

MICHIGAN FARMER

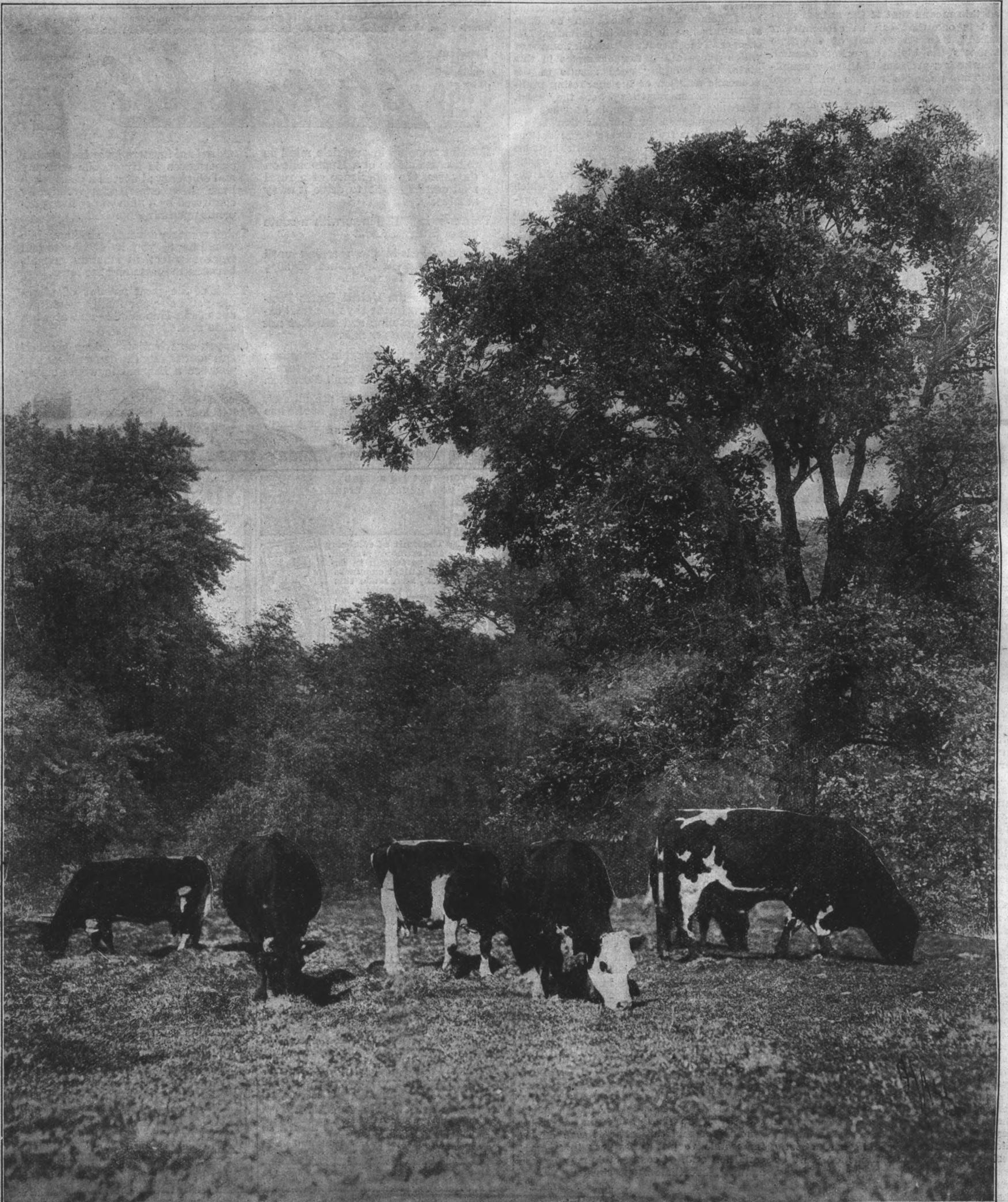
AND LIVE STOCK JOURNAL.
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MARKETING PROBLEMS.

THE problem of marketing farm products in such a manner as to get a maximum return from them is as great as the problem of securing a maximum return for the capital and labor invested in their production. Indeed, the problem of profitable marketing involves economical production. Manufacturers and commercial producers of every kind are constantly on the alert to devise means of cheapening the cost of production to the end that the selling problem may be simplified and competition easily met. This is an important factor in the farmer's as well as the manufacturer's selling problem and should not be neglected.

Another equally important factor is the quality of the product to be sold. Successful live stock feeders have often been heard to remark that an animal "well bought is half sold." To the initiated this means that if the animal purchased is one that can be economically "finished" into an animal of the type that meets the highest market demand, the marketing problem is thereby simplified. This principle applies with equal force in other lines of production and again brings the marketing problem in close alignment with the problem of production.

But simplify it as we may by the solution of the problem of production, the marketing problem merits the most serious consideration by farmers, both individually and collectively. To the average farmer, the problem is one of converting the diversified products of his farm into cash through the established channels of trade as quickly and to as good advantage as possible. Let us then first consider his conditions, with a view to offering helpful suggestions if possible.

When the necessity for quick marketing exists, the speculative phase of the problem is eliminated at the start, and little remains to be done but to look for a buyer at the best obtainable price. This necessity for immediate selling as soon as the crop is harvested is, however, sometimes a handicap in successful marketing. Not alone because the market is apt to be oversupplied at such times, owing to the fact that many producers find themselves in a similar condition, but also to the fact that purchasers realize this condition to a very general extent and are not slow to take advantage of it when opportunity offers. Perhaps it may also happen that the farmer has sought credit of the very party to whom he desires to sell a marketable product, which is a further disadvantage and one that should be avoided as a first step in the correct solution of the marketing problem. The man who pays cash for what he buys and obtains cash for what he sells is always in a better position to make a good bargain, whether he be a buyer or a seller. Undoubtedly the credit system of doing business is a damage to the farmer who employs it, as well as to the dealer with whom he trades, nor is it often necessary to employ one's credit in this manner. The very first step toward a good business solution of this problem should involve a visit to the local banker, a frank talk with him regarding the need for money on the part of the farmer, the purposes for which it is needed and the resources which warrant the making of a small loan to cover present needs. Having arranged matters with the banker a commercial bank account should be opened, upon which checks can be drawn for the payment of bills which must be met, which will prove an added business safeguard, since the checks will serve as a receipt to show that the bills have been paid. Because a man is in a position to hold his products after they are ready to market may not be a good reason why he should do so. This problem will then be up to the judgment of the farmer, who will have more latitude for the exercise of his judgment than in the case where necessity compels him to sell at once.

But growing the produce is a factor of the marketing problem in still another sense, because the man who has some special product for which he can secure a special market is in a much better position to market that product to advantage. Every farmer should have at least one special product for which he can create a special market. It may be seed wheat; it may be pure-bred live stock; it may be a good quality of dairy butter, chickens suitable for table use, strictly fresh eggs or various kinds of fruit or vegetables. If he grows or produces a special quality of any product of the

farm, any intelligent farmer can, by a little effort, create a special market in some nearby city or town for that product, and by distributing it direct to the customers thus eliminate the middle-man and his profits in that special product. Very many farmers are making good money out of special products in this manner, and there is room for more profitable expansion of this kind of special production and marketing.

But the final solution of the marketing problem, so far as the general products of the farm are concerned, lies more in co-operative effort among producers along special lines, than in individual efforts such as are above noted. Much space has been devoted to emphasizing this fact in the Michigan Farmer, and it will not be necessary or advisable to dwell upon it in this article. The co-operative creameries and cheese factories have demonstrated what can be done along this line in a special industry. The co-operative produce associations, of which there are a few examples in this state, are bringing good results in the economic solution of the marketing problem in the communities where they exist. Probably the best example of what can be accomplished in this direction is afforded by the fruit growers' organizations of the west, where the work includes supervision of the packing as well as the distributing of the fruit, insuring an absolute uniformity in the product, which enhances its market value to the purchaser. The time will surely come when the great bulk of the products of our farms will be marketed in this manner, as is now the case in some of the smaller European countries, where the results have been most satisfactory in added profits to the producer.

But in the meantime, much can be done by individual effort to improve the general quality of the products marketed, and to seek a market in which that quality will be appreciated and willingly paid for.

LILLIE FARMSTEAD NOTES.

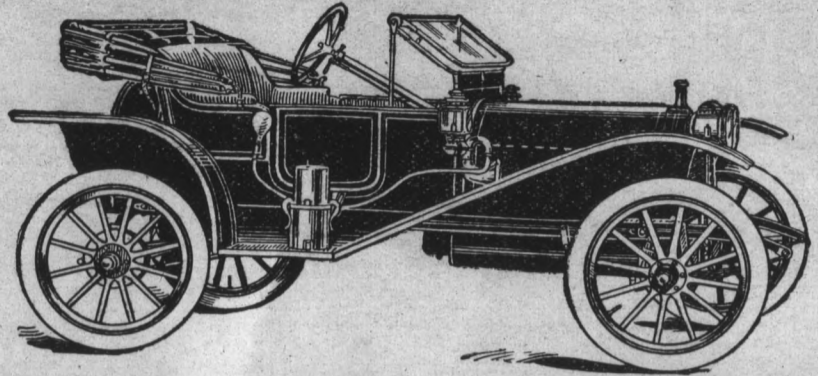
Preparing the Land for Wheat.

As I have stated before, we got our oat and pea ground plowed in pretty good time, and did a good fair job of plowing this year. Since then we have been working it quite thoroughly. We followed the plow immediately with the acme harrow and followed the acme harrow with the roller. This took advantage of any moisture that was in the soil and worked up many lumps before they had time to harden. There was not, however, very much moisture in the soil, and we haven't had any since, so there are a few little places with quite hard clay lumps, though they are not bad this year. Now, since rolling, after plowing, we have gone over the entire 30 acres both ways with a disc harrow, rolled it all again, gone over it with a smoothing harrow, rolled all the clay places again, and now have gone over it once with a spring tooth harrow and have begun to cross it. I will follow this with a corrugated roller and I hope by that time rain will come so that we can put the land in wheat. We are getting a fine seed bed. The ground is becoming compact down as far as the plowing with this excessive working and rolling and the surface two or three inches is becoming fine and mellow, making an ideal seed bed. The weather has been so dry, however, that I cannot think of sowing wheat until we get a rain. I should be afraid that there would not be moisture enough in the soil so that the wheat could germinate and it would probably swell and mould and the germinating power of it would be destroyed.

Then again, this dry, hot weather if we should sow the wheat, it would be very liable to be injured by the Hessian fly. Last year we sowed the wheat from the first of September but the ground was moist enough so that the wheat could come up and make a rapid growth. There is nothing so detrimental to the work of the Hessian fly as to have the ground in so fertile a condition and containing sufficient moisture so that the plant outgrows its ravages if there are any. I can remember seasons when much the same condition as to moisture prevailed as the present one, that when it did rain we had such an excessive amount of moisture that it was almost impossible to put the wheat in in good condition and, of course, this may happen again. Nevertheless one can only wait.

COLON C. LILLIE.

Rural Mail Carrier Proves Hupmobile's Usefulness to Farmers



Runabout—4 cylinders, 20 H. P., Bosch magneto, sliding gear transmission. Price includes top, windshield, gas lamps and generator; three oil lamps, tools and horn.
Touring Car, same equipment, \$1000. Interchangeable wagon body for farm use, \$25 extra.

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\$750
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Detroit

Hupmobile

Touring Car
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equipped
\$900
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If doubt remains in anyone's mind as to the usefulness of a Hupmobile on the farm, the experience of a rural mail carrier ought to drive it away absolutely.

This man is J. E. Jones, with a route out of Stuttgart, Ark.

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THE FARM WORK.

Alfalfa.

We cut our first crop of alfalfa from the spring seeding the middle of August, about nine weeks from the time of seeding. Some weeds were getting in, and quite a little of the alfalfa was beginning to blossom, so we thought best to clip it, setting the mower rather high. This was soon after a heavy rain so the soil was full of moisture, and the crop is now growing finely again. We raked up the alfalfa into small windrows as soon as it had wilted, and before the leaves would rattle off, and let it lie a couple of days, as the weather was fair, then bunched it in small bunches and hauled it the next day, as the weather was threatening. It was still rather heavy, but is keeping well over the scaffolds, that is, what is left of it, for we are feeding it in connection with clover hay to the horses and cows, and it seems to be relished fully better than the clover. There is a pleasant odor about it which is agreeable to those who handle it. We secured about one-half ton per acre from this cutting. I think the crop will still make a good growth for winter protection. It will be remembered that this ground has been under cultivation only about four seasons, and the alfalfa followed a clover sod after wheat following strawberries. Sweet clover soil was spread over one-third of the plot, but as yet we can see no difference. The alfalfa has a fair color, yet there is a slight yellowing in spots, which may indicate a lack of sufficient bacteria. The agent from the soil department of the college advised against sowing this piece, fearing June grass, but we wished to get it started this season, and chanced it. As yet little June grass has appeared, and weeds have not been very troublesome, barnyard grass being the most prevalent. This was pulled by hand when the alfalfa was about four to six inches high, which gave it a good start of the weeds. We have a plot which is now in cucumbers and pop-corn, that I think we shall seed to alfalfa next season. It was heavily manured last winter, and is perfectly clean now.

Corn.

Corn is a better crop than usual in this locality, and is about the only good crop this season. We seldom have a failure of everything, and the corn crop will make up for the light oat and wheat crops. Some of the corn is down badly from the wind in late July, and some is injured by the hail of that time. We have one field that was badly ripped up by the hail, but was not blown over, and another field a half mile from it that was not touched by the hail, but was badly blown over, and is mean to cut. Most corn is now ready to cut, and many pieces are down too badly to do good work with the binder, and will have to be cut by hand. We except to sow oats and vetch in one field we are cutting for a cover crop if we get a good shower soon. It was down too badly to sow it in the corn. This field was set to apple and peach trees last spring. The other field we expect to sow to wheat, and will disk it up and sow as soon as the corn is cut.

We have a half acre of pop-corn, that has made a more rank growth than I ever saw before for pop-corn. It is on a "wornout farm," too. A year ago we gave it a dressing with stable manure. The wheat crop and seeding which followed were light, and we manured it again last winter, and plowed it early, later hauling on a top dressing of fine manure and disking and harrowing until about June 1, when it was planted to corn and cucumbers. The corn is thick and rank, with ears as high as one's head in places. It is of the golden queen variety, and will be a mammoth crop if the frost holds off a few weeks.

Wheat.

Our wheat ground, following wheat, which was plowed in late July after having a coat of manure, has been harrowed twice and disked once, and we will continue to work it until seeding time, probably about September 15. This should make a good seed bed, which will hold moisture well. The last year's crop is not turning out well, chiefly on account of the fly, and it is probable that there will be considerable late seeding this year. I believe those who sow about the middle of September, as a rule, will strike it about right. There is such a thing as getting the seeding too late as well as too early. On many seasons the early seeding does best. In this as in most other things, the golden mean is best, in the long run.

Building.

We are trying to build, or rather work

over, old buildings, and this interferes considerably with the farm work. Last year we completed the stabling in our large barn, and we have now moved a former horse barn from its position near the road, and are converting it into a fruit storage and packing house, with eight-foot cellar beneath. This necessitated the building of an eight-foot wall, 172 feet in length, the building being 32x38, with a 16-foot approach to the cellar for a driveway. When completed we can back into the cellar, drive through the first floor, or unload on a level with the wagon bed at the side. The attic will be used for storage of barrels, etc.

We have also moved a small house from an undesirable location, and are putting a wall and cellar beneath it, and building to it. This makes a considerable addition to the farm work, and makes it difficult to get everything done when it should be. Corn cutting will have to wait a few days.

Calhoun Co.

S. B. HARTMAN.

HOW TO GET THE GREATEST FOOD VALUE OUT OF THE CORN CROP.

We have no silo, but have a very fine field of corn which was planted just 90 days ago (August 20). It is a mixed variety of two late corns and by picking the earliest ears, I have developed it into a ninety-day corn. How can I get the most feeding value out of this good crop—Husk it with a corn shredder or by hand, and feed the stalks whole, or run them through a cutting box after husking?

Lapeer Co.

B. R.

I think there would be little difference so far as getting the greatest amount of food value out of the corn crop in this instance, whether one husked it by hand and then shredded the cornstalks or cut them and fed them in that way, or whether one husked the corn in the first place with a husker and shredder and shredded the stalks at the same time. All the corn that I do not put into the silo I husk with a corn husker and shredder. Of course, you can't do quite as nice a job husking with a corn husker as you can by hand. The corn doesn't look quite so well—the husks are not all removed—but I don't care very much about that. The corn is soon fed out and it is practically impossible to husk any considerable amount of corn by hand, now, on account of the labor problem. There is no doubt but what you can get the most food value out of the stalks by having them shredded. I think they are better shredded than they are cut. If you cut dry cornstalks with an ensilage cutter the edges are hard, the pieces are not torn apart, and the cattle will leave a large amount of it. On the other hand, if the stalks are shredded, they are torn apart, they pack into mow better, they are more apt to be softened in the mow, and what is not eaten makes better bedding. It is barely possible if this crop was husked by hand the stalks drawn up and stacked and then they were run through a cutting box as fast as you wanted to feed them and fed fresh in this way, there would be less waste, but this would cost more.

COLON C. LILLIE.

SEEDING CORN GROUND TO RYE.

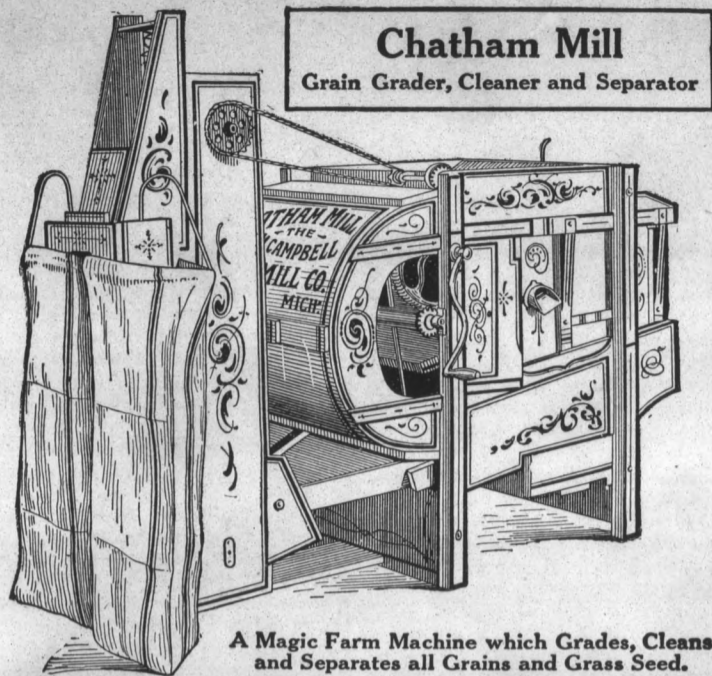
Would it pay me to sow to rye after the corn used for silage is taken off? It benefit the ground? I am going to put corn in the same field next year.

Monroe Co.

F. W. W.

It is most excellent practice to seed corn ground to rye, providing you can get the corn off early enough so that the rye can get a start in the fall. If you can get the corn off in the early part of September and get it seeded to rye, the probability is that you will get a good growth of rye and it will give you considerable fall pasture and give you early spring pasture. If you are to put this field into corn again you will not need to plow it so very early in the spring and you can get quite a little bit of pasture from the rye. One thing, however, must be taken into consideration, and that is, the nature of the soil in this field. If it is a sandy, gravelly soil you can pasture it quite late in the fall and pretty early in the spring without doing injury to its mechanical condition, but on the other hand, if it is a clay soil be careful about pasturing it when it is wet, because the cattle will tramp upon it and it would probably do as much harm as they would get good out of the rye. Even though you do not succeed in getting the corn off early enough so that the rye makes a good growth for pasture this fall, it is a hardy plant and will come up and make early spring pasture.

COLON C. LILLIE.



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I built this System on the Eternal Truth found in the Family Bible, "As Ye Sow So Shall Ye Reap."

Forty-four years ago, as a boy on a farm, I saw the tremendous possibilities of planting pure, clean, healthy seed.

I saw that the only sure way to make farming pay BIG was to plant perfect seed and no other seed.

I proved on farms what Agricultural Experts were proving at State Farming Colleges, that Fat Seed Make Fat Crops and Fat Crops Make Fat Bank Rolls.

I Invent a Remarkable Farm Machine

But my System would never have become famous had I merely proved that planting pure seed means bumper crops. It was up to me to show my neighbors and other farmers how to get pure seed. I found that buying seed from dealers every season was expensive

and bothersome business, and that often such seed failed to thrive when planted on strange ground. Nor did hauling seed grain to the elevator prove successful, convenient or cheap. Even if I got the weed seed, dirt and poor grains taken out, usually some other farmer's weed seed crept in. And it took time to haul my grain to the elevator and back. I noticed, too, that when a farmer sold his uncleaned grain to the elevator, he got not a red cent for his screenings.

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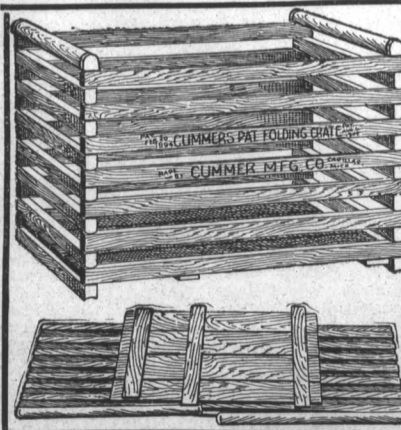
Please Write Me Today what your main crops are, how many bushels you raise per acre. If you can't find time to do that, just drop me a line—a postal will do. I want to get in touch with every live farmer in the U. S. and Canada. WRITE!

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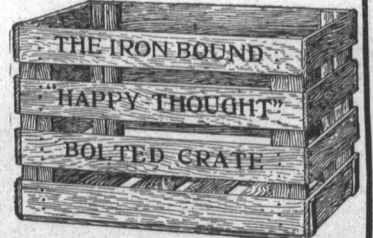
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LIVE STOCK

THE AMERICAN HOG.

It is safe to assert that the hogs are not appreciated at their full value on most of the farms in this country. They are looked upon as a necessary evil that works in between other things and prevents wastes. If it were not for the pigs that are ready to devour everything that is eatable, and convert it into marketable meat, considerable quantities of different things that are raised on the farm would be wasted. It is too often the case that the pigs are despised on account of their most meritorious characteristics, their appetite. If it were not for the good appetite and willingness to make hogs of themselves in a short period of time, the pigs would be of no more value to the farmer than were their slow growing ancestors. The improved appetite which the modern pigs possess, enables them to become a modern type of hog of great value.

The hog crop of the country during 1910 sold for more money than the wheat crop, and more than all the sheep and horses. They were the readiest means of getting money with which to meet expenses, buy luxuries, and lift mortgages, of anything on the farm in the shape of meat producers; and they did it in a very short period of time. A very large percentage of pork meats sold were from light weight hogs, not exceeding 225 lbs. each, which weight was attained in less than six months' time. These weights gave the Michigan farmers an advantage not often considered; they could raise two crops of pigs, one in the spring and one in the fall, fit the pigs for market at an age when they would make the greatest gains for the feed consumed, and bring them the cash in hand twice per year.

While traveling in the corn belt, I noticed that the farmers allowed their sows to farrow at nearly all times of the year. Then, by keeping the pigs growing there were some ready for market at all times of the year. The inflow of hogs at the great market centers is very constant, with heavy shipments during the late fall and winter months. This constant run of hogs to market makes it possible for dealers to supply all classes of trade at nearly all times of the year. The butcher's light weight, fresh pork trade, has reached great proportions, taking a considerable from what formerly went for different cuts of beef and mutton. At present fresh pork meats are very popular at hotels, restaurants and in city families.

Economical Meat Producers.

It is pretty generally understood that for a given amount of feed consumed, the pigs give the largest returns in live weights. As the prices for live hogs are as high or higher than for either beef cattle or mutton sheep, it is easily seen that during the growing and fattening periods the pigs make the larger returns for the feed consumed. If grass or forage feeds are supplied in connection with the grain feeds, the cost of production is so greatly reduced that the gap between the cost of live hogs and live beef animals or mutton sheep, is widened to that extent that it is no wonder that the American farmers turn their attention to the raising and feeding pigs to that extent that the income from the porkers exceeds that from both sheep and horses.

But there is still another point that should be considered in regard to the economical meat question; the dealers and consumers get more profit for the trouble of handling and the amount of money paid for the stock in the first place. While the beef steer and the mutton sheep dress away around fifty per cent, the pigs dress away only about twenty per cent. With the same prices alive, and the same prices for the dressed meats, there is more profit to the dealers on the pork meats than for either of the others. To use the common expression with the consumers the better classes of pork meats "go farther when used in the family than either the beef or mutton." And still farther, the pigs furnish a greater variety of popular cuts of meat than the other animals.

The World's Supply of Hogs.

The fact does not seem to be very generally understood that more than one-half of all the hogs in all the world are raised and marketed in the United States. The Americans are becoming heavy consumers of pork meats, and yet about three-fourths of all the pork meats that are commercially distributed throughout

the civilized world are produced and prepared for distribution in the United States. The pork producing business of this country has become so dominant, that it is said that in nearly all parts of the world, whether it is mess pork, bacon, hams or lard that is exposed for sale, it is all accredited as the products of the American hog.

The American pork meats are so universally popular that they are used by all the leading religious sects that form a part of modern civilization, with the exception of the Jews and Mohamedans. With the increasing popularity of pork meats, on account of palatability and economy, we may reasonably expect to be given to understand that the unfounded prejudices against the hog has passed away, and that the meat from the domestic pig, when well prepared for eating, will occupy its proper position, and be, as it was in ancient China, food considered suitable for feasts and sacrifices, as well as food fit for the gods.

The Farmer Behind It All.

With all that can be said in regard to the magnitude of the home and export trade in pork meats, the genius of the American farmer is behind it all and should be given the amount of credit due him. As great as is the genius of the packer, as wonderful as is the operations of the live stock markets, the farmers are behind both these forces, and make it possible for them to do business. Withdraw the farmers and the business would vanish. And still farther, the genius of the farmer in seeking out plans by which the quality of the stock has been improved, and the meats supplied in form and flavor to suit the demands of the consumers at home and abroad, has been the greatest factor in enlarging the field for operations, and extending the trade in the American hog and his products until it has justly become the marvel of the civilized world.

Wayne Co.

N. A. CLAPP.

SEE THE LIVE STOCK AT THE STATE FAIR.

That there is great need for improvement in the average quality of Michigan live stock is disputed by no one who is at all familiar with the conditions. That there is a growing interest in live stock improvement none can doubt who are in present touch with the situation. Farmers are recognizing the fact more generally than ever before that it costs nearly as much to grow a poor animal as a good one.

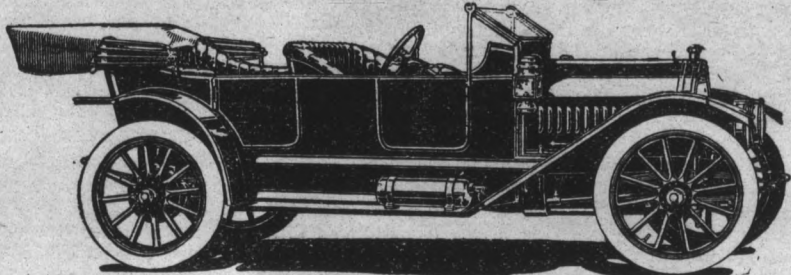
The fact that there is no comparison between the poor animal and the good one, when grown, can nowhere be seen to better advantage than at the big fairs, where the best products of our most skillful breeders in every line of live stock production are exhibited. Every farmer who attends the State Fair, as every farmer should who can possibly arrange to do so, should make a careful study of the live stock exhibits. Here, as nowhere else so near at home, can he study the perfection of the type and quality which count for so much in every show ring, and here, as nowhere else, will he derive an inspiration for the improvement of his own live stock.

The entries made in the several departments of the fair indicate that the live stock show this year will be better than ordinary, and this should prove an inducement for every farmer to attend the fair if he were not attracted by its many other attractive departments.

H. A. Leaders, of Iowa, who marketed a car load of 17 head of fancy branded Wyoming Hereford steers at Chicago recently at an extremely high price, bought them in Omaha, and during a six months' feed they made an average gain of around 480 lbs. Mr. Leaders stated that the cattle were started on ground and ear corn, timothy and clover hay, being kept on this feed for about two months. The corn ration was gradually changed from ear to shelled corn. They were fed corn on grass only about one month, and then placed in a dry feed lot. The ration consisted of shelled corn, alfalfa-molasses feed, with oil meal and oats as a conditioner toward the latter part of the feeding period.

The decreasing receipts of matured hogs at western markets help to confirm the practically unanimous reports that the supply has been nearly exhausted. Taking the country as a whole, there are said to be plenty of pigs and thrifty young hogs that are gaining in weight rapidly, but some weeks are needed to bring them to suitable maturity for packers' purposes. All kinds of hogs are bringing high prices, even the commoner grade, but prime light hogs are especially high, with a big demand for hogs adapted for converting into fresh pig pork and bacon. The country packers are again coming into prominence and are doing a big business in selling bacon and hams of high grade.

1912 Jackson value guaranteed by ten long years' experience



Model 42—Five passenger; 40 H. P.; 118 inch wheelbase; full elliptic springs front and rear; 34 x 4-inch tires. Including full equipment of top, windshield, gas tank, etc.—\$1500

Four reasons make this the most notable announcement of the new season.

Jackson
No hill too steep
No sand too deep

These reasons are the extraordinary power and size of the new Jacksons; the extraordinary prices; and the fact that the Jackson experience and reputation of ten years' standing is back of the cars.

You know about the majority of the new season's productions.

Have you encountered any other touring car of 30 horsepower and 110 inch wheelbase—with generous room for five people—at \$1100?

Or 40 horsepower and 118 inch wheelbase at \$1500?

Or 50 horsepower and 124 inch wheelbase at \$1800?

The 1912 Jackson cars retain all the sterling qualities which have made the Jackson famous—the full elliptic, easy-riding springs; the sturdy, powerful motor, good for any road it encounters; the standard construction and sound designing.

To find their equal in power and size—in what you actually get for your money—you must look among higher priced cars.

In other words, the Jackson gives you—at moderate prices—all that the car of higher price gives you—and a ten year reputation besides.

See the new Jacksons at the nearest dealer's. Look at others, too, if you like—and we'd advise doing that, for we know the comparison will be favorable to the Jackson.

If you don't know the Jackson dealer's name write us—a postal card—and we'll send it to you.

Do this today.

Jackson cars are on exhibition at the Michigan State Fair. Space to right of main entrance. Jackson Automobile Co., 1460 East Main St., Jackson, Mich.

Keep Hogs Healthy



A DIPPING TANK OR A HOG WALLOW WITH KRESO DIP No. 1 WILL DO THE WORK

THERE IS NO EXCUSE FOR LOUSY MANGY UNTHRIFTY PIGS. IF YOU HAVE SOME OF THIS KIND YOU WILL FIND IT WORTH WHILE TO GET OUR CIRCULAR ON TANKS AND WALLOWS. IT TELLS HOW TO MAKE THEM OF CEMENT

KRESO DIP No. 1 IS A REAL NECESSITY

ABOUT ALL LIVE STOCK FOR KILLING LICE, TICKS, MITES, FLEAS. FOR TREATING SCAB, MANGE, RINGWORM, AND OTHER SKIN DISEASES.

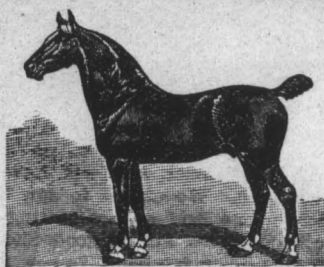
TO DISINFECT, DEODORIZE, CLEANSE & PURIFY.

ALL OF THESE USES FULLY DESCRIBED IN OUR BOOKLETS. WRITE FOR COPIES ASK YOUR DRUGGIST FOR KRESO DIP No. 1

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WILL NOT SCAR OR BLEMISH.

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is the safest and most effective lotion or blister for ailments of

HORSES and CATTLE

and supersedes all canter or firing. It is prepared exclusively by J. E. Gombault, ex-Veterinary Surgeon to the French Government Stud.

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has saved thousands of dollars and thousands of horses. The old reliable cure for Spavin, Ringbone, Splint or any lameness. For sale at all druggists. Price \$1 per bottle, 6 for \$5. "Treatise on the Horse" free at druggists, or write to Dr. B. J. KENDALL COMPANY, Enosburg Falls, Vt., U. S. A.

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Will reduce inflamed, strained, swollen Tendons, Ligaments, Muscles or Bruises. Cure the Lameness and stop pain from a Splint, Side Bone or Bone Spavin. No blister, no hair gone. Horse can be used. \$2 a bottle delivered. Describe your case for special instructions and Book 2 E free.

ABSORBINE, J.R., the liniment for mankind. Reduces strained, torn ligaments, enlarged glands, veins or muscles—heals ulcers—allays pain. Price \$1.00 a bottle at dealers or delivered. W.F. YOUNG, P.O. Box 268 Temple St., Springfield, Mass.

A real breeder must be a man who loves his stock. There is a wide difference between merely keeping stock and being a successful breeder. A successful breeder either makes improvement or holds his stock up to a high level fixed by the great breeders. Stock-breeding is a business that requires brains. It requires the best thought of the brightest intellects. There are a dozen breeders of the last century whose names are just as everlastingly engraved upon the roll of fame as are the world's greatest statesmen. They have been of as great benefit to humanity as any other class of men.

A willingness and ability to work is also a prime essential. Success will not come of a single effort. Temporary discouragements may mar early success. It requires courage and the best fighting ability that a man possesses to pull through the disappointments. The really great breeders have worked and waited long years before success finally crowned their efforts.

Breeding is an art that requires knowledge. Without knowledge one begins at exactly the same place at which the breeders of early times did. By studying and learning what those men have done and how they have accomplished it a man of today is able to start in at the place where those men stopped their work and is thus enabled to improve upon the animals produced by those men.

Knowledge of the principles of breeding is of estimable value. In the mating of animals together a real breeder will have in mind some particular type of animal that he wishes to produce. Lack of knowledge and consequent inability to judge the outcome of the cross is one of the greatest causes of mediocre success being attained by a large mass of stock keepers.

Knowledge of feeding is of prime importance. The great breeders and improvers of stock have ever been great feeders. The most prominent of early Angus breeders in America was known as the "Prince of Feeders." Feed is absolutely necessary in developing an animal's form. Unless an animal is well fed and its good points brought out, a breeder cannot determine whether to keep or discard the stock.

A man cannot be a successful and progressive breeder unless he is a good judge of stock. A breeder today, especially a man who has pure-bred stock, is in a large measure engaged in business in competition with other men who handle the same breed and to some extent with other breeds. Unless a man is a first class judge he cannot successfully compete with those other men. The ideals that other breeders have in mind and the animals that they produce are a help to any man in his own work. A good judge will know what constitutes a desirable animal for the purpose, as, for instance, in cattle, there is a wide difference in beef and dairy animals. Knowing what constitutes a good animal for the desired purpose, he must have a detailed knowledge of the more particular characteristics of the breed.

A breeder of today must have a keen knowledge of the principles of buying and selling. He must be a business man. The keeping of records and the correspondence incident to the business are as exacting in their requirements as are those of any other business.

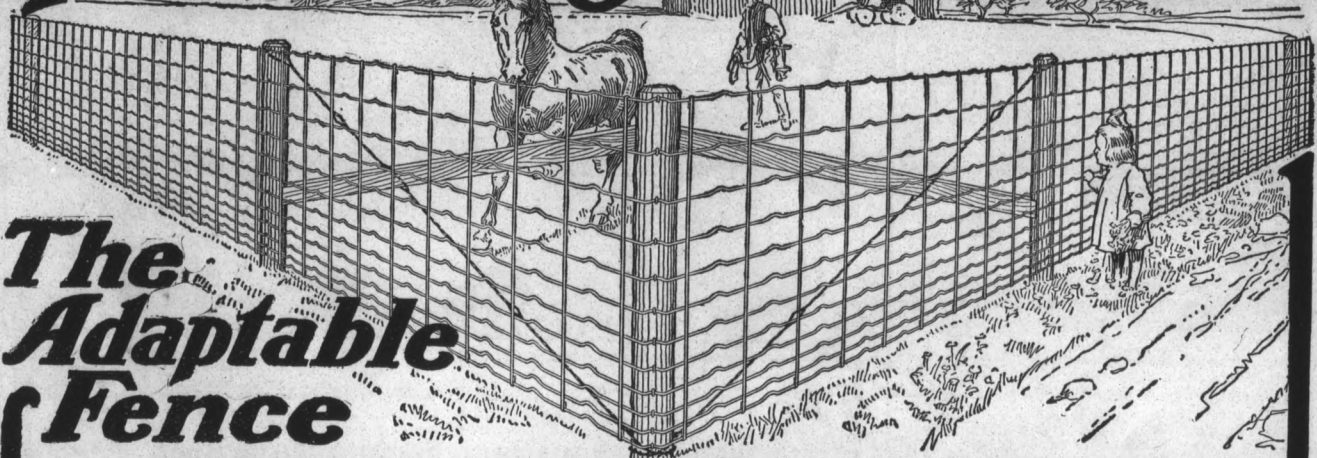
A breeder must know his market. He must know what his customers will want to buy. It is far better, at least from the financial standpoint, to breed what the market demands than to raise something that the market is not wanting and to wait until a market is created. From the purely business standpoint, the raising of pure-bred stock is a problem of pleasing the buyer. How to please those men and how to smooth over their whims and fancies is one of the requirements of a modern stock producer.

Many breeders are engaged in showing their stock at fairs. This is really a form of advertising. The way a man conducts himself when the ribbons are tied, whether he loses or wins, is taken by the onlookers as an index to the kind of a man the exhibitor is. A man can gain many friends and customers by showing some of his best stock in show condition and meeting and talking with breeders. A breeder of today requires a broader knowledge and more ability than the man who follows almost any other business, either on the farm or in some other line of honest endeavor.

Iowa.

H. E. MCCARTNEY.

"Pittsburgh Perfect"



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AMONG the 145 styles and sizes of "Pittsburgh Perfect" Fence shown in our new catalogue, the fence user can now obtain fencing perfectly suited to his particular requirements. "Pittsburgh Perfect" is the most adaptable, portable, durable and resultful of all wire fences, and gives absolute satisfaction because, coupled with our ripened manufacturing experience, it is the culmination of close and exhaustive study and investigation of farmers' needs along lines of up-to-date agricultural methods and equipment.

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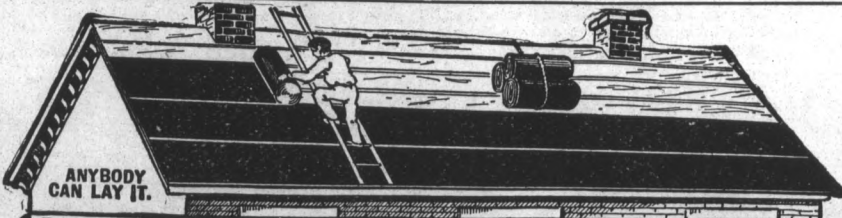
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Works perfectly in any soil. Digs, elevates, separates—all in one operation. Built to last. World's best materials and construction. Has 30-inch wheels, cold-rolled steel axle and malleable main beams. Main gears are interchangeable. Lightest draft digger made—no friction anywhere. Only digger with separating agitators which pulverize soil before it reaches rear of machine—reducing power, wear, and lightening draft. Get our **Book Free**—Tells the many money-making advantages of the Schreiber. Proves its wonderful efficiency and superiority. Made in two styles to meet all conditions—Revolving Chain Conveyor Style and Endless Chain Style. Book tells all facts. Write postal now. The Schreiber Mfg. Co., Dept. 23, Hammond, Ind.

VETERINARY

CONDUCTED BY W. C. FAIR, V. S.

Advice through this department is free to our subscribers. Each communication will be published. Initials only will be published. Many queries are answered that apply to case in full; also name and address of should state history and symptoms of the same ailments. If this column is watched carefully you will probably find the desired information in a reply that has been made to some one else. When reply by mail is requested, it becomes private practice, and a fee of \$1.00 must accompany the letter.

Indigestion—Lessened Milk Supply—Impaction.—Have had two cows die during the summer and I would like to know what ailed them. The first one to go wrong was a three-year-old Jersey that came fresh last December, she was turned out to pasture the eighth of May and died ten days later. There was considerable dead grass in this pasture, but in addition to grass she was fed one quart of cornmeal twice a day. She seemed to suddenly lose her appetite for both food and water and her bowels did not move as they should. The second case was an eight-year-old cow due to freshen in October and she died August 6. The pasture had been dry for several weeks and the only fodder was dry timothy. This cow was also fed some cornmeal. We gave them powerful cathartics each having three pounds of salts, one pint soft soap and milk; also one pint of kerosene oil, two quarts linseed oil and lots of molasses. This medicine acted on the bowels, keeping up a brisk movement for about a week. G. L. S., Capac, Mich.—I am inclined to believe that both cows died the result of impaction of third stomach and could not have been saved. Perhaps you gave them too much medicine. Best cathartic for cattle is epsom salts, and second best raw linseed oil, given to them every twelve hours.

Sheep Cough.—I would like to know what to do for sheep that have a slimy discharge from nostrils and a cough. Several of these sheep have been on a low, wet pasture during the early part of the summer. I feed apples, cucumbers, potatoes, new oats and green cornstalks. W. R., Big Rapids, Mich.—Mix together equal parts powdered licorice, ground ginger and salt and give each one a teaspoonful at a dose twice a day.

Acute Indigestion.—I have a shoat that you cured of piles last winter and now I come to you regarding a hog that seems to bloat badly, then gradually gets over it. This pig is a great deal smaller than those of the same litter, but does not seem to be very sick. One of my neighbors thought the pig was troubled with black teeth, but I am not familiar with that ailment. W. J. B., Otia, Mich.—Black teeth seldom do hogs any harm. Give your pig 20 grs. bicarbonate soda at a dose in feed two or three times a day. Perhaps you had better change his feed.

Rheumatism.—I have a hog that has been lame for several months, the lameness is in one fore and one hind leg. I fail to locate lameness as there is no swelling or tenderness. J. L. L., Kingsley, Mich.—Give your hog 15 grs. salicylate of soda at a dose in feed two or three times a day. It is possible that the joints are affected enough to make him always stiff.

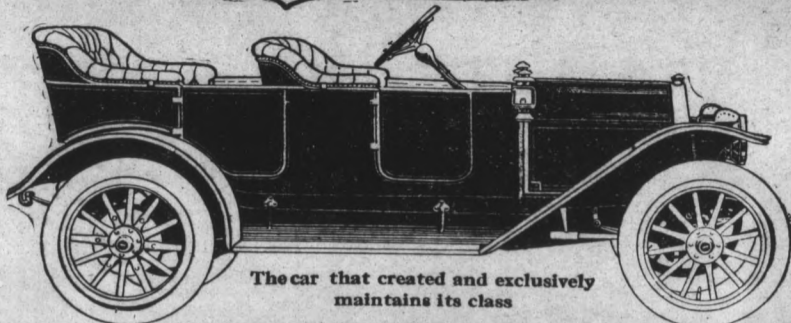
Chronic Cough.—I have a seven-year-old horse that has been troubled with a cough all summer but appears to be healthy. He does not show any symptoms of heaves, has worked on the farm all summer, fed dry feed during the day and runs in pasture nights. N. C. H., Stanwood, Mich.—Give 1 oz. powdered licorice, 1 dr. powdered opium and 2 drs. muriate ammonia at a dose in damp feed two or three times a day.

Tumor on Eye.—I have an eight-year-old cow that hurt her eye about a year ago; the eye ball is pretty much gone, but a large growth the size of a goose egg seems to have grown on eye and I would like to have it removed. A. M., Sturgis, Mich.—The only satisfactory treatment for a case of this kind is to cut off tumor, then apply boric acid to eye two or three times a day.

Stockmen are attracted by the opening of the Fort Berthold Indian reservation in North Dakota, approximating 160,000 acres. The lands are classified as agricultural lands of the first and second class and grazing lands. The soil is dark brown alluvial top, with a retentive subsoil. The drawing by lot will take place on the sixth day of September. More than 5,000 people registered at Minot, North Dakota, the first day, the heaviest registration being from the two Dakotas, Minnesota, Wisconsin, Illinois, Iowa, New York and Pennsylvania. A considerable portion of the land is said to be valuable for grazing live stock.

Now that the government report on corn has been made public and shows the condition to be 70.3, a little higher state than a month ago, and indicates a yield of 2,736,000,000 bushels, compared to 3,126,000,000 bushels a year ago, cattlemen are saying that it would not be unwise for feeders to take on some liberal supplies of thin steers to fatten for the market next year. Feeding cattle values are on their relative basis as against fat heaves. The outlook for fat beef crop next spring favors shortage and with a fairly generous new crop of corn and a liberal surplus, the beef men are saying that cattle and hog production needs impetus, if corn is to be consumed in quantity sufficient to maintain prices at strong levels, even though Europe is going to buy much more of our yellow cereal this year than in years gone by.

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The car that created and exclusively maintains its class

The R.F.D. and the Automobile

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THE benefit, comfort and pleasure derived from the possession of an automobile are measured only by the kind of automobile you own. In the Marion you get all car—you are not paying part of your good money for a fancy name nor an "advertised reputation"—the Marion sells on merit. You don't have to be an engineer in order to operate a Marion car, because simplicity of construction is its chief characteristic—self-reliance was born in a Marion. This car can be operated and turned in crowded city streets or narrow country roads—it can be started by your wife or daughter as easily as she turns a cream separator crank.

Here is a car that will pull sand, mud, snow or slush—it requires no tinkering, just gasoline and plenty of oil. With moderate care any model of the Marion line should last a lifetime.

MARION "35"—Five-passenger, flush-sided, fore-door Touring Car; wheel base 112"; fully equipped, less top and windshield. \$1285
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MARION "48"—Five-passenger, flush-sided fore-door Torpedo Touring Car; wheel base 120"; fully equipped, less top and windshield. \$1750
MARION "46"—Two-passenger, and **MARION "47"** four-passenger, same specifications as **MARION "48"**. Price, each. \$1750

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Two Fine Registered Guernsey Bull Calves.

Both Guernsey Island Bred.
 One sired by Bijou's Star, Prize Bull of the Island.
 Dam Star's Fanny Fern III.
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 Handsome and Well Marked. Price reasonable.
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NEWTON'S REMEDY 21 years' sale removes the cause. Prevents and cures Indigestion, Coughs, Distempers, Death to Heaves. Removes intestinal worms and is an excellent conditioner. Standard remedy for 21 years. Guaranteed for Heaves. At dealers or direct, prepaid \$1 a can. Book explains fully, free. **THE NEWTON REMEDY CO.,** Toledo, Ohio.

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For Sale—One registered Black Percheron Stallion "Oliver" No. 3304. Weight 2400 lbs. 9 years old. **VOORHEES BROS.,** Albion, N. Y. No. 6, Mich.

A REG. PERCHERON 1 year old for sale, also 30 Reg. Shropshire Rams and a few Duroc Jersey Boars. **M. A. BRAY,** Okemos, Mich.

BREEDERS' DIRECTORY.

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ABERDEEN-ANGUS.
 Herd, consisting of Trojan Erics, Blackbirds and Bridges, only, is headed by Egon W. a Trojan Erics, by Black Woodlawn, sire of the Grand Champion steer and bull at the International in Chicago, Dec., 1910. He is assisted by Undulata Blackbird It. **WOODCOTE STOCK FARM, Ionia, Mich.**

BROWN SWISS CATTLE.
 Stock for sale. Look for our exhibit at Detroit Fair. **HULL BROS.,** Painesville, Ohio.

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Registered bulls from four to ten months old for sale that are closely related to Hengerveld De Kol, De Kols 2nd Butter Boy 3rd, and Calantha 4th of Johanna. The dams are heavy milkers and mostly in the A. R. O. Prices reasonable. Send for list. **Bigelow's Holstein Farm, Breedsville, Mich.**

TOP NOTCH HOLSTEINS
 Top Notch registered young Holstein Bulls combining in themselves the blood of cows which now hold and have in the past held World's Records for milk and butter fat at fair prices. **MCPHERSON FARMS CO.,** Howell, Mich.

Holstein Friesian Cattle—BULL CALVES.
 Grandsons of Canary Mercedes. **W. B. JONES,** Oak Grove, Michigan.

DEKOL-KORNDYKE Holstein bull calf, choicest A. R. O. breeding. Splendid individual, \$50. Ypsilanti Farms, Ypsilanti, Mich., Cole Brothers, Proprietors.

HOLSTEIN BULLS—1 to 11 months old, \$25 to \$50 registered and transferred. Good breeding. **HOBBART W. FAY,** Eden, Mich.

HOLSTEINS—I have for sale a few cows and yearling heifers bred to Johanna Concordia Champion, the only bull of any breed whose 2 grand dams average 34.06 lbs. butter in 7 days. Also bull calves and service bulls. **L. E. CONNELL,** Fayette, O.

HEREFORDS—Both sexes and all ages for sale. Also Poland-China hogs. **ALLEN BROS.,** Paw Paw, Mich.

FOR SALE—Reg. St. Lambert Jersey Cows and Bulls from high producing stock. **C. A. BRISTOL,** Fenton, Michigan.

For Sale—Reg. St. Lambert Jersey Cows. Heifers and Calves of both sexes. **L. H. GEORGE,** Cottage Home Egg Farm, Constantine, Michigan.

BUTTER BRED JERSEY BULLS
CRYSTAL SPRING STOCK FARM,
 Silver Creek, Allegan County, Michigan.

JERSEY BULLS FOR SALE
 Sired by Temisin's Interested Prince 71648, whose dam made 733 lbs. butter in one year, authenticated test. Choice individuals. Prices Reasonable. **BROOKWATER FARM, ANN ARBOR, MICH., R. F. D. 7.**

Register of Merit Jerseys. Official yearly lot of young bulls from dams with official records of 483 pounds and upwards of butter. **T. F. MARSTON,** Bay City, Michigan.

REGISTERED JERSEYS For Sale—Some combin. ing the blood of St. Louis and Chicago World's Fair Champions by HERMAN HARMS, Reese, Mich.

Dairy Bred Shorthorns—a few bred heifers for cash or good note. **J. B. HUMMEL,** Mason, Mich.

LILLIE FARMSTEAD JERSEYS.
HERD BULLS—Vidas Signal St. L. No. 58197. **Jubilee's Foxhall,** No. 82299. Bull calves sired by these great bulls, and out of splendid dairy cows, many of them in test for register of merit. Also a few heifers and heifer calves for sale. Write for description and prices. Satisfaction guaranteed, or money refunded. **COLON C. LILLIE,** Coopersville, Michigan.

For Sale—Double Standard Polled Durham Bulls, heifers, and cows. I am closing out. Write for prices. **Sanford Gasser,** Sherman, Mich.

SHEEP.

SHADY LAKE HAMPSHIRE—Magnificent lot one and 2-year old rams. Come and take your pick for \$5.00. None better. Comfort, Flyer, Coldwater, Mich.

Polled Delaine Rams for Sale.
F. L. BROKAW, Eagle, Michigan.

Oxford Down Sheep—Good Yearling Field Rams and ewes of all ages for sale. **I. R. WATERBURY,** Highland, Michigan.

OXFORD DOWN RAMS FOR SALE—yearlings and lambs. Will sell a few aged ewes at attractive prices. **S. E. GILLET,** Ravenna, Ohio.

PARSONS' OXFORDS—these big, dark faced better lambs. Grad. X, \$15; XX, \$20; XXX, \$25. I pay express charges. Order now of Michigan's largest breeder of good sheep "PARSONS—the Sheep Man," Grand Lodge, Mich.

FOR SALE—Registered Rambouillet Sheep. Both sexes, all ages, prize winners. **IRA B. BALDWIN,** Hastings, Michigan.

Oak Hill Stock Farm

VON HOMEYER RAMBOUILLET RAMS
 at farmers' prices for the next 90 days. Large, plain, heavy fleeced. **C. E. LOCKWOOD,** Washington, Mich.

REG. Rambouillets of the best breeding, rams and ewes from one to car lot at reduced price if taken in Sept. Breeding furnished. All in perfect health. Farm 2½ miles E. of Morrice, on G. T. R. R. and M. U. R. Come and see me or write your wants. Sheep shipped for inspection if ordered. **J. Q. A. COOK**

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POULTRY AND BEES

PROMPT MARKETING MEANS BETTER QUALITY AND PRICES.

The quality which is most desirable in milk and cream for immediate consumption is sweetness. In eggs, the corresponding quality is freshness. Most producers have come to realize that dairy products must be marketed daily, and under the most favorable circumstances, to command the highest market price. The same practice should obtain in the marketing of eggs.

There is a closer parallel between the quality of sweetness in milk, and freshness in eggs, than is commonly supposed. It may be truthfully said that, under the same conditions, eggs will keep fresh no longer than milk will keep sweet.

A better term than freshness would be newly-laidness. The term "fresh eggs" is commonly applied to "current receipts," which may be from one week to one month old. A new-laid egg must be under one week old, and must have been kept in a cool, dry place, under 60 degs. F., and free from odors of all kinds to retain its freshness. If properly cooked within this time, the albumen or white is milky, flaky, and what is termed "clotty," and the yolk sound, firm and rich. Such eggs, from healthy hens, are wholesome food, and have a distinctive flavor and aroma very pleasing to the taste.

If exposed to heat dampness and odors, this quality soon disappears, and the egg becomes stale, insipid and unwholesome.

Chick development, and bacterial changes, often render eggs unfit for human food within 48 hours, and such come under the ban of the pure food laws.

It is very important, then, that eggs should be marketed promptly and regularly to preserve quality and wholesomeness. Not only so, but the annual loss through detrimental changes in market eggs would be saved. This loss is 17 per cent of the value in the hands of producers; and the price is fixed to cover this loss.

It is conservatively estimated that Minnesota produced 100 million dozens of eggs during 1910, on farms and village lots, and that 60 million of these were put upon the market. How long they were kept in the country stores, how long they were in the possession of the commission men and retailer, who can tell?

Thousands of farmers market their milk and cream daily; and an appeal is made to them to market their eggs with the same promptness and regularity. Also, let producers, merchants, shippers, railways, commission men and retailers, handle fresh eggs as they do sweet milk and cream. Keep them moving, from nest to table. Then all may have the privilege of eating really fresh and wholesome eggs.

Minnesota. N. E. CHAPMAN.

COUNTING THE COST FURTHER.

A writer from the southwestern part of the state claims that my article in The Farmer of August 12 contained "apparent discrepancies." The writer either misread this article or does not appreciate the difference between a flock record and the individual hen's record.

Let me quote the paragraphs referred to. "There shouldn't be more than six weeks of the year when the 100 hens would not produce more than this value (referring to my ration cost) in eggs. This referred to the flock in the aggregate. I quote further: "My estimate of the number of eggs these hens should lay is 1,500 doz., at an average price for the whole season of about 17c per doz., making \$250. Subtracting cost of keep (\$100) leaves \$150 profit—something like 200 to 300 per cent."

The writer's opinion that 180 eggs per hen is too few for a flock with a six weeks loss record is a matter for each one to decide for himself. But here is the point: Does the writer think that this flock lays, or should lay, 100 eggs per day for the other 323 days of the year? I have never discovered hens so good.

A hen begins a period of laying and produces from 12 to 30 eggs usually. Then she either gets broody or takes a short rest. These periods continue through the season and many hens, even then, lay only every other day. Now, counting the light yield of the cold winter months and the moulting season, it takes a pretty fair flock to average 180 eggs each.

Enough as to the egg yield. Now to

the profit. Taking the writer's own valuation per hen (50 cents) we have a total investment for the flock of \$50, and a profit of \$150 on this investment, over feed cost, is a profit of 300 per cent. He cannot charge any interest on the feed investment as the flock pays cash, so is entitled to a two per cent discount.

One thing further: the writer's claim that the henhouse is a further burden I will answer with the question, how many farm premises are there without such a provision already? However, if it must be built, \$5 interest per year will furnish enough money to turn the trick.

To the writer's complaint that \$150 profit of an investment of \$50 is not enough I would say that it looks good to me, and remember this refers to park confined hens without any "intensive" care.

Another point in the estimation of the total egg yield. The flock is to be composed of 100 hens, not necessarily of the purely laying varieties of pure breed, but such as a farmer can get ordinarily. Isabella Co. Wm. J. COOPER.

MORE ABOUT THE PROFIT IN BROILERS.

I noticed Mrs. Rockwood's article concerning the profit in broilers which you published a few weeks ago and as I, too, live in Genesee county I wish to corroborate her statement. I have sold broilers here for three years, and seldom does the price fall below 18c, even late in the fall. The earliest ones, in June, brought 22c dressed. I sold nine on July 21, 1911, that brought \$4.85. Have six pullets of that hatch which are laying at the present date. I consider that a record, as the hatch came off April 4 and, if my memory doesn't fail me, the age at which Plymouth Rocks generally begin to lay is 7½ months. These pullets are just twenty weeks old. They have been laying for some time, but I couldn't be certain about it until I shut them up. I found two eggs in their enclosure today (Aug. 25). These are just ordinary fowls, raised in an ordinary way. They have had no beef scrap or coddling; have had wheat screenings and cracked corn three times a day, with plenty of fresh water and such free range as they could get in company with 200 other chickens.

I consider wheat the best feed for both hens and growing chicks. If I can have wheat, skim-milk, and exercise for my hens it is all I ask. I have sold all my hens (yearlings) except a dozen which I kept to supply the table, and am getting six to eight new-laid eggs every day; besides that, every now and then I find a hidden nest with from five to twelve eggs in it. They are getting simply wheat and free range.

Genesee Co. B. D. PARTRIDGE.

HENS THAT ARE TOO FAT.

It often happens that one will find some hens in the flock that have become too fat. These hens usually become broody, weaken, and occasionally die. In such fowls there should be some incentive given for exercising; also, the diet is important, since by regulating it one can to a certain extent overcome the tendency to lay on fat. The practice of good chicken men is to feed such hens once each day, at night with a feed of lean meat and a little grain scattered about in some straw or other litter where it will be necessary for the chickens to labor in order to get the kernels. Feeding this way makes the fowls get out and rustle for themselves during the day and when evening comes the scattering of the grain causes them to remain out exercising late, thus increasing their hours of exercise beyond those prescribed by the union. The lean meat has a tendency to develop muscular tissues and corrects the tendency to lay on fat.

Wayne Co.

A. H.

ELIMINATING ONE SOURCE OF DISEASE.

The spread of contagious diseases among fowls can often be traced directly to improper disposal of dead fowls. It is often the case that dead fowls are thrown down in some out of the way place to decompose and be eaten by the healthy ones, thereby placing the entire flock in danger of contracting the disease.

All dead fowls, whether they died from contagious disease or otherwise, should be either properly buried or burned. The latter is the best and by far the safest method. Should they be disposed of by burying, however, they should first be covered with quicklime and then buried sufficiently deep to remove all chance of their being scratched out by dogs or be-

ing otherwise brought to the surface. Only last spring a friend of mine complained of his fowls dying off. He made a practice of burying dead fowls in the poultry yard. The work was so poorly done that the carcasses were scratched up by the healthy fowls. Thinking that this might be the cause of the loss of so many hens, he kept the flock penned in for a time, and this served to check the trouble. However, as soon as the hens were released and resumed scratching they contracted the disease and continued dying until he had lost his entire flock of old fowls and the young stock also became affected.

O. E. HACHMAN.

FACTS RELATIVE TO THE HANDLING OF HONEY.

In removing comb honey from the hive a good bee escape proves invaluable. The old term for this process was formerly called robbing. As every bee-keeper knows, it is not an easy task to rid the surplus arrangement of bees when he wishes to remove some honey from the hive, but with a bee escape the thing is done so quickly that there is not even a flutter among the bees, and it can be done whenever the honey is ready to come off without any danger from robber bees. All that is necessary is to slip an escape board between the super and brood nest on each of the colonies from which you desire to remove honey. The next morning you can take the supers off the hives, practically free of bees, without disturbing the colony below, and the honey will be free of punctures and the smell of smoke. To me the bee escape has been a great time and labor-saving device.

After honey is well ripened on the hive it is a question whether it can be improved by any practical known method, but all will probably agree that the body and flavor can be practically ruined by a little carelessness, or inexperience, in handling. In handling combs of honey, always keep them in a perpendicular position. Do not lay them on their sides; they may be easily broken. In packing comb honey for shipment it should be kept in a position similar to that it occupied when on the hive. The same principle applies when handling supers containing foundation, or when handling brood frames.

A bee-keeper who produces comb honey has, at the close of the season, more or less sections which are only partly filled; some of the sections can be fed back to light colonies if any such are in the apiary. A great many more can be disposed of on the home table, and the rest extracted. This year I greatly overestimated the fall flow of honey and put on entirely too many sections. The result was I had over a thousand unfinished sections, and probably there are others in the same predicament.

Unfinished sections, to be used over again, should be cleaned out by the bees at the close of the harvest. Before there is time for any granulation, put them out where all the bees can get at them. To prevent the bees tearing the combs to pieces, put out enough sections at a time so that all the bees in the apiary can find plenty of room to work on them. If you put out a single section for a dozen colonies to work at, the comb will not be worth much after they are done with it. If you have only a few sections, instead of having them all open, as you do when you have plenty, allow an entrance to the sections that is only large enough for one bee to enter at a time.

These sections were too wide to fit into the comb basket of an extractor so I was obliged to contrive some other way of holding them. I found the following plan very convenient: Make two frames out of three-eighth-inch pine, eight and five-eighths inches wide, twelve and one-eighth inches long, and the width of your sections, which is generally one and seven-eighths inches. Drive in, near the top on each side of the frame, two wire finishing nails with small heads, letting them project about one inch. Now take a pair of pliers and bend them downward about half an inch from the frame, thus forming a good hook. These frames should hold eight sections nice and snug, so that they can be put into the extractor and hooked onto the comb baskets. Thus the honey will be whipped out at the rate of sixteen sections at a time. From 1,000 sections we obtain about 300 lbs. of honey, and the empty combs are the best stock in trade any bee-keeper can have. These are to be used as bait combs next season. By putting eight or ten of them in a super the bees are induced to begin storing honey much sooner than they otherwise would.

New Jersey.

F. G. HERMAN.

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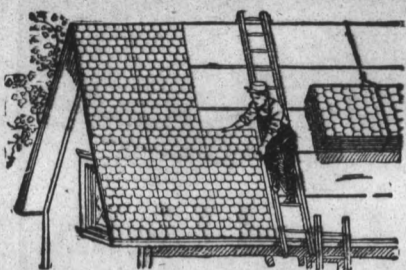
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OVER-RUN IN BUTTER MAKING.

The over-run in butter making is often confusing to those not familiar with the composition of butter nor with the process of making it.

Over-run means merely that one pound of butter-fat when churned into butter will produce more than a pound of butter just the same as a pound of flour when mixed with yeast, milk, salt and water will make more than a pound of bread—or over-run. Just so with butter. When the cream tests 25 per cent it requires four pounds of such cream to contain one pound of butter-fat. After the removal of the butter-fat by churning, it is washed to remove the buttermilk, then salted to suit the market. The composition of average butter is as follows:

Butter-fat, per cent 82.5
Water, per cent 14.0
Casein, per cent 1.0
Mineral matter, per cent 2.5

In the process of making butter, the constituents naturally would vary the same as in bread, depending upon the skill of the maker. In both cases, the water would vary the most so is responsible for the greatest variation in over-run. Yet it would be impossible to make either bread or butter containing no water.

In fact, all food products whether of vegetable or of animal origin contain more or less moisture and this element is one of the things that makes our food wholesome. Again, the mineral matter in the butter, which is salt, largely, varies from none at all to four per cent, according to market demands. The amount of casein left in the butter has the least effect upon over-run for it occurs in small amount, depending upon how well the buttermilk is removed from the butter.

To calculate the percentage of over-run: Suppose we have 70 pounds of butter from 200 pounds of cream containing 60 pounds of butter-fat. Apply the figures to the formula:

Wt. butter—Wt. butter-fat
× 100 = 16%
Wt. of butter-fat.

In other words, dividing the increase 10 pounds by the original amount of butter-fat, 60 pounds, and multiply by 100 gives the percentage of over-run.

N. Dak. Agril. Col. G. L. MARTIN.

ENSILING FRESH BEET PULP.

Have no corn to put into silo this year. If fresh beet pulp is obtainable why can I not store a couple of carloads? Can it be fed as corn ensilage, that is, a bushel per feed? What can I afford to pay for it per ton?

J. W. K.

I know of no better substitute for corn silage than fresh beet pulp. It is not as valuable as corn silage, containing only about one-half of the food nutrients, it contains such a large percentage of moisture. It is a splendid succulent food and where it does not cost so much freight or one does not have to haul it too far, it would pay, I think, to put it into a silo. This is the proper way to take care of it. Containing so much moisture, however, it is expensive if one has to haul it very far, but, where one is situated as J. W. K. is, having no corn silage and an empty silo, I would believe that he could afford to pay more than anybody else for this beet pulp, and if I could get the beet pulp I would fill the silo full. It will be worth all its cost as a succulent part of the ration this winter for the cows, for dairymen have come to know that succulence is a very essential factor in the compounding of a ration as it greatly enhances the feeding value of the other components.

There isn't any question about its keeping in the silo and coming out in splendid condition. This has been tried thoroughly, it is no experiment. Several years ago I procured a couple of carloads of green beet pulp from the factory and put it into the silo. It worked nicely but I concluded that where I had sufficient corn of my own to fill the silo that it would not pay me to get beet pulp on account of the expense of hauling this food and paying freight on it. But if I did not have the corn silage I certainly would get beet pulp enough to fill the silo if I possibly could. Last year I got a carload of beet pulp from the factory and put it in on top of the beet tops to settle them down. They are rather bulky and it is quite difficult to get them packed in the silo and unless something of this nature is put on top of them they spoil for a considerable depth. Last year

we didn't lose a beet or a beet top leaf. We filled the silo full to overflowing with beet tops and when they settled a little we put the beet pulp on top. The beet tops settled down with this added pressure so that we could get in an entire car of beet pulp. This beet pulp sealed the silo over on top, excluded all of the air, and the beet tops beneath kept perfectly as did also the beet pulp. Even the top of the beet pulp was not spoiled. Some of the steam and some coloring matter from the beet tops and leaves from below worked up to the top and colored the pulp a little, but its food value was there. Even its palatability was not impaired and the cows ate every particle of it. It is a difficult matter for one to say how much one can afford to pay for beet pulp for this purpose. It is worth more than its chemical analysis would seem to indicate. There is no doubt about it, because it gives one a succulent food to feed with the other dry matter and the cows will respond and do better than if given the same nutrients in a dry feed. I should say that one could afford, situated as J. W. K. is, to pay 50 cents a ton and the freight on it.

BARN DIMENSIONS.

I want to build a barn this fall. Please give me the width and length of cow stables and horse stables. I want it large enough so I can run a litter carrier behind the cows, also width of alley for feeding in front of cows, also width of feeding alley between horse stable and granary. How high should stables be from floor to ceiling? How large can one make a mow for grain and still not make it too large to pitch to threshing machine? I want room for 12 cows and four horses. I want to ventilate by King system; how large must intake and outlet be? Where would be the right place to put them? I want to put hay on top of stables and granary. Which would be the best way to build the stable out of lumber and have it warm? How many windows should there be and how high should the barn be?

Wayne Co.

E. G.

It is quite difficult in a short article to answer the questions which are asked by E. G. and make them interesting or make the article in any way satisfactory. If you have room back of the cows or back of the gutter for a litter carrier sufficient to make it convenient, you will be much better satisfied with your barn than if this space is a little crowded. It ought to be at least five feet from the back edge of the gutter to the wall. The feeding alley between the granary and the stable ought to be six feet to be convenient, and wider would be a little better. One can get along with a feeding alley in front of the cows of four feet, but five feet is better here. Four feet will enable one to get in front of them with an ensilage cart and work nicely, yet the car fills up the alley so that if one wants to pass through the alley when the car is there he can only do so with difficulty. I should say that the larger the bay in the barn the better, because it will hold more grain and hay. I never worry about getting the grain or the hay out of the bay. The trouble comes in getting it in. It will come out. I should make the stables out of lumber; by double boarding, with tar paper between. To have a stable properly lighted you ought to have four square feet of glass for every animal kept in the stable. The size of the ventilating shaft for the King system of ventilation depends altogether upon the number of animals you have in the stable.

WHICH SILO SHALL I BUY?

We wish to speak to you of silos. There is a difference in the cost of these structures the same as in the cost of cows. "Which one will serve me most economically?" is a question that strikes as arrow-like at the heart of the dairy business as a question concerning the kind of feed one will use; and in the exhibits at the coming State Fair one can answer questions which only costly experience or wearisome traveling could otherwise satisfy. But should he look over the different types of silos without a forethought, he would be handicapped and miss information on important points. He would be at a loss to know where to look, what questions to ask. It therefore seems especially urgent that he post himself beforehand. Here in these columns are notices, advertisements of silos. A careful perusal of what the makers have to offer and say about them would stimulate our brain along the right lines and no doubt enable us, with what other information we can gather, to ask intelligent questions on the structure of these "feed tanks" and look for strong and weak features in the different types.

PAID HIM TO CHOOSE SHARPLES Tubular Cream Separator

Has anyone tried to convince you that disks or other contraptions are needed in modern cream separators? If so, read this:

West Newfield, Me.

The Sharples Separator Co.

The Tubular Separator I bought of you paid for itself in six months with only six cows and left a balance to the credit of the Tubular of \$14.00. People came to my house, saw the Tubular at work, and purchased a Tubular for themselves; others that had separators of another make, after seeing the Tubular at work and the ease with which the bowl was cleaned, traded their separators for a Tubular.

GEO. T. WILSON.

Geo. T. Wilson personally appeared before me and declared the above statements to be the fact.

Luther E. Sanborn, Justice of the Peace.

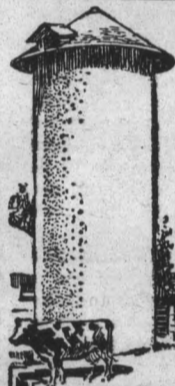
It paid Mr. Wilson to choose the Tubular, for Tubulars have twice the skimming force of others and repeatedly pay for themselves by saving what others lose. Dairy Tubulars contain no disks—wear a lifetime—are guaranteed forever by America's oldest and world's biggest separator concern. You will finally have a Tubular. Buy The World's Best first. Save yourself the expense of discarding some cheap or complicated separator. Other separators taken in exchange. Write for free trial and catalog 152.



30
Yrs

THE SHARPLES SEPARATOR CO.
WEST CHESTER, PA.
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Build Your Silo of Concrete



On practically every modern and up-to-date farm in the country, concrete is the general choice for silo building.

A concrete silo is weatherproof, fireproof, ratproof—and practically everlasting. The airtight construction, together, with the perfectly smooth interior, allowing the contents to settle evenly, insures perfect silage. The acids formed by the natural fermentation of the silage which act quickly on wood or metal have no effect whatever on concrete.

LEHIGH PORTLAND CEMENT

meets with the unhesitating approval of every man who has investigated the cement question thoroughly. It is undoubtedly the strongest, most durable and most economical Portland cement that has ever been placed on the market. It is the best cement for building barns, water troughs, corn cribs, fence posts, etc. The best dealer in your town handles Lehigh. Don't forget the name—Lehigh—make it a particular point to ask especially for Lehigh and be absolutely safe. Look for the Lehigh trade-mark.

A valuable book—giving full, detailed directions for every use of concrete on the farm—sent free on application.

Lehigh Portland
Cement Company
11 mills—11,000,000
barrels yearly
capacity.
534 Peoples Gas Bldg.
Chicago



SPRINGFIELD STEEL CRIB

SAFE against mould, rats, mice, fire, lightning, hurricane & time. Open sides permit two weeks earlier husking. Costs less than wood, 150 sizes & styles. Easily erected. Free catalogue. Wm. Bayley Co. 23 North St. Springfield, Ohio.

FOR SALE—Power Concrete Mixer and Cement Block Machine
D. P. VINING, Jackson, Michigan.

CHANGING TO DAIRYING.

Large numbers of farmers are planning to change from grain growing or general farming to dairying. Constant cropping with grain has depleted the returns from their fields until they do not yield the bounteous harvests that they formerly did. Their land has increased in market value at the same time that the yield has decreased. One hundred dollar per acre land should yield more to make a fair income on the investment than is necessary with \$25 land. Yet the contrary is what is actually working out. A smaller net income is received on higher farm values. Some more intensive system of farming is needed.

Dairying is being adopted in such places for a double purpose. It is a more intensive system of farming and the net returns for any given area are larger comparatively than from grain growing. In the second place, and often this is the main reason for the change, dairying is adopted with a hope of restoring the worn out fertility of the farm. That dairying will do what is expected of it in either case we will grant and in this article take up some of the small details with which a man entering the business, or changing from a herd of common cows to a strictly dairy herd, may meet.

The cow herself is first in importance of all the problems that confront him. She determines his profits or losses. It is a recognized fact that one-third of all cows that are milked are kept at a loss. Of the other two-thirds a great many of them return but a small profit. Probably not more than one-third of all the cows are returning a profit that is worth while.

The cow problem is to be looked at from two standpoints. First, to get rid of the unprofitable cows. Second, to secure cows that will pay for their feed, for their care, and in addition return a profit. Now, some cows might well be eliminated from the herd without ceremony. Some are too beefy to make profitable milkers. However, far too often the cow is built on the rail fence order and does not possess digestive apparatus sufficient to enable her to do credit at the milk pail. None of those slender "pipe stem" bodied cows ever made a record except for low production and loss to the owner. The judgment of the owner will in many cases be sufficient to discard such cows.

The only sure means of determination, however, is the Babcock test. By that the percentage of butter-fat in her milk is determined and with the spring balance the weight of the milk is determined. Then it is a very simple matter to calculate her total production and if a record is kept of the feed she has eaten her true profit or loss is demonstrated.

How, then, are good cows to be secured since the poor ones have been gotten rid of? There are two courses open. In the first place, a man may buy them. Good cows cost money. However, a cow whose annual profit is \$100 is cheaper at a cost of \$200 or more than is one whose profit is small, even if she may be bought for \$50. No matter how well-bred a cow may be or how much she looks like a heavy producer the only certain way to be sure of her milking qualities is to see that she has made a record under the spring balance and Babcock test.

The second way and the one by which most of the dairy cows are to be secured is to breed them. The best cows in the herd having been determined by the test, they are to be bred to a bull whose ancestry have records that are known to

be satisfactory as producers. Then the bull himself should possess to a marked degree the qualities naturally desired in dairy stock. Then, by proper feeding the heifer calves and when they become milkers, they, too, should be tried by the spring balance and tester and the unprofitable ones eliminated.

How to secure a good bull is a problem with many men who have small herds. They feel that they can scarcely afford to pay the prices that are necessary to buy the good ones when they have only a few cows. There is but one solution. Several of those men must club together and buy a bull that will produce calves that will improve the average quality of the herd. By using higher class bulls on the best of cows that are now in the common herd the average may be raised and a herd of high producers bred up.

This brings up the point of all around co-operation that is becoming so popular. Aside from several farmers owning and using the same bull they should co-operate in their milk testing work. About 30 of them should club together and hire a man to do the testing. This man will spend one day per month on each farm. Above the testing association they may have a co-operative creamery.

Then comes in the problem of feeding. Any reasoning man wishes to feed his cow so that she will produce as heavily as possible. Then he wants to do it economically. He must then raise clover or one of the other legumes. They not only are necessary in a dairy cow's ration but aid in restoring the fertility of the wornout farm.

The silo is a positive necessity on any dairy farm. Silage is an economical feed. It makes farming more intensive. One acre of corn put into a silo will make as much feed as five acres of pasture. Best of all, silage is healthful to the cow. It keeps her digestive system in good working order and increases her appetite. As an economical ration silage and alfalfa will in themselves make almost a complete ration. They are well balanced and the only criticism is that it may be a little too bulky. Last year the herd that probably produced the highest average of all working dairy herds in America was fed principally of silage and alfalfa. Never did the cows receive more than six or eight pounds of mixed grain per day.

The matter of housing is no small item. Few general farms are properly equipped for keeping dairy cows. The cow needs protection from the cold of winter. Since men are figuring the profit from their cows it won't do to let them back up against the north wind or even to get behind a barbed wire fence for shelter. Conditions differ on every farm. The best that can be done is for each man to size up his particular situation. Then, with proper ideas of warmth, light, sanitation and convenience to make the best of it that he can.

Then the herd must be kept healthy. Tuberculosis will ruin the herd if not kept out. Only by properly housing the cows and by having them tested with tuberculin can the herd be kept free from it. Of course, in case any cows are infected she is to be eliminated. Then there is danger of contagious abortion or other troubles which must be handled as the occasion may seem to require.

Dairying is a business that requires thought. Men don't get very far into it until they realize that when they begin studying their problems and seeking light upon them and the best practices there is improvement in the herds and increase in the net returns.

Iowa. —H. E. MCCARTNEY.

Opening of the

Rosebud and Pine Ridge Indian Reservations

466,562 acres of rich land in Mellette and Bennett Counties, South Dakota, will be opened for settlement by the U. S. Government.

Secure a farm at small cost in a region especially well adapted to high grade agriculture and grazing.

Register any day, **October 2 to 21, 1911**, at Chamberlain or Rapid City, South Dakota, on the line of the

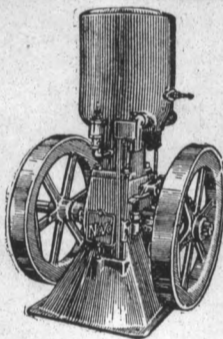
CHICAGO Milwaukee & St. Paul RAILWAY

The Shortest Line to the Reservations

Round trip homeseekers' tickets at greatly reduced fares on sale to Chamberlain and Rapid City on October 3 and 17.

Descriptive literature, maps and full information sent free on request to

H. W. STEINHOFF, Michigan Passenger Agent, 212 Majestic Bldg., Detroit
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THE NOVO ENGINES At the State Fair

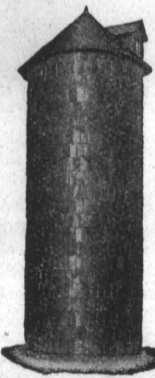
At Detroit, Sept. 18 to 27,

and inspect the NOVO Jr. Pumping Engine, the 1½ H. P., 2½ H. P., 3½ H. P., 5-6 H. P. and 8-10 H. P. NOVO engines; the NOVO power sprayers, diaphragm and direct connected pumping outfits, etc.

It is to your advantage to become acquainted with the engine that has **NO TANK—NO FAN—NO FREEZING.**

Write today for catalog and circulars.

THE HILDRETH MFG. CO., 120 Willow St., Lansing, Mich.
C. E. BEMENT, Secretary and Manager.



ON THE MICHIGAN STATE FAIR GROUNDS At DETROIT and GRAND RAPIDS AN IMPERISHABLE SILO

Made from hollow blocks of fire clay (not cement) can be inspected. Every farmer who visits the big fair should see this silo and talk with the company's representatives at their tent. All will be welcome. Sales of our silos have been large and customers include many of the leading dairy firms, colleges and packing companies. **This silo never decays, blows down or requires repairs.**

Send for booklet.

IMPERISHABLE SILO CO., Huntington, Indiana.

DE LAVAL

CREAM SEPARATORS

Skim cleanest—turn easiest—are simplest—most sanitary—last longest

The DeLaval Separator Co.

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The Michigan Farmer

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WE GUARANTEE to stop THE MICHIGAN FARMER immediately upon expiration of time subscribed for, and we will pay all expenses for defending any suit, brought against any subscriber to The Michigan Farmer by the publisher of any farm paper, which has been sent after the time ordered has expired, providing due notice is sent to us, before suit is started.

Avoid further trouble by refusing to subscribe for any farm paper which does not print, in each issue, a definite guarantee to stop on expiration of subscription.

 The Lawrence Pub. Co.,
 Detroit, Mich.

DETROIT, SEPT. 16, 1911.

CURRENT COMMENT.

It is a fixed policy **A New Department.** with the publishers of the Michigan Farmer to make improvements in and add interesting features to the paper whenever opportunity offers, regardless of the expense incurred. This involves a most careful study of the tastes and needs of its readers. As a result of such study and after most careful thought, we have determined to add a new department to the paper, which will be a pioneer of its kind and an innovation in agricultural journalism.

At the present time, as never before, the results of scientific research as related to agriculture, are being given a practical application to farm problems through the work done at our agricultural colleges and experiment stations and the allied departments of our state and national governments. Necessarily, however, the development of scientific agriculture is slow, due to the fact that comparatively few people are reached through these sources, notwithstanding the fact that the agricultural press has done a great work in the dissemination of up-to-date scientific knowledge relating to the problems of the farm. Probably no one educational influence has been conducive of more good along this line than the short course instruction which has been given the young men from the farms in our agricultural colleges. Through these short courses many young men have been given a new insight into the possibilities of scientific agriculture, but here again the beneficial results have been limited to an almost infinitesimal percentage of the young men of our farms. We believe that similar benefits can be brought home, not only to the young men but to the young women, as well as to the older members of every farm family in whose home the Michigan Farmer is a weekly visitor, through the medium of our paper.

To this end we have decided to establish a Practical Science Department in which short lectures on scientific agriculture, as outlined in the announcement on page 234, will be published and which, upon completion of the work outlined, will constitute a practical short course on scientific agriculture. It will be our aim to make this department of interest to every member of the family, to old and young alike. We hope, also, to enhance its educational value by urging our read-

ers, and particularly the young men and young women readers, to carefully follow and closely study the lectures as presented and to preserve a file of the papers in which they appear, with the view of submitting a thesis for competitive examination and appropriate recognition in accordance with rules which will be announced at a suitable time before the close of the series of lectures.

This department will be conducted by Dr. Floyd W. Robison, who needs no introduction to our readers. Dr. Robison has had experience in this line of educational work in Michigan for more than a decade. He was for years chemist of the Michigan Experiment Station, and later for several years was state analyst for the Michigan Dairy and Food Department and for some years has been connected with the United States Department of Agriculture as a chief food and drug inspection chemist. He has had a wide experience in educational work among the farmers of the state, both in the giving of short course lectures at the college and acting as a lecturer at farmers' institutes and a speaker at dairy meetings and other farmers' gatherings in all portions of the state. In addition to this, he is recognized as one of the best agricultural chemists of the country, and in both scientific knowledge and experience he is better equipped to conduct a department of this kind than perhaps any other man in the whole country.

In addition to this educational work, which will be attempted in this department as outlined above, we contemplate in connection therewith to further aid our readers in the practical application of science to their problems, by the establishment of a farm laboratory, in which analytical work will be done for our subscribers in case chemical analyses are necessary to a correct answer to the questions which may arise in the application of scientific methods upon the farm.

This is also an entirely new department for a farm paper, and one which we hope and believe will appeal to our readers as particularly advantageous to them. Heretofore the farmer of ordinary means has never had the advantage of expert scientific advice or access to a chemical laboratory as an aid in the solution of his problems; first, because he has not known where to seek for such advice, and second, because expert advice upon a commercial basis has always been too costly. In providing for this practical work we have aimed to make it inexpensive as well as valuable to our readers. As outlined in the announcement on page 234, there will be no charge for advice or replies to letters, presenting practical problems which involve a scientific answer, nor within reasonable limits for analyses which may be required in the answering of such questions.

We commend our readers to the careful perusal of the announcement appearing in this issue, and ask their co-operation to the end that as many young men and women of the farm homes as possible, may become actively interested in the work which we shall seek to do through this new department.

Perhaps no single exhibit at the State Fair is viewed with more interest by most farmers than the exhibit of the agricultural machinery and equipment. Here the latest improvements in almost every line may be seen and the goods of competing manufacturers can be compared. This exhibit will be more complete than ever at this year's State Fair, and will include everything that might be classed under the head of agricultural machinery or farm equipment, from the most simple tools and implements to the most complicated machinery for preparing the ground, planting the seed and caring for the crop up to the harvesting, storing and transporting to market or feeding it upon the farm. Most of this machinery can be seen in actual operation. The silos which have been built in connection with the model dairy barn will be filled during the fair and the machinery used for the purpose can be seen at practical work, while very much of the machinery shown in the regular exhibits will be exhibited in operation so far as practicable.

While these exhibits are always interesting to every farmer, yet they may be studied with more practical benefit if a little previous thought is given to the proposition before going to the fair. A good way to study the proposition is to carefully look through the advertising columns of your farm paper and make a mental note of the particular implements, machinery or farm equipment which you

desire particularly to see and study that these may be sought systematically in this department of the fair, while those of lesser personal interest may be passed over more quickly. Very many of the Michigan Farmer advertisers will have exhibits at the State Fair as quite a number of them have announced in their recent advertisements. Each and every one of them will be glad to meet Michigan Farmer readers and show and explain the good qualities of their particular line of goods.

HAPPENINGS OF THE WEEK.

National.

The colliding of two heavily loaded cars near Fruitport, on the Grand Rapids, Grand Haven & Muskegon interurban road, resulted in injuring 19 persons, some, it is feared, fatally.

Miss Clara Barton, founder of the American Red Cross Society, is critically ill at her summer home at Oxford, Mass. She is now ninety years of age.

A strike seems imminent on the Hariman railroad lines since the demands of the labor unions have been denied. The chief question in controversy is the recognition of labor unions by the railroad company, the unions claiming that they have as much right to organize the men as have the railroad to combine different lines into one great company.

Evidence furnished by Harry K. Thaw, now an inmate of the Matteawan criminal asylum of New York, has resulted in the resignation of the administrative officials of that institution, since the evidence was so indisputable as to make an investigation likely.

The western Michigan conference of the Methodist Episcopal Church is in session at Kalamazoo this week. Bishop W. A. Quayle, of Oklahoma, will preside.

As the result of heavy showers in eastern Kansas and western Missouri, Saturday and Sunday, when nearly six inches of water fell, the land along the streams is flooded.

The jury in the trial of Henry Clay Beattie, Jr., who was charged with the murder of his wife, returned a verdict of guilty at the Chesterfield court house, Va., last Friday.

The Connecticut State Grange showed its antipathy toward the federal administration in passing the Canadian reciprocity measure, by refusing to accept a proposal to make Taft Day at the State Fair of that commonwealth, Grange Day.

Thomas E. Knotts, mayor of Gary, Ind., was arrested last week on a charge of soliciting and accepting a bribe of \$5,000 for signing a heating franchise. Other officials were also arrested.

Bean jobbers of Michigan estimate the crop of the state to be only 90 per cent of the yield of 1910.

Robert S. Fowler, an aviator, started from San Francisco, Monday on a trip across the continent to New York City in an aeroplane. This is the first undertaking of such magnitude, and should he succeed the event will go far to demonstrate the efficiency of the heavier than air flying machine. Mr. Fowler covered 120 miles the afternoon of his first day out.

The result of the state election in Maine is still uncertain. Regarding the license question the earliest reports indicated that the "wets" had won by a very small margin.

Reports state that on the evening of September 11, a cyclone swept across the southern part of Wexford county, Mich. At Hobart, a woman and her six children are said to have been killed, besides the storm demolished a large number of buildings in the little town. Telegraph and telephone communications are completely cut off from the storm section.

The Michigan Association of Probate Judges is holding a three day session in Detroit in connection with the National Association.

Dr. David J. Hill, who recently resigned as ambassador to Germany, has accepted a position as head of the department of politics and economics of the Cornell University.

Michigan postmasters of third and fourth class post offices have convened in Detroit this week for their eighth annual convention.

Judge Denison, of the United States District Court at Grand Rapids, has awarded the Chandler Dunbar Co., of the Soo, \$700,000 for their claims against the government for water rights, etc.

Foreign.

Two new craters have opened in the sides of Mt. Etna, the famous Sicilian volcano.

The explosion of a gasoline tank on board a schooner off the shore of Nicaragua, resulted in 14 men being drowned.

It is reported that Newfoundland will consider a proposal to enter as a province of the Dominion of Canada in case the reciprocity agreement with the United States becomes law.

Nine persons were killed and a score injured in a clash between the followers of Francisco I. Madero and General Reyes at Tuxtla Chico, Mexico. The clash was the result of a parade in honor of Gen. Reyes when the Maderistas of the community began interfering, with the result above mentioned. The Reyesistas have petitioned the state to afford them more ample guarantees of safety.

A review of the statistics of immigration into Canada during the past fifteen years shows that 560,719 Americans, 723,424 British and 512,386 other nationalities have come into the great North American country during that period. A very large proportion of the American immigrants are farmers, 445,081 of the above number belonging to that occupation, the remainder being divided between mechanics, clerks, bookkeepers, etc. The opposition in the present campaign in

Canada to the reciprocity issue, is using these facts to impress the British public with the danger of annexation to the United States, should the trade agreement become law. Besides, it is estimated that the Americans have invested \$700,000,000 outside of that used to purchase land.

There is some concern regarding the reply made by Germany to the French proposal dispatched a fortnight ago. Germany demands that she be given certain economic guarantees in Morocco. It amounts to privileges that will, in all probability, not be accepted by France, nor the other powers interested in Moroccan affairs, since the granting of this demand would suppress commercial equality between the different nations. The press of France and England appear to be of the opinion that Germany's financial condition will compel her to make the settlement without taking up arms.

The bottom lands along the Yangtze-Kiang river, of China, are flooded by the overflow of that stream which is an annual occurrence, but the flood this season occurred before the crops were harvested, with the result of their complete loss. Distress is evident everywhere, and the natives seem much discouraged.

Disorders of alarming magnitude are occurring in the Chinese province of Szechuen, and the government is centralizing its troops to take charge of the situation, should the provincial guards prove incapable of doing so, or should the latter revolt.

It is stated that Turkey is raising funds to purchase four obsolete American cruisers, the Brooklyn, Saratoga, Olympia and Raleigh.

CROP AND MARKET NOTES.

Livingston Co., Sept. 2.—Continued dry weather has not made ideal conditions for the proper development of corn, beans or potatoes, all of which will be below normal in yield. Corn cutting and bean harvesting in full progress. Pastures are very short and farmers are resorting to supplementary feeding. Fruit of all kinds very plentiful. Some pieces of clover seed have been threshed with good yields reported. Wheat sowing will probably be delayed until rain comes. New seeding practically ruined by the dry weather.

Eaton Co., Sept. 4.—Corn cutting is in full swing, in fact, it began ten days ago, an unusually early date. It seems as though nearly everyone was hauling hay to market, judging from the frequency that loads pass on the roads leading to town; \$15 is the price for best timothy, and the price looks so attractive for this time of the year that many will doubtless sell themselves short. What will it cost next May for those who have to buy? Oats proved a light crop, but corn is fine. There is an abundance of fruit, especially apples, and the market so glutted it will scarcely pay to pick, yet the quotations for apples in the cities is more per bushel than the farmer will get per bbl. Wheat, 80c; oats, 35c; corn, 68c; beans, \$2; potatoes, \$1.25; butter, 25c; eggs, 15@18c; hogs, \$7; clover seed, \$10 @11.

Genesee Co., Sept. 8.—Nice rains this week have laid the dust, and given needed moisture to wheat ground and autumn crops. Beans ripening well and corn is now being cut. Sugar beets will be a big crop. Silos increasingly popular and many new ones going up. Hay is unusually high and considerable is being marketed at \$14@15 per ton. In spite of the dry season crops are good with the exception of potatoes, which were never so high priced at this time of year.

Ogemaw Co., Sept. 9.—The sudden cold rain that overtook us Thursday put a crimp in farm work for a few days but plowing is again in order. The corn crop is about all cut and the crop is a good one. Silo corn is now being put in. Late potatoes are still somewhat a matter of speculation. Some claim a fairly good crop, while a good many will have very few merchantable tubers. Grocers are paying \$1 for them for present use. Live chickens are worth 9@12c; eggs, 16c; butter, 19c. The creamery pays around 24c for cream. Hay buyers are contracting at \$15. The cattle market is good on everything but milk cows. Many new settlers are coming in this summer and fall and things look good, as a rule, to the farmer.

Northern Isabella and Southern Clare Co.'s, Aug. 31.—Continued dry weather. Corn and beans are drying upon the ground. Beets are making but little growth, owing to the continued dry weather. Fall pasture very poor. Potatoes a scarce article and worth \$1.25 per bu. Corn the poorest in 20 years. No clover seed in this part of Michigan. Beans will yield from seven to ten bu. per acre. But little fall wheat being sown owing to the dry weather and low price. Fall apples plenty. No winter fruit to speak of. Threshing nearly all done and light yield of all kinds of grain. Butter sells at 16@22c; eggs, 15c; wheat, red, 80c; white, 77c; new oats, 35c; hay, \$13@15; rye, 82c.

Ottawa Co., Sept. 1.—Everything is suffering from the longest and severest drought known here for years. It is almost impossible to either plow or fit land for wheat. Corn is drying up and on light soil some farmers are cutting it up to save the fodder. On this account, silo filling will commence rather earlier than usual, and wheat will be sown later. In this vicinity there is a little more clover seed being cut than last year, and the heads seem to be well filled. There were plenty of bumble bees this season to fertilize the crop. Clover seed is very high in market here, and timothy was never known to be so high, (\$8 per bu.) The drought is going to shorten the sugar beet and bean crop.

(Continued on page 235).

Magazine Section

LITERATURE
POETRY
HISTORY and
INFORMATION

MICHIGAN FARMER
AND *LIVE STOCK* JOURNAL
PUBLISHED WEEKLY
ESTABLISHED 1843.

The FARM BOY
and GIRL
SCIENTIFIC and
MECHANICAL

This Magazine Section forms a part of our paper twice a month. Every article is written especially for it, and does not appear elsewhere

Harnessing a Babbling Brook.

By Dora H. Stockman.

IN this age of labor-saving machinery, man has been pressing into service horse power, steam, gasoline and electricity to do the work on the farm, as in the cities, formerly done by slow hand labor. These are all more or less costly and unreliable and it is only within the last decade that the best, cheapest, and

bare feet, and how I clambered over the slippery logs that obstructed its path down by the woods where the brook rushed noisily, or rested in clear deep pools that mirrored beautiful, delicate

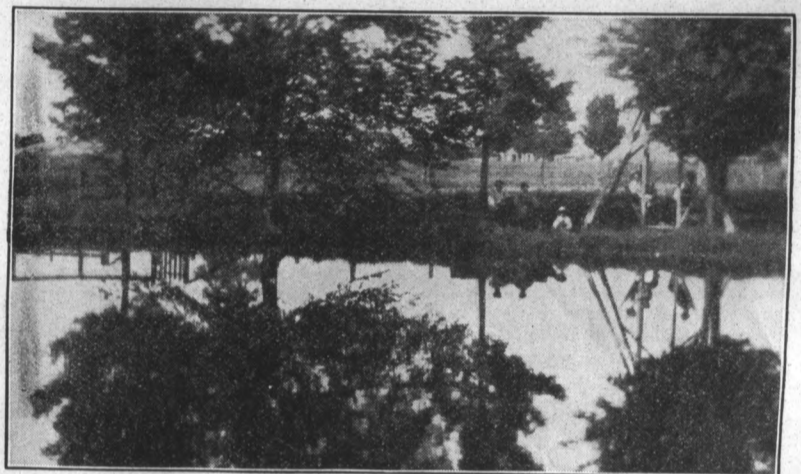
in the old gravelly creek bed, a gently curving course down across the farm, first in one field, then in another, all the way across the place.

Between the house and barn there were

its way through the fields, furnishing water in every field on the farm. Trees were planted along the banks of the pond and, later, a second dam was built farther down the stream, of cement, to make possible the use of the water for irrigating purposes in dry weather. My father also secured some speckled



"White ducks float gracefully on the quiet waters."



"There members of the family rest after a day of toil."

most reliable, natural power has been given serious consideration. But recently the conservation of the water supply of our country has become a vital national policy.

Large irrigating projects have been planned, most of the large streams have been surveyed and "rights" are eagerly sought by large organized power companies under the strict supervision of the government. These, it is planned, will furnish an immense amount of power, chiefly for electrical purposes in the cities, and for projected trolley systems. It will be available to only a few rural residents that live along its wiring system.

In the great plans of nature there is neither favoritism nor monopoly. And there is a vast amount of unrecognized, unapplied power ready and willing to do the work of man on the farms when he shall fit the harness to its back.

There are countless brooks and small streams now dashing down the hillsides and babbling through our meadows that are chiefly appreciated by small anglers and thirsty cows.

Such a brook flowed through my father's farm in northern Michigan. In my childhood days it wasted precious time, and incidentally considerable land, with its seemingly endless windings in and out among the lush, fragrant water-cress, peppermint and cowslips that grew in a fringe along its borders. I remember also the large juicy berries that I picked from the overhanging bushes while the clear water gurgled around my

green ferns and also served as a bathtub for the songbirds.

My father had been a carpenter by trade, before taking up his homestead, and therefore the careless idle ways of the brook disturbed his orderly, industri-

natural banks to form a reservoir. This basin was scraped out and a substantial dam built at the lower end. When the temporary obstructions were removed, the little brook purred merrily along over the stones in its new narrow path and

trout, from a private pond, to stock his ponds.

That was more than twenty years ago. This summer I visited the old home, and, at milking time, went to the spring house built just below the first dam. I saw a small undershot wheel lying idly beneath while the water rushed noisily below it.

Presently the men came in with the foaming pails of milk which they poured into the separator in the dairy room. My father took hold of a lever and lowered the gate in the dam; the water splashed down onto the water-wheel, the pulleys began to turn and the separator began to sing.

Beside the separator stands a churn. When the cream is ripe the belt is put onto the churn pulley, and the brook churns the butter most willingly, never seeming to get tired, as we used to, no matter how long the butter is in coming. There is also a small feed grinder that is run by the water power. The cream is kept cool in the cooling tank in the flowing water. In fact, it is an ideal place for handling dairy products.

Below the dam the brook is used for irrigating a small garden spot in dry weather. And my brother, who is an electrician, is contemplating a still larger dam, for more extensive irrigation, and to run a small dynamo for electric lighting and heating purposes, for the house and barn, in the near future.

Yet, aside from its usefulness, it makes a spot of rare beauty. In the lower pond an artificial island was built, set with

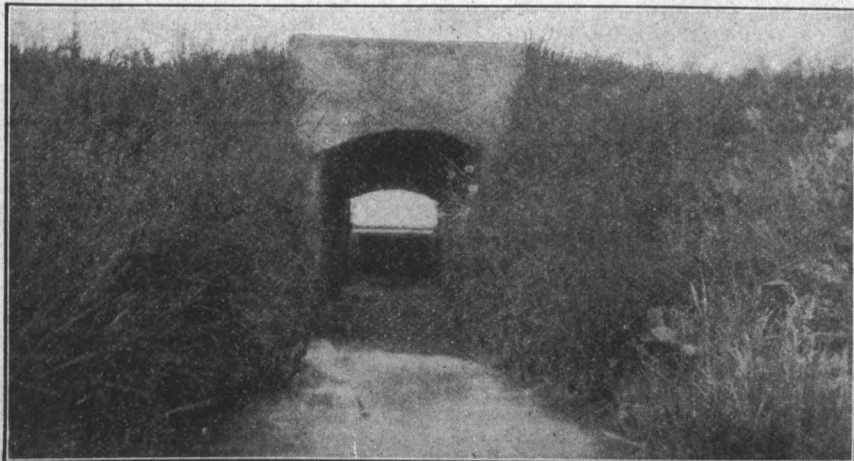


"In the lower pond an artificial island was built."

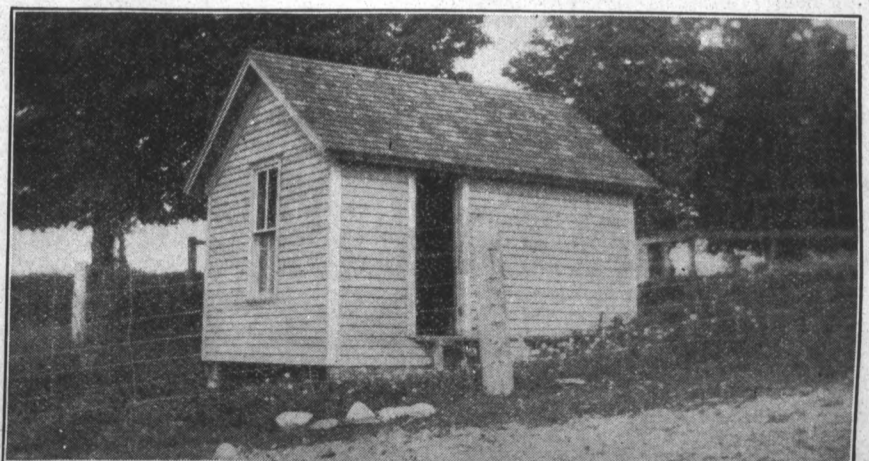
ous soul. One well remembered day he built a temporary dam across the stream just above the house and, while the brook roared furiously against this insult to its primal rights, father hitched the sturdy oxen to the plow and furrowed

spread out above the dam, gradually filling up the basin and forming a beautiful grassy bordered pond about four rods wide and fifteen rods long.

Then it leapt over the dam in a spraying waterfall, then more quietly wended



Concrete Culvert through which the Waters of the Brook Escape from Pond.



Spring House, about 12x14 ft., which Contains Separator and Other Machines.

evergreen trees, which at sunset forms a picture never to be forgotten. White ducks float gracefully over the waters. It is also feeding time for the fish, and the speckled trout, by hundreds, leap out of the sparkling waters, catching insects, flashing their rainbow tints in the sunlight, most tantalizing to the amateur sportsman watching them from the bank. And as the sun sinks low, the trees are mirrored in the water below. There the members of the family, in the swing chair, on the rustic bench and stretched out on the grass, rest after a day of toil in the fields.

Many a tempting offer has been made for the farm, to all of which my father

replies by shaking his head in his old-fashioned philosophic way, and adds, "When I've got what I want why should I change and get something I don't want," which, after all, is the secret of a contented life.

The thing that has made this farm a place of beauty and a joy to its owner is that he knew how to fit a harness to the brook. And all over the eastern and western and some of the central parts of the United States there are many, many streams, leaping and dancing over the stones, awaiting a master's hand to fit the harness so that they may fulfill their destiny of usefulness as they flow onward toward the great sea.

A STORY OF A BACKWOODS BOY.

BY FRANK H. SWEET.

A horseman rode slowly up the valley. He was large, strongly made, and sat his horse easily, lounging a little forward, after the manner of men who spend hours in the saddle. Now and then he paused to look around, as one who seeks an expected landmark in an unfamiliar country. But always there was the same dreary expanse of pine woods and palmettos, lapsing here and there into low, dank belts of mossy carpets. Long ago the last vestige of a trail had disappeared. All around was the tangled undergrowth of vines and shrubs, and frequently he had to make a wide detour to avoid vast clumps of palmettos or wastes of marsh.

As he rode deeper into the woods his eyes grew keen and watchful, and he peered suspiciously about him. Any slight sound—the loud rustle of leaves or the snapping of a twig or the movement of some small animal—caused his right hand to leave the pommel of his saddle and make a significant movement toward his coat pocket. At last he half drew a revolver at the sudden sound of approaching footsteps, but slipped it back as a boy emerged from the palmettos. He was scarcely more than a child; but his expression was grave and mature, as of one with responsibilities. There was no hesitation or timidity in his approach, only a serious, kindly air of inquiry. "Can I be of he'p?" he asked gravely.

"Perhaps. I'm lookin' for Jim Crowther's place. If you can direct me, I'll be obliged."

The boy looked interested. "I'm goin' right thar' myself," he said, "an' will show ye. Come fur?"

"Right smart. Reckon you live in these parts?"

"Yes, just out the scrub. We've got the best hammock lan' roun' here." He had spoken quietly, without any show of boyish enthusiasm or embarrassment. Only when he mentioned the land did his eyes glow a little.

When he first appeared from the scrub the traveler's right hand had returned to its careless position on the saddle. Now it touched the horse lightly, and they disappeared in the undergrowth.

At the end of half an hour they came to a small clearing. Near the center was a rough cabin of logs and slabs. At a little distance, and half concealed by the spreading branches of a large live oak, was another small building, evidently a stable or cow house. Under the oak were several rough benches. On one of these a very small boy sat washing what appeared to be a mass of fine white roots. Another boy was at work in the garden near the house. Everything about the place was neat and orderly.

As they approached the cabin the traveler noted these signs of thriftiness with some surprise. But he said nothing, and after one swift glance around he looked suspiciously at the cabin. There were rigid lines about his eyes, and his right hand had returned to his coat pocket. "Tell Jim Crowther I'm waitin' to see him," he said to his guide as he drew rein before the door.

"I'm Jim Crowther," answered the boy. "Won't you light an' take a cheer on the po'ch an' let me put your horse in the stable?"

The man looked at him curiously. "So you're Crowther's son?" he said. "I 'lowed so; but 't aint you I'm lookin' for. I want to see the head o' the fambly."

"Well, I reckon that's me," said the boy quietly; "but you'd better light off an' take a cheer. We can talk afterwards. You've come right smart, an' the horse'll need rest."

For a moment the man hesitated, then he dismounted and allowed the boy to lead the horse away. When Jim returned he found the stranger talking with his two brothers. Seen together, the three boys were almost counterparts of each

other. The stranger particularly noticed their clean, wholesome appearance. They were barefooted and wore home-made straw hats; but while their checked shirts and blue jeans trousers were uncouth and ill-fitting, they had no rents or tatters and were scrupulously clean.

In spite of his evident uneasiness, the stranger noted all these signs of thriftiness with increasing surprise. "You've got a mighty well-kept place," he was saying as Jim came up. "Hit speaks well for boys an'—an' the wimmen folks. 'T aint every man that can leave his property in sech good hands."

The boy looked at the speaker sharply. Why was he so anxious to see his father? "We all work reglar," he said thoughtfully. "Hit takes a heap o' work to look arter a place like this. But the's no wimmen folks—nobody but jes' me an' Bryan' an' Stuart."

The stranger looked a little incredulous. Who does the housework, then, he asked, "the cookin' an' washin' an'—an' mendin'?" glancing at their patched clothing.

"Me—mos'ly; but Bryan' an' Stuart is good boys, an' pow'ful handy." He smiled affectionately at his two brothers, who were shifting uneasily on their feet and listening to the conversation.

"But whar's your pappy? Why don't he come an' he'p? I used to 'low he was a toiler'ble good farmer."

Again the questioning, puzzled look came into Jim's face. Then he turned to his brothers. "Stuart," he said, "you go an' finish cleanin' the roots for supper. Bryan', you start the fire an' put some hominy on to cook. An' I reckon you'd better pick some termaters. We'll have comp'ny to eat 'long of us." The stranger seemed about to make some protest, but apparently changed his mind and remained silent. "Now," said the boy, turning to his guest, "s'pose we go an' look round the place while they're getting supper. I reckon we've got as good a crap as you've seed in this country."

The stranger assented willingly, although he suspected that the words were intended more for the ears of the two boys, who were lingering reluctantly near the corner of the cabin, than for himself. This suspicion was confirmed as soon as they were out of hearing of the cabin.

"Now," said the boy firmly, "what is hit? What'd ye come here for?"

"To see your pappy, Jim Crowther," was the reply.

The boy shook his head impatiently. "The's somethin' else. Ye can't fool me. Ye know whar' he is. Ye know he aint here."

"I 'lowed this'd be jest the place to find him, now he's out o' jail. Nat'rally he'd want to see his own flesh an' blood."

The boy drew a quick, sharp breath. "Scaped? I hadn't heered," he faltered. Then his face darkened with sudden suspicion. "What do you want with him?" he demanded.

"Me? Why, me an' him are old friends. We used to go to school together, an' coon huntin' an' the like."

Jim looked relieved. "I'm glad he's got one frien' left," he said softly. "Hit almos' seemed like everybody'd got too feared o' the law to 'member him. Hit suttinly seems queer, sence all pappy done was to fight for his kin, like every honest man ought. If he hadn't done jest like he did, I'd a felt 'shamed o' him."

"I heerd he mighty nigh killed one man, an' drew blood on the sheriff hisse't," ventured the man.

"He was fightin' for his kin," replied the boy. "He couldn't do no less. As for the man bein' mos' killed, he was only scratched, an' was out in less'n a week. 'Sides, him an' the sheriff was both traitors."

"I didn't know that. Mebbe I aint heered all the facts. S'pose you give me your side."

The boy hesitated, then said slowly: "I reckon ye've got the truth twisted;

hits most allers the way. The fac', truth is that Uncle John was 'stillin' whisky back in the woods, an' pap was helpin'. They wa'n't thinkin' o' any trouble; for Sheriff Webb was secon' cousin o' ours, an' Dep'ty Brown used to work for Uncle John. So when Dep'ty Brown come round one day, Uncle John give him a drink an' showed him whar' the stuff was made. Soon after that a whole passel o' men come an' 'rested Uncle John an' 'fiscated everything on the place. An' the worst of it was that Sheriff Webb an' Dep'ty Brown led 'em. That hurt Uncle John more'n all the rest."

"Where was your pappy?"

"He happened to be off. When he got back, he put arter 'em, meanin' to rescue Uncle John. But they was too many, an' took him, too. That was two year an' a half ago."

"Have you boys lived here all alone ever since?"

"Yes, thar' wa'n't nothing' else for us to do. We've done made a livin', an' laid by a little toward a waggin; an' 'sides that, we've put a sight of improvements on the place. Bryan' an' Stuart have suttinly humped theirselves workin'. Pappy'll be s'prised."

"How old are you, Jim?"

"Fo'teen; an' Bryan' is 'leven an' Stuart ten."

"Then you was 'bout 'leven when your pappy was took. Well, you fellows have done well. But how did you manage to save money?"

"Toted aigs an' truck to the store an' sold 'em. An' sometimes we took pa'tridges an' mebbe a turkey or two we'd ketched in the woods. If 't wa'n't for the boys' schoolin', I wouldn't keer. So fur I've teached 'em myself, but hit seems like they're gettin' ready for a sho'-nough school."

"Can't you send 'em?"

"There aint no school nigher'n the settlement, an' that's thirty mile off. Hit's too fur. I did 'low I'd teach 'em right along myself," he added, hesitating and coloring a little; "but they're both right quick, an' hit looks like I can't keep up with 'em. Pappy only learnt me to 'fo'-letter words, an' I don't git so much time as Bryan' and Stuart. 'Sides, they're quicker'n me." Here he paused and looked at his companion. "Mebbe ye wouldn't mind tellin' me a few words 'fore you go. I've had some marked a right long spell—'c-a-l-m', 's-a-t-y-r', an' sech. I can't seem to git holt on 'em, an' I don't like the boys to ask me questions I can't answer. I'm older'n they, an' hit don't seem like I ought to let 'em git ahead o' the teacher."

"Suttinly, suttinly. I'd be glad to show ye all I could," said the stranger heartily; "but I wasn't countin' on stayin' arter supper. Seein' your pappy aint here, I reckon I'd better move on."

"Not to-night, shorely," expostulated the boy anxiously. "I 'lowed for certain you'd stay tonight. We aint had comp'ny sence pappy was took. Hit'll do the boys good, they're so bashful-like."

"Well, suit yourself. Mebbe your pappy'll git roun'."

At this moment a shrill voice was heard from the cabin: "Jim, O Jim! Somethin' ails the hominy."

"I'll have to go," said the boy hurriedly. "Don't let on 'fore them 'bout pappy's troubles. I 'lowed 't was best to keep it from 'em till they got older. They'd worry, an' not be able to understand hit. They think he's off workin' and can't come home jest yet."

While supper was being prepared the stranger strolled about the place. Going to the log hut under the live oak, he glanced within. Near the door was fastened a magnificent horse. He recognized the animal from the start, and stopped to examine him. He was Tornado, whose fame several years before had filled several counties. "The boys have took good care o' him," he said as he entered the stable and ran his hand over the animal's glossy coat.

Half an hour later he was called in to supper. The food had not much variety, but it was well cooked and looked inviting. The boys, with faces shining from a vigorous application of soap and water, and eyes glowing under the unwonted excitement of the moment, ranged themselves round the table on stools and boxes. The only chair in the room was placed at the head of the table for the guest. As he seated himself he noticed several dainties near his plate which were not at the plates of the others. He made no remark, but ate them with such apparent relish that his entertainers could not disguise their pleasure.

After supper Bryan' and Stuart began to "clear up," while Jim went out with



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the stranger. As they walked away from the cabin the stranger placed his hand upon the boy's shoulder. "I was lookin' round 'fore supper," he said, an' 'low you've made a right good showin'. It's a bad fix your pappy got into, but he was some to blame. He shouldn't 'a' been quite so hasty arter he'd broke the law."

The boy turned, flushing angrily. "Pappy ust to 'low that kin come 'fore anything else," he retorted. "Law's well 'nough," he continued, "but 't ain't kin."

"I know. I know. I was brung up that way myse'f. But your pappy might 'a' been a little less reckless. I'm acquainted with Dep'ty Brown, an' I know that he hates your pappy an' your Uncle John like pizen, an' has sworn to do 'em harm. An' I'm also acquainted with Sheriff Webb, an' have allers 'lowed he was a purty squar' man. Now it looks cur'us that your pappy wasn't shot when he tried to rescue his brother. Thar' was plenty o' men an' plenty o' time, an' shorely Dep'ty Brown would jest as soon he was took dead as alive. Mebbe Sheriff Webb was a sort o' restrainin' influence. Mebbe he'd ordered 'em to ketch your pappy alive, an' not to shoot."

A look of doubt crept into Jim's face, though it was still flushed a little. "If Sheriff Webb keered for his kin, why didn't he show it? Why didn't he come forrard like a man, or at least let us know arterwards?"

"I have heered thar' was a quar'l o' long standin' twixt him an' your pappy 'bout a hoss or something, an' that thar' was threats o' shootin' on sight. I don't reckon they visited?"

"N-no, I reckon not," was the hesitating answer. "I never seen Sheriff Webb in my life, an' pappy never spoke 'bout him 'less he was mad."

It was now growing dark, and they returned to the cabin. Soon after the boys made a large fire of resinous pine knots near the live oak. An old spelling book was brought out, and they were soon busy hearing each other recite. The stranger was an amused but appreciative listener. After the recitations were over the book was brought to him and another half hour spent in pronouncing the more difficult words.

Sometime in the night the stranger was aroused by low voices outside. A little later Jim came softly into the room. "If ye'd like to see pappy, come 'long with me," he whispered. "He jest sent word that he's hidin' on Uncle John's place. He'd 'a' come here, but was feared the officers might be roun'."

The stranger had not undressed, and it took but a moment to put on his boots and outside coat. As he did so Jim uttered a quick exclamation of surprise and darted from the room. The stranger was puzzled until he noticed a shining badge which his open coat had revealed. With a gesture of impatience at his own carelessness, he hurried after the boy. But before he could reach the stable he saw Jim mount a horse and dash into the woods. At the same moment he heard the galloping of his own horse in the other direction. "The rogue's set my horse loose," he muttered. "Lucky I rode Dinah. If I ain't keerful, that boy'll spoil everything."

Placing his fingers to his mouth, he gave a shrill whistle. A little pause, and it was repeated. He did not have long to wait, for soon a sharp neigh was heard and Dinah trotted to his side.

Before the hoof beats of the boy's horse had died away the stranger was in pursuit. There was no moon, and the faint light of the stars was almost obscured by the dense foliage overhead. But he had a vague idea of the direction, and this, with the occasional sounds of the horse in advance, kept him right. It was a wild ride, and he had to bend low over the saddle to keep from being swept off by the limbs.

At last he saw a faint glimmer of light ahead. At the same moment he heard a faint sound behind. It might be horses and it might be shouting; but whatever it was, it made him clench his teeth and dash madly forward. There was no time for precaution.

Reaching the camp fire, he sprang from his horse and found himself face to face with a tall, gaunt man, who laughed derisively as he saw him. A little back stood the boy, holding Tornado.

"Much obleeged for comin'," the man said. "Hit saves me from lookin' you up. But thar's no time to waste. Pull your weepin', sheriff, an' we'll settle things right now."

"Wait a minute. I—"

"No waitin'," and an ominous click accompanied the words. "Now's the time; an' if ye're quick to shoot ye'll have a show; otherwise I'll shoot ye like a dog."

Almost mechanically the sheriff raised his weapon. As it came to a line there was a flash and a report, and his right arm dropped to his side.

"Ye didn't fire!" cried his opponent angrily.

"No."

"Why?"

"I didn't come here to fight, but to warn you, Jim Crowther. My deputy has sworn to kill you, an' he has a good show o' law to back him. I'm your friend. The Georgia line ain't far from here; an' if you cross hit, you're safe. Brown'll be out of office 'fore long, an' arter that I reckon your friends can fix hit with the governor so you can come back."

"But why'd ye do this for me?"

"We're kinfolks, an' hit's time we made up. Now hurry."

A moment later Tornado's hoofs woke the echoes of the forest. Scarcely had the sound died away when a large party dashed up.

"Whar' is he?" asked the leader as he recognized the sheriff.

"On his way to Georgia," was the quiet answer; "an' he's on Tornado. We might as well try to overtake a hurricane."

"Why didn't ye stop him?" suspiciously.

For answer the sheriff glanced significantly at his useless arm. "I wan't in good condition," he answered laconically.

"Sides, Jim Crowther's a bad man to tackle single-handed. I reckon thar's nothing left for us but to turn round an' trot back home." Then turning to the boy he said: "I suppose you know the way back?"

"I know every foot in this country," was the answer; "but—but I'd like to see you by yourse'f."

"Suttinly." And he walked aside with the boy.

"Can't ye spen' one mo' night with us?" the boy asked earnestly. "I was too fast, an' would like to make up for what I done said 'bout ye. 'T ain't often folks has sech kin as you."

"I'm sorry—" and a kindly hand was laid on the boy's shoulder—"but I must have my arm looked after; an', 'sides, I never 'low to be alone in these woods 'cept hit's very pertickler business. Thar's a lot o' lawbreakers here that would be glad to see the last o' Sheriff Webb, an' some o' 'em have a way of shootin' from behind trees an' rocks. But the men are waitin'. Take keer of yourse'f, boy; an' when ye come my way, rec'lect that I'll always be glad to see ye."

Long after the last sounds of the horsemen had died away the boy stood gazing into the forest. A wistful, hungry expression was in his eyes, and even a fox stealing across the clearing failed to draw his attention. Then he gave a relieved glance around and walked slowly homeward.

ECONOMY IN STOVES.

In these days when the home supply of fuel has become depleted upon the average farm, and the securing of fuel to heat the house or do the family cooking means a direct outlay of cash, there is a greater reason for the use of more economy in connection with stoves than ever before. In the early days when the open fire-place was in common use there was no need for economy in fuel, but today the relation of fuel consumption and efficiency is an important consideration in a stove for whatever purpose it may be used. In fact, this is a much more important factor in stove economy than is the first cost of the stove itself, hence the wisdom of studying the proposition from a standpoint of good construction, which means proper material, tight joints and an adaptability for the requirements in use. This applies even more forcibly to the cooking-stove or range than to the heating stove, since it will be used many more days during the year; but it applies to stoves of all descriptions, hence the wisdom of making a careful investigation before purchasing, in order to secure real stove economy which should be made a business proposition by every stove user. A good way to investigate is to write the advertisers of stoves whose advertisements have appeared in recent issues of this paper, for literature which will describe the merits of their stoves. With these in hand a selection can be more intelligently made and the practice of real stove economy will be simplified.

Catalog Notice.

The D. M. Ferry Co., Detroit, have just published an illustrated catalog of "Bulbs and Seeds for the Autumn of 1911," which should prove of particular interest to the housewife and gardener at this time.

We are now mailing our 600-page Catalogue, and it will be sent to you, FREE and Postpaid, upon request.

DRESS BETTER AT LOWER COST

Your money will go further this Fall than it has gone in several seasons, owing to the very unsettled conditions which have existed in the textile trade for several months. We have been fortunate in our purchases of raw materials and made up goods. Then, too, the new styles for Fall are extremely beautiful, more attractive than ever. You will be delighted with the strikingly beautiful garments which have been designed for the Fall and Winter season, and surprised to learn the very low prices which will bring them to you from the great Macy store in New York City. Many of our buyers have returned or are now returning from the fashion centers of Europe, bringing with them the newest things produced by the style creators of the old world, and you will surely want to see the new Macy Catalogue with its wonderful variety of merchandise, beautifully illustrated, fully and accurately described, and all so attractively priced as to enable you to dress better this season at a very material saving.

Macy's Prepaid Price For This Fine Coat

will surprise you. This beautiful garment is only one of thousands of ready-to-wear garments illustrated in the Macy Catalogue for Fall and Winter and we are ready to send you a free copy if you will write for it. The new book is larger and better than ever. It is easily the largest catalogue issued by any retail store in New York, the fashion center of America. It contains 636 pages, showing a wonderful variety of dependable, high grade merchandise, everything for the family, everything for the home, all priced at the same low prices which have made Macy's the largest and most widely known store in New York.

Then, too, our new policy of prepaying the transportation charges on thousands of articles enables the woman in California to buy just as cheaply as the woman in New York City. We are prepaying the transportation charges on all ready-to-wear apparel except shoes, and all jewelry. There is nothing more for you to pay. Simply send us the price we ask for any article of wearing apparel except shoes, or any piece of jewelry, and we will deliver it free anywhere in the United States.

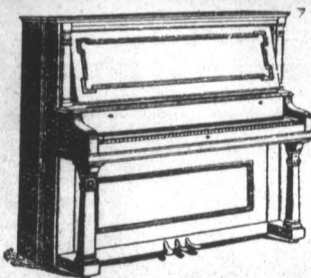
Our merchandise passes from first hands direct to you, with just one small profit added. We cut out the profits and expenses of a host of middlemen and pass along the saving to you in the form of lower prices, and on thousands of articles we pay all the transportation charges too. Therefore, before you buy anything to wear or to use this Fall, please write us a letter or a postal card and ask for a copy of our new book. It will be sent you by mail, free and postpaid, the day we receive your request.

R. H. Macy & Co.

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Full Size, Guaranteed \$188

Value which at any other house in the country would cost you \$250 to \$300.

A manufacturer's pressing need of money and our great purchasing power combine to give us a sensational special to offer at this time—note that this Piano is modern in every detail: It is full size, with double veneered Mahogany or Oak case, duet music desk, Boston folding fallboard, three pedals, double repeating action and full iron plate. It possesses well balanced scale and tone of rare depth and sweetness—and back of it is our own Guarantee as well as that of the manufacturer. This instrument is on exhibition oth at our booth in the Main Building at the Fair, and at our store, 243-247 Woodward Avenue—the close of the Fair will undoubtedly find every one of them sold—see them without delay!

EASY PAYMENTS

\$10 down sends this fine Piano to your home; \$6 monthly pays the balance; quarterly payments arranged if preferred. WE PAY TRANSPORTATION ANYWHERE IN THE STATE, and include free, with each Piano, fine Stool and handsome Drape. Every purchaser is given privilege of Free Exchange any time within a year.

See the other splendid Pianos and Player-Pianos at our booth at the Fair. There will be an abundance of music, and souvenirs for all.

We cordially invite you to make our store your headquarters on your shopping tours—and at your earliest opportunity see our great State Fair special—the splendid Piano we offer at only \$188. We do not know of any other place in the world wherre similar value can be obtained at our price.

GRINNELL BROS. MUSIC HOUSE

24 Stores, Headquarters, Grinnell Bldg., 243-247 Woodward Ave., Detroit

BY G. RAYMOND PEEL.

Perhaps some of our boys and girls who have witnessed the fascinating aeroplane flights at the fairs, and even some who haven't, will be interested in learning how to make a toy flying machine. By reading the following description carefully, and studying the illustrations, any ingenious boy can make one. The aeroplane must have two good-sized flat surfaces or wings of cloth, for it depends upon the pressure of the air on the lower side of the planes (which is caused by driving the aeroplane rapidly through the air) for its support in the air.

For this model, we first need some light, strong wood for the frame. Bamboo is good. From this make a stick 5-16 inch square and 32 inches long for the motor

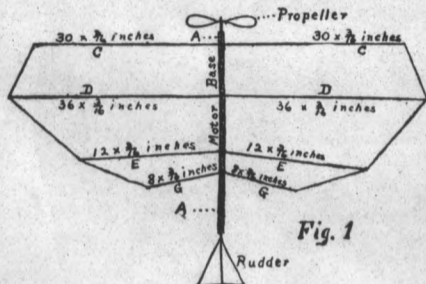


Fig. 1

base (Fig. 1, A). Then make eight more sticks of the same material, two (C) 30x3-16 inches, two (D) 36x3-16 inches, two (E) 12x3-16 inches, and two (G) 8x3-16 inches. Fasten these to the motor base, A, at an angle of 8 degrees, as shown in Figs. 1 and 3. The joints may be made as at Fig. 2, A.

A rudder (Fig. 1) may be attached, but is not necessary if the wings are fastened to the motor base at an angle of about 8 degrees from a plane, as in Fig. 3.

For the propeller, cut a sheet of aluminum to the shape shown in Figs. 1 and

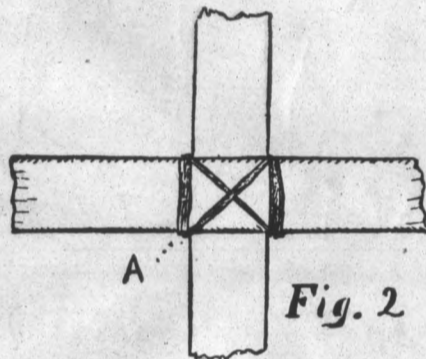


Fig. 2

3, making it about 8 inches long, and 2 inches wide at its widest part. The blades are then twisted to the required angle by taking each end between your thumb and finger of each hand, and twisting about one-eighth around in opposite directions.

The propeller shaft (Fig. 4, A) is made of a bicycle spoke, with the propeller fastened between two nipples (Fig. 4, B, B).

The motor or motive power is furnished by rubber. Take about six strips

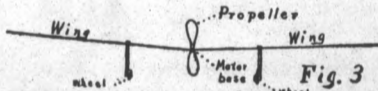


Fig. 3

of good rubber 1/4 inch wide and 26 inches long, and lay them together to form a 6-ply strip. Fasten one end of this rubber strip (Fig. 4, E) to the hook-shaped end of the propeller shaft, and fasten the other end to the motor base about 6 inches from the rear end of the base. To provide the motive power twist this rubber strip as tightly as possible, then its untwisting will whirl the propeller.

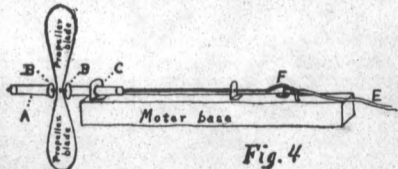


Fig. 4

The propeller shaft is passed through a brass bearing (Fig. 4, C), which is fastened to the front end of the motor base.

When everything has been completed so far, a set of small wheels (Fig. 3) may be placed under the frame. Next cover the frame with light, strong paper. Manila paper is best. The aeroplane is now complete, and, if carefully made, should fly from 30 to 40 feet or even more. A model like this will be a fine toy to furnish many hours of pleasure.

Overland

This \$900 Car Measures Up With Any \$1250 Car on the Market

EVERY man likes to make each dollar go as far as possible. He is wasting no money. Whether he buys a plow, pump or an automobile, he continually looks for the greatest value he can get for any given amount of money. If a 30 horsepower, five-passenger touring car of standard make can be bought for \$900 why on earth should he pay \$1250 or more for the same type of car?

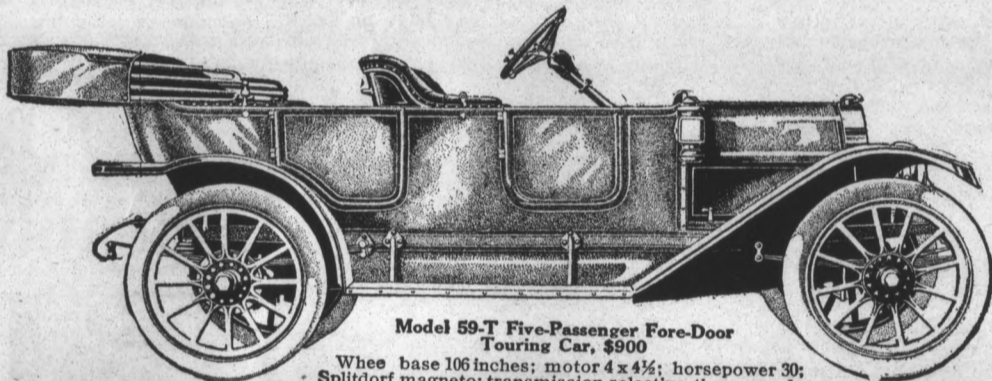
C. Our Model 59 is a 30 horsepower, five-passenger fore-door touring car. The price is \$900. It is a big, roomy, thoroughly high grade car. The motor will develop more power and speed than you will ever care to use. It has a handsome body design—graceful and good to look at. The pressed steel frame is staunch and solid. The selective transmission is fitted with F. & S. bearings—the finest in the world. In a word it is just as good and fine as this type of car can be made. You will not find its equal for less than \$1250, and a comparison of the specifications with any other 30 horsepower car will prove this statement.

C. This car at this price is due to our enormous manufacturing facilities. We have the greatest plant of its kind in the world. We have just published a very thorough book which explains in a clear, definite and readable manner the difference in automobile plants. And the point of this whole book is to prove the economical manufacturing ability of the Overland plants—to prove its strength by showing and explaining to you the interior and exterior of the greatest automobile plant in the world. It takes you over the entire 80 acres. The book is free and we want you to have one. It is interesting and full of information.

C. Above all it gives you a clear understanding of economics in the production of automobiles in great quantities, and we believe it proves why no other manufacturer in the business can produce the car described below and sell it at our price without losing money.

C. A line to us will bring you this new Overland book. It explains what we are and what we have got and why other cars of similar size and rating are from twenty to forty per cent. higher in price. Write and ask for book AG 39

The Willys-Overland Company, Toledo, Ohio



Model 59-T Five-Passenger Fore-Door Touring Car, \$900

Wheel base 106 inches; motor 4 x 4 1/2; horsepower 30; Splitdorf magneto; transmission selective, three speeds and reverse; F. & S. ball bearings; tires 32x3 1/2 Q. D.; 3 oil lamps, 2 gas lamps and generator. Complete set tools.

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The great Treasure State invites you, with her 93 million acres: lots of room, lots of sunshine, lots of opportunity.

Montana is in the center of the Great Northwest Prosperity Belt. Where dry-farming methods are opening the eyes of the world to their safe and sure scientific principles and wonderful results. Where irrigation is showing what marvelous resources have lain under the cattle range.

Free Government Homestead Land in choice localities. Farming and orchard land in fertile valleys at low prices. You can make money and enjoy life working out-of-doors on an orchard or farm of your own in Montana. Look it over this Fall. See the harvests in the productive Yellowstone, Clark's Fork, Shields, Gallatin and Bitter Root Valleys. Low-rate Homeseekers' Tickets to points in Montana sold every Tuesday in September and October. Round-trip, 25 days return limit, with stopovers.

Send for illustrated booklets about Montana and full information about low fares.

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General Immigration Agent
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The Northern Pacific Railway has land for sale, adjacent to its lines in Montana. For printed price lists and descriptions, address Thos. Cooper, Land Com'r., St. Paul.



Woman and Her Needs

At Home and Elsewhere

WOMEN MAY BE FORCED INTO POLITICS.

Will the next decade find the women of America as ignorant on the subject of politics as they are today? In the past women, on the whole, have ignored the issues at stake in the country. But they are beginning to awaken to the fact that government is for all the governed, and to inquire of their liege lords and alleged masters what all the commotion in the world political is about.

And the cause of their awakening is the prevailing high prices. What logic and arguments could not accomplish, the hard task of securing two dollars to buy what one should pay for has brought to pass. Women's eyes have opened to the fact that the country is passing through a crisis, and that it behooves every intelligent citizen, male or female, to be correctly informed and to have a say in the settlement of the vexed questions. It seems too bad that sordid measures should bring about what ethical pleadings could not accomplish. But, on the whole, we are a sordid people and reforms are seldom accomplished in our midst until we are touched on our most vital point, the pocketbook.

There are many questions which puzzle women and which we would far rather see answered than such vaporings as "Is it right to allow a young man to hold my hand?" and "How can I increase my height an inch?" We should like to know, for instance, why, when potatoes could be bought for 15 cents per bushel 35 miles from Detroit in the spring of 1910 and were being given away 70 miles from here, Detroiters were compelled to pay 80 cents the bushel for them? Shall we blame the tariff, the middleman, the railroads, the insurgents, the democrats, President Taft, or the farmer?

Why must we pay 85 cents for rubbers which we could purchase 15 years ago for three and a half dimes?

Why are we forced to pay 28 cents for eggs and 33 cents per pound for butter, while 1,500,000,000 eggs and an equal number of pounds of butter are held in cold storage?

Why must we pay 28 cents the pound

for steaks and 20 cents a pound for roasts, these prices being five cents the pound higher than last year, while the farmers receive two and three cents a pound less for their stock than they did a year ago?

Why is hard coal worth less than \$2.00 a ton when it is loaded in the cars in Scranton, Penn., and cheap at \$7.00 the ton when it arrives in Detroit?

Why is the price per loaf of bread raised when wheat is cornered by some operator, and not lowered when flour drops down again?

Why is it that every dollar we earn is gently but deftly extracted from our pockets by the butcher, the baker the candlestick maker, aided and abetted by the hatter, the tailor and the shoeman? Is it the machinations of gigantic corporations? Is it over-population and under production? Is it surplus of gold, as suggested by railroad presidents, or extortionate freight rates, as suggested by muck rakers? In short, is this extortion brought about by natural causes, or is it just graft, pure and simple?

These are only a few of the questions which are puzzling by far the greater number of women in our broad land. They are not only puzzling us, they are worrying us and we should like to have them answered. Man, big, broadminded, brainy man is trying to answer them and at the same time is bidding us run along and play with our dolls. But thinking women can no longer be content with the role of childish ignorance. The questions of the day are of absorbing interest, more fascinating than any romance, more vital than for decades past. We want them answered, and if they are not soon settled many women who have no desire for a vote will join hands with the suffragists, in a hope of getting a chance to right things themselves.

Congress investigates, and after the smoke clears away prices soar a few degrees higher than before.

Suppose the women investigate? What would be the result?

DEBORAH.

Sending the Girls to the Town School.

By Pearle White M'Cowan.

The first consideration of the parents who send their daughters to the city schools, away probably for the first time from their own care, should be to know something, at least, of the character and habits of the family with whom they are to stay. For, of course, private homes are much preferable to public boarding or rooming houses, and the townspeople respond heartily to this demand and open their doors willingly to the changing, transient population of students. The mistress should be an earnest, thoughtful woman who will take a kindly interest in the well-being of the young people entrusted to her care.

Then, too, if there are young people in the house, something should be learned concerning them. Are they earnest, whole hearted, good natured young folks, with a time for work and a time for play? Or are they of the type that think nothing matters much, so they have a good time, and thus neglect their studies and work, spending much of their time upon the streets, indulging perhaps, in silly flirtations, frequenting cheap shows, etc.?

Parents can't do everything. They can't tell what special temptations may enter into these young lives that they are sending forth, but they can use every means within their power to try not to send them into any harmful atmosphere, but rather to put them in the way of the positively good influences.

Distance is also one of the matters to be considered. The quiet, reticent, or studious girl will be all the better for a walk of half a mile or so, while the vivacious, active one will get her exercise anyhow, so it does not matter how near to the school building she rooms.

There are several plans open to the girl thus going into town. She may board outright, having her room and board at the same home; or possibly, she will room in one house, taking her meals at another where the housewife has plenty of time to cook, but no extra rooms. In the latter case, a certain sum is charged per week, (varied somewhat, usually, by her use or non-use of the room over Sunday), and meal tickets are purchased at the other house, thus avoiding the necessity of paying for any meals not eaten. By the way, if a girl is invited out to tea, she should not forget that it is only common courtesy to let the mistress of such a home know. It naturally makes more or less difference in her plans.

Then again, a girl may rent a furnished room, and, if the hostess is willing, install therein a small oil or gasoline stove and board herself. Often two or more girls club together and follow this plan, taking turns as to roomwork and cooking, and making quite a lark of the whole affair. Their parents send baked goods, potatoes, etc., from the farm, for their use.

Some housekeepers object to having the little oil stoves in the rooms. They can be persuaded to cook the potatoes, vegetables, etc., upon their own ranges for a trifling sum, if they are properly prepared and brought into the kitchen before the girls leave for school.

When "boarding themselves" is the rule, the girls are expected to furnish their own dishes, tablecloths, towels, and sometimes even the bed linen, and, of course, the laundering is sent back to the farm to be done, or hired out of the house. Now and then an unfurnished

room is rented, the parents providing the material for the furnishing from the farm home.

Sometimes arrangements are made whereby a girl is to board with the family and instead of cash, her parents are to furnish supplies from the farm, wood, eggs, meat, butter, etc. However, as it entails a considerable amount of book-keeping, this plan is seldom satisfactory. When it is adopted a fair price, determined by the market value of the furnished article at the time they are provided, should be charged for the various commodities. Also, a stated sum is asked for board, and the amount of produce furnished made to correspond with the cost of board. Sometimes, of course, only a part of the price of board and room rent is covered by produce and the balance made up in cash.

Then again, a girl may, if she is physically strong enough, work for her board. If this is to be the plan tried, some definite arrangements as to what she will be required to do, should be entered into before she begins her work, for both girls and mistresses have been known to take advantage. Work should be promptly and well done, and there should be no imposing either by girl or housewife.

Some girls feel that they have not the time to pay all their board in work, but would be glad to reduce their bills somewhat in that way. The only satisfactory plan whereby this may be arranged is to keep a tally card handy, and never forget to set down the exact time spent in work. This may be footed up, usually at ten cents an hour, and the amount deducted from the bill for the week's board and room.

Even if the girl is only to stay in town on bad, stormy nights, have some definite arrangement as to where she shall go, and the price to be paid for such accommodation. No girl so soon loses the respect of the townspeople as the "professional sponger."

SHORT CUTS TO HOUSEKEEPING.

Several readers have asked why their contributions have not appeared. The number of suggestions received is so greatly in excess of the number we are able to print each week that we have several hundred ahead. Sometime we may catch up, but in the meantime can only ask our readers to be patient.—Editor.

The leaves from a sage plant may be gathered three or four times a year if proper care is taken not to injure the slender branches. Clip the leaves close to the stem and set to dry in a window just out of reach of the direct rays of the sun. After the sage plant develops blossoms cut them off and add a little rich fertilizer to the soil, banking it well around the roots which have a habit of pushing out of the ground. In three or four weeks new sprouts and leaves will spring up, the largest and finest of the season.—L. M. T.

When screen door do not fit perfectly tack a strip of linoleum or heavy oilcloth on the outside of the frame to cover the crack.—B. M. W.

The sofa pillow fad having gone into a decline a new use for leather post cards has been found. To make a novel and interesting portiere collect all the leather post cards that friends have sent you during the summer, purchasing a few if need be, as 232 are required. Combine them artistically, lacing them together with the leather thongs that come for that purpose. The portiere should be eight cards across and twenty-nine in length, or 94x42 inches, and the leather thongs should be laced into the top row of cards to make loops for curtain poles.—L. M. T.

We have found sweet milk to be the best thing we have ever used in the water for washing painted or hard finished walls. Try it and see how rapidly the dirt will disappear. Have the water only lukewarm.—A. E. L.

Peaches prepared at night, the sugar mixed with fruit, will need no water, when cooked in the morning. A good way to make marmalade.—A. B.

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OFTEN IMITATED—NEVER DUPLICATED

Suesine Silk 39¢

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No advertisement we could write can speak half as strongly for Suesine Silk as the praise of these hundreds of thousands of fastidious women, and good judges of value, who know Suesine by their own experience—and who buy it again and again every season year after year.

These women refuse all imitations and substitutes—they insist on buying genuine Suesine—with the name along the edge of every yard—like this

SUESINE SILK

Don't be talked into buying a substitute or you will be sorry—these imitations are adulterated with tin, glue and iron dust which make them quickly fall to pieces—don't be coerced or persuaded into buying them, for you will surely regret it.

We will send you, absolutely free, forty-two samples of Suesine Silk—more than 255 square inches altogether

We ask only, that, when writing for these free samples, you will mention the name of your regular dry goods dealer, and say whether he sells Suesine Silk or not. Please be sure to give that information in writing to us.

No matter where you live, it is easy to get genuine Suesine Silk

We do not sell Suesine Silk except through regular retail merchants. But if we cannot send you the name and address of a Dealer in your vicinity who has Suesine Silk, we will see that your order is filled at the same price, and just as conveniently, by a reliable retail house, if you enclose color sample and price, 39c. per yard.

The price of Suesine Silk in CANADA is 50c. a yard.

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Farmer and His Wife Wanted—Farmer to work a small 30-acre farm, one with knowledge of fruit and poultry preferred. Wife to work in house. Good wages and board to right people. Address Box H, Mich. Farmer, Detroit, Mich.

WANTED—A man or woman to act as our information reporter. All or spare time. No experience necessary. \$50 to \$300 per month. Nothing to sell. Send stamp for particulars. Address Sales Association, 814 Association Bldg., Indianapolis, Ind.

Please mention the Michigan Farmer when writing to advertisers.

NEW FEATURES IN THE DINING-ROOM ILLUSTRATED IN AN ARTISTIC HOME.

AFTER all, things go pretty much as women say, for all they are called slaves of fashion.

Take plate rails in the dining-room, for instance. A few years ago some builder who was looking about for "something different," conceived the idea of running a shelf around the dining-room five feet up from the floor, on which women were to place their best china plates, vases, etc. This was supposed to beautify the room, and women, being always ready to try new schemes, took up with the idea. But if women are fond of new ideas, few of them are fond of adding to their work and they soon found that these plate rails were adding greatly thereto. There is no better resting place in the house for dust than here, and after taking down each article and dusting it and the shelf carefully once or twice a week for one, two or three years, woman declared herself through with plate rails. As a result, architects and builders decided that plate rails were "passe," and the new houses are minus this feature, while in many old homes they have been removed and the dishes put where they will not have to be dusted quite so often.

The dining-room wall must be broken, though, the decorators seem to think, so a dado is used three feet up from the floor. Then from the dado the paper runs straight up to the ceiling without a hint of a border. In lieu of the border, the corners are finished with the old-

figured draperies are usually in two-tone effects, or if not are shot on a black warp.

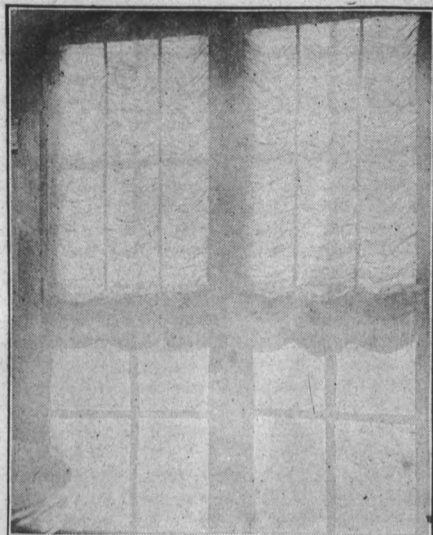
Simplicity is the keynote of the artistic dining-room of Mr. and Mrs. William E. Dye, of Detroit, several views of which are shown in the illustration. French windows opening out on a porch with steps leading down to the lawn, form one of its attractive features, and the absence of the plate rail commends it yet more. The room is in antique oak, beams of the oak finishing the ceiling, and a panel of the wood runs around the room about five feet from the floor. The walls are finished with a leaf paper below the panel in soft shades of dark brown, and above the panel a lighter shade of brown runs to the ceiling. The French windows have hangings of mulberry Aurora cloth, which is seen again in the over-draperies at the half windows above the buffet.

THE YOUNG MOTHER AND THE FIRST CHILD.—No. 3.

The Crying Baby.

"The well baby is a happy baby." This is the dictum of every child specialist who knows his business. If your baby cries constantly, do not excuse it by saying he is "cross." Depend upon it, something is wrong and it is for you to find out what is the trouble. If he is perfectly developed, if his food is sufficient in quantity and of the right quality, if he digests it well and has no diseased conditions of any sort, he will not be fretful nor cry overmuch. Instead he will sleep

best way is to take a strip of old clean, white cotton an inch wide and two or three yards long. Begin at one end and roll the strip up tightly like a bolt of ribbon, put the navel in position, lay your roll of cotton firmly over it and fasten it in place with a strip of oxide of zinc plaster. This should remain in place eight or ten days if you are careful



French Windows Open Out on the Lawn.

not to wet the plaster when bathing baby, and protect it from the diapers by a bit of cotton batting, which does not absorb moisture readily. When the plaster comes off, put on a clean roll of cotton and continue this treatment until the trouble is over, which may be months. Try to keep the baby from crying unduly as this aggravates the trouble.

Too tight a band may also be the cause of crying. The band, of soft woolen, should be loose enough for the mother to easily insert three fingers after it is pinned.

Colic is one great cause of crying and may result from a variety of causes. Cold feet and hands, either the baby's or the mother's, if it is a nursing baby, will cause it. Too much food, or food taken too hastily, irregular hours of feeding and the wrong sort of food all tend to cause it. To relieve, see that the baby's feet and hands are warm, wrap them in a bit of heated flannel or use the hot water bottle. Put warm applications on the stomach, a hot flannel or the ever helpful hot water bottle, and give a few spoonful of hot water. A suspicion of essence of peppermint in the water helps bring up the gas and relieves the infant. To avoid a recurrence, see that baby is kept warm and correctly fed. If you are a nursing mother, do not eat any food that you know you can not digest well. We are all so differently constituted that it would be hard to advise in a general article what not to eat. One woman can not eat cabbage, another, tomatoes, a third squash. Anything that distresses you will be reasonably sure to distress baby, so govern yourself accordingly.

If you find baby is not crying from any of the above causes, and he is bottle-fed it is more than likely he is not getting the right sort of food. In this case the



The Ceiling is Beamed with Antique Oak.

fashioned cove, that is, instead of the square corner in the room a bell-shaped piece of wood is fitted in and tinted to shade up from the wall to the ceiling color.

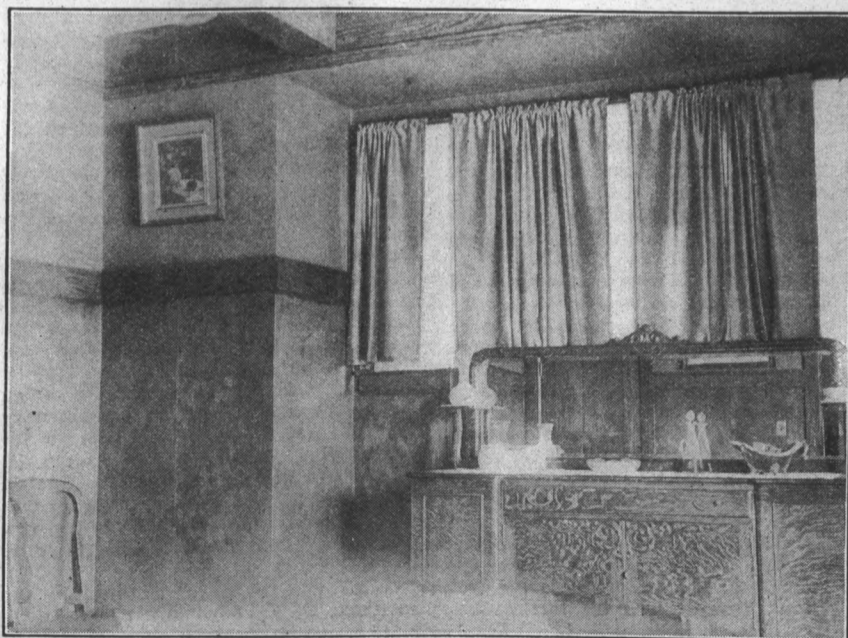
Metallized effects are very good in dining-room papers, that is, a combination of two colors, as gold and silver, two shades of blue, two of brown, etc., blended together. The grapevine papers, and the scroll and forest effects which we once admired have been done away with, unless one can afford to have woven tapestry. A very popular paper is the new Aerochrome, a two-toned paper which owes much of its popularity to the fact that the customer can pick out her own colors and have them blended on the paper. These are beautiful in silver and blue or in two shades of brown, a color which is still chosen often for the dining-room. The paper is five feet wide, and is sold by the yard instead of by the roll. It is designed to be put on straight around the room above the dado so that it need not be cut in strips and show seams. The dado, of course, would then have to come within five feet of the ceiling. A good feature of the paper is that it can be wiped off with a damp cloth when it becomes soiled.

Fishnets and scrims, both in ecru, are most chosen for dining-room curtains. Whatever the cloth, the color must be ecru, as white is decreed entirely out of place in the dining-room. The fishnets are figured in all-over designs, while the scrims may be either plain with filet insertion from three to five inches wide, set in two inches from the edge, down one side and across the bottom, or it may be figured and finished with a Cluny edge.

The overdraperies are usually of the "Sundour" fabrics, so called because they do not fade. If your wall paper is figured, choose plain draperies, but if it is plain a figured drape is used. These

nearly 20 hours out of the 24 and only cry when he needs food or care.

First in your examination to find out the cause of his crying, look at the navel to be sure it has healed perfectly and no inflammation or discharge is apparent. If there is apparent soreness or irritation consult the doctor at once. Do not follow the well meant advice of friends who may or may not know what to do. Often



An Alcove for the Buffet.

a child suffers from navel rupture, or the navel protrudes instead of growing in the natural way. This may be caused by crying or from other things, but in any case it must be treated at once. The

condition of the bowels will tell you. They will be loose and watery, often green in color. The stool of a properly digesting bottle-fed baby should be formed and yellow in character. If this is

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A lady lecturer writes from Philadelphia concerning the use of right food and how she is enabled to withstand the strain and wear and tear of her arduous occupation. She says:

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| 3 Organs | 19 Sewing Machines |
| 4 Trunks | 20 Gasoline Engines |
| 5 Roofing | 21 Cream Separators |
| 6 Vehicles | 22 Building Material |
| 7 Furniture | 23 Stoves and Ranges |
| 8 Incubators | 24 Underwear Samples |
| 9 Wall Paper | 25 Automobile Supplies |
| 10 Typewriters | 26 Bicycles—Motorcycles |
| 11 Grocery List | 27 Baby's Dress and Toilet |
| 12 Feed Cookers | 28 Women's Tailored Suits |
| 13 Tank Heaters | 29 Women's Fashion Book |
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| 15 Carpets, Rugs | 31 Men's Clothing |
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not the case with your baby, consult a physician who knows his business at once. Do not try formulas of friends or even from magazines. Such formulas, even if written by the best of physicians, are only general and may not be at all suited to your individual case.

(Questions regarding diet, clothing or anything else regarding the child will gladly be answered.—Ed.)

NEW FALL FASHIONS.

Velvet hats promise to be much worn this season. They come in small, round shapes to be trimmed with pompons and flowers for street wear, and in dress hats, which are wide-brimmed and feather trimmed.

Flower trimmed turbans are good, and as they are becoming to most women, young or old, this will be welcome news. Roses, pansies, gardenias, all are used in the making of these universally popular chapeaux.

A variety of colors are shown in hats, black, dark blue, brown, Copenhagen blue and green in the velvets, and white and grey in the felts. Everyone ought to be suited, no matter what her complexion, as the range of colors is ample.

The kimono sleeve and the sailor collar promise to continue their popularity for another season at least.

The ultra coat shows the raised waist line.

We are sure there is no new thing under the sun when we read that dark blue serge, basket weaves, homespuns and tweeds are still the approved materials for skirts and suits. Frills of lace in the sleeves, matched by soft jabots, give these suits a dressy air.

Buttons promise to be much used as a trimming.

The panel, stitched to the skirt part of the way down and then left to fall free, which appeared in the summer fashions, is holding its own for the fall. They come to the bottom of the skirt or only to a few inches below the knees.

The new coats show big collars and revers.

FRUIT LEFT-OVERS.

BY MRS. MARY E. UNDERWOOD.

When putting up fruit, one is sure to have something left over after the last jar is filled, either a little fruit, or a little juice, or a little of both. I know housewives who throw it away; but I never do. I always have a few jars of these left-overs, and in the winter I count them among my treasures—they are like picking up money, for, being left-overs, they might have been wasted! As it is, they seem to have cost nothing, and I feel that I can be real extravagant with them. Husband laughs at this reasoning, but any woman who has been obliged to economize, will understand just how I feel about it.

And so, while putting up fruit, I put whatever is left over into these jars; I keep one handy all the time, mix all kinds of fruit together, add bits of marmalade or jelly, or the dish of fresh berries or stewed fruit that was left over from dinner—in fact, put in any kind of fruit that happens to be too small in quantity for any other purpose. When the jar is full, I heat the contents to boiling point, then screw on the cover, mark it "left-over" and set it away. In the winter I use this for flavoring ice creams, or for making sherbets, or to serve as a drink, with water added, when we have company in the evening. I add sugar and a beaten egg to a portion of it, and make a pie, or I add gelatine and make a pudding. I use it to flavor pudding sauces, or stir it into a dish of toasted bread crumbs and make a fruit pudding. I have even made it into shortcake that was pronounced delicious, and no one could tell what it was because more than half a dozen fruits were mixed together.

When I have company and want to put on a great deal of style, I serve "Ruby Souffle" for dessert. It is a dish of my own invention. I take half a pint of my fruit left-over, and strain it to get out all particles of fruit. Then I soak one-fourth of a box of gelatine in half a cupful of juice for five minutes, then stir in half a cupful of boiling water to dissolve it. I mix the remainder of the juice with sufficient sugar to form a syrup, then add the beaten yolks of three eggs, and stir all well into the gelatine. I put this in a cold place where it remains until it begins to set, then I lightly stir in a pint of whipped cream, and leave it until it is firm. This is good served with any preferred sauce. Sometimes I serve it with a little jelly and some of the juice. Sometimes I pile whipped cream over it. At

other times we use simply sweetened cream. When I say a pint of whipped cream, I mean, of course, after it is whipped. It takes about half a pint of good cream to make a pint of whipped cream. If your cream does not whip well, stir in a tiny pinch of salt.

I always count watermelon rinds among the left-overs, since they are really left over from a feast of melon. And I have such a nice easy way to convert them into pickles that I am sure you want to know about it. I take two cupfuls of sugar to three of vinegar, and measure out half a cupful, each, of whole cloves and stick cinnamon. I tie the spice into a thin bag and boil it in a little water until the strength is removed, then add it to the vinegar and sugar. Pare the melon rind, cut away all the soft red part from the inside, then cut it into squares, and boil these squares in the liquid until they are tender enough to allow a fork to pass through quite easily. Then I take out the melon and pack it in a two-quart glass jar, and let the liquid boil hard for ten minutes. It is then poured over the melon, and the jar is sealed and put away. These pickles are good to eat in about two weeks, and they will keep indefinitely—if you have enough of them. Now think how much easier this is than to steam the melon, and boil the syrup half a dozen times, pouring it off for that purpose every alternate day! That was the way I was taught to do, but really the pickles made in this way were not as good as those I now make so easily. Whenever we have melon, I use the rind at once, before it has become wilted, and I never make hard work of it. And so my melon pickles also come among the left-overs that are like a gift from home, they come so easily.

MICHIGAN FARMER PATTERNS.

These patterns may be obtained from the Michigan Farmer office at the price named. Be sure to give pattern numbers and size.



5537—Ladies' Waist having Under-arm Gores and with or without Puritan Collar. Cut in 6 sizes, 32 to 42 inches bust measure. Size 36 requires 2½ yards of 36-inch material; ¾ yard of 27-inch contrasting goods. Price, 10 cents.

5528—Children's Box-Coat. Cut in sizes 2, 4, 6 and 8 years. Age 8 requires 3½ yards of 27-inch material; ½ yard of 18-inch all-over, and ¾ yards of edging. Price, 10 cents.

5396—Ladies' Dress Skirt having Inverted Plait or Habit Back. Cut in 6 sizes, 32 to 42 inches bust measure. Size 36 requires 5¼ yards of 36 or 4¼ yards of 44-inch material; 10% yards of banding. Price, 10 cents.

4500—Children's Rompers. Four sizes, 2 to 8 years. For 4 years it requires 2½ yards of 36-inch material. Price, 10 cents.

5527—Ladies' Seven-Gored Skirt with Inverted Plait or Habit Back. Cut in 6 sizes, 22 to 32 inches, waist measure. Size 24 measures 3 yards around the lower edge and requires 4 yards of 50-inch material. Price, 10 cents.

Editor Household Department:—Will somebody please tell me of a remedy for taking tartar off the teeth?—B. A. W.

The best thing to do is to go to a dentist and have the teeth cleaned.

Put small pieces of camphor gum in the drawer or on the cupboard shelf where silverware is kept and it will not tarnish so easily.—Mrs. J. W. T.

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The best Baker ever built

Built like a locomotive boiler

Riveted, not bolted together. No stove putty

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The Arcadian Range will never have false drafts—it will always do perfect baking, using a third less fuel than common ranges.

Never need to use blackening—a rub with an oiled cloth makes it appear like new. It pays for itself over and over in the fuel it saves, to say nothing of the way it makes a woman's work easier and allows her to do perfect baking. The Arcadian is sold by dealers.

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Bluefield, Col.—I received my stove and have tried it thoroughly. I am perfectly satisfied with it. I use about one-half the coal and get about one-third more heat than I did with my old stove. I don't see how you can put the material used and the excellent workmanship on your stoves and sell them for the price you do. I could not duplicate mine in my town for \$80.00. I have saved \$20.00 on my stove. SAML. E. WADE, Prof. English.

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PRACTICAL SCIENCE.

OUR NEW DEPARTMENT OUTLINED.

The purpose of establishing this department is to awaken in the farmer and the young people on the farm a desire to know more concerning the work they have to do; to instill in their minds a spirit of inquiry, not of idle curiosity; but born of a desire to know in order that more may be accomplished on the farm. It matters not what occupation one may follow, unless he has enthusiasm in his work he becomes a mere machine and as a machine he can be useful only in the hands of an operator. There is not a dearth of machines at the present time, but there is a dearth of operators. It is easy to be a machine. One needs patience, steady habits, the quality of obedience and such, and he is fitted to be a machine worker in almost any employment. It then really matters little what employment he is in. He may be a clerk in a grocery store and obtain a

Special articles from time to time on the products of the dairy and the farm. These articles will be gotten up in such a manner as to comprise practically a course of lectures on agricultural chemistry and its allied subjects, and will include their application to home conditions on the farm. It is expected that these articles may appeal to the women and girls in the farm home as well as to the men and the boys, and every inducement will be made to make these lectures the subject of discussion in the home during the winter evenings.

It may seem advisable to inaugurate contests in regard to this work and if so this also will be undertaken. We are carrying the short course to the farm. The Mountain to Mahomet, as it were, and hope to animate our readers and students with a spirit of inquiry which may result in the development of an enthusiasm for the various lines of activity on the farm.

Practical Farm Laboratory.

In addition to the subject of scientific extension, we have established a farm laboratory. Through this laboratory we hope to answer farmers' questions involving a chemical analysis. Multitudinous questions arise to the student farmer, questions which a laboratory alone can answer; questions arising from a real desire for information which may assist in making more profitable some line of agricultural activity on the farm, or which may assist in making more fascinating some line of endeavor in the household. This farm laboratory is placed likewise at the disposal of the readers of the Michigan Farmer.

It will be seen that this may involve a considerable volume of work and therefore some restrictions must be placed upon it. These restrictions are few, but must be carefully observed.

1st. The privilege of this department is extended to the farmer and his household only. Problems of commercial and manufacturing concerns cannot be carried in these columns.

2nd. This is a real laboratory department and therefore we cannot devote time and energy to the analyses to satisfy mere curiosity. It must be a sincere request for information, based upon some practical or home problem.

3rd. A letter of inquiry must precede the sending of the sample.

4th. The postage or express on all samples sent must be prepaid.

When the above simple conditions are fulfilled, we stand ready to extend our services to our subscribers.

THE HESSIAN FLY IN OHIO.

The Ohio Experiment Station has issued a warning that Hessian fly is rather plentiful in a good many sections of Ohio this fall and in those localities where it is known to be present it will be unwise to sow wheat early. Where rainfall has been reasonably abundant, the flies may be expected to appear at the normal time and the following dates for seeding in the different parts of the state are suggested by the Ohio Agricultural Experiment Station as safe for such districts: Northern third of the state—September 20 to 25, the latter date for the southern counties of this area; middle third of the state—from September 25 to October 5; southern third of the state—from October 5 to October 10. Neighborhoods which are certainly free from the fly may sow five or ten days earlier than these dates, while neighborhoods more or less infested with fly and having been afflicted with drouth during summer and fall, will be safer from fly attack if sowing is done a few days later than the dates here scheduled. Dry weather retards the development of the fly without destroying it, except in cases of extreme and prolonged drouth, and the belated brood may appear in numbers, following the fall rains, a week or two later than their usual time.

CATALOG NOTICES.

The Pittsburgh Steel Co., of Pittsburgh, Pa., are sending out a 48-page, pocket size catalog, describing and illustrating the 145 styles and sizes of "Pittsburgh Perfect" fences, also plain and barb fence wire, staples, nails, tools, etc. "Concrete Silos," a book of practical information, prepared especially for the farmers and rural contractors by the Universal Portland Cement Co., of Chicago and Pittsburgh, is an 88-page book, describing and illustrating many kinds of concrete silos with information regarding the building of same, a valuable booklet for every farmer.

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The Steel Shoe Man—he has made a million feet happy.

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Don't you want to join this great army of health-savers and money-savers? Don't you want to do your work without your feet bothering you? Don't you want to save about \$10 on your shoe money every year? Then wear Steel Shoes, like the half million that are now doing it.

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There is nothing in the world like my Steel Shoes. Nothing can even compare with them. The soles are stamped out of a thin, rust-resisting, seamless, special process steel. This steel extends from heel to toe and up around the edges. There are no cracks or seams. The soles are studded with adjustable steel rivets which protect them from wear and give a sure, firm footing. When rivets wear out they can easily be replaced by yourself. Fifty rivets cost 30 cents and they will keep your shoes in good repair for two more years.

Let me prove all these wonderful advantages to you. You ought to have enough consideration for your own health and comfort to write me a postal for the facts right now. Read how the construction of my Steel Shoes makes them absolutely the greatest boon to the outdoor worker ever invented.

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Read why the heels and soles on Steel Shoes can't wear down at one side or run over, can't give you an uneven standing surface, can't throw the weight to one side on your ankles. That's one reason why steel shoes can't cause crippled, sore, aching feet, tired ankles. Do you know the real reason why you get so tired standing on your feet all day tramping around? It is a hundred to one that you have broken down the instep of your leather shoes, making you stand flat footed. There's where the fatigue comes in. Thousands of people have their shoes made to order, putting in steel shanks to prevent this. Every pair of Steel Shoes that I make prevents it. And here's the economy feature. Let me prove to you that

Steel Shoes Outwear 3 to 6 Pairs of All-Leather Shoes

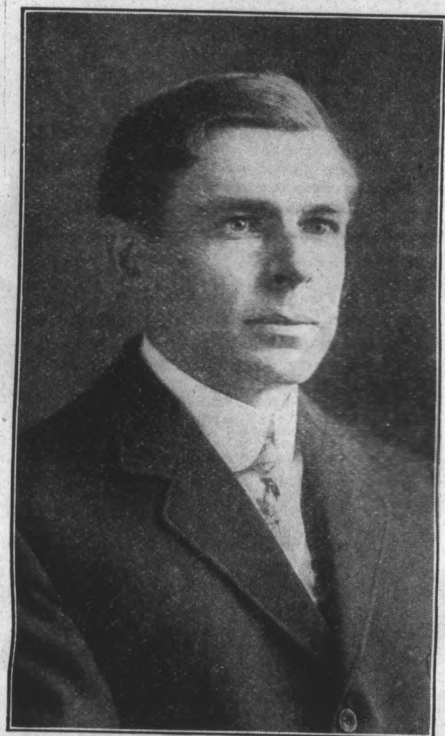
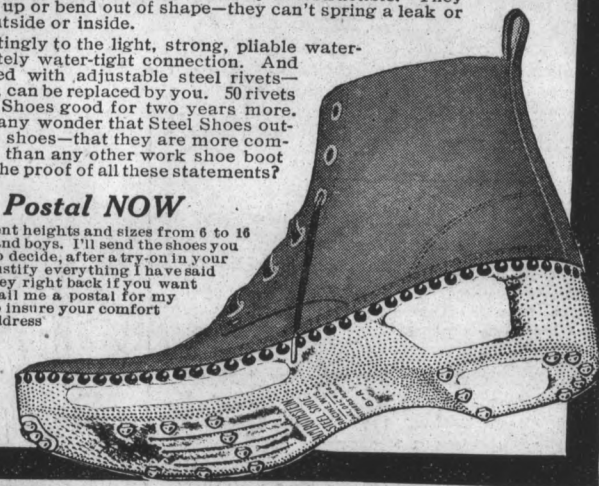
The light, thin, rust-resisting Steel Shoes are practically indestructible. They can't ever shrink, crack, curl up or bend out of shape—they can't spring a leak or get your feet wet from the outside or inside.

They are fastened everlastingly to the light, strong, pliable water-proof uppers by an absolutely water-tight connection. And these steel soles are studded with adjustable steel rivets—which, when they wear down, can be replaced by you. 50 rivets cost only 30c and make Steel Shoes good for two years more. Isn't that economy? Is it any wonder that Steel Shoes outwear 3 to 6 pairs of leather shoes—that they are more comfortable and better protection than any other work shoe boot ever made? Don't you want the proof of all these statements?

Write Me a Postal NOW

Steel Shoes are made in different heights and sizes from 6 to 16 inches—sizes from 1 to 12, for men and boys. I'll send the shoes you want, on free examination—you to decide, after a try-on in your own home, whether or not they justify everything I have said about them and more. Your money right back if you want it—no questions, no quibbling. Mail me a postal for my free book. Take this step NOW to insure your comfort and health and shoe economy. Address

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Dr. Floyd W. Robison, who will conduct our Practical Science Department.

fair measure of success. He may be an employe on a railroad and escape censor. He may be a hired man on the farm and gain a reputation for his faithfulness. In any walk in life he may be a machine. But to be an operator requires more. It requires an enthusiasm, a desire to accomplish the most that can be accomplished in the work in which he is engaged. It matters little what occupation one chooses (so long as it be an occupation which may bring the spark of pride to the eye), if one can develop an enthusiasm for the work. Success is sure to crown the efforts of such.

Farm life has been the goal of the writer's ambition since boyhood and as his studies have led him more and more into the fundamental principles of agriculture, his fascination for farm life has become stronger and his enthusiasm, over the tremendous possibilities awaiting the scientific farmer, has become more and more marked.

A Practical Science Lecture Course.

The specific purpose of this department in so far as science extension is concerned, is to instill enthusiasm into the man on the farm. It is the plan to prepare each week an article on Scientific Agriculture and present it in such a form that it may be easily understood by every reader of this paper. This series of articles will extend throughout the fall and winter. It will constitute a short course on Agricultural Science, and will embrace such topics as the following:

- Origin and formation of soil.
- Preparation of the soil for plant life.
- A study of how plants grow and feed.
- The theory and practice of fertilizers and manures.
- Composition and chemical study of various plant crops.
- The science of animal nutrition.
- Study of feeds and the principles of feeding.
- A study of animal and vegetable food products and their scientific and economic relation to the food of man.
- A study of human foods and dietetics.



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GUARANTEED

(Continued from page 226).

Ohio.

Carroll Co., Aug. 26.—We are having lots of rain down here. About one-third of the fall plowing, and about three-fourths of the threshing is done. Oats turned out good, also rye and barley, but wheat was poor. Corn will be a fair crop if nothing happens to it now. Most of the farmers will be short of hay, so they put their straw in the barn. Wheat, 78c per bu; rye, 80c; corn, 70c; cabbage, 4c per lb; cucumbers, 10c per doz; muskmelons, 4c per lb; tomatoes, 75c per bu.

Indiana.

Laporte Co., Sept. 9.—Had two good rains this week and crop prospects are better. Corn is filling out and is good for an average yield. Silos are being built by most dairymen and are now being filled with corn. Potatoes are still light in yield but late planting in June looks well and is growing fast; will mature a good crop. The acreage is not large and prices will be about the average. No frost yet and none expected until October. Stock healthy and in good condition. Apples plenty and cheap, 35 @ 40c. Wheat sowing late this season on account of fly. Prices fair for all the farm can produce. Large exhibits at county and state fairs, with a good attendance, the best in years.

NATIONAL CROP REPORT.

The Crop Reporting Board of the Bureau of Statistics of the United States Department of Agriculture estimates, from the reports of the correspondents and agents of the bureau, as follows:

For the United States:

Crops.	1911.	Condition 1910.	Sept. 1. 10-yr. Av.	Aug. 1, 1911.	P. c. of 1910.	Acreage, 1911. Acres.
Corn	*70.3	78.2	79.3	69.6	101.7	115,939,000
Winter wheat .....	.....	.....	.....	.....	106.6	31,367,000
Spring wheat	*56.7	*63.1	*78.7	59.8	104.9	20,757,000
All wheat	*63.8	*61.7	79.1	.....	105.9	52,124,000
Oats	*64.5	*83.3	*79.5	65.7	99.9	35,250,000
Barley	*65.5	*69.8	*83.0	66.2	97.0	7,038,000
Rye .....	.....	.....	.....	.....	96.7	1,962,000
Buckwheat	83.8	82.3	87.1	82.9	97.0	801,000
Potatoes	59.8	70.5	78.9	62.3	97.3	3,495,000
Tobacco	71.1	77.7	82.3	68.0	72.4	893,200
Flax	68.4	48.3	71.8	71.0	103.3	3,013,000
Rice	87.2	88.8	88.3	88.3	97.6	705,700
Hay .....	.....	.....	.....	68.6	94.1	43,017,000
Apples	56.2	46.8	52.6	53.9	.....	.....

*Condition at time of harvest.

†Eight-year average.

The yields indicated by the condition of crops on September 1, 1911, or at time of harvest, the final yields in 1910, and the averages for 1906-1910, follow:

Crops.	1911. Indicated by condition.	1910. Final.	1906-1910. Av.	Indicated total production 1911, compared with total production in 1906-10. 1910. p.c.	Av. p.c.
Corn	bus. 23.6	27.4	27.1	87.5	97.1
Winter wheat	bus. 14.5	15.3	15.5	98.1	101.1
Spring wheat	bus. 9.8	11.7	13.5	87.9	83.6
All wheat	bus. 12.6	14.1	14.7	94.7	95.0
Oats	bus. 23.9	31.9	28.4	74.8	90.4
Barley	bus. 20.3	22.4	24.8	88.1	85.9
Rye	bus. 15.6	16.3	16.4	92.9	94.6
Buckwheat	bus. 19.6	20.9	19.6	91.1	98.8
Potatoes	bus. 74.2	94.4	96.9	76.5	81.0
Tobacco	lbs. 714.6	797.8	826.0	64.8	79.1
Flax	bus. 7.7	4.8	19.9	164.4	99.0
Rice	bus. 32.1	33.9	32.4	92.4	105.5
Hay	tons 1.1	1.3	1.4	77.0	74.0

s Preliminary estimate of yield.

t Average for 1905-1909.

Preliminary returns indicate a hay yield of about 1.09 tons per acre, or a total of 46,969,000 tons, as compared with 60,978,000 finally estimated last year, and 63,507,000, the average annual production in the past five years. Quality is 90.3, against 92.5 last year and a ten-year average of 91.1.

MICHIGAN CROP REPORT.

Wheat.—The average estimated yield in the state is 17, in the southern and central counties 18, in the northern counties 13 and in the upper peninsula 19 bushels per acre. The quality as compared with an average per cent in the state and central counties is 87, in the southern counties 92, in the northern counties 74 and in the upper peninsula 90.

The total number of bushels of wheat reported marketed by farmers in August at 107 mills is 356,022 and at 105 elevators and to grain dealers 450,663, or a total of 806,685 bushels. Of this amount 648,467 bushels were marketed in the southern four tiers of counties, 129,664 in the central counties and 28,559 in the northern counties and upper peninsula. The estimated total number of bushels of wheat marketed in August is 2,500,000. Thirty-two mills, elevators and grain dealers report no wheat marketed in August.

Oats.—The estimated average yield in the state is 27, in the southern counties 29, in the central counties 28, in the northern counties 20 and in the upper peninsula 35 bushels per acre. The quality as compared with an average per cent in the state is 85, in the southern counties 87, in the central counties 83, in the northern counties 77 and in the upper peninsula 97.

Rye.—The estimated average yield in the state and central counties is 14, in the southern counties 15, in the northern counties 13 and in the upper peninsula 19 bushels per acre.

Corn.—The condition of corn compared with an average per cent in the state is 83, in the southern and northern counties 84, in the central counties 79 and in the upper peninsula 89. The condition one year ago was 81 in the state, 75 in the southern counties, 84 in the central counties, 91 in the northern counties and 92 in the upper peninsula.

Beans.—The probable yield of beans compared with an average per cent in the state is 78, in the southern counties 76,

in the central counties 75, in the northern counties 84 and in the upper peninsula 85. One year ago the probable yield was 81 in the state, 75 in the southern counties, 83 in the central counties and 91 in the northern counties and upper peninsula.

Peas.—The estimated average yield in the state is 12, in the southern counties 14, in the central counties 13, in the northern counties 9 and in the upper peninsula 17 bushels per acre.

Potatoes.—The condition of potatoes compared with an average per cent in the state is 62, in the southern and central counties 57, in the northern counties 69 and in the upper peninsula 85. The condition one year ago in the state was 69, in the southern counties 65, in the central counties 70, in the northern counties 77 and in the upper peninsula 83. The average condition for the past five years is 75 in the state, 76 in the southern peninsula and 74 in the central counties.

Clover Seed.—The condition of clover seed compared with an average per cent in the state and central counties is 64, in the southern counties 62, in the northern counties 66 and in the upper peninsula 88. The condition one year ago was 73 in the state, 70 in the southern counties, 78 in the central counties, 76 in the northern counties and 77 in the upper peninsula.

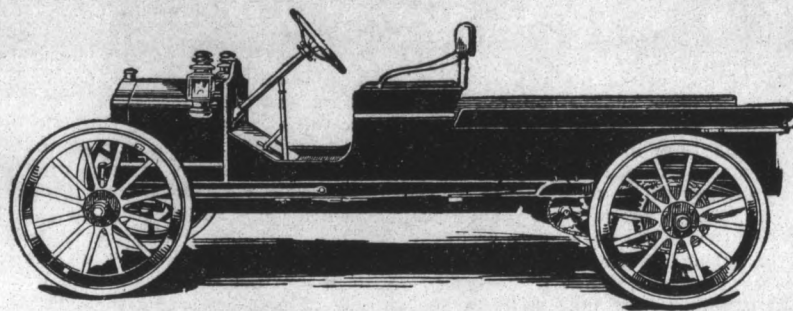
Live Stock.—Live stock throughout the state is reported in fair condition.

THINKS WEED LAW UNJUST.

I notice that many of our farm and county papers are telling the farmer

what a good law the new compulsory law requiring the cutting of all weeds and brush along roadsides is for the farmer. Some farmers have been thinking about

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HORTICULTURE

HANDLING FRUIT FOR COLD STORAGE.

The question of handling fruit for cold storage is one of great importance to commercial fruit growers. Years ago growers were compelled to market their fruit soon after it was harvested. That resulted in low prices for the producer and fruit of poor quality for the consumer, but with better transportation facilities the time has come when it is advantageous to hold back large quantities of fruit, which, in consequence, gives it much greater value to the producer and holds the prices at a more uniform level for a longer period of time.

There are various things to be considered in handling fruit that is to be held in cold storage. Many growers and speculators have lost fortunes holding large quantities of fruit for higher prices, and it is not always safe for growers to depend upon cold storage as a means of playing the role of speculators. Cold holding fruit until the markets are relieved of the surplus of cull stuff which

condition we must devote more study and attention to the various phases of this question and plan to have the fruit go into the storage houses in the best possible condition. The more promptly we can pick, pack and get the fruit into storage the greater will be our success in holding it in good condition. Fruit that goes into the storage houses in poor condition cannot be held as long as fruit that goes into storage in prime condition.

Wrapping fruit in tissue paper is a great protection against bruising in handling and germ infection. Fruit that is carefully wrapped keeps better in every way than fruit that is left so that the specimens come into contact with each other. The very best fruit should be packed in boxes rather than barrels. The cost of wrapping and properly packing apples in boxes is a small item compared with the prices such fruit brings in the best city markets. It seems almost incredible the waste of opportunities that can be seen on every hand among eastern fruit growers who neglect to put their fruit on the market in condition to bring the most money.

Some may ask if it would not be better for large growers to put up their own storage houses? This is a question that

and four feet in exposed places and even the peach trees came through without injury. The questions I should like answered are: What does a cover crop protect? Do fruit trees ever suffer from root freezing caused by having ground bare, or being plowed late in fall? My object in very late fall plowing is to kill June grass and insects.

Crawford Co.

H. S.

The cover crop has much the same effect upon the soil and the plant roots beneath that a covering of chaff has upon a potato pit, it protects the roots to some degree from freezing, notwithstanding the experience of our correspondent. Not only does it prevent temperatures reaching the low point they would otherwise, but it holds the snow upon the ground, and makes changes in the soil temperature more slow, which is vitally important for quick changes usually do greater damage to plant tissues than exceeding low temperatures reached gradually.

TREATMENT FOR ROT IN TOMATOES.

What can I do for rot on tomatoes? It attacks the blossom end in the green stage and no fruit ripens without it. Vines vigorous and lots of fruit, but it all spoils. Manured the places where we set plants.

Berrien Co.

R. G. B.

A number of inquiries have come to the office asking what can be done for "point-rot." The trouble is also denominated by the terms, "blossom-end rot" and "black rot." The trouble shows on the green fruit at different stages of development and the blossom end is the point most usually attacked. The disease eats away the tomato like a cancer, and usually a black fungus grows over the affected part. The nature of this disease has not as yet been worked out and no one has discovered a satisfactory treatment for it. It is found most often during dry seasons and on light soil, where the supply of water is inadequate for the maximum growth of the plant and fruit. About the only general remedy that can, therefore, be prescribed is to irrigate, where that is possible, and to give the land such culture as to conserve moisture to supply this need. While spraying has been advanced by many, as a preventive of the disease, there is no evidence to show that it will control the situation. If the trouble is of a bacterial nature, as many think it to be, (but satisfactory demonstration of the fact has not yet been made), then, spraying would likely be an important factor in treating the trouble. It would seem, however, that the cultural treatment suggested above, should be the principal program for those who are having a fight with "point-rot," since success has not followed applications of Bordeaux mixture. At least, follow it till the life history and physiology of the trouble is better known when solutions fitted to destroy or prevent the disease may be suggested.

FRUIT MARKET NOTES.

The reports of the shipments of apples to Glasgow from Montreal amounted to 672 bbls, for the week of August 25, as compared with 2,255 bbls, for the corresponding week in 1910. The total shipments for the year to that date was 1,347 bbls., as compared with 2,799 bbls, in 1910, and 524 bbls, in 1909.

The Fruit Trade Journal and Produce Record of September 2, indicates a firmer tone in the New York market for apples, desirable grades in standard barrels are offered in very light supply. The bulk of the consignments are of inferior quality, thus making the trade slow for the low grades but active for the top ones. The price for Alexanders rules from \$2.50@3.50 per barrel; Wolf River commanded the same figures; Wealthy and Twenty Ounce were selling at \$3.00; Duchess are advancing and now command a price of \$3.25.

Crabapples are in rather light supply this year, especially the small varieties. They are quoted in eastern markets at from \$3.00 to \$6.00 per bbl. The large kinds rule from \$1.75 to \$2.50.

The Yakima apple crop of Washington is estimated not to exceed 600 cars of merchantable fruit; the yield a year ago amounted to 3,000 cars.

The state board of horticulture of Missouri, indicates that the crop for that commonwealth is 30 per cent of the normal yield. This amount of fruit will make Missouri the largest apple growing state in the country.

Parties buying apples in Washington State have entered into a partnership with English dealers to export this fruit to the British markets this season.



Birdseye View of Famous Keiffer Pear Orchard of Geo. Lowe, of Van Buren Co.

is always in evidence during the early part of the season and in this way benefits both producers and consumers.

The success of holding fruit in cold storage depends in a large measure, upon the quality and condition of the fruit that goes into the storage house. Fruit that goes into storage in poor condition cannot be safely held for a long time. Recent experiments show that we must have a knowledge of the varieties best suited for holding if we secure satisfactory results. Varieties differ widely in their keeping qualities. Furthermore, the age of the trees and the methods of orchard cultivation have a great influence upon the keeping qualities of the fruit. Apples grown in orchards that are kept in sod or seeded with grass keep better than those grown under tillage. Pruning and thinning of the fruit on the trees are other important factors that influence the maturity and keeping qualities of the fruit. Trees that are not properly pruned do not produce fruit that ripens uniformly. Fruit that ripens uniformly has better keeping qualities when placed in storage than fruit that is less uniform. All of these qualities must be considered before we place our fruit in cold storage and have a reasonable assurance of its keeping qualities.

Careful handling of the fruit that goes into storage is perhaps the most important single factor in successfully holding it in cold storage. Fruit that is in any way injured in picking, packing or handling will have poor keeping qualities. In handling fruit we must avoid every possible chance of breaking the skin, for as soon as the skin is broken, the fruit is at once infected with germs that spring into activity and begin to develop decay. So long as the skin is not injured there is little danger of decay.

The emptying of the fruit from utensils used in picking into the baskets, boxes or barrels should be carefully done. All baskets used for picking should be lined with cloth or burlaps. Some apple growers use bags for picking, but they are not to be recommended, as the constant moving about of the fruit in the bag punctures the fruit with the stems and this is equally true with baskets unless care is taken in handling and emptying. If we succeed in holding our fruit in ideal

may be worked out in time. Present results go to prove that the expense is greater than the cost of storing the fruit in storage houses that are cooled by the mechanical system of cooling.

A better plan would be for a community to erect co-operative storage houses. In all localities where fruit of fine quality can be grown it will pay growers to co-operate and establish first-class cold storage houses. By having their own storage houses they can gather and put in their fruit at the right time and there is no delay about getting cars and shipping the fruit, as is often the case when the fruit is shipped to the city storage houses. The problem of securing cars and getting the fruit in storage at the right time is one of the most serious ones that growers have to contend with.

Another great advantage of having local storage houses is the fact that it gives a great advantage in distributing the labor more evenly. It is about all fruit growers can do now to get their fruit gathered in season. By having local cold storage houses it is much easier to get the fruit gathered quickly and get it into storage and after the rush of work it can be packed and graded. In the winter when it becomes cold it can be delivered to the best markets. There is no question but what the co-operative storage house is bound to be an important factor in the handling of our fruit crops as soon as the growers realize its utility and are willing to stand together for the good of their business. Few growers realize the great possibilities that these storage houses would open up to them. The Pacific Coast growers have learned their lessons well and eastern fruit growers must adopt the same business-like methods of handling their fruit if they succeed in making the best of their opportunities.

New York.

W. MILTON KELLY.

THE FUNCTION OF COVER CROPS.

In the columns of your paper some of your writers always advise a cover crop in young orchards for protection in winter. What I want to know is, what does this cover crop protect, aside from keeping the soil from washing in case of a hillside? I plowed my orchard very late in the fall several years ago and did not see any bad effects from it. That winter the ground froze to the depth of three

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CLUB HISTORIES.

The Hartland Farmers' Club, of Livingston county, is now nearly three years old. It has a membership of over 30 families. We hold our meetings each month, except in July, when we have a picnic. We have a large attendance at our monthly meetings, and we are entertained by home talent of the very best type and quality, of which we are glad to speak.

The Club members are alert to all questions of the day, such as reciprocity with Canada, the revision of the tariff downward, good roads movement, and the betterment of the farm home and life upon the farm.

The questions that come from our question box are discussed with much interest. We have elected officers for our Club fair, which we will hold the second week in October.—J. H. Brian, President.

A HOME-COMING MEETING.

The annual Home-Coming of Columbia Farmers' Club was held the third Saturday in August, at "Broadlands," the home of Mr. and Mrs. Walter Reading. The beautiful day brought together a good company, many of the older members who had not been present in some time being there.

Miss Nina Hess, who is teaching in Arizona, gave some interesting "Glimpses of the West." She described a trip through the Grand Canon, a visit to Cactus Forests, the old Missions and many other features of interest, showing pictures of scenes there. She spoke of the spirit of the west as one of cordiality and fellowship. Everyone is away from home and that in itself draws them together.

Miss Paulina Raven, who has been in New York City for some time attending Columbia College, took the company on a trip to the east, telling of some of the many historical and distinctive features of the second largest city in the world, following that with a description of a visit to our National Capitol, including a trip to Mt. Vernon. She told of being present when congress was in session and of attending the egg rolling at the White House on Easter Monday. Perhaps because she, too, had become enthused with the "Spirit of the West" she regarded the east as living for themselves, making one feel that you were but a particle of dust amid the rush and conflict of such a mixed populace.

The tables were then placed upon the lawn and supper served. Following which W. S. Culver acted as toastmaster, the following toasts being responded to: "Our Pioneer Members," Mrs. R. D. Palmer. She spoke of the formation of the Club 25 years ago next December at the home of F. J. Randall, George Culver being the first president, how in less than two years the membership numbered over 200, comprising among the best of the citizens of Columbia township. The Club had grown stronger, both mentally and morally, due largely to the faithfulness of our pioneer members, many, over 40, having passed to their eternal home. Mrs. J. G. Palmer, who was absent, sent a few words of greeting which were read by Miss Maude Smith on "The Farmer as a Friend." She thought the "pursuit of agriculture is best calculated to induce love of country and love of friends and rivet it firmly on the heart. It is not that we prize solitude which secludes us from the busy life of the city, but the aspects upon which we look, breathe a spirit, the characters we read speak a language which draws us nearer to our friends of the soil."

ANNUAL COUNTY CLUB PICNIC.

The annual Shiawassee County Farmers' Club picnic was held at Corunna on the last Friday in August. It was a joint affair in which the Granges and the Gleaner organizations in the county joined. There were nine Clubs represented and ten Granges. It is estimated that about 4,000 were present. B. W. Mattoon acted as chairman. The singing of "America" by the audience was followed by a prayer by Rev. J. D. Young, of Henderson. After a good musical and literary program had been rendered, Mrs. J. C. Woodman was then introduced as one of the speakers of the afternoon. Her subject was "Some Problems for 1911." She named three in the address, viz., rural education, local option, and woman suffrage.

While the assembly singing was being announced an offering was taken to defray the expenses of the afternoon, \$6.95 being the total amount received. H. G. Baker, of Cheboygan, speaker of the state house of representatives, gave a characteristically strong talk on "Three phases of the educational aspect of the Farmers' Organization." In the meantime Mrs. Woodman had retired to the band stand a short distance from the casino and gave an address to those unable to get into the casino, on woman suffrage, of which she is an enthusiastic advocate.

The committee that had labored hard to make the day a success is entirely satisfied. Its efforts were crowned with better results than anyone had expected.

GRANGE

Our Motto—"The Farmer is of more consequence than the farm, and should be first improved."

COUNTRY COMMUNITY BUILDING THROUGH REARRANGEMENT OF SCHOOL FURNITURE.

A Grange ought to exist for the good it can render its members and their neighborhood. Whenever a new idea that can help to this end is discovered, it deserves to be passed on.

It was recently my good privilege to spend several days with the teacher of a rural school who has in her school building a number of things that are quite different from any commonly found in country school buildings. Some of these, most rural communities would not listen to because they look impossible at present, such as workshops for boys and girls, electric lights and fans, and water closets. For that reason I wish to tell you about one feature which any school, anywhere, can have with slight expense, and which will not appeal to the average school patron as so impossible of attainment as some of the other conveniences I have named. This is the placing of the desks and seats upon movable platforms. The teacher I met was most enthusiastic over the advantage of school furniture arranged in this way. The photo reproduced herewith shows a desk and seat



Any School Desk May be thus Mounted on Movable Platform.

mounted upon a small platform so that the whole affair can be moved at will. It serves to suggest what can be done with whatever furniture the school may have, whether single or double desks and seats. At a moment's notice a whole row of seats and desks can be pushed to one side, giving floor space for exercises, dialogs, or games in keeping with the modern trend of education. Just as easily narrower aisles can be made, leaving a large floor space on one side of the room in which can be placed folding chairs for visitors at school, or an audience at an entertainment or community gathering, day or night. Folding chairs, by the way, cost little and can be kept in an entry, basement or attic of a one-room schoolhouse, and are a valuable investment to a community. The platforms can also be pushed to either side, leaving the center of the room open for degree work when a Grange meets in it. The movable platforms make all of these uses of the one-room schoolhouse possible at slight effort and do away with the awkwardness and positive discomfort which now accompany its use by adults.

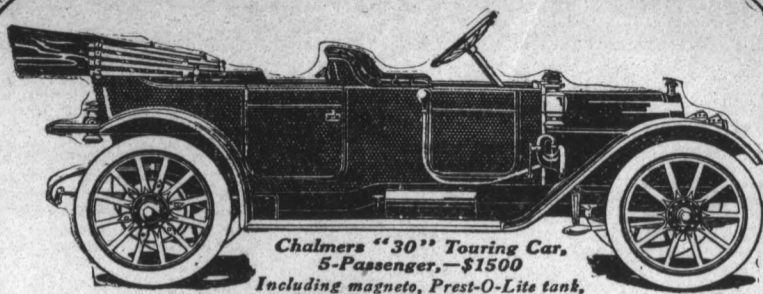
The interest of every Grange, which meets in a schoolhouse, in such a rearrangement of seats and desks is a double one; first, the advantage to the children and school; second, the advantage to the Grange, Sabbath school, club or other community organization which may find it desirable to use the building.

When your Grange is casting about to see what it can do to make its neighborhood a more pleasurable place to live in, think on this little device for transforming a one-room school building into a more inviting "social center."

JENNIE BUELL.

COMING EVENTS.

Pomona Meetings.
Lenawee Co., with Palmyra Grange, Thursday, Oct. 5.
Kent Co., with Carlisle Grange, Wednesday, Oct. 4. Master N. P. Hull, state speaker.
Ingham Co., with Ingham Grange, at Dansville, Friday, Sept. 22, 1911.



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WHEN you go to a horse market, ask the price of a horse, and a reputable dealer replies, "\$200 and guaranteed sound," you know that with this statement he guarantees the horse to have good eyes, good ears, good hoofs, sound bones, and to be free of disease.

"Guaranteed sound" really goes back of the horse as he stands before you, to the sires and dams that have preceded him and to the training and care that he has had.

Every Chalmers car is guaranteed sound—guaranteed in every part and particle. We not only guarantee it to be sound the day it is delivered; we guarantee a sound record behind every Chalmers car preceding it; we guarantee it to keep sound; we guarantee service.

The Chalmers car is a champion; a car with a pedigree. A car of performance—15,000 satisfied owners prove this.

It's when you get down under the hood to the heart of things that the Chalmers guarantee means most. The Chalmers motor has been the wonder of the automobile world ever since this car appeared on the market; such



This monogram on the radiator stands for all you can ask in a motor car.

remarkable power in proportion to weight, such smoothness and quietness, such reliability and economy had never been known before.

The Chalmers "30" this year is offered fully equipped, for \$1500. Last year this car sold for \$1750 equipped with magneto, gas lamps, top and windshield.

This year, refined, and improved in every possible way, with thoroughly ventilated fore-door bodies, inside control, magneto, gas lamps, Prest-O-Lite tank, and including also Chalmers mohair top and windshield—\$1500! It is the big motor car bargain for the 1912 season.

Every farmer knows that it is best in the end to buy good machinery. It is worth while to pay a little extra price in order to be certain that you get a good machine in the first place—one guaranteed by a company able to make good every promise.

We make also the Chalmers "Thirty-six"—\$1800—a car of greater size and power, including Bosch dual ignition, self-starter, Continental demountable rims and many other high-grade features.

A postal card will bring you our new catalog and the name of dealer nearest you. We shall be very glad to hear from you.

Chalmers Motor Company, Detroit, Mich.

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IS DETERMINED TO PLACE 10 ENGINES IN EVERY TOWNSHIP IN THE NEXT SIX MONTHS



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If you want a small engine—for pumping, etc.—this proposition will be like a gift of \$25.00 to \$40.00 in cash. If you need a larger size—as much as 28 h. p.—my proposition is as good as \$300.00 cash in your pocket.

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It doesn't matter what you need the power for—

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I'm making this offer—this sacrifice of profit to insure ten satisfied customers in every neighborhood within the next six months. Those ten will send me scores more from everywhere. When those engines get placed, this country will know the truth about Galloway engines and Galloway value. Then the people can turn a deaf ear, once for all, on the ridiculous arguments cooked up by those who sell on the old many-profits system, and compel the buyer to donate from \$25.00 to \$300.00 to them. Remember—my factory capacity is doubled now—there are new low prices all down the line, on highest possible quality. No manufacturer in the world can make a higher quality engine at any price. Don't let them fool you by quality talk as excuses for high prices. If I sold the same way they do I'd have to get the same high prices.

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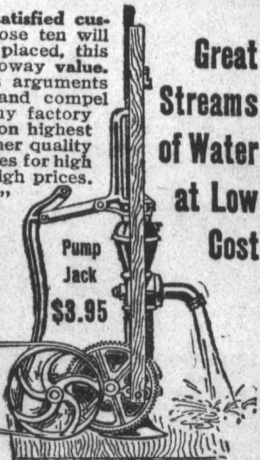
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MARKETS

DETROIT WHOLESALE MARKET.

September 13, 1911.
Grains and Seeds.

Wheat.—The price for No. 2 red wheat on Tuesday was the same as for the preceding Wednesday. May showed an advance of a quarter of a cent, as did December. There was a small increase in the world's available supply last week, which had a bullish influence upon the trade. However, reports indicate a piling up of offerings at Russian ports and favorable weather news from Argentine, this latter information creating an easy feeling in European market centers. The home market is being held in abeyance by the reciprocity campaign in Canada, dealers believing that there will be little change in values should the agreement be supported by the electorate, but they contend that its failure to pass would be a sudden boost to the market on this side the boundary line. One year ago No. 2 red wheat was selling on this market at 98½¢ per bu. Quotations for the past week are as follows:

	No. 2	No. 1	Red.	White.	Dec.	May.
Thursday	91	88	97½			\$1.02
Friday	91	88	97½			1.02
Saturday	91½	88½	98½			1.03
Monday	90¾	87¾	97¼			1.02
Tuesday	90¾	87¾	97¼			1.02
Wednesday	90¾	87¾	97¼			1.02

Corn.—Substantial advances have been made in the corn deal since a week ago. In the Chicago market export clearances were large on Tuesday; this, with the firm tone in the wheat deal gave the trade good support. While the government report shows an improvement of a fraction of a point over the conditions indicated August 1, the estimate is practically eight points below that of Sept. 1, 1910. The increased acreage amounts to only 1.7-10 per cent as compared with a year ago, which will leave the crop yield below what it was then. Foreign countries are also demanding corn in large amounts which goes to make a strong market. The price for No. 3 corn a year ago was 59¢. Following are the leading quotations for the week:

	No. 3	No. 3
	Corn.	Yellow.
Thursday	67	68
Friday	67	68
Saturday	67½	68½
Monday	67½	68½
Tuesday	68	69
Wednesday	68½	69½

Oats.—The yield of this crop is placed by the government reports at about 19 points below the crop of 1910, and 15 points below the ten-year average, and the acreage for the present season is 1-10 per cent less than a year ago. This accounts largely for the increase in prices in this grain; there is a fair cash demand, considering the high prices. One year ago the price for standard oats was 35½¢ per bu. Quotations for the week are:

	Standard	No. 3	White.
Thursday	45	44½	
Friday	45	44½	
Saturday	45½	45	
Monday	45½	45	
Tuesday	45½	45	
Wednesday	46	45½	

Beans.—The Michigan crop report places the yield of beans for the present season three points below that of a year ago, which will have a tendency to support the market on its present basis at least. Quotations are nominal with that of a week ago, little trading being done on the exchange here. A year ago, October beans were quoted at \$2.18 per bu. Quotations for the week are as follows:

	Oct.	Nov.
Thursday	\$2.05	\$2.05
Friday	2.05	2.05
Saturday	2.05	2.00
Monday	2.05	2.00
Tuesday	2.05	2.00
Wednesday	2.05	2.05

Clover Seed.—The price here has been fluctuating during the past several days. Monday's market reached a new high point for the season, but was followed by a decline on Tuesday. A year ago October seed was quoted at \$9.75 with alsike ruling at \$9.25. Quotations for the past week are:

	Oct.	Alsike.
Thursday	\$11.60	\$10.25
Friday	11.75	10.40
Saturday	12.00	10.40
Monday	12.25	10.50
Tuesday	12.00	10.00
Wednesday	12.00	10.50

Rye.—This market is higher and dull, with cash No. 2 quoted at 89¢, which is a 1c advance over the figures of last week.

Flour, Feed, Potatoes, Etc.

Flour.—Market is quiet and easy with values steady. Quotations are:

Clear	\$3.90
Straight	4.15
Patent Michigan	4.60
Ordinary Patent	4.40

Feed.—All kinds of feed are steady. Carlot prices on track are: Bran, \$26 per ton; coarse middlings, \$27; fine middlings, \$30; cracked corn, \$26; coarse corn meal, \$26; corn and oat chop, \$26 per ton.

Hay and Straw.—The market has reacted from the reduced prices of last week and all lines show advances except rye straw, which is steady. Quotations are: No. 1 timothy, \$20@20.50; No. 2 timothy, \$18.50@19; clover, mixed, \$18@18.50; rye straw, \$7.50@8; wheat and oat straw, \$7@7.50 per ton.

Potatoes.—While the consumption of potatoes may be a little restricted by the high prices there is no apparent evidence

to that effect. The week has seen increased supplies which have worked quotations to a lower basis, the average quality of the offerings now selling at \$1.10@1.25 per bu.

Provisions.—Family pork, \$18.50@19.50; mess pork, \$17.50; medium clear, \$16.75@18.50; smoked hams, 15½¢@16¢; brisquets, 11½¢@12¢; shoulders, 10¢; picnic hams, 9½¢; bacon, 15¢@16¢; pure lard in tierces, 10¼¢; kettle rendered lard, 11¼¢ per lb.

Dairy and Poultry Products.

Butter.—The tone of the butter deal is firm. At Elgin the quotation committee attempted to boost the figures a half-cent but the motion was not sustained. The general market is in good shape to support the present basis of trading. Extra creamery, 26¢; firsts, do., 25¢; dairy, 18¢; packing stock, 17¢ per lb.

Eggs.—A cutting off of supplies has set prices for eggs soaring and with the storage houses containing limited holdings it looks like high prices for the coming six months. Fresh receipts, case count, cases included, are now quoted at 20¢ per dozen, which is a 2½¢ advance over last week.

Poultry.—This deal is easy with supplies piling up. Broilers are off a cent; other grades steady with a week ago. Prices are: Live—Hens, 12½¢@13¢; old roosters, 8¢; turkeys, 14¢@15¢; geese, 8¢@9¢; ducks, 12¢@13¢; young ducks, 14½¢@15¢; broilers, 14¢@14½¢ per lb.

Cheese.—Michigan, old, 17¢; Michigan late, 14½¢@15½¢; York state, new, 14¢@15¢; Swiss, domestic block, 19¢@21¢; cream brick, 15¢@16¢.

Veal.—Market steady. Fancy, 11¢@12¢; choice, 8¢@9¢ per lb.

Fruits and Vegetables.

Cabbage.—Lower. Selling at \$2 per bbl. for home-grown.

Plums.—Higher and about gone; now quoted at \$1@1.25 per bu.

Peaches.—There is an overstock of inferior grades of peaches and the quotation for them is severely cut since last week. The good to fancy goods are about steady, with prices unchanged. Quotations: A. A., \$1.50; A., \$1.25; B., \$50¢ per bu.

Huckleberries.—Steady. Quoted at \$3@3.50 per bu.

Apples.—As is usual during the harvesting season farmers are working off their inferior stock which is crowding the trade more than recent prices would stand and the average offerings are going at 50¢@60¢ per bu.

From Farmers' wagons on Detroit Eastern Market.

There was a rather active market on Wednesday morning, both sellers and buyers being present in good numbers. Figures do not vary a great deal from those of a week ago except in a few products that are now plentiful and ripening fast so that farmers need to crowd their sales. Following are the ruling prices: Potatoes, \$1.30 for a good grade; cucumbers rule around 40¢ for average stock; butter beans, 65¢@75¢ per bu; turnips, 40¢ per bu; beets, 40¢ per bu; corn, 45¢ per bag of five dozen ears; cabbage is in fair supply and selling at 50¢ per bu; cauliflower was quite plentiful, farmers asking 5¢ per head or 75¢ per basket; melons are nearly gone and quality a little inferior with prices ruling around 80¢ per bu; peppers, green, \$1 per bu; tomatoes are in good supply and some high grades were selling around 40¢ per bu; celery fair quality at 25¢ per bunch; good hand-picked apples rule from \$1@1.25 per bu; peaches are selling from \$1@2 per bu., with the average grade at \$1.50@1.75; grapes are in more liberal supply, with black selling around \$1 per bu. and green \$1@1.25; hay continues scarce and prices are ruling a little higher, the range for good timothy being \$23@25 per ton.

OTHER MARKETS.

Grand Rapids.

Dealers report the egg market firm, the price paid the shipping trade for fresh stock being 16½¢. Dairy butter is worth 20¢. Prices paid for live poultry are as follows: Chickens, 11¢; fowls, 10¢; ducks, 10¢; turkeys, 12¢. Potatoes were a little lower on the city market Tuesday morning, many selling at \$1.25, and ranging from this up to \$1.40. Tomatoes brought 40¢. Peaches have quite a wide range, going from 50¢ up to \$2, a few of the best Elbertas bringing the highest figure. Grapes sold at 60¢ per bushel. Hay is bringing \$16@17.

Chicago.

Wheat.—No. 2 red, 92½¢@93¢; Dec., 96½¢; May, \$1.02¼ per bu.
Corn.—No. 2, 66½¢@67¢; Dec., 66¢; May, 66½¢ per bu.
Oats.—No. 2 white, 44½¢@45¼¢; Dec., 46¢; May, 48½¢.

Barley.—Malting grades, \$1@1.21 per bu; feeding, 65¢@85¢.

Butter.—Creamery grades firm at an advance of 1 cent over last week. Dairy stock steady with prices unchanged. Quotations are: Creameries, 21¢@26¢; dairies, 18¢@22¢ per lb.

Eggs.—A strong upward tendency is apparent in this market. Graded stock has gained a full cent in the past week. Miscellaneous receipts are showing improvement as to quality and are quoted 2¢ higher. Quotations are: Prime firsts, 19¼¢; firsts, 18¢; at mark, cases included, 14¢@17¢ per dozen.

Potatoes.—Although receipts are running considerably ahead of this time last year, prices show little change. Market reported steady with Minnesotas quoted at \$1@1.05 and Michigans at 90¢@95¢.

Beans.—Market barely steady at last week's reduced values. Choice hand-picked pea beans are quoted at \$2.15@2.20 per bu; prime, \$2@2.05; red kidneys, \$2.75@3 per bu.

Hay and Straw.—Timothy hay is easy at a decline of \$1@1.50 per ton. Clover and straw steady. Quotations: Choice

timothy, \$21.50@22.50; No. 1 timothy, \$19.50@20.50; No. 2 do., \$17@18; No. 3 do. \$12@16; clover, \$10@14; rye straw, \$8.50@9; oat straw, \$7@8 per ton; wheat straw, \$5@6 per ton.

New York.

Butter.—Market is firm with prices a fraction above those of last week for most grades. Creamery specials are quoted at 27½¢; extras, 26½¢; firsts, 24¢@25¢; seconds, 22½¢@23½¢; thirds, 20½¢@21½¢.

Eggs.—All grades are higher. Fresh gathered extras, 25¢@27¢; extra, firsts, 23¢@23½¢; seconds, 19¢@20¢; western gathered whites, 22¢@26¢ per dozen.

Poultry.—Dressed. Values are a little easy, showing a tendency downward. Turkeys, 10¢@16¢; do. young, 28¢; fowls, 14¢@17¢; western broilers, 15¢@21¢.

Boston.

Wool.—Owing to the attitude of the manufacturers in not wishing to lay in a supply larger than for present requirements the local trade has been light for the past week. Prices are holding firm, however, and there appears to be no strong tendency on the part of those who are in the market for goods, to hammer down quotations. Following are the leading prices for domestic wools: Ohio fleeces—Delaine washed, 30¢@31¢; ½-blood combing, 26¢; ¾ do. 25¢; ¼ do. 25¢; XX, 28¢; delaine unwashed, 25¢@26¢; fine unwashed, 21¢. Missouri—¼-blood, 25¢.

Scoured basis: Territory—Fine staple, 60¢@62¢; ½-blood combing, 57¢@58¢; ¾ do. 50¢@52¢; ¼ do. 47¢@48¢.

Elgin.

Butter.—Market firm at 26¢ per lb., which is last week's quotation. Output for the week 827,700 lbs.

THE LIVE STOCK MARKETS.

Buffalo.

September 11, 1911.

(Special Report of Dunning & Stevens, New York Central Stock Yards, East Buffalo, N. Y.)

Receipts of stock here today as follows: Cattle, 170 cars; hogs, 105 double decks; sheep and lambs, 103 double decks; calves 1,300 head.

With 170 cars of cattle on our market here today, and 23,000 reported in Chicago, we quote the good and prime cattle about steady with last week, as there were no cattle shown here today as good as the top we sold last week. All other grades of cattle sold about steady with last week.

We quote: Best 1,400 to 1,600-lb. steers \$7.50@7.75; good prime 1,300 to 1,400-lb. do., \$6.85@7.50; do. 1,200 to 1,300-lb. do. \$6.75@7.15; best 1,100 to 1,200-lb. shipping steers, \$5.85@6.40; medium butcher steers 1,000 to 1,100 lbs., \$5.25@5.85; light butcher steers, \$4.50@5.25; best fat cows, \$4.75@5.25; fair to good do. \$3.50@4.50; common to medium do., \$2.75@3.25; trimmers, \$1.75@2.75; best fat heifers, \$5.75@6.25; good do., \$5@5.50; fair to good do., \$4.25@5; stock heifers, \$3.50@4; best feeding steers, dehorned, \$4.25@4.50; common do. \$3.75@4; prime export bulls, \$5.25@5.50; best butcher bulls, \$4.50@5; bologna bulls \$3.50@4; stock bulls, \$3.35@3.50; best milkers and springers, \$5.50@6; common to good do., \$2@3.50.

Today's hog market ruled fairly active on the good quality corn-fed stuff, but slow and unsatisfactory on the other grades, with prices generally about 10¢ lower on the bulk of the good quality hogs, and 10¢@15¢ lower on the commoner grades. Pigs ruled from 25¢@40¢ lower; roughs, 15¢@25¢ lower. The best quality mixed, medium and yorkers sold from \$7.60@7.65, and the commoner kinds around \$7.25@7.50. The best quality of heavier weights sold around \$7.45@7.55. Pigs and light yorkers sold generally from \$7.10@7.25; rough sows from \$6.25@6.30; stags, \$5@5.50. Good quality mixed and york weights were pretty well cleaned up. There are a few loads of the commoner kind of the lighter weights and pigs going over unsold. Try to get a good margin on all kinds, and especially on the commoner grades.

The sheep and lamb market was active today at the prices. Most of the choice lambs sold from \$6@6.15; wethers from \$4.10@4.25; look for little stronger prices the balance of the week; everything sold tonight.

We quote: Best spring lambs, \$6@6.15; wethers, \$4.10@4.25; cull sheep, \$1.50@2.50; bucks, \$2.50@2.75; yearlings, \$4.50@4.75; handy ewes, \$3.50@3.75; heavy do., \$3@3.25; veals, choice to extra, \$9.25@9.50; fair to good do., \$8.50@9; heavy calves, \$4@6.

Chicago.

September 11, 1911.

Cattle Hogs Sheep.
Receipts today 25,000 23,000 40,000
Same day last year.. 35,911 23,213 36,007
Same week last year.. 67,313 88,300 122,213

Receipts of 25,000 cattle today included 8,000 western rangers. Natives comprised a heavy quota of plain and medium grades and weakness marked the trading in that kind. Opening price basis was steady but before the market was well under way general values slumped 10¢ from last week's close. This decline applied to bulk of steers selling below \$7.25 and even good to choice grades had a mean finish, although best sold steady throughout the day, prime 1,420-lb. steers making \$8.20 and a fair quota of prime 1,400 to 1,550-lb. bullocks went at \$7.90@8.10. Prime steers were thus still up to the season's highest point but the tone of the general market lacked the same briskness which characterized trading a few weeks ago. Bulk of good corn-fed steers went at \$6.75@7.50 and medium made \$6.25@6.65 while common to good grassers sold at \$5@6.10. Rangers topped at \$7 but there was a scant quota above \$5.75. Native cows and heifers cleared at strong rates, fat cows

making \$4.50@5.50 and heifers sold up to \$6.50 with canner and cutter cows at \$2@3.40. Calves held steady and feeder and stock steer trade was firm on good country demand.

Hog market had a higher start, on a run of 2,000, this supply falling 7,000 below expected volume, but the advance was lost before the close. Top butcher and light weights made \$7.60. Bulk of sales were at \$7@7.35. Pigs sold largely at \$4.25@5 for 35 to 75-lb. lots while good 115 pounders made \$6.50@6.75.

Sheep supplies of 40,000 following last week's excessive run forced new price recessions of 10¢@15¢ and it was a demoralized market at the decline. Idaho lambs topped at \$5.60, and natives at \$5.65, while 55 to 61-lb. range feeding lambs went at \$4.90@5. Ewes and wethers topped at \$3.75 and 68-lb. feeding yearlings made \$4.45.

Choice prime beefs have recovered some of the recent decline and are now selling around \$7. Common grass and corn-fed steers dropped under a heavy supply. Prime grades reached \$7.90@8.10, while grassers ruled at \$5.25@6, thus making a wide range. Ranger stuff is running much lighter than in 1910—a 40 per cent reduction in receipts thus far. Cow and heifer supply is limited and quotations are up 15¢@25¢; prime heifers \$6.50@7; good to choice do., \$5.25@6.25; grassers, \$3.75@4.75; good to choice cows, \$4.75@5.75; bulk of grassers, \$3.75@4.50; cutters, \$3.40; canners, \$2.25@3; bulls, \$3.50@5.75; calves, \$3.50@9.50. Best feeders went at \$5.50@5.75; fair to good do., \$4.75@5.25; stockers, \$3.25@4.50.

Hogs have gone down the toboggan 15¢@25¢ from the previous week's level. There were, however, spots in the market at low point last week which showed 40¢@50¢ decline. It has been a trade well in control of the packers. They have taken advantage of the slump in demand from the east to pound the market. What the future course in the trade will be is a matter of conjecture. Just how many hogs the country shippers can buy on a basis of current lower market rates will determine the course of values in the near future. If the country is willing to sell freely that is all there is to it. The hopes of the bullishly inclined traders will be dashed. However, producers are not holding any very big crop of matured hogs now. The spring pig supplies are some ways off from maturity, mainly because of poor pastures this summer, and it will require a lot of corn feeding to bring the shoats up to marketable standard. Once they begin coming the packers probably will have opportunity to hammer values hard. Opinion prevails that not until October will any very big crop of hogs come marketward. The average weight is running off a little, being around 240 lbs. now, as against 245 lbs. a few weeks ago and 252 lbs. a year ago, but in spite of this, general quality of marketings continues fairly good, there being fewer pigs and thin light hogs in the crop.

Sheep and lambs were marketed in excessive numbers last week, the crop being largely range lambs and values for these as well as natives were hammered 50¢ lower than the previous week while feeding stock sold down 25¢. Wethers, yearlings and ewes, however, held a steady basis. The decline has at least put feeding stuff on a relatively cheap basis, and this is being well appreciated by country buyers. A big feeding demand was had from Illinois, Michigan, Indiana and Ohio farmers. Prices for feeding lambs ranged at \$4.75@5.35 while feeding yearlings were bought at \$4@4.50 and breeding ewes at \$3.50@4.25. Native lambs were reduced to a basis of \$5.25@5.75 for good to choice and poor to fair killers sold at \$3.50@5.15 with culls down to \$3.25. Range lambs sold up to \$6@6.25 at best point early in the week while later tens of thousands of them landed to killers at \$5.50@5.75.

Horses were marketed in big numbers and the prices slumped \$10@15 per head from the previous week, a decline of \$20@30 per head being shown from levels prevailing late in August. Receipts were 1,700 head against 1,779 the week before and 1,392 a year ago. The inroads of the auto truck upon the horse industry is accountable for the short demand for business horses and instead of a big fall market the trade looks for a bad deal for some months ahead unless prices are further reduced to a basis which makes horses cheap to the consumer. It took an extra grade of draft horses to land at \$175@200 and only fancy 1,700 to 1,800-lb. grades went at \$250 and higher while common and medium made \$110@150. Good wagon horses sold at \$140@165, drivers of a fair to good grade at \$135@200, and the light chunks were a drag down to \$65@85.

LIVE STOCK NOTES.

Farmers who would buy more good milch cows for the winter's dairying operations can get them cheaper now by \$10 per head than a short time ago. Late in August when there was big demand from Pennsylvania and New York dairymen the prices shot up to almost prohibitive levels, but recession in values has set in since that demand has run its course. Cows of high grade such as sold at \$70@75 at top point are procurable in the market at \$60@70 now and \$40@50 buys a medium to good kind. With milk and butter at prevailing good prices these producers appear fairly reasonable in cost on their present market basis.

The impetus given hog production by \$10@11 markets of a year ago is plainly indicated by the big increase in supplies received at the eleven chief stock markets of the country thus far in 1911, as compared with the same period a year ago. The aggregate receipts at these points stand 16,713,000 head against 12,985,000 a year ago, 15,858,000 two years ago and 18,790,000 in the corresponding period in 1909.

THIS IS THE LAST EDITION.

In the first edition the Detroit Live stock markets are reports of last week; all other markets are right up to date. Thursday's Detroit Live Stock markets are given in the last edition. The first edition is mailed Thursday, the last edition Friday morning. The first edition is mailed to those who care more to get the paper early than they do for Thursday's Detroit Live Stock market report. You may have any edition desired. Subscribers may change from one edition to another by dropping us a card to that effect.

DETROIT LIVE STOCK MARKETS.

Thursday's Market.

September 14, 1911.

Receipts, 1,043. Market steady at last week's prices.

We quote: Best steers and heifers, \$5.75 @ 6; steers and heifers, 1,000 to 1,200, \$4.75 @ 5.50; do. 800 to 1,000, \$4.50 @ 5; grass steers and heifers that are fat, 800 to 1,000, \$4.50 @ 5; do. 500 to 700, \$3.75 @ 4.50; choice fat cows, \$4.45 @ 5; good do., \$3.75 @ 4; common cows, \$3.40 @ 3.75; canners, \$2 @ 2.75; choice heavy bulls, \$4.50; fair to good bolognas, bulls, \$3.75 @ 4; stock bulls, \$3 @ 3.50; choice feeding steers, 800 to 1,000, \$3.75 @ 4.25; choice stockers, 500 to 700, \$3.80 @ 4.25; fair stockers, 500 to 700, \$3.50 @ 3.75; milkers, large, young, medium age \$4 @ 60; common milkers, \$25 @ 35.

Roe Com. Co. sold Bresnahan 3 canners av 893 at \$2.60; to Sullivan P. Co. 15 butchers av 565 at \$3.85; to Newton B. Co. 8 bulls av 762 at \$3.65; to Ratkowsky 6 butchers av 641 at \$3.25; to Mich. B. Co. 6 do. av 663 at \$4, 9 do av 800 at \$4.75, 6 cows av 950 at \$3.75; to Sullivan P. Co. 4 butchers av 630 at \$4.

Bishop, B. & H. sold Mich. B. Co. 9 butchers av 681 at \$4.25, 2 cows av 925 at \$3.50, 2 bulls av 765 at \$3.75, 6 butchers av 596 at \$4, 7 do av 910 at \$4.75; to Breitenbeck 5 cows av 994 at \$3; to Parker, W. & Co. 3 bulls av 780 at \$3.50; to Bresnahan 3 canners av 900 at \$2.75; to Sullivan P. Co. 5 cows av 884 at \$4, 1 do. weighing 1,030 at \$4, 3 butchers av 527 at \$3.75, 2 steers av 885 at \$4.75, 1 bull weighing 1,480 at \$4.10, 2 do av 685 at \$3.60, 5 butchers av 774 at \$4.15, 1 cow weighing 750 at \$2.25; to Goose 5 do av 1,032 at \$3.25; to Fromm 3 butchers av 787 at \$4.25, 2 steers av 885 at \$4.30; to Urban Bros. 5 butchers av 870 at \$4.50, 2 cows av 765 at \$4.25; to Heinrich 18 steers av 990 at \$5; to Ratkowsky 2 cows av 1,010 at \$3.25, 3 butchers av 333 at \$3; to Ratkowsky 1 cow weighing 920 at \$4.25, 1 do weighing 750 at \$3; to Regan 6 heifers av 554 at \$3.85; to Herkimer 10 butchers av 572 at \$3.90; to Mich. B. Co. 25 do av 580 at \$3.60; to Goose 5 cows av 1,030 at \$3.75; to Bresnahan 1 cow weighing 900 at \$2.75, 2 do av 875 at \$2.75, 2 do av 1,110 at \$3; to Hammond, S. & Co. 8 steers av 777 at \$4.60; to Kamman 12 do av 844 at \$4.80, 6 cows av 1,021 at \$3.85.

Haley & M. sold Sullivan P. Co. 4 butchers av 788 at \$4.50, 3 steers av 1,010 at \$5.65, 1 cow weighing 1,240 at \$3.75, 1 do weighing 1,150 at \$4.25, 1 do weighing 830 at \$2.50, 10 heifers av 590 at \$3.85, 1 bull weighing 1,030 at \$3.70, 1 steer weighing 1,270 at \$6.25, 7 heifers av 611 at \$3.80, 2 cow and bull av 1,025 at \$3.80, 2 steers av 940 at \$4.80, 2 stockers av 600 at \$3.50, 2 do av 600 at \$3.80; to Smith 6 butchers av 815 at \$4.50; to Breitenbeck 2 steers av 875 at \$4.50, 3 do av 1,090 at \$4.75, 21 do av 900 at \$4.80; to Regan 17 butchers av 577 at \$3.65; to Schlischer 18 steers av 877 at \$4.65, 3 do av 600 at \$4, 2 bulls av 815 at \$3.50, 4 do av 595 at \$3.25, 3 do av 643 at \$3.15; to Mich. B. Co. 2 do av 950 at \$3.80; to Applebaum 2 heifers av 375 at \$3.50, 3 cows av 990 at \$3.85; to Bresnahan 1 do weighing 930 at \$3, 1 do weighing 680 at \$2, 6 canners av 926 at \$2.75; to Kamman B. Co. 10 butchers av 620 at \$4, 3 do av 750 at \$4, 15 steers av 920 at \$5.15; to Prince 7 stockers av 693 at \$4, 2 do av 600 at \$3.60, 5 do av 620 at \$3.75, 2 do av 575 at \$3.80, 1 do weighing 460 at \$3.60; to Herckleman 5 steers av 944 at \$5; to Fry 3 do av 773 at \$4.15, 8 butchers av 652 at \$3.85.

Spicer & R. sold Sullivan P. Co. 1 canner weighing 870 at \$2.50, 2 cows av 1,100 at \$4.25, 1 do weighing 1,180 at \$4.50, 4 butchers av 610 at \$3.85, 1 canner weighing 940 at \$2.50, 6 bulls av 725 at \$3.50, 2 do av 1,085 at \$4; to Prince 2 bulls av 500 at \$3.25, 15 stockers av 462 at \$3.25; to Heinrich 2 steers av 650 at \$4.25; to Mich. B. Co. 1 heifer weighing 750 at \$2.50, 2 bulls av 680 at \$3.50, 3 do av 857 at \$3.90; to Bresnahan 9 stockers av 509 at \$3.50, 1 canner weighing 810 at \$2.50, 5 do av 750 at \$3, 1 do weighing 660 at \$2.25, 3 do av 833 at \$2.75; to Gerish 6 steers av 963 at \$5.20; to Hammond, S. & Co. 18 butchers av 642 at \$4; to Sullivan P. Co. 3 steers av 793 at \$5, 1 cow weighing 1,040 at \$3.

Receipts, 486. Market 50c lower than last week. Best, \$8.50 @ 9; others, \$3.75 @ 8; milch cows and springers steady.

Bishop, B. & H. sold Parker, W. & Co. 3 av 140 at \$9, 3 av 135 at \$9, 8 av 155 at \$9, 2 av 300 at \$5, 1 weighing 120 at \$8.50, 2 av 175 at \$9, 1 weighing 290 at \$6, 3 av 149 at \$8.50, 9 av 150 at \$8.50; to McGuire 11 av 160 at \$9; to Schuman 6 av 160 at \$8.75, 1 weighing 140 at \$9, 4 av 130 at \$9, 4 av 250 at \$6; to Burnstone 2 av 135 at \$9, 13 av 170 at \$8.50.

Spicer & R. sold Sullivan P. Co. 3 av 140 at \$8, 2 av 170 at \$6.50, 4 av 120 at \$8, 6 av 150 at \$7.75; to Goose 6 av 150 at \$8.75, 5 av 155 at \$8.75; to D. Goose 13 av 350 at \$3.30; to Prince 4 av 400 at \$3.50; to Applebaum 6 av 190 at \$5.50; to Ratkowsky 10 av 230 at \$4.25, 5 av 250 at \$4; to Sullivan P. Co. 4 av 150 at \$8.50, 5 av 140 at \$8.50.

Kendall sold Burnstone 9 av 120 at \$7.75, 6 av 130 at \$9.

Long sold same 10 av 136 at \$9.

Haley & M. sold Goose 13 av 250 at \$4, 20 av 225 at \$5.50; to Parker, W. & Co. 12 av 150 at \$8.50, 5 av 125 at \$8.50, 2 av 115 at \$8.50, 1 weighing 160 at \$9,

1 weighing 120 at \$6, 5 av 160 at \$9. Boyle sold Goose 3 av 130 at \$8.

Sheep and Lambs.

Receipts, 5,619. Market 25@50c lower than last week. Best lambs, \$5.50 @ 5.75; fair lambs, \$4.75 @ 5; light to common lambs, \$3.50 @ 4.25; fair to good sheep, \$3 @ 3.25; culs and common, \$1.50 @ 2.50.

Haley & M. sold Sullivan P. Co. 12 lambs av 55 at \$4, 5 sheep av 120 at \$2.50, 10 do av 95 at \$1.50; to Thompson Bros. 39 lambs av 60 at \$3.50, 16 sheep av 105 at \$2.25; to Barlage 43 lambs av 70 at \$3.75, 35 do av 75 at \$5, 18 mixed av 63 at \$3.75; to Mich. B. Co. 22 sheep av 125 at \$3.25; to Newton B. Co. 99 lambs av 74 at \$5.25, 28 sheep av 85 at \$3.50; to Hayes 24 lambs av 65 at \$4.50, 39 do av 55 at \$4.75, 19 sheep av 80 at \$3.40; to Kull 27 lambs av 77 at \$5.25; to Hammond, S. & Co. 5 sheep av 90 at \$1.50, 11 do av 88 at \$3.50, 6 do av 110 at \$2.75, 21 do av 100 at \$3.75; to Hobbins 44 lambs av 80 at \$5.50.

Spicer & R. sold Sullivan P. Co. 12 lambs av 55 at \$4, 5 sheep av 120 at \$2.50; to Mich. B. Co. 28 lambs av 75 at \$5.20, 13 sheep av 100 at \$3.10; to Thompson Bros. 21 lambs av 60 at \$4.40, 9 sheep av 90 at \$1.25; to Sullivan P. Co. 20 do av 108 at \$3.25; to Jones 93 lambs av 75 at \$5.40, 42 do av 75 at \$5.50; to Mich. B. Co. 22 do av 80 at \$5.25; to Young 91 do av 65 at \$5; to Barlage 8 sheep av 60 at \$2.50; to Thompson Bros. 5 do av 75 at \$1.50, 20 lambs av 55 at \$3.50; to Torrey 34 do av 70 at \$5.

Boyle sold Sullivan P. Co. 13 sheep av 110 at \$3, 38 lambs av 70 at \$5.

Bishop, B. & H. sold Torrey 77 lambs av 72 at \$5.25; to Sullivan P. Co. 133 do av 75 at \$5.25, 36 do av 60 at \$3.75, 43 do av 55 at \$3.50, 22 do av 53 at \$3.75, 48 do av 65 at \$4.50; to Newton B. Co. 81 do av 77 at \$5.15, 61 do av 65 at \$5.25, 23 do av 70 at \$5.15, 141 do av 73 at \$5.25; to Mich. B. Co. 51 do av 72 at \$5.40, 47 do av 75 at \$5.25, 60 do av 67 at \$5.40, 14 do av 75 at \$5.40, 18 sheep av 110 at \$3.35; to Breitenbeck 24 lambs av 55 at \$3.50, 7 sheep av 80 at \$2.50, 22 do av 130 at \$3; to Hammond, S. & Co. 15 do av 100 at \$3.25, 24 do av 95 at \$2, 31 lambs av 50 at \$4, 29 do av 60 at \$5, 70 do av 73 at \$5.50, 15 do av 68 at \$4, 27 sheep av 78 at \$3.50; to Parker, W. & Co. 88 lambs av 68 at \$5.25; to Ratkowsky 9 sheep av 135 at \$3.35; to Thompson Bros. 17 lambs av 73 at \$5.40, 5 sheep av 120 at \$3; to Newton B. Co. 16 do av 80 at \$3, 53 do av 85 at \$3.50; to Mich. B. Co. 20 lambs av 65 at \$5.25; to Fitzpatrick Bros. 45 do. av 65 at \$5, 40 mixed av 70 at \$3.50, 10 sheep av 109 at \$2.75, 34 do av 110 at \$3.25; to Torrey 28 lambs av 70 at \$5.25.

Hogs.

Receipts, 4,143. No hogs sold up to noon; packers bidding as follows:

Range of prices: Light to good butchers, \$7.15; pigs, \$6.25 @ 6.50; light yorkers, \$7.15; heavy, \$6.75 @ 7.10.

Bishop, B. & H. sold Hammond, S. & Co. 815 av 180 at \$7.15, 1,025 av 160 at \$7.10, 430 av 160 at \$7.

Roe Com. Co. sold Sullivan P. Co. 220 av 200 at \$7.10, 85 av 190 at \$7.05, 70 av 180 at \$7, 75 av 160 at \$6.70.

Spicer & R. sold Parker, W. & Co. 315 av 200 at \$7.15, 175 av 180 at \$7.10, 112 av 150 at \$7.

Haley & M. sold same 240 av 190 at \$7.15, 120 av 180 at \$7.10, 265 av 175 at \$7.05, 70 av 160 at \$7.

Friday's Market.

September 8, 1911.

Cattle.

Receipts this week, 1,209; last week, 1,420. Market steady at Thursday's prices. Run very light.

We quote: Best steers and heifers, \$5.75 @ 6; steers and heifers, 1,000 to 1,200, \$5.25 @ 5.50; do. 800 to 1,000, \$4.50 @ 5; grass steers and heifers that are fat, 800 to 1,000, \$4.50 @ 5; do. 500 to 700, \$3.50 @ 4.15; choice fat cows, \$3.75 @ 4; good fat cows, \$3.25 @ 3.50; common cows, \$2.75 @ 3.25; canners, \$1.75 @ 2.25; choice heavy bulls, \$4.25 @ 4.75; fair to good bolognas, bulls, \$3.50 @ 4; stock bulls, \$3 @ 3.25; choice feeding steers, 800 to 1,000, \$4.50 @ 4.75; fair do. 800 to 1,000, \$4 @ 4.25; choice stockers 500 to 700, \$4 @ 4.50; fair stockers, 500 to 700, \$3.50 @ 4; stock heifers, \$3 @ 3.50; milkers, large, young, medium age, \$4 @ 60; common milkers, \$25 @ 35.

Veal Calves.

Receipts, this week, 680; last week, 619. Market, steady at Thursday's prices. Best, \$8.75 @ 9.50; others, \$4.50 @ 7.75; milch cows and springers, steady.

Sheep and Lambs.

Receipts this week, 4,761; last week, 4,959. Market steady at Thursday's prices. Best lambs, \$6; fair to good lambs, \$5.25 @ 5.75; light to common lambs, \$3.50 @ 4.25; yearlings, \$4 @ 4.25; fair to good sheep, \$3 @ 3.50; culs and common, \$1.50 @ 2.50.

Hogs.

Receipts this week, 4,915; last week, 5,408. Market, 5@10c higher than on Thursday. Range of prices: Light to good butchers, \$6.90 @ 7.35; pigs, \$6 @ 6.85; light yorkers, \$7 @ 7.35; heavy, \$6.90 @ 7.35.

LIVE STOCK NOTES.

A sale of over 7,000 head of cattle has taken place at Great Falls, Montana, for \$250,000, embracing two herds of rangers and two herds of grain fed cattle. At the sale a herd of between 2,000 and 3,000 head of cattle brought an average price of \$33 per head, grain fed cattle going for \$5 per 100 pounds for steers and at \$4 for cows.

Ogden Armour, the packer, has returned from a visit of two months spent in European countries, where he found good business conditions, especially in Germany and England. "South America is going to furnish the future export meat of the continent," Mr. Armour said, talking of the packing industry. "I can't say that we have any new plans for the extension of our business in southern countries. It already is well known that we have land there and are building a

plant just outside of Buenos Ayres. The Swift Company, too, I believe, has entered the South American field. There is no doubt but that the United States is soon going to be unable to furnish beef for export trade. Our wealth and population are growing to such an extent that we will soon use the entire domestic product for our home consumption. South America is now exporting great quantities of meat to Europe, most of it going to Austria, Italy and the southern countries. Of course, Germany is buying no outside meats, her laws forbidding. All the beef used in that country comes from within its own borders. I can't say offhand just what the proportion of increase in the export product from South America is, but it is growing enormously."

There has been for some time past a lively demand at the Chicago stock yards for breeding ewes of a superior type, and almost any day numerous farmers may be seen in the huge sheep house inspecting the offerings of choice black-faces on sale there. The greater part of the ewes shown run too much to weight and fat to make ideal breeders, and it is not the easiest thing imaginable to find just what is wanted. Michigan and Kentucky buyers are usually among the ones most prominent, although there are also buyers from Wisconsin, Ohio, Iowa, Indiana and other states. Ohio farmers have also purchased a good many feeder lambs and sheep, feeding wethers having been offered at temptingly low figures. In quite a number of instances farmers coming to Chicago expecting to make purchases of feeding steers found prices so high that they changed their minds and bought feeding wethers instead.

The big farmers of the great middle west who have been staying out of feeding cattle because they thought land was too valuable to be used for such a purpose are beginning to try their luck in stock feeding once more, now that stockers and feeders and feeding heifers have had such a big collapse from their former prices. Among such farmers may be mentioned A. C. Cromer, of Vermillion county, Illinois, the owner of an enormous farm covering 2,100 acres. He marketed recently in the Chicago stock yards a consignment of two car loads of prime hogs of his own feeding, and said he was planning to buy some cattle to feed, and was inclined to purchase some heifers for that purpose. He lives in a region where farms are valued at from \$175 to \$225 an acre, and unusual thought and care are essential to make the land yield a satisfactory return on such high valuations. A foreman and workmen are hired the entire year, and a four-year crop rotation is practiced, two years for corn, one year for oats and one year for clover. Mr. Cromer is going into breeding hogs more extensively, although for some years he has made comfortable profits by marketing his corn.



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The trademark name, "Garland," on a stove or range, because of the quality and service which it represents, has become enormously valuable to us. We estimate its value at millions of dollars. Behind it are 40 years of study, invention, experience, skilled workmanship and conscientious effort.

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The purpose of this announcement is to point out to the stove buyer the safety, convenience, satisfaction and greater economy of buying stoves and ranges from established local dealers.

Pays to Buy Stoves from Your Local Dealer

It pays in satisfaction, safety, convenience and economy to buy stoves from your local dealer. His profit per stove is very small. He gives you big value for every dollar of stove money.

The idea that your home dealer makes a pocketful of money on every stove he sells is utterly ridiculous. Stoves are staple merchandise, just like sugar, coffee, salt, calico, muslin, etc. The dealer's profit on a good stove is often scarcely more than the amount of freight you would pay if you sent away for it.

How the Home Dealer Helps You

If you have ever wrestled with a stove loading it at the depot, carting it home, unloading it, getting it out of the crate, putting it together, blacking it and possibly waiting a couple of weeks for replacement of broken parts before being able to use it, you will never wish to repeat the performance.

Your home dealer not only gives you more stove value for every dollar you spend, but he saves you a pile of trouble, inconvenience, delay and dissatisfaction.

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The same home dealer delivers your stove set up, blacked and polished—ready for business. By you there's no carting it, no setting it up, no polishing. Moreover, your local Garland dealer will give you ten times more liberal credit terms and free trial terms than anybody else in the world. And you don't have to tell him your family history, either. Are not these many advantages in home-dealing well worth considering?

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