keep up from two to five miles of continuous road. They must have a leader, who may be either a boy or a man. Of course, if he is over twenty-one, he cannot do actual work on the road, and he is limited to helping by his advice and directions to the team. The condition of this road when judged will count eighty points and the length twenty points.

The prizes offered are: For the best team work, \$100; second best, \$75; third best, \$50; fourth best, \$25, and fifth best, \$10. The leader of each of these five teams will receive a medal.

Members entering on a team may also enter in the individual work with the same stretch of road that they enter in the team contest. Each boy keeps a record on a blank furnished him of the following points: Date of dragging,

ing how Miss Field has started the Page County, Iowa, boys to work at road-improving. After all, it's as much fun as a picnic if you do it with a will. Is any cousin going to try?

As this is a vacation month, I think we ought to have a vacation contest. Write me a letter, not longer than fifty words, if you can help it, telling me what you would like to do this summer, and why you want to do it. I'll give five prizes to the girls and five prizes to the boys for the best answers. And I want every member of the Cousin Sally Club to compete. Remember, the contests are for our Club members, only.

Have your father or mother endorse your contest letters so I'll know they're original, and be sure to put your address in the letter. Address the letters to me.

Affectionately yours,
COUSIN SALLY.

Winners in February Contest

I KNOW you'll be interested to know who I won the prizes in our February contest. The first prize was awarded to Frank C. Hout, age 15, of Middlebury, Indiana. The original poem he sent in answer to the questions, "How does Balfour-Ker's picture make you feel, and where would you hang a copy of it?" is excellent, and we may print it later. The other prize-winners are: Mildred Aldrich, age 8, Alford, Pennsylvania; Bessie Belle Ballard, age 8, Millington, Massachusetts; Glen Chrisman, age 8, Wauneta, Kansas; Lillian Lee Blair, age 9, Highland Park Station, Tennessee; E. Louise Miller, age 10, Rodney, Mississippi; Harold Shackleton, age 11, Missaukee, Michigan; Helen Brill, age 13, Richmond, Virginia; Bonnie A. Gillespie, age 13, Casey, Illinois; Howard Ellsmere Fuller, age 16, Loxley, Alabama; Richard L. Davis, 481 West Sixth St., Spencer, Iowa.



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Designs by Grace Margaret Gould



No. 2038—Tucked Lingerie Waist

Cut for 32, 34, 36, 38 and 40 inch bust. Material required for 36-inch bust, two and five-eighths yards of thirty-six-inch material. This is a very good pattern for such materials as fine batiste, dotted Swiss or cotton voile, with simple lace trimming. Price of pattern, ten cents



No. 2038



No. 1699



No. 1699—Empire Dressing-Sacque

Pattern cut for 32, 36 and 40 inch bust measures—small, medium and large. Quantity of material required for 36-inch bust, four yards of twenty-seven-inch material, or two and seven-eighths yards of thirty-six-inch material. Price of pattern, ten cents



No. 1541—Negligee with Kimono Sleeves

Pattern cut for 32, 36 and 40 inch bust measures—small, medium and large. Quantity of material required for medium size, four yards of twenty-two-inch material, or two and three-fourths yards of thirty-six-inch material. Price of this pattern is ten cents



No. 2039



No. 1541



No. 2039—Blouse for Embroidered Patterns

Pattern cut for 32, 34, 36, 38, 40, 42 and 44 inch bust measures. Quantity of material required for medium size, or 36-inch bust, two and one-fourth yards of thirty-six-inch material. A simple embroidered design will make this waist very attractive. Price of pattern, ten cents



No. 1639—Double-Breasted Overcoat

Pattern cut for 32, 36 and 40 inch bust measures—small, medium and large. Quantity of material required for medium size, or 36-inch bust, seven yards of thirty-six-inch material, or five and one-fourth yards of fifty-four-inch material. Ratine, that new soft coat material, is a practical fabric for this overcoat. The price of this pattern is ten cents



No. 1639



No. 1644



No. 1644

No. 1644—Combination Corset-Cover, Skirt and Drawers

Pattern cut for 32, 34, 36, 38, 40, 42 and 44 inch bust measures. Quantity of material required for medium size, or 36-inch bust, six yards of twenty-two-inch material, or three and one-half yards of thirty-six-inch material. A simple scalloped edging makes a dainty trimming for this practical combination. Price of pattern, ten cents



No. 1906



No. 1906

No. 1906—Room Gown with Large Collar

Pattern cut for 32, 36, 40 and 44 inch bust measures. Quantity of material for 36-inch bust, seven and five-eighths yards of twenty-seven-inch material, or four and one-eighth yards of forty-four-inch material. The collar of this negligee is very new. This is a very good style wrapper. It is easy to make and yet it is dainty. The flowered lawns are pretty developed like this model, and so are the bordered materials when the border is used as the trimming. It is also practical for heavy materials. Price of this pattern, ten cents



No. 1459



No. 1459

No. 1459—Combination Corset-Cover and Knickerbockers

Pattern cut for 34, 36, 38 and 40 inch bust measures. Quantity of material required for 36-inch bust, four and one-eighth yards of twenty-seven-inch material, or three and one-eighth yards of thirty-six-inch material. This combination may have the drawers either gathered into a band at the knees or hanging loose. Price of this pattern is ten cents

The pattern designs illustrated on this page are sure to appeal to the home woman. In the first place, they are all of them the sort of garments that should be included in the summer wardrobe, and in the second place, they combine smartness with simplicity. The patterns may be ordered from the nearest of the following 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, 1538 California Street, Denver, Colorado. Be sure to state exact number and size of the pattern you desire



No. 1596—New-Style Blouse without Belt

Cut for 32, 34, 36 and 38 inch bust. Material for 36-inch bust, one and three-fourths yards of thirty-six-inch material, with one and five-eighths yards of lace. The price of this pattern is ten cents

No. 1597—Scant Skirt Gathered at Waist

Cut for 22, 24, 26 and 28 inch waist. Material for 26-inch waist, two and seven-eighths yards of thirty-six-inch material. Price of this pattern, ten cents

It is always a good plan to include a light-weight long coat in the summer outfit. There are many times during this outdoor season when a coat is a necessity, and it is a decided extravagance to wear the coat that belongs to your suit, with separate dresses. The coat illustrated on this page in pattern No. 1639 is a practical one and may be developed in a number of different materials. Light-weight dark-blue serge would be both serviceable and stylish, especially if it had collars and cuffs of white Turkish toweling and white pearl buttons, the buttons being sewed on with dark-blue silk. Heavy, natural-colored crash would be another good material to use, and so would pongee. These two fabrics would look well with collars and cuffs of black satin or of colored linen, or if a very plain coat was wanted, the collar and cuffs could be of the same material as the coat. This is a simple pattern to make up, as the back is loose fitting, being held in by buttoned-over straps, while each side of the front is made in one piece only. The sleeves are plain two-piece ones, and the collar is far easier to adjust than a notched tailored collar. This collar may be made plain, or it may be trimmed with narrow soutache braid.

A simple dress of batiste or lawn is a useful costume for summer wear. Made like the model shown on this page in patterns Nos. 1596 and 1597, it would be appropriate for church wear, evening entertainments, or to wear to sewing circles and visiting. The waist may be made either with or without a collar. The yoke and the cuffs are made of white embroidery, though lace may be substituted if desired. The skirt is rather scant, with slight gathers at the waist-line. It may be finished with a band of embroidery to match the embroidery on the waist, or it may be plain. A soft girdle of colored ribbon gives an attractive finishing touch to this simple dress.

The two waists shown at the top of the page are both practical and dainty. No. 2039 was especially designed for the embroidered-waist patterns and is a good model to use in making up these embroidered waists.

The combination pattern, No. 1644, is a particularly good one. It includes three garments, the plain corset-cover, the open drawers and the petticoat section, which covers the back of the drawers and is included in the side seams.

The Gift Club



Jean West
Secretary

THESE glorious spring days fill me with the keenest desire to close my desk, lock up my office, throw away the key and wander off into the woods and fields with my camera tucked under one arm and a book under the other. I'd like to stop at your homes, my Club girls, and try to persuade you to put your work and worry and cares aside and come out and be "knee-deep in June" with me. But I can't do it! You girls keep me so busy here in town that I haven't a minute to spare, and I know that you are busy, too. This Gift Club of ours makes me think of a big hive of bees! We're all buzzing away as hard as we can, and we haven't even a Queen Bee, for your Secretary is just as busy as any one of you!

It is not every hive, however, that can produce the kind of honey that our "bees" make—beautiful things for their homes and themselves, lovely silver and exquisite jewelry! I think that we are the only hive in the world that is making this particular brand of honey!

I've been writing letters all morning long to girls who have asked me to explain the mystery of The Gift Club. Those dear, doubtful girls who can hardly believe that it is all true! But they'll be convinced when they hear from me! As I've often said before, any girl, anywhere, can become a member of The Gift Club and get just as many of the splendid gifts in our Cupboard as she wants, without spending a single penny for them!

Wouldn't you like to read a few letters from members of our Club? They will show you better than anything I can say just how much the Club is helping our FARM AND FIRESIDE girls to make their dreams come true.

DEAR MISS WEST:

I do so want to thank you for that beautiful embroidery-set that you sent me. I've been having the jolliest time this afternoon sitting out on the porch embroidering the corset-cover. My chum came over, and when I showed her all the perforated patterns and the corset-cover and centerpiece stamped ready to be embroidered, she could hardly believe her eyes. She wants to join our Gift Club, too, so that she can have some of these lovely presents. It does not seem as though I did any work at all for the set. M. L., Kansas.

And here is a letter from a little school-girl in Ohio. She says:

DEAR JEAN WEST:

I'm so glad that vacation is almost here, because then I'll have more time for the Club. I just love everything about it, and when I'm through school, I'm going to pitch in and work like a beaver to get all those dandy presents that you have stowed away in your magic Cupboard. You are so generous to us girls, and I do not see how anyone could fail to appreciate it!

Our girls certainly do appreciate this opportunity that is open to them to get the things they've always longed for—there's no doubt about that! Just read this letter and see:

If two months ago anyone had told me that I could get silver for my table, lace curtains for my living-room and a beautiful little clock, all without spending a penny for them, I should have said they were crazy. But since then I've found The Gift Club, and now I know that the girls who write you such glowing letters do not half express what they really feel about the Club. I've tried again and again to thank you for the lovely things that you've given me, but I can't do it. Really, I do think that your idea of paying us for our work in gifts instead of in money is splendid. It's often so hard for us farm women to get to town and buy the things we want, and it's just fine to know that you are right there, willing to do that very thing for us!

There! Do you wonder that I'm proud and happy to be at the head of The Gift Club when I receive letters like that? Here is just a wee bit of a note from a Gift Club girl who seems to be overcome at her own good fortune:

Can it be I, or am I dreaming? That beautiful manicure-set came, and I cannot believe that it is really mine. Thank you a thousand times!

A girl from Maine writes:

We are two sisters, Miss West, and we need all kinds of things—clothes

principally. If there is any chance to earn them in The Gift Club, do let us join.

I've just answered that note and told my new little friend that we try to provide whatever our girls want. If we haven't the one particular thing in our Gift Cupboard that your heart is set on, we'll have it there before you can say Jack Robinson! There is just one thing that I want to do and that is to please the members of our Club and make them happy as larks all the day long.

Remember that The Gift Club is for every girl and woman reader of FARM AND FIRESIDE who wants for herself and her home the many little luxuries and dainty fixings that it is impossible to squeeze out of the family income. Let me tell you our secret. I shall be glad to whisper it—on paper—if you will tell me your name and address. Just a line on a postal card will bring you a prompt reply. Do let me hear from you soon. I shall save a place for you in our Club.

Jean West

Secretary, Gift Club,
FARM AND FIRESIDE, Springfield, Ohio.



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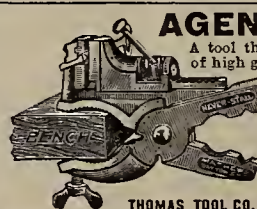
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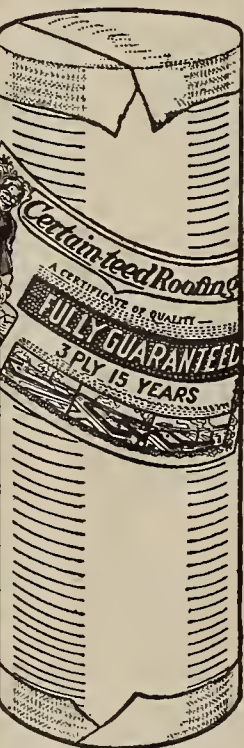
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