

MICHIGAN FARMER

AND LIVE STOCK JOURNAL
PUBLISHED WEEKLY. ESTABLISHED 1843.

The Only Weekly Agricultural, Horticultural and Live Stock Journal in the State.

VOL. CXXXVI. No. 4.
Whole Number 3532

DETROIT, MICH., SATURDAY, JAN. 28, 1911.

\$1.00 A YEAR.
\$2.75 FIVE YEARS

FARMING is not a science. It is not a profession. It is pursued primarily not for gaining knowledge, but for gaining a living. Consequently it is a business. Management spells either success or failure in business. How often do we see farmers in the same neighborhood, on the same size farm, beginning life as farmers under similar conditions, one making a success out of life, the other making a failure. What is the cause of this? Management. One is a business man, the other has not learned to apply business principles to farming. Management is everything in farming. Yes, it is the "whole thing." It is "it."

The most learned man in the world in agricultural science might make a dismal failure when it comes to farming, while the ordinary fellow, with a common sense understanding of things, might make a success. The reason would be that he is a manager. Then what is farm management? It is simply doing the right thing at the right time. Of course, one must have a knowledge of farming in order to be a good manager! One can't know too much about plants and animals, about soils and fertilizers, about the sciences that relate to agriculture, but he can know all about these, and yet make a failure on a farm. You must not only know how to do things, but you must do things. You must apply your knowledge in a practical way to the common everyday affairs of farming. If you can do this, then you are a good farm manager.

What are some of the things that a farm manager must do in order to make a success? Why, he must know the right kind of pigs to keep, he must feed them the right kind of rations, he must feed them in the right way, and at the right time. He must not only know how to put in a crop of oats right, but he must know when to put it in, and when and how to harvest it. He must fix the fence before the cows get into the corn, not after they get in. He should remember that the Good Book says that there is a "time to march, and a time to pray," and when it is time to be marching he should not be praying. The farmer should have such a knowledge of all the details of farm work, that he sees constantly the relation of all the phases of farm work, the one with the other, and so acts and manages, that everything works in harmony. If he can do this he is a farm manager, and will make a success on the farm, and his success, in a greater or less degree, is measured by his ability to do this.

Farm management requires very careful study. To be most successful, one should begin at the very beginning. In the first place, select a farm adapted to the line of farming which you wish to pursue, or else adapt your line of farming to the farm which you have. You cannot make the greatest success unless you do this. If one has a natural stock farm, he will not make the greatest success by trying to make a grain farm out of it. He must take into consideration his location, when he decides upon the line of farming which he wishes to pursue. If one is to raise fruit, or potatoes, or sugar beets, or that line of farming, he wants to be fairly near a market, and he ought to have good roads. If he is far away from a market and has poor roads to go over he had better manufacture as much as possible on the farm, and save the hauling over long and poor roads. It would be poor management indeed, to sell hay, where one had to haul it a long distance over poor roads. He might better feed the hay to live stock and reduce its bulk by producing an animal, or an animal product. In this way he would reduce the bulk of product to be hauled to the minimum and make money.

FARM MANAGEMENT.

After one takes into consideration the farm and its location, and selects his kind of product, then he must make plans for his particular kind of farming—have a system. This system will be improved from year to year as experience dictates, but unless he has a plan at the beginning he will lose much time, and consequently much money. After he has found a farm for his special kind of farming, then he must study the details of the farm; work them out carefully, theoretically at first,

into consideration carefully in farm management. What will be our plan? Shall we plan to get along with as little hired help as possible, or shall we plan to use all that we think we can possibly use on the farm? This will largely depend upon the manager. If he has a faculty of getting along with hired help, if he can so plan his work that the men are profitably employed, then he ought to use all the help that he possibly can. But on the other hand, if he hasn't the faculty of



These Farmsteads Show the Result of Good Farm Management, Even in Winter.

which theories will be modified by practical experience as he gets into the work.

The farmer, even after he has gone thus far, should take into consideration the amount of capital he has at his command, and make his plans accordingly. If one has sufficient means to do business with, he can do business in a different way than if his means are limited. One kind of farming requires a larger outlay of cash, a longer term of years to realize upon investments, than others, and this

successfully managing help, getting them to do things in the right way and at the right time, with little friction, then he ought to modify his plans, and plan to get along with as little help as possible.

The fact is, that farming is a mighty complicated business, and the farmer must realize that, in a great measure, his success as a farmer will depend upon head work instead of hand work. Certainly he must work, or get some one to do the physical labor upon the farm; we



A Row of Sturdy Maples in Winter "Follage." Farm of Mrs. C. M. Reese, Cass Co.

must be taken into consideration with other things or he will make a flat failure out of it. A great many farmers are handicapped in the successful management of their farms from a lack of working capital. This many times prevents them from doing the right thing at the right time, and yet there seems to be no alternative, and we must consider this and act accordingly, else we are not first-class managers.

The hired help question must be taken

cannot get along without it; but at the same time, the labor cannot be well employed if the head does not plan before the hand is called upon to act, and without such planning much effort will be lost. A farmer makes a great mistake in a business way, when he works so hard physically that he incapacitates himself for mental work, because the mental work, the plans, the reasons, must come first. The farmer must have all his plans worked out before he attempts to perform

them. Willing hands are a good thing, but a business head is absolutely necessary for a farm manager. It will bring success instead of failure, profit instead of loss. Knowledge of agriculture is power, but management is everything.

COLON C. LILLIE.

ESSENTIAL POINTS IN FARM MANAGEMENT.

1. Planning the Work.

The first essential to any kind of work is the plan. A farmer without a plan is like a ship without a chart or compass; he may expend energy enough to reach a desired goal but fall short of it because he did not continue in the same direction, following some well defined plan. Then, too, if we set our mark and work toward it persistently we will be reasonably sure of attaining it, for where there is a well defined plan and a will to follow it, a way is almost certain to be found.

This plan should usually include the making of one or more branches of production our leaders, and making other branches subservient to these. If dairying is to be our specialty our plans should be so laid as to make other branches of farm work subsidiary and contributory to this.

During the winter months the coming season's work should be carefully outlined. The crop rotation and acreage, the treatment and care of each crop and field, the amount and kind of stock to be kept as proportioned to the crops to be grown, the care to be given the garden and orchard, the permanent improvements to be made, and many other questions that will suggest themselves as we study our particular problems.

We must remember, however, that the plans may need to be varied as the season or seasons progress, and we should make them sufficiently elastic to be varied in detail as occasion requires but without swerving from our main purpose unless insurmountable obstacles are encountered.

2. Preparing for the Work.

After the plans for the season's work are carefully outlined we should make everything in readiness to carry them out. So far as possible these arrangements should be made during the winter months. The list of tools, stock, fertilizers, seeds, fruit packages, spray chemicals household supplies, or other material or equipment needed should be prepared, makes and prices ascertained, and purchases made so far as possible before the busy season opens.

Then we should look to the repairs. Tools should be examined and repaired if necessary to put them in order for another season. It is a good plan to carry a note book and when a tool is used jot down any needed repairs or improvements that suggest themselves, otherwise the matter may escape our notice until the tool is needed again. Repairs on buildings and fences and conveniences in the house or barns should also be looked after. There should be a workshop on every farm, with a bench, forge, and the common tools for working with wood or iron, also a stock of lumber suitable for repairs, and a supply of nails, bolts, screws, and wire of assorted sizes. This may save many trips to town in the busy season and enable one to secure steady help and utilize stormy days to good advantage. We should also see that the harnesses are in good condition and the teams properly fitted for the spring work before it is upon us. Poor teams or harnesses are as undependable as poor tools, and it is poor economy to use either when we consider the inefficiency and danger of delay during the busy season.

If ready capital is not available it is well to ascertain where the money is coming from to carry out our plans. If

we have faith that their fulfillment will return the money invested, with interest, we should not be afraid to borrow if necessary, to carry them out. It will pay us to associate ourselves with a good bank, confide in its officers, let them handle our money and gain their confidence so they will accommodate us when necessary. Every farmer can at times borrow money with advantage to himself to increase his business, take advantage of discounts on bills, or make purchases when supplies are cheap. This can often be done even when the borrower has money in the bank drawing interest.

If help is necessary either indoors or out, we should secure it early and have enough to carry out the work planned. We do not want help to support in idleness but should strive to keep them at work at something that will earn us a little more than we pay them, leaving us a margin of profit on each one employed. Considered in this way, help should not be regarded as an expense but an investment which should produce an income. If possible, secure competent help that will stay by you for several years. I like to have help from whom I can learn something, and try to encourage in them the same receptive spirit. Use them well work with them if possible, sharing some of the most disagreeable jobs, giving them an occasional holiday, treat them as your equals and they will be ever ready to do the right thing by you.

3. Carrying Out the Work.

We should try to follow the plans laid out, as closely as practicable. The farmer who allows every unfavorable breeze to turn his sails will not get anywhere. See that essentials are carried out and get the non-essentials when you can. For example, spraying, harvesting, and cultivating must come in season, while manure hauling, pruning, or corn husking may be put off a little. If you have help, study them to determine what they like to do and can do well, and let them follow the kind of work for which they are fitted as much as possible. In general, more will be accomplished by bunching help and working with them or having a competent foreman do so, taking one thing at a time and finishing it so far as possible, though, of course, this rule must be varied at times.

It will pay to be neat, do everything well, and keep up the tidy appearance of buildings, yards, orchards, and fences. It will pay in dollars as well as in satisfaction and enthusiasm.

We should try to arrange our work so it is adapted to weather and soil conditions as far as possible. This will make the work more agreeable and better results will be secured. For example, select quiet days for spraying or handling straw or hay, cool days for sawing or splitting wood, warm days for pruning, and cultivate or hoe when the soil is in proper condition to perform the operation easily and make it most effective.

Another object to be sought is the arrangement of work so as to save time and labor in going from one part of the farm to another, or in changing teams or tools. For example, if there are several patches to be cultivated we should aim to do it on the same day and in such order as to save unnecessary change of tools, and where possible lay out the work so a certain part of it may be completed by noon or by night and save return trips to distant fields for a half hour or an hour's labor. This is simply a crude illustration of one of the many ways in which careful farm management will eliminate a useless waste of time. These things turn the scale between profit or loss in a large factory, and while we may not realize it, the lack of attention to labor-saving details causes a big leak on many farms.

We should also do our work in season if we would reap the best rewards for our labor. Some farmers are continually doing one thing when they should be doing another. They are plowing for corn when they should be planting or cultivating it, cutting frosted fodder when they should be husking it from the shock, spraying the orchard when it is too late for best results, or picking the apples after the largest have fallen. These farmers are just far enough behind with their work so that their procrastination eats up their profits. Too much work or inability to get help are usually ascribed as the cause, when in reality the proper diagnosis in nine cases out of ten is habit or lack of managing ability. Let us beware of the habit of procrastination for I believe it causes more slovenly farms and failures in farming than any other practice.

The question of judicious marketing is of much significance in farm management, especially since investigations re-

veal the fact that in general the distributors receive more of the consumer's dollar than the producer does. This is a problem which requires considerable foresight and business ability, and with it should be studied the question of judicious buying. With some products, such as fruit, garden truck or dairy products, for example, it is possible to seek a special market, either local or distant, and sell direct to the consumer with no deductions other than packages or transportation charges. In other cases it may be feasible to co-operate with other farmers and handle products direct or purchase farm supplies in the same manner. The proper time to buy or sell requires some study and knowledge of market conditions. As a rule, we should buy early before orders are rushing, and sell when our best judgment, coupled with a knowledge of market and crop conditions and human nature, dictates.

4. Accounting for the work.

It is not enough that we use good judgment in planning, preparing for, and carrying out the farm work, we should also keep an accurate account of this labor so that we may know the exact cost of each crop and the gross and net proceeds therefrom. It is essential to proper management that we know whether a given crop or a certain kind of stock is a paying or a losing branch of the business. If a large factory could be found which keeps no account of its cost of production and the receipts from its various lines of manufacture, you would immediately mark it for failure. Just so with the farm, which is simply a more complicated factory, as it has more indeterminate factors, such as weather conditions. If the farmer's margin of profit was not large and his living expenses small he could not survive the lax business methods so generally employed.

The system of farm accounting need not be extensive but some plan should be adopted which will show: (1). The cost of growing each crop or kind of stock. (2). The gross receipts from the crop or class of stock. (3). The net profit or loss from the same. These are essentials. By combining these figures we get the total profit or loss from the operation of the farm. As many auxiliary accounts may be kept as desired, such as the cost of permanent improvements, of labor that can not be charged to a crop or stock account, of household expenses, and of luxuries. These are important in regulating the disbursements of the farm earnings, but the foundation facts which every farmer should know are the cost, receipts, and profits from each line of his farm operations.

Calhoun Co.

S. B. HARTMAN.

RAFTERS FOR ROUND ROOF BARN,

Please describe the method of making rafters for a round roof barn.

Midland Co.

D. H. S.

The round roof barn is framed like any other barn, excepting the rafters for the roof, which are built up of inch strips of the width which it is desired to have the thickness of the rafter. This may be from three to four inches as desired. Any good lumber is suitable for making the rafters, but elm or ash strips may be used if available. First a form should be made with the curve which it is desired the rafter to have. Then the rafter is started by bending the inch strips around the form, nailing them together as each one is added until the required dimensions of the rafter are secured. As the outside of the finished rafter will be a little longer than the inside, all the strips being thoroughly nailed together, the rafter will retain the curved shape without staying until placed in its proper position in the barn roof. The shape of these curved rafters gives them the greatest strength possible for the material used in them. In building up these rafters the joints should, of course, be broken, and when well nailed they form a continuous rafter in one piece which is stronger than the self-supporting kind which are spliced in the center.

FITTING FALL PLOWED GROUND FOR POTATOES.

I plowed down a heavy sod last fall, harrowed it twice and disked it twice. It is part clay and part sand. Which would be the best, to plow or disk in the spring for early potatoes?

Ionia Co.

W. T. G.

This ground should preferably be disked or cultivated deeply as early in the spring as the ground can be worked to prepare it for early potatoes. The old sod has not had time to decay so as to make it advisable to turn it up to the surface in fitting the soil for potatoes.

Please mention the Michigan Farmer when you are writing to advertisers.

POTASH PRICES PLEASE FARMERS AND DEALERS.

Sales to Them Increase.

The long published statement regarding the potash situation, signed by Mr. Bradley and others, contains some near truths, much argument and some opinions of attorneys, the latter being evidently influenced by their clients' presentation of their troubles. All of these need to be considered in connection with the following facts:

Mr. Robert Bradley did not sign the contract July 1, 1909, but according to Mr. Schmidtman it was signed by Mr. Peter Bradley in New York, August 18.

The statement of the Prussian Minister of Commerce in the German Parliament on July 7th contained the following:

"Being a man of caution, I have already drawn up a prospective law, which naturally I have not yet placed before the Bundesrat. Now everybody knows where he stands and can arrange his business accordingly. Whether the potash syndicate will be formed is not material. The question rather is, whether it will be possible to counteract the consequences detrimental to the general welfare."

It is quite inconceivable that Mr. Bradley should not know of this on August 18th, when the contract providing that "any export or import duties or other governmental charges which may hereafter become effective within the life of the contract shall also be paid by the buyer," was signed.

Under the circumstances the signing was a speculation which so far has not been successful, but he made a bad guess on what was going to happen, and Mr. Schmidtman out-traded him.

The other 68 buyers who see fit to cast their lot in with Mr. Bradley had contracts with the Solstedt mine, which did not expire until 1917. These contracts guaranteed the average price paid by the two greatest American fertilizer corporations, and had they not consented to change them the mine (which had been purchased by another American corporation, the International Agricultural, of which Mr. Schmidtman is president) would have been obliged to pay the tax.

However, in September or October they saw fit to sign supplemental contracts in which they assumed all taxes and other governmental charges, German or American. They, too, made a bad guess and were outwitted by Mr. Schmidtman.

The trade lists show about 600 fertilizer manufacturers in the United States, so that only about one-tenth of them are represented in the present contention. Among those who are not asking the government for help in trying to get an advantage over their competitors is the Virginia-Carolina Chemical Co., the largest fertilizer corporation in America. On the contrary, the German mine Einigkeit, controlled by the Virginia-Carolina Co., recently joined the potash syndicate.

Mr. Bradley's ideas on conservation seem to consist mainly of "filler." The fact that the law requires an increase of at least five per cent yearly in the quantity mined proves that there is no intention of limiting production. The conservation policy of the law is that the mining shall be so regulated that mines more favorably situated shall not export their products at a price lower than the average cost of mining and lower than that for which the Germans themselves can secure the same products.

We have every reason to believe that the German Foreign Minister did not assure Ambassador Hill that "it would not invalidate or impair the American contracts," but that the assurance was given that a provision would be made so that the American buyers need not pay more for their potash than had been paid in previous years. This promise was faithfully carried out and this provision stands in the law, but the buyers have never asked for the liberal reductions which it permits.

Mr. Bradley dramatically inquires: "How, therefore, can Germany afford to start a tariff war with the United States?" Germany has no such intention. A small but noisy fraction of the American fertilizer manufacturers is trying to convince the American government that it ought to start a tariff war in order to get them out of a bad bargain.

In the meantime, the potash business is getting lots of effective advertising. Farmers and dealers are buying direct

in greatly increased amounts at reduced prices, and are quite satisfied with the situation since it permits them to mix their fertilizers at home at much less cost than they can secure them in ready mixed form.

GERMAN KALI WORKS,
By H. A. Huston, Secretary.



Away with mystery!

You have a right to know, what your roofing is made of. That's the real way to make sure it will last.

Genasco Ready Roofing

is made of Trinidad Lake asphalt—Nature's everlasting waterproofer. You know this natural asphalt will last in a roof.

The Kant-leak Kleet insures against leaky seams. Does away with cement. Supplied with Genasco, when specified.

Look for the trade-mark at your dealer's. Mineral and smooth surface. Insist on Genasco. A written guarantee—if you want it. Write for samples and the Good Roof Guide Book.

THE BARBER ASPHALT PAVING COMPANY

Largest producers of asphalt, and largest manufacturers of ready roofing in the world.

PHILADELPHIA

New York San Francisco Chicago

Cross-section, Genasco Smooth-surface Roofing

Trinidad Lake Asphalt
Asphalt-saturated Wool Felt
Trinidad Lake Asphalt

A PERFECT STAND

Of potatoes is what you will get with good seed and an Iron Age Planter. It plants 100 per cent, without misses or doubles or injury to the seed. Every seed piece placed, just right, at even spaces and covered uniformly. The boy pays for his labor 10 to 20 times over, and the planter pays for itself—ask any user. With or without fertilizer distributor.

IRON AGE Farm and Garden Tools

have "made good" and proven their superiority for 75 years. Send postal to-day for our Anniversary Catalog—it tells all about our Potato Planters, Cultivators, Diggers, Sprayers, Garden Tools, Wheel Hoes, Drills, etc., and is FREE. Don't delay.

BATEMAN MFG CO.
Box 1046
GRENOCH, N. J.



If you would insure a Good Potato Crop

After 19 years' test it is recommended by thousands of satisfied users. Write for Catalog "M" today.

Sold direct from factory to farmer. Special prices. Satisfaction guaranteed by the manufacturers.

SCHOFIELD & CO., FREEPORT, ILL.

LET US TAN YOUR HIDE.

Cattle or Horse hide, Calf, Dog, Deer, or any kind of skin with hair or fur on. We make them soft, light, odorless, wind, moth and water proof, and make them into coats (for men or women) robes, rugs or gloves when so ordered.

Your fur goods will cost you less than to buy them, and be worth more. Send three or more cow or horse hides in one shipment from anywhere east of Denver and we pay the freight both ways.

Get our illustrated catalog which gives prices of tanning, taxidermy and head mounting. Also prices of fur goods, and big mounted game heads we sell.

The Crosby Frisian Fur Company,
571 Lyell Ave., Rochester, N. Y.



"More Potatoes"

From ground planted secured by use of The KEYSTONE POTATO PLANTER than by any other method of planting. Work perfectly accurate. A simple, strong, durable machine. Write for CATALOG, price, etc. A. J. PLATT, MFR. BOX J. STERLING, ILL.

SMALL VS. LARGE POTATOES.

I notice this old saw is being vigorously filed again, and Bro. Lillie has his troubles about it on account of the skeptics. Lillie is optimistic, because Bro. Woodman grows big crops from small potatoes. The heretical ones scoff, because small kernels of grain are not orthodox. Scientific thoughts and principles are alluded to as infallible guides to perfect success.

I have had my experience in the scientific field, and in the potato field, (30 years in the potato fields of Montcalm county), where the season of planting ranges from May 5 to June 25, and the customs regarding seed range from hickory nut to extreme size, the general custom being hen's egg size, uncut or cut once.

My estimate of scientific capabilities in the potato field is that scientific knowledge enables one to classify various theories as to their actual merits. Mr. Lillie has illustrated this by his terse declaration that small kernels from the crib and small potatoes "have no bearing whatever." Mr. Lillie forgot the man who did not possess scientific training and is asking, why?

The seeker for information is right. Small kernels of grain are doubtful, if not bad, but if you were to propagate a field of willows from cuttings, would you cut hoop-pole size, or only whips to stick in the ground? Small ones, certainly! Why? For convenience only. The big pole would start no larger roots, no stronger buds, and would make no better tree than the whip; but convenience dictates the small size is most practical for cuttings.

Now does the potato resemble most the kernel of grain, or the cutting of willow, as a source of propagation? It is not a seed at all, and hence not at all like the kernel from the crib. It is a cutting from the body plant like the willow, and hence, if the body plant is sound, the small potato is sound and identical with the willow.

But when we go farther, and reason that Jason Woodman built up his yields with small seed, and that he reduced the individual size of his tubers by using small seed, we become both impractical and unscientific. Small seed potatoes, are not seed at all, but are cuttings of plant stems and are preferable only for convenience, and undesirable only when degenerate, (from "run out" hills).

I once saw a field of potatoes in which eight rows planted with cast-off nodule-like potatoes, perhaps one-half inch in diameter, yielded much more than any other portion of the field, (these nodules were screened out of the regular seed). The true reason for extra yield was an old fence row, consequently more plant food where these nodules were used.

So Mr. Woodman's large yields are more likely to be the result of enriched soil than preferred seed. The uniform marketable size of his stock is more likely due to the amount of seed per square yard of soil, than the size of individual pieces.

Were it not that the above theories and facts are as capable of being demonstrated in a field of low yield as a field of large yield, I should not presume to declare them, as I never raised a field yielding like Mr. Woodman's and never saw many such. But I have planted all dates from May 10 to July 10, all sizes from hazelnut to cocoanut, all distances apart from rows two feet to four feet, check rowed and drilled 10 to 26 inches apart in drill, used all kinds of machinery, tested all treatment for scab and sum up the battle in these words—sound seed, used in quantities to balance the fertility of your soil, so stock will grow neither too small nor too large; good cultivation and barnyard manure.

One theory Mr. Lillie alludes to as the ideal, was a pet of mine—that is, select seed from best hills before or at time of digging. Few years in my experience have passed when I have not selected one ideal hill and planted it several years following, striving to produce an extra good strain. In every case it has been a failure, and usually soon passes into a degenerate, undesirable stock. I am still at it, have my hill of superior quality laid away now, but no hopes for it builded on either practical experience or scientific knowledge. Why? Ask of the crops yet to be and the authorities yet to come.

That hale fellow, Charles W. Garfield, when once asked his vocation said, "I'm a doubter in politics, a questioner in religion and a fool of a farmer, and get along pretty well when the late frosts don't kill the buds on my fence posts." As Charlie's fence posts were always an ornamental shrub or a peach tree, one

knowing him could appreciate his humorous expression.

It is said an optimist sees the fried cake while the pessimist sees only the hole in it. In the potato business I usually satisfy myself with seeing the fried cake, while I am most of the time in the hole. Montcalm Co. JOHN E. TAYLOR.

HOW A GOOD CROP OF POTATOES WAS GROWN.

Having read the articles in your valued paper from Messrs. C. C. Lillie, Woodman and Chandler, with much interest, I thought I would give my method of preparing the soil, selecting the seed, planting and cultivating the potato crop. In the first place I prefer a clover sod one year old, and the soil a sandy loam if it is to be had. For my 1910 crop I had a piece of land as above described. During the winter previous to the planting I gave the field a good application of horse manure. This I turned under as early in the spring as the ground was in condition to plow. The soil was harrowed two or three times before planting, which was about the 10th of June. At this time we gave the soil a thorough working, after which we took our team and plow to the field, making furrows about five inches deep and the ground was ready for the seed.

Now as to selecting the seed, I never have selected seed at digging time as it seemed to be too much trouble, as Mr. Lillie has said, but I select the tubers that are all of one size and uniform in shape, and as near the size I want to raise as possible. These tubers are cut in one-eye pieces as near as possible and not have them too extremely small. I drop these pieces into the furrows made in the soil about 18 inches apart, one piece in a place, covering them about two inches deep. Then these furrows are gradually filled as the crop is cultivated and hoed. This last crop was cultivated three times, and hoed. This method keeps the young growing tubers down under the surface away from the sun, without the objection of hilling by ridging up the soil.

At digging time I dug 360 bu. per acre from this field. I do not think there were two bushels to the hundred that were below the proper size for market. I do not think, either, that there were as many as two bushels to the hundred that were as large as my two fists. They were all of a nice, even size. I have, in former years, used small seed but with unsatisfactory results, but since I have followed my present method I have not had a poor crop of potatoes. I am not saying what I have said, to criticize Messrs. Lillie and Woodman, but it does look to me that, if Mr. W. is reducing the size of the tubers by selecting the small seed, it would be difficult to check the downward trend if that practice is continued.

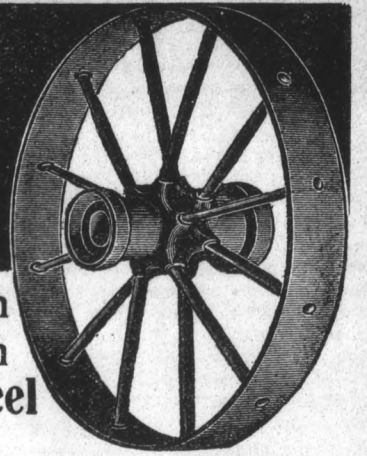
Saginaw Co. A. W. WEAVER.

GROWING POTATOES OF GOOD MARKET SIZE.

I have been not a little interested in the discussion of the seed potato question in recent issues of The Farmer, particularly with regard to the use of small seed as a means of producing a maximum number of potatoes of good market size. Mr. Lillie states that by planting small seed he thinks he will get less extremely large potatoes and more of the proper market size, and cites Mr. Woodman's experience as an example. This brings to mind an experience of my own which has a bearing on this point. A number of years ago, before I had learned the importance of plowing the potato ground early, that portion of a 14-acre field plowed last did not contain enough moisture to insure a good stand. After waiting vainly for some days for a shower the potatoes were planted, and, as I feared, a poor stand was secured on that portion of the field plowed last, while on the side of the field where the plowing was begun the stand was good. This was an example of poor farm management which the writer regretted throughout the summer, as it required just as much work per acre to tend the crop where the stand was poor as where it was good. At digging time we commenced on the good side of the field, expecting, of course, that the yield would fall off as digging progressed. Imagine my surprise at the fact that the yield was just as large where there was not over two-thirds of a stand; the potatoes had simply grown larger. This was conclusive proof to me that the market size of the potatoes grown depends upon the amount of seed planted per acre, rather than on the size of the seed.

A. R. FARMER.

STOP Your Wheel Expense



Why keep wooden wheels on your wagon all the time when you can have Empire Low Steel Wheels at half the Cost?

What's the use of straining—lifting—taxing your strength to the limit to get hay, grain, barrels, bags, wood and stone over wagon wheels two feet higher than they ought to be? **It's the last two feet of the lift that hurts.**

Ever think of it? No sense in having your wagon perched away up there on high wheels. Have low wheels for farm work.

Stop the drudgery of loading! Cut out the aches! Lifting kills more farmers than pneumonia, consumption and typhoid combined.

Save your team. These low, broad steel tires by actual test pull from one-third to one-half lighter than high narrow wooden wheels. **You can put a broad platform over your Empire wheels and double your load.** You can't overload Empire Low Steel Wheels and you don't get stalled in the mud. They save you money. No more cracked hubs, rattly or broken spokes or loose tires. No more stopping your hauling to go to the blacksmith with wheel troubles.

EMPIRE Steel Wheels Handy Wagons

We have determined to distribute at least three times as many of our wheels and our wagons among farmers this year as we did last year.

We can do it. We have the materials. We have the factory. The farmers want the wheels and the wagons. We have fixed the lowest possible prices, based on an output for 1910, three times the largest of any year in our history.

Those who answer this test advertisement will get the benefit now! Does this interest you? Then clip the coupon below and fill in your name and address—or just send your name and address to us on a postal card—and we will send you our catalog and unheard-of low price list. Pick your wheels—pick your wagon—see how little they cost you.

You can order Empire Low Steel Wheels separately to put on your old farm wagon.

We give you plain, simple directions how to measure your skeins for just the wheels you need.

A MONEY SAVER! Empire Wheels on Empire Wagon

The best combination for money saving and satisfaction in farm hauling is Empire Low Steel Wheels on the Empire Handy Wagon.

We build twenty styles of Empire Handy Wagons—a wagon for every purpose—wagons that will carry from one to twenty tons—wagons for general farm use—logging—lumber hauling—combination farm and logging—orchard trucks, etc.

30 Days' Free Trial

We will ship you either a set of Empire Wheels for your old wagon, or a new Handy Wagon simply on your order. **No money down** unless you wish.

Try the wheels or the wagon thirty days—every way you think of. Then if they have not made good on every claim send them back to us.

We will pay the freight both ways. You won't be out a cent! Can we make a fairer proposition to you?

Cut out the coupon and mail it to us. You will get our low prices and book showing every wagon and every wheel. Do it now!

EMPIRE MANUFACTURING CO.

Box 89, Quincy, Illinois.

Send me your Empire Wheel and Wagon Book. This request puts me under no obligation to buy.

Name..... P. O.

State..... R. R. No.



30 Days' Free Trial.

LIVE STOCK

STATE BREEDERS' MEETINGS.

Following an established custom, nearly all of the stock breeders' associations of the state held meetings in connection with the general live stock meeting, held at M. A. C., on Jan. 11-12, as reported in this and the preceding issue. The officers of these various associations were asked to make brief reports of the meetings for publication in the Michigan Farmer, and the following are reports received to date:

Michigan Red Polled Cattle Club.

The meeting was called to order by Pres. E. W. English, and to accommodate some of the speakers the program was first taken up. The address of Prof. Brown, of M. A. C., was full of interest and instruction. The cement silo was well discussed, and thought to give general satisfaction. Mr. Nate Herberson, of Birmingham, gave his experience in showing cattle at the state fair. The newly elected officers are: Pres., E. W. English, Clarksville; vice-pres., Jacob Berner, Grand Ledge; sec.-treas., W. W. Woodman, Stanton; director, three years, Nate Herberson, Birmingham. The president and secretary were re-elected. The balance of the directors are James Reynolds, Port Huron, two years, and E. Foster, Clarkston, one year. Although the Red Polls are a comparatively new breed in Michigan, the secretary's mailing list shows about 80 firms interested in breeding this type of cattle, and the report of President English and Superintendent Tyler, of the state fair, showed about 90 head on exhibition, this being second to no other breed except the Short-horns. The work of Mr. Myron Convers, of Iowa, as judge gave general satisfaction and it was voted to ask the association to try and secure his services again this year.—W. W. Woodman, Sec.-Treas.

Michigan Hereford Breeders' Association.

The meeting of the Michigan Hereford Breeders was not so well attended as it should have been, although those present had a very good meeting. The membership was increased over 300 per cent in the last year. The old officers were re-elected: R. E. Allen, of Paw Paw, pres., and Louis Norton, of Quimby, sec.-treas. The association will meet again at Lansing next winter in connection with the live stock meeting.—Louis Norton, Secy.

Michigan Guernsey Breeders' Association.

The third annual meeting of the Michigan Guernsey Breeders' Association since the organization of that body, was held in the Agricultural Building at M. A. C., January 11, at 2:00 o'clock p. m. There were present about 75 people interested in the raising of Guernsey cattle. The meeting was called to order by its president, Mr. T. V. Hicks, of Battle Creek. The report of the secretary and treasurer was read and approved, and the following officers were elected for the ensuing year: Pres., T. V. Hicks, Battle Creek; first vice-pres., M. A. Burnett, Sand Lake; second vice-pres., H. W. Wigman, Lansing; third vice-pres., John Miller, Birmingham; sec.-treas., A. M. Brown, East Lansing. No formal program had been prepared, but a number of short and interesting talks were given by members of the association and others. Mr. H. W. Wigman discussed, in an interesting way, the commercial situation with reference to Guernsey cattle, referring to the rapid advance of prices and the limited supply of good stock. Prof. A. C. Anderson, of the College, made a short talk in which he cautioned against exaggerated statements and comparisons and recommended that the association guard against excessive booming in furthering the interests of the breed. Other short talks were also made by Messrs. Rosema, of Fremont, Hill, of Grand Rapids, and several others. The meeting was generally regarded as an unusually successful one.—A. M. Brown, Sec.

Michigan Shropshire Sheep Breeders' Association.

The second annual meeting of the Michigan Shropshire Sheep Breeders' Association was held in room 212, Agricultural Building. Meeting began promptly at 10 a. m. A good attendance was present and marked interest was manifest throughout both forenoon and afternoon sessions. Following the address of the president a committee was appointed, consisting of Cassius, Alexander, J. C. Butler and W. P. Pulling, to draft a constitution and by-laws for the association and report at the afternoon session. Report of the secretary-treasurer read and approved. At the afternoon session, the committee to

present constitution and by-laws made their report and the constitution and by-laws submitted were adopted without debate. As the Shropshire in name is almost a household word among farmers, it was thought best to abridge the name of the association to the "Michigan Shropshire Association." A fine paper on "The Shropshire of 1920," was read by Hon. H. E. Powell, of Ionia, after which the meeting adjourned to the judging arena, where were about a dozen specimens of the breed upon which judgment was passed by Prof. R. S. Shaw, H. E. Powell, H. H. Hinds, and others. The membership of the association was materially increased at this meeting and the feeling was general that this association would fill a long-felt want in bringing together, once a year at least, the many breeders of this popular breed of sheep, for their mutual good.—W. H. Schantz, Sec.-Treas.

Michigan Oxford Down Breeders' Association.

The fifteenth annual meeting of the Michigan State Oxford Down Sheep Breeders' Association was held in room 115 of the Agricultural Building, at the Michigan Agricultural College, on Wednesday, Jan. 11, 1911, and was called to order at 4 p. m. by the vice-president, H. J. De Garmo, of Clyde, Mich. The minutes of the previous meeting were read and approved. The report of the treasurer was read and adopted. The several members present reported a very successful year, in fact, the most successful of any yet enjoyed, sales having been large with prices higher than usual. The secretary was instructed to get out a printed statement showing the number of sheep each member had for sale. The time and place of the next meeting was left for the president and secretary to decide. The following officers were elected for the ensuing year: I. Roy Waterbury, Highland, president; H. J. De Garmo, Clyde, vice-president; B. F. Miller, Flint, sec.-treas.; board of directors J. A. De Garmo, Muir; F. W. Bailey, Coral; A. L. Wright, Bad Axe; L. N. Olmsted, Muir, and A. P. Hagaman, Leonard.—B. F. Miller, Secretary.

Michigan Poland-China Breeders' Association.

The third annual meeting of the Michigan Poland-China Breeders' Association was held at M. A. C., Jan. 11, 1911. We are pleased to report a good attendance of the progressive Poland breeders of the state. We had a very interesting meeting, with a good program as advertised in the Michigan Farmer last week. Everybody reports sales good and business booming. The Poland-China breeders and the Duroc-Jersey breeders of the state will hold a combination sale on Feb. 8, 1912, at M. A. C., at which time there will be offered 50 bred sows, 25 of each breed. Officers were elected for the ensuing year as follows: Pres., W. W. Woodman, Stanton; vice-pres., E. D. Bishop, Lake Odessa; sec.-treas., J. C. Butler, Portland; directors, Geo. Stokes, Grand Ledge, B. M. Wind, Sheridan.—J. C. Butler, Sec.

Michigan Duroc-Jersey Swine Breeders' Association.

The fourth annual meeting of the Michigan Duroc-Jersey Swine Breeders' Association was held at Agricultural College, East Lansing, Jan. 11. The meeting was called to order by Pres. Bray, Mr. John Bowditch, Jr., of the College, gave an address on "Breeding and management of swine and their diseases, notably hog cholera," which brought out some discussion and a general round table talk. Then came the payment of dues and the adding of some new members. The best of feeling prevailed throughout, and it was considered the best meeting yet held by the association and all felt greatly encouraged at the future outlook for the swine breeders in general. The election of officers resulted in the old officers being re-elected, i. e.: Chas. H. Bray, Okemos president; M. T. Story, Lowell, secretary and treasurer; directors, E. R. Cornell, Howell; J. C. Barney, Coldwater; L. C. Morrill, Leslie; H. G. Keesler, Cassopolis.—M. F. Story, Sec.

(Concluded next week.)

Corn has been selling at Illinois country stations for 38c per bushel and at lower prices farther west, with sales in Minnesota as low as 32c. With a superabundance of cheap corn nearly everywhere it is only natural that farmers should feed as much corn on their farms to live stock as possible, and especially to healthy growing young hogs, for corn that is converted into pork yields a much larger return than when it is sold as grain.

Fifteen Years' Service Without Painting—Or a New Roof—That is Our Guarantee to You—

and the guarantee is stamped right on the roofing itself with the year you buy it.



It will last you much longer than that, but for 15 years we are responsible. Think of that—lay your roof and forget it for 15 years. No expense—no repairing—no renewing. We don't know the wearing possibilities of our own roofing. Our 25-year-old roofs are as serviceable and look as good now as roofing laid five years ago. We make our guarantee 15 years to be safe, but we know it is good for twenty-five years.

DICKELMAN EXTRA

Galvanized Metal Roofing

is the only metal roofing made which is so scientifically galvanized that it can be guaranteed against rust.

Only the toughest, most pliable, open-hearth stock is ever used. This metal is peculiarly porous and long-fibred, so that when it is put into the galvanizing pots the liquid spelter does not veneer but penetrates this fiber and amalgamates with the metal base, thus protecting it forever.

Dickelman Extra is easily laid. It is already turned and adjusted for end locks. All you have to do is to place together, and you have a perfect double seam.

Try one of our samples, test it and then test some ordinary galvanized roofing. Buy the one which does not flake or crack. It will be Dickelman's. Write today for

Free Samples and Book on Roofing

The book will show you how you can save money on your roofing, how to lay roofing easily, how to avoid repair bills. Your dealer will know about Dickelman's. Ask him. But let us send you this free book and sample. Write today.

THE DICKELMAN MFG. CO.
66 Gormley St., Forest, Ohio

GALLOWAY SAVES YOU \$50 to \$300

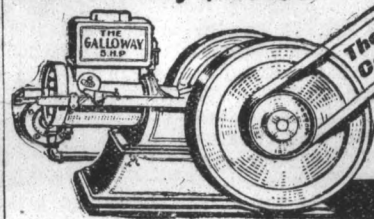
SAVE from \$50 to \$300 by buying your gasoline engine of 1 1/2 to 2 horse-power from a real engine factory. Save dealer, jobber and catalogue house profit. No such offer as I make on the class of engine I sell has ever been made before in all Gasoline Engine history. Here is the secret and reason: I turn them out all alike by the thousands in my enormous modern factory, equipped with automatic machinery. I sell them direct to you for less money than some factories can make them at actual shop cost.

All you pay me for is actual raw material, labor, and one small profit (and I buy my material in enormous quantities).

Anybody can afford and might just as well have a high grade engine when he can get in on a wholesale deal of this kind. I'm doing something that never was done before. Think of it! A price to you that is lower than dealers and jobbers can buy similar engines for, in carload lots, for spot cash.

An engine that is made so good in the factory that I will send it out anywhere in the U. S. without an expert to any inexperienced users, on 30 days' free trial, to test against any engine made of similar horse-power that sells for twice as much, and let him be the judge. Sell your poorest horse and buy a

5-H.-P. Only \$119.50



Get Galloway's Biggest and Best FREE GASOLINE BOOK

Write today for my beautiful new 50-page Engine Book in four colors, nothing like it ever printed before, full of valuable information, showing how I make them and how you can make more money with a gasoline engine on the farm. Write me—

Wm. Galloway, Pres., Wm. Galloway Co.
645 Galloway Station, Waterloo, Iowa

Prairie Stock Farm

OUR NEXT IMPORTATION, Consisting of

High Class Percheron Stallions and Mares
WILL ARRIVE ABOUT SEPT. 15.

We cordially invite everybody to come and visit our stables and learn our method of doing business. We can sell you a first-class stallion or mare for less money than any importer in America. Terms to suit purchasers.

Niles is ninety miles from Chicago on the Michigan Central.
E. METZ HORSE IMPORTING CO., Niles, Mich.



JACKS and MULES

Raise Mules and get rich. 18 Jack and Mule Farms under one management, where can be seen 540 head fine large Jacks, Jennies and Mules, 14 to 17 hands high. Good ones. Stock guaranteed. Write for prices today. Address



KREKLER & MATHEWS
West Elkton, Ohio
—Branch Barns—
Clinton, Indiana.



Try The Bull Dog Feed Grinder 10 Days' Free

You can grind 5000 bu. of cob and corn to table meal with one set of Rollers and Conveyers. Dump grain in can't clog it—nails won't break it. Has only 2 inch working leverage which accounts for light running. Get our FREE Catalogue and Samples.

CROWN POINT MFG. CO.,
133 E. Road, Crown Point, Ind.

PLEASE MENTION THE MICHIGAN FARMER when you are writing to advertisers.

DUNHAMS' PERCHERONS

Fourth importation for 1910 arrived August 4th. Our present lot, we believe, equals or surpasses any we have heretofore collected. More horses of bone, size and first-class quality than ever. Numerous important prize winners. Write for catalogue.

W. S., J. B. & B. DUNHAM
Wayne, Illinois

Registered Kentucky Mammoth JACKS, JENNETS and SADDLE HORSES

We are the largest breeders of Mammoth jacks in America. Registered Tamworth and Hampshire hogs all ages. J. F. COOK & Co., Lexington, Ky.

BELGIAN HORSES. If you are wanting to buy Draft Horses write H. H. JUMP, Munnich, Michigan.

DR. HESS DIP and Disinfectant

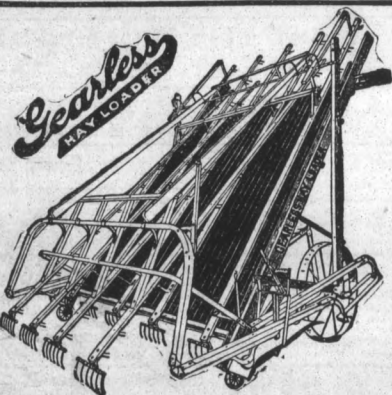
is an indispensable necessity to every live stock owner.

Farmers and stockmen suffer, through lice and parasites, the appalling annual loss of nearly \$200,000,000—a sum which could be saved and added to the grand aggregate of "farm prosperity" if Dr. Hess Dip and Disinfectant were used the country over.

Dealers, everywhere, handle this preparation. It is easily prepared—easily applied. It meets the government requirement for official dipping for sheep scab. Use it for lice, fleas, sheep ticks, sheep scab, foot rot, mange, hog cholera and every form of germ or parasitic disease. Cleanses and purifies pens and stables. Send for our free Dip Book.

One gallon makes 50 to 100 gallons of solution ready for use.

DR. HESS & CLARK, Ashland, Ohio



The Loader That Adjusts Itself To the Load.

It makes no difference to the "GEARLESS" Hay Loader whether the hay is light or in windrows, it adjusts itself automatically at the bottom as well as at the top to the quantity of hay it has to handle. No other rake bar loader has such an adjustment at the bottom nor half so much at the top. This is just one more of the many important improvements the "GEARLESS" has over other loaders.

The "GEARLESS" is the loader that can be operated by one man, the driver. It is the loader that can be depended upon every hour of the haying season because it is free from the delicate and complicated parts that are so objectionable on many loaders.

Our free booklet will interest every farmer. Write for it today. A postal will do.

LA CROSSE HAY TOOL CO.
32nd Street. Chicago Heights, Illinois.

MINERAL HEAVE REMEDY

CURES HEAVES

NEGLECT Will Ruin Your Horse
Send to day for only PERMANENT CURE
SAFE CERTAIN.

\$3 PACKAGE will cure any case or money refunded.
\$1 PACKAGE cures ordinary cases. Postpaid on receipt of price. Agents Wanted. Write for descriptive booklet.

Mineral Heave Remedy Co., 463 Fourth Ave., Pittsburg, Pa.

DEATH TO HEAVES

HEAVE, COUGH, DISTEMPER AND INDIGESTION CURE.

The first or second \$1 can cures heaves. The third is guaranteed to cure or money refunded. \$1 per can at dealers, or express prepaid. Send for booklet.

THE NEWTON REMEDY CO.
TOLEDO, OHIO.

20 years sale.

Prices Sent Free
Chicago Scale Co.

THE LIVE STOCK MEETING.

(Concluded from last week.)

Beef Production for Michigan.

The above topic was the subject of a most interesting address by Prof. H. T. Handshin, of the University of Minnesota, who spoke in the place of Prof. Andrew Boss, of that institution, whose name appeared on the program. Prof. Handshin's talk was of a nature to prove an inspiration to the beef cattle breeders and feeders of Michigan. His message was one of encouragement to the breeder, since the breeders of beef cattle must provide the sires for the breeding of the high grades upon which the permanent industry of beef production must be founded. While the speaker expressed the opinion that pure-bred cattle could be made to pay out where kept for the production of beef, any calculation or prediction regarding the business of beef production must be based on grade cattle, since they are the only kind that will be available in quantities to supply the foundation for the business.

The elements to be considered in the problem of beef production are the cost of the cattle and the feed, and the overhead expense incident to the business, consisting mostly of labor and housing for the cattle. Regarding the cost of the cattle and feeds, Prof. Handshin stated that the cattle feeders of the past, and to a somewhat less extent those of the present day, have been able to purchase their feeders from western sources and a considerable portion of their feed in the form of by-product grains which have been available at comparatively cheap prices; but he expressed the opinion that at no very distant date in the future the producers of beef will have to raise a larger percentage of the cattle fed and a greater proportion of the feed used in the process of beef production than they do at the present time, and since the conduct of the industry should be based on the idea of permanency these are factors which should be well considered.

In this connection Prof. Handshin stated that it is a common idea among farmers that beef production cannot be profitably engaged in on high-priced Michigan lands. He undertook to show the error of this theory by pointing out the fact that beef production flourishes in southwestern Indiana, in central Illinois, in Iowa and in the southern part of Minnesota, and other states similarly located as nowhere else in this country, and yet the farming lands in these sections sell for higher prices than are reached by the agricultural lands of any other section of the country. The idea that high-priced land is not a handicap to the business of beef production was further emphasized by referring to Scotland, and some sections of England, where beef production is the principal industry in counties where the land values are higher than in the states above mentioned, and the available feeds are mostly straw and roots and American cottonseed and oil meal instead of cheap corn silage which is everywhere available in this country, together with the same by-products which are cheaper here than abroad.

These illustrations served to emphasize the point that successful and profitable beef production does not depend so much on the price of the land on which the industry is conducted, as upon the relation of the crop-producing power of our land to the amount of labor that is available. The labor supply is a big problem, and its limited supply is an argument for beef production rather than the following of some line of farming which requires a relatively larger supply of labor. Another factor to be considered is the amount of money to be invested in buildings and equipment as compared with the amount of money invested in the land itself. It was pointed out by the speaker that the money invested in buildings and equipment depreciates rapidly, while that invested in land appreciates through the rise in land values, which is another argument for the business of beef production, since this business requires a relatively smaller investment in buildings and special equipment than any other branch of live stock breeding or feeding.

After impressing his hearers with the possibility of making beef production a profitable business in Michigan, Prof. Handshin spoke briefly of the kind of feeders to get and what and how to feed them. While this depends not a little upon conditions, he favored feeders of the better class for most profitable results, and silage as the basis of the ration in growing and finishing them. He stated that it had long been conceded that silage was the cheapest and best feed for the dairyman to make the basis of the ration

for the dairy cow, and that the more experiments that are conducted and the larger the number of practical trials made by feeders, the more silage is being fed to steers with profit. He referred to one experiment in which it was shown that a bunch of steers fed on silage alone made more profitable gains than any others fed in the same experiments, and although he did not advocate this method of feeding he used the result as an argument for the liberal use of silage in the production of beef, as in the feeding of other farm animals aside from the dairy cow. Prof. Handshin's address was at once one of the most entertaining and profitable of the session, and was particularly happy at this time when there is need of encouragement for the business of beef production in Michigan.

Mutton Production in Michigan.

This subject was ably handled by Mr. C. A. Tyler, Secretary of the American Hampshire Sheep Association, and well-known member of the State Live Stock Sanitary Commission. Mr. Tyler described the growth of the lamb-feeding industry in Michigan from its beginning until it reached the high mark in 1904, when the lambs fed in Michigan were purchased at a cost of over \$4,000,000 and brought in the Buffalo market something like \$6,500,000. He called attention to the fact that Michigan was formerly a considerable factor in wool production, but that this industry had declined in proportion with the increase of the business of mutton production. He stated that while some were still engaged in trying to produce wool and mutton from the same animal, it was not a profitable system, and as the supply of western range bred lambs is declining and will continue to grow smaller in future years, our sheep feeders must produce their own lambs, and if they are to produce them for the most profitable mutton production they should be bred with that end in view. But in addition to producing the lambs we must learn to feed them in competition with western mutton producers who grow their alfalfa on irrigated land. We must learn to grow alfalfa on our own land, and with more clover and alfalfa and less corn grow our lambs at less cost. It is not difficult to do, and there is plenty of room for the expansion of the industry in Michigan. Mr. Tyler pointed out the fact that our American people have developed a taste for mutton, and will continue to demand more of it until, instead of less than one sheep for each person in Michigan our mutton sheep industry will be four or five times as great as it is at present, and this will be accomplished through the liberal use of home-grown alfalfa and corn, together with the clover which we now grow. Mr. Tyler's talk was an eloquent plea for the expansion of the business of producing mutton in Michigan, by the method of raising the lambs as well as growing the feed for them on our own farms. This address closed the program for the general session. The officers, elected for the ensuing year were as follows:

The New Officers.

President, R. C. Reed, Howell; secretary, Prof. A. C. Anderson, East Lansing; assistant secretary, S. B. Wattles, East Lansing; treasurer, C. S. Bartlett, Pontiac; directors, T. F. Marston, Bay City; W. H. Schantz, Hastings; H. H. Hinds, Stanton; G. M. Brownell, Detroit, and F. R. Crandall, Howell.

Attention is being directed to the falling off in the numbers of stocker and feeder cattle in recent years. Such shipments from the five principal western markets amounted in the aggregate during the first eleven months of 1910 to 1,587,163 head, compared with 1,533,263 in 1909, 1,501,364 in 1908 and 1,720,963 in 1907. The former vast ranges of the country bred and marketed great numbers of cattle adapted for fattening, and by this means farmers were enabled to obtain enough cattle to feed, these being supplemented by young stock cattle bred and sold by other farmers. Now the numbers of stock calves marketed by farmers are much smaller than five or six years ago, while the range supply is greatly cut down owing to the settlement of farmers on the big tracts where formerly cattle roamed in big numbers. The time has arrived when farmers should go into breeding their own cattle. Stockers are feeders selling at dangerously high prices, and buying them is a good deal of a speculation, as they are relatively much higher than finished beef cattle. The packers are in the habit of bidding for the best feeders, and this runs prices up to a high level and works against the intending buyers from feeding districts.

More cattle, lambs and sheep were forwarded from Chicago during 1910 to feeding districts in the corn belt than ever before, the enormous corn crop and comparatively low prices for that grain encouraging farmers to carry on stock feeding more extensively than usual.

MOTHERS NEED Scott's Emulsion

Many mothers have learned how much they needed

Scott's Emulsion

by taking it to show their children that it was a sweet medicine.

For thirty-five years it has been the best known specific against fatigue and enfeeblement, as well as the standard remedy for warding off and relieving colds and affections of the throat and lungs.

EFFECTUAL

The most effectual remedy in use for the cure of ailments of horses and cattle is

GOMBAULT'S CAUSTIC BALSAM



Used as a Blister or Lotion.

This preferred remedy is prepared exclusively by J. E. Gombault, ex-Veterinary Surgeon to the French Government Stud.

As a HUMAN REMEDY for Rheumatism, Sprains, Sore Throat, etc., it is invaluable. Every bottle of Caustic Balsam sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address THE LAWRENCE-WILLIAMS COMPANY, Cleveland, Ohio.

"SAVE-THE-HORSE" SPAVIN CURE.



96 Munn Ave., Newark, N. J., Aug. 15, 1910. Some time ago I purchased a horse, believing him to be a real good one. At the time I did not know that he had been fired and blistered. He became very lame from a Bone Spavin, and the prospect was not very favorable, owing to his advanced age. However, having a bottle of "Save-The-Horse" on hand, of which I had used very little in satisfactorily curing Puffs on another horse, I ventured to think it would help the Spavin on my new purchase. I was ashamed to drive the horse in the daytime, he was so lame. I used about half the bottle. Suddenly the horse forgot his lameness, and to this day he acts and goes as sound as a colt. Now should you want a recommendation you are at liberty to refer to me. Jos. Wm. Burton.

\$5.00 a Bottle With Signed CONTRACT.

This is a binding CONTRACT and protects purchaser absolutely in treating and curing any case of Bone and Bag Spavin, Thoroughpin, Ring-bone, (except low), Curb, Splint, Capped Hock, Windpuff, Shoeshin, Injured Tendons and all Lameness. No scar or loss of hair. Horse works as usual. Send for copy of contract, booklet on all lameness and letters from prominent business men, bankers, farmers and horse owners the world over on every kind of case. At all druggists and dealers, or express paid. Froy Chemical Co. 20 Com'fave, Binghamton, N. Y.

A Guaranteed DISTEMPER REMEDY

HORSES SHEEP AND DOGS You take no risk in buying Craft's Distemper and Cough Remedy. It is sold on a positive money back guarantee. It is so certain we let you test it at our expense. Get a bottle—try it on any case of Distemper, Cough, Cold, Pinkeye, etc.—if it fails to do what we claim—take empty bottle back and get your money. Price 50c and \$1.00. If your dealer can't supply you, send to us and get 3 Valuable Horse Books Free. **CRAFT'S DISTEMPER REMEDY** WELLS MEDICINE CO., 11 Third St., LaFayette, Ind.

Lankford Collars Invaluable in Indiana

Mr. James Cartmill, of Pine Village, Ind., says: "I had a pair of three-year-old geldings which I broke this spring. Mr. M. E. Taylor insisted that I use Lankford Collars on them, which I did under protest. After using them two days I bought two more. I think they are the best collars I ever saw." O-2

VETERINARY

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

Advice through this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also name and address of writer. Initials only will be published. Many queries are answered that apply to 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.

Cracked Heels.—When running in pasture last summer the heels of my four-year-old colt cracked. I treated them with home remedies and she appeared to get well. A month ago her hind legs began to stock, and although the skin is not chapped much her legs are badly swollen and I would like to know what to do for her. C. G. W., Bentley, Mich.

Feed your mare less grain and more roots and well-salted bran mash to open her bowels; also give her a dessert spoonful of powdered nitrate of potash, a teaspoonful of ground nux vomica and two tablespoonfuls of cooking soda at a dose in feed two or three times a day. Bandage swollen legs in cotton, not too tight, and keep her legs dry. It is also important that she has daily exercise.

Foot Soreness—Indigestion.—I have a horse that is sore and stiff in both fore feet. He seems to suffer much less pain in warm weather than cold and he backs out of a stall with great difficulty. Exercise seems to bring some relief. When turning around the fore feet are extended far in advance of body. I forgot to say that he travels best in soft snow. I also have another horse that is out of condition and passes thick, yellow urine. F. W. P., Grant Mich.—I am inclined to believe that your horse suffers from chronic laminitis (founder), and the foot soreness will be relieved somewhat by using a wide-webbed, rolling-motion shoe with leather sole, and packing bottom of foot with tar and oakum; besides, apply lanolin (wool fat) to wall of hoofs once a day. By blistering coronets with cerate of cantharides every 10 days it will have a tendency to reduce the lameness. Give your other horse a tablespoonful of ground gentian, a dessertspoonful of powdered rosin and a teaspoonful of ground nux vomica at a dose in feed two or three times a day. He should be fed some roots, and perhaps more grain.

Acid Condition of Urine.—I have a horse that I believe must have bladder trouble on account of his passing small quantities of urine at a time, and far too often. W. M. G., Traverse City, Mich.—Give 3 drs. of citrate of lithium at a dose in feed or water twice a day; also give 1 oz. fluid extract of buchu at a dose daily until the desired effect is produced.

Incipient Heaves.—I have a valuable driving mare that begins to show the first symptoms of heaves. Besides, she is troubled with constipation and coughs some when in stable, but seldom when out doors. T. W. K., Fennville, Mich.—Feed no clover or musty, dusty, badly-cured fodder of any kind and feed very little bulky food. Wet the feed with lime water which is made by adding a handful of lime to a bucket of water, let it stand until it dissolves, pour off the first water which is usually a little bitter, then refill and use. The water will take up only so much lime and no more; therefore it cannot be made too strong. Give 1 dr. ground nux vomica, 1 dr. powdered lobelia, ½ dr. powdered opium and 2 drs. muriate ammonia at a dose in damp feed three times a day.

Collar Bolls.—We have a team of horses six and seven years old, in good flesh and feeling fine, which have small bolls come under the collar or where the harness

48 Million Shortage

Government statistics show there were 48,000,000 bushels less of potatoes grown in the United States last year than in 1909. This with increasing population must necessarily make a larger demand for potatoes in 1911. No crop as a



Money Maker

squalls it, and the information showing how to grow for profit will be mailed absolutely free to any one asking for it. Our president has devoted over fifty years to the study of potato culture and the manufacture of machinery for handling the crop in all stages.

ASPINWALL MANUFACTURING CO.
439 Sabin Street, Jackson, Michigan, U. S. A.
World's Oldest and Largest Makers of Potato Machinery.

HEAVES CURED!

A remedy for lung, throat and wind troubles. Cures Heaves, Coughs, Distension and Indigestion. Veterinarians use and recommend.

PRUSSIAN REMEDY CO., ST. PAUL, MINN.

MIX YOUR OWN FEED

Buckeye Molasses

Bbls. 15c gallon, f. o. b. Detroit.
10 gallon cans \$2.50, freight paid.

W. H. EDGAR & SON, Detroit, Mich.

BREEDERS' DIRECTORY.

CATTLE.

ABERDEEN-ANGUS.

Herd, consisting of Trojan, Ericas, Blackbirds, and Prides, only, is headed by Egerton W. a Trojan Erica, by Black Woodlawn, sire of the Grand Champion steer and bull at the International in Chicago, Dec. 1910. He is assisted by Undulata Blackbird Ito.

WOODCOTE STOCK FARM, Ionia, Mich.

AYRSHIRES—High type of Dairy animal.

Young bulls and bull calves for sale. Prices low. Inquiries solicited.

BERKSHIRE SWINE.

FINE POULTRY—White and Barred Rocks, White & Buff Orpingtons, White Wyandottes and Leghorns. Eggs in season at each.

MICHIGAN SCHOOL FOR THE DEAF, Flint, Mich.

FOR SALE—Registered Guernsey Bull 3 years old. Price \$100. Also one reg. bull calf 4 months old, price \$50. Geo. W. Reeves, R. No. 2, Gd. Rapids, Mich.

Holsteins—Young bulls of high quality and low prices, considering breeding. Get our descriptions. LONG BEACH FARM, Augusta, 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.

25 Holstein Cows for Sale

—10 good young cows, bred to a son of Pieterje Hengervelds Count De Kol, due to freshen in Feb. & Mar. 15 others bred to equally as good bulls. 10 bull calves, mostly from A. R. O. D.M.S. 1 yearling bull sired, Admiral Philly Walker, Dam, a daughter of Manor De Kol. This is good stuff, if you want some of it, write me just what you want. L. E. Connell, Fayette, Ohio.

Holstein Friesian Cattle

Also a fine bunch of Plymouth Rock Cockerels. W. B. JONES, Oak Grove, Michigan.

Holstein Bull Calves

—Choicest A. R. O. bred. ing. Prices, \$50 and up.

COLE BROTHERS, Ypsilanti Farms, Ypsilanti, Mich.

FOR SALE—Holstein Bull 2 years old \$125.

Bull Calves 6 months to 1 year \$50 to \$100. Bred heifers \$150 to \$200. Oldest herd in Ind. Send for Photos and Pedigrees. W. C. Jackson, 715 Rex St. South Bend, Ind.

HOLSTEIN BULL CALF

nearly ready for service. Sired by son of Pieterje Hengerveld Count De Kol—85 daughters in advance of register. Dam gave 2010 lbs. milk in one month at 3 years. Price \$100. C. D. Woodbury, Lansing, Mich.

HEREFORDS

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

Register of Merit Jerseys.

Official yearly record. A fine lot of young bulls from dams with official records of 483 pounds and upwards of butter.

T. F. MARSTON, Bay City, Michigan.

LILLIE FARMSTEAD JERSEYS.

HERD BULLS {Vidas Signal St. L. No. 58197. Jubilee's Foxhall, No. 82209.

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.

Jersey Bull Calf

born April 10, 1910. Dam will go in Registry of Merit this year, gave 8224 lbs. milk as 2-yr-old. Sires Dam's record 10000 lbs. milk in 10 1/4 months. **THE MURRAY-WATERMAN CO., R. 6, Ann Arbor, Mich. Bell Phone.**

For Sale—Registered Jersey Cattle, either sex.

also Reg. O. I. C. hogs. C. A. BRISTOL, Fenton, Mich.

For Sale—Four registered POLLED DUR-

old. All Reds. **J. E. CLARK, Milford, Mich.**

Dairy Bred Shorthorns

—A few good bulls for sale. Good notes good as cash. **J. B. HUMMEL, Mason, Mich.**

SHORTHORNS and POLLED DURHAMS. Both sexes

FOR SALE, **A. D. DeGARMO, Highland, Michigan.**

3 Scotch Topped Shorthorn yearling Bulls and

a few Cows for sale. **W. C. OSIUS, Hillsdale, Michigan.**

Scotch Shorthorns—3 young Bulls and a few

and heifers for sale. **JOHN LESSITER'S SONS, R. No. 1, Clarkston, Mich.**

SHEEP.

ANGUS and POLLED DURHAM CATTLE—

Cotswold, Hampshire and Southdown Sheep. **THE CLOVER BLOSSOM FARM, Port Austin, Mich.**

Oxford-Down Sheep and Polled

Durham cattle for sale. **A. D. & J. A. De GARMO, Muir, Mich.**

Oxford Down Sheep—Good Yearling Field

for sale. **I. R. WATERBURY, Highland, Michigan.**

Reg. Rambouillets

—I have 100 ewes, among them all of my youngest and best, also 85 ewe and ram lambs. Live 2 1/2 miles east of Morris on G. T. Road. Address **J. Q. A. COOK.**

INGLESIDE SHROPSHIRE

—Rams of all ages. Bred ewes, singly or in lots. **H. E. Powell, Robt. Groves, Shepherd, Ionia, Mich.**

SHROPSHIRE HALL STOCK FARM

Has for sale, twenty-five choice bred yearling ewes, at a low price, also a few good three and four year-old, bred ewes.

L. S. DUNHAM & Sons, Concord, Michigan.

HOGS.

Durocs & Victorias

—Growthy Spring Boars & Gilts of choice breeding from Prize Winners. **M. T. STORY, R. 248, Lowell, Michigan.**

HUPP FARM BERKSHIRES!

WON 189 PRIZES IN 1909.

Stock of both sexes and all ages for sale. Breeders of Guernsey Cattle, M. B. Turkeys, Barred Rock Chickens, Pekin Ducks. **GEORGE C. HUPP, Manager, Drawer A, Birmingham, Michigan.**

Berkshires

—Two yearling sows bred for spring farrowing. A few choice July gilts & boar pigs for sale. **A. A. Pattullo, Deckerville, Mich.**

BERKSHIRES

Unexcelled in breeding. Selected boars, sows and gilts. Choice fall pigs. **T. V. HICKS, R. No. 11, Battle Creek, Mich.**

A DAMS BROS., Litchfield, Mich., breeders of Imp. Chester

White and Tamworth swine, service boars, sows bred or open, of either breed. Shorthorn Cattle, Buff Rock, Buff Wyandotte, W. Orpington, Chks. all breeding stock leading winners.

Auction Sale.

Feb 7th I will sell pure bred Durocs and Shropshires bred. I have size and quality. Want it pay you to come? Catalogue on request. **S. L. WING, Kinderhook, Michigan.**

DUROC-JERSEYS.

Bred Sows **CAREY U. EDMONDS, Hastings, Michigan.**

DUROC-JERSEY SWINE and HOLSTEIN FRIES-

IAN CATTLE. One boar and one sow yet for sale. **E. R. CORNELL, Howell, Michigan.**

A FEW first class Duroc Jersey Service Boars

FOR SALE. **M. A. BRAY, Okemos, Ingham Co., Mich. Indpt phone**

Capitol Herd

DUROC-JERSEY Swine established 1888. One last Spring Boar and Sept. 1910 Gilts for sale. **J. H. Banghart, R. 6, Lansing, Mich.**

DUROCS

—25 Bred Sows, of high quality. 10 75 Fall Pigs both sex. Write or come and see.

J. C. BARNEY, COLDWATER, MICHIGAN.

IMPROVED CHESTERS

—Young boars ready for service, orders taken for sows bred for spring farrow. Also Holstein Bull Calves of the best of breeding. **W. O. WILSON, Okemos, Mich. Both Phones.**

O. I. C's

—Hogs all ages for sale, sows bred or open, boars any age or size. Shipped on approval. **HARRY T. CHANDELL, Rolling View Stock Farm, CASS CITY, MICHIGAN.**

O. I. C. Hogs

all ages. Sows bred. Males weighing 185 lbs. and more. **H. H. JUMP, Munith, Michigan.**

O. I. C.

—Spring boars all sold, have 2 good June boars left. Sows bred for spring farrow, fall pigs either sex. **A. NEWMAN, R. No. 1, Mariette, Mich.**

O. I. C. Swine

—Spring, summer & fall farrowed, both sexes, breeding and type right. **Geo. P. Andrews, Dansville, Ingham Co., Mich.**

O. I. C. Early Fall Pigs

Low prices. Only 4 bred gilts for sale. **C. J. THOMPSON, Rockford, Michigan.**

O. I. C's FOR SALE

—An extra good lot of last spring pigs, either sex, weighing from 150 to 300 lbs. 1 yearling boar and 30 fall pigs. **OTTO B. SCHULZE, Nashville, Mich.**

O. I. C. SWINE

—For sale now fall Pigs got by Grand Son of Jackson Chief the World's Champion and Grand Champion O. I. C. Boar. Write for live let live prices on pairs not akin.

A. J. GORDEN, R. No. 2, Dorrt, Michigan.

Poland-Chinas

—Boars ready for service; spring pigs, either sex. Write **L. W. Barnes & Son, Byron, Shiawassee Co., Mich.**

GREAT POLAND-CHINA HOG SALE.

JANUARY 20th.

60 sows bred for spring farrow. If you want the best, attend my sale as I have the best in the state.

WM. WAFFLE, Coldwater, Michigan.

Poland-Chinas

The home of the Michigan State Fair-winners. We won 24 prizes at Detroit in 1910. Pigs of both sexes for sale, sired by our prize winners.

M. T. BEATTY & SON, West Unity, Ohio.

Butler's Famous Wonders

—the Big Poland-Chinas that make good. They grow big, because they have been bred big for 20 years. Some great Aug. Sept., Oct., pigs, good enough for any breeder, cheap enough for any farmer.

J. C. BUTLER, Portland, Mich. Bell Phone.

RECORDED MULE FOOTED HOGS

are said to be immune from hog cholera. Stock of all ages for sale. **John H. Dunlap, Box M, Williamsport, O.**

O. I. C. SWINE

—Boars all sold. 20 young sows bred for spring farrow, for sale. **E. E. BEACH & SON, R. No. 3, Brighton, Michigan.**

O. I. C.

—Choice Bred Sows. Boars ready for service and fall pigs. From World's Fair Winners. **Glenwood Stock Farm, Zeeland, Michigan. Phone 94.**

12 P. C. Boars

ready for service, sired by a Son of the World's Champion Meddler; dam, undefeated Lady Louise. **Z. Kinne, Three Oaks, Mich.**

Poland-China Gilts

bred for spring farrow. Fall Pigs \$1 each. **B. M. Wing and Son, Sheridan, Michigan.**

POLAND-CHINAS

—Large styled Gilts and older sows bred. Boars ready for use, also fall Pigs. Prices low. **ROBERT NEVE, Pierson, Michigan.**

P. C. SOWS

bred for spring farrow. Big value for your money. Some good boars. **WOOD & SONS, Salline, Michigan.**

POLAND CHINAS

—Sows of big type. Gilts bred for spring. A few choice boars and fall pigs. **E. D. BISHOP, Route 38, Lake Odessa, Michigan.**

P. C. SOWS

—Sired by the largest boar ever in this part of Michigan. Bred to a son of a World's Fair Champion. Satisfaction guaranteed. **R. W. Mills, Salem, Mich.**

Large Type P. C's

—Spring pigs all sold. Order a fall pig early from my great herd and get choice. None better. **W. E. Livingston, Parma, Mich.**

LILLIE FARMSTEAD YORKSHIRES.

The great medium bacon type. The hog that wins on sheer merit. Large, vigorous, prolific. Gilts bred for March or April farrow. Fall pigs, either sex. Pairs not akin. I guarantee satisfaction, or money refunded. **COLON C. LILLIE, Coopersville, Mich.**

ALWAYS mention the MICHIGAN FARMER

when you are writing to advertisers.

ARE YOU LOSING CALVES?

IF SO, YOU ARE KEEPING YOUR HERD AT A LOSS

It lies within the power of every live stock breeder upon the face of the earth to wipe abortion out of his herd and keep it out. This means that it lies within your power to wipe abortion out of your herd and keep it out. Dr. David Roberts, the cattle expert, has devoted over 20 years of his life to live stock diseases and especially abortion in cows.

He has the distinction of having the largest cattle practice in the United States, extending from coast to coast. His profession has called him to treat some of the most valuable animals in America. He has been called upon to act in the capacity of Official Veterinarian for the largest and greatest cattle shows in the world, such as the National Western Stock Show, the National Dairy Show, American Royal Show, etc.

Dr. David Roberts, Wisconsin State Veterinarian 1906-'07-'08, has conducted educational campaigns throughout the United States and has addressed thousands of live stock breeders, both from special dairy trains and lecture platforms.

The Results of Dr. Roberts 20 Years Experience

Compiled in Book Form for Your Benefit.

David Roberts, D. V. S., has perhaps, a larger bureau of information concerning abortion in cows, than any other man in this country. Not only has he had 20 years practical work in treating this disease himself, but he has come into personal touch with hundreds of breeders who have counseled with him and given him their experiences with abortion and the many different treatments of same. This valuable experience—that of Dr. Roberts and hundreds of cattle breeders in every part of the world—has been carefully and clearly written in plain language and put in concise book form by Dr. Roberts. He calls this book the Practical Home Veterinarian. It's a Home book because it contains the information that you are in need of at home. It's a Veterinarian because it prescribes for all livestock ailments. The book contains 184 pages, clearly printed on good paper, is profusely illustrated and bound in cloth. It's a book that if sold in the regular way would cost you \$1.00, but for a limited time, you may get a copy by sending the small sum of 10 cents in stamps to pay postage.

Any live stock owner desiring special information concerning the care and management of his herd, can obtain same by writing Dr. David Roberts, who will treat all such matters strictly confidential. Dr. David Roberts, The Cattle Specialist, will upon request answer all professional calls to any part of the United States to examine and treat cattle only. Calls received by telephone, telegraph or letter. Address

Dr. David Roberts Veterinary Co.

970 Grand Avenue

Waukesha, Wisconsin.

\$1.00
VETERINARY
BOOK FREE

Cut Coupon Here
Dr. David Roberts Veterinary Co.,
970 Grand Ave., Waukesha, Wis.
Herewith I enclose 10c in stamps to pay postage on a copy of
the Practical Home Veterinarian.
Name _____
Address _____
City _____
State _____
P. O. _____
R. F. D. _____

By
Abortion
You
Are
Losing
Calves,
Milk,
Money

PRACTICAL
HOME
VETERINARIAN



Let me show you where and how I can save you 20% to 40% of your purchase money on a manure spreader.

You can take your pick of ten different styles—from the fifty bushel wagon box spreader, \$39.50, f. o. b. Waterloo, up to my complete, all steel gear No. 5 spreader, sixty to seventy bushels—a size and a style for every farm. One for your farm at a saving of one-fifth to nearly one-half of your money.

How can I do it? Give me your name and I'll write you how and prove every word. Briefly it is that the Galloway is made in a factory with a capacity of 42,000 spreaders of all styles a year. The spreader is sold direct to you at actual factory cost plus one small profit based on this enormous quantity. Absolutely the best value for the money! It's positively true, and more than 50,000 farmers of America say so. Let me send you their proof. Photographs, letters, articles to papers about my spreaders. Proof for any man, even the most unreasonable.

Ask me any question. I'll give you some farmer's answer to it. That's the kind of argument that tells.

You are asked to sift this testimony of eye witnesses. Then take a Galloway onto your own place. Try it thirty days, or more if you need it—make it prove itself. Then I'll take your word, be it yes or no. If it's "no" I'll take back the machine, refund your money, and pay all the freight. I'll even give you 6% interest on your money for the time I've had it. Or you can try it with your money in your own pocket—makes no difference to me. You are the judge, anyhow. I don't ask you for a minute to take my word. It's your word I have to take. There are lots of things that I know about this spreader business that you want to know. Let me tell you.

Let me show you how I divide the melon with my farmer friends.



GET MY BOOK "The Great Crop Maker" Absolutely FREE
Write Me Tonight Wm. Galloway, President
The William Galloway Co.
Authorized Capital, \$3,500,000
649 Galloway Station, Waterloo, Ia.

FREE TO FARMERS
A Valuable 160-page book entitled "Silo Profits"

Written by 200 of the most successful Feeders, Farmers and Dairymen in the World. Every farmer in America should read this book, and as long as our supply of these books lasts we will mail one copy free to each person asking for it. It gives the actual experience of these farmers and in their own words. Our factories are located at Anderson, Ind., Des Moines, Iowa, and Kansas City, Mo. Write NOW for this book. **INDIANA SILO COMPANY**
382 Union Building, Anderson, Indiana



chafes. The boils or sores are from the size of a pea to a hickory nut and usually discharge pus. F. L. M., Ithaca, N. Y. Give each of your horses a dessert-spoonful of Donovan's solution at a dose in feed twice a day and dissolve 1/4 lb. acetate of lead, 3 ozs. sulphate of zinc and 2 ozs. of carbolic acid in a gallon of water and wet shoulders and chafed parts two or three times a day. Also wet the face of collar with this same solution occasionally.

Distemper—Chronic Cough.—We have a six-year-old horse that had distemper last spring; since then he takes cold easily, has a cough and wheezes when much exerted. When driven very fast or pulled heavily his flanks heave as though he was broken-winded. L. G. W., Marlette, Mich.—I believe most of your horse's trouble is in throat. Apply one part iodine and eight parts fresh lard three times a week, and give 2 drs. Donovan's solution at a dose in feed three times a day for ten days, then give 2 drs. iodine potassium at a dose in feed three times a day for 20 days.

J. F., Chesaning, Mich.—See treatment for collar boils in this column.

Stocking—Calked.—I have a horse that seems to be in good health, but his hind legs stock. I also have another horse that tramped on fore coronet, which causes some soreness. I applied black oil without doing it much good. S. E. G., Chilson, Mich.—Give your horse a teaspoonful of powdered sulphate of iron and a tablespoonful of powdered rosin at a dose in feed three times a day. Apply tincture iodine to bunch on coronet daily.

Indigestion—Thick Urine.—I have a six-year-old horse that is in an unthrifty condition. His urine is unnatural and his skin itches. G. H. B., Caro, Mich.—Give your horse 2 tablespoonfuls of the following compound powder at a dose in feed two or three times a day: Powdered cinchona, gentian, ginger, fenugreek, rosin and bicarbonate of soda.

Nervousness.—One of my cows is inclined to pass urine every time she is milked. W. D. D., Otis, Mich.—Your cow has a habit of doing just what thousands of other cows do when they are milked or frightened, and many of them never get over it. Giving her drugs will not help her; however, by treating her kindly she may discontinue the habit.

Loss of Appetite—Barrenness.—One of my heifers came fresh seven weeks ago; since then she seems to have very little appetite for ground grain and she has gradually decreased in milk flow until she is now giving only two quarts daily. I have offered her different kinds of feed, but it seems to make very little difference what kind is supplied her, she refuses to eat it. Twelve-month-old sow has never been in heat and as I am anxious to use her for breeding purposes, should like to know what can be done to bring her in heat. F. H., Kingston, Mich.—Give your cow a teaspoonful of ground nux vomica, two tablespoonfuls of powdered quassia two tablespoonfuls of ground gentian, two tablespoonfuls of bicarbonate soda and the same quantity of powdered charcoal at a dose in one quart of tepid water as a drench. This medicine should be given not less than three times a day and if her bowels are constive they should be opened by giving her one pound doses of epsom salts daily. Give your sow 5 grs. powdered cantharides at a dose in feed two or three times a day. If you own a boar turn her in pen with him.

Light milker.—I have a nice heifer that will not be fresh until the middle of next summer, that seems to be going dry, although she is not seemingly sick or out of health. T. B. D., East Jordan, Mich.—Taking your own statements as a guide I can safely say that your heifer will prove unprofitable for dairy purposes, therefore I would advise you to either fatten her or sell her for what you can get. My observations lead me to believe that at least one-third of the cows of this country prove unprofitable; therefore, I have no hesitation in believing that your heifer belongs to this class.

Ringworm—Lice.—I am pretty sure that my cattle are troubled with ringworm and I would like to know how to cure them; besides, I would also like to know how to kill lice on cattle for I have tried several remedies that are recommended, but they fail to do the work. F. S., Belmont, Mich.—Apply one part iodine and eight parts fresh lard every two or three days and they will get well. One of the most satisfactory remedies that I use in my practice is made by boiling 1/4 lb. (four ozs.) crushed stavesacre seeds in a gallon of water. This mixture should be allowed to simmer for two or three hours, then strain and water added to make the original gallon. Then apply lousy cattle twice a week. It is also a good plan to dust on some Persian insect powder or use a little mercurial ointment to back part of head and neck and rump. One part carbolic acid and 30 parts water kills lice quickly and will not harm cattle.

Spasm of Larynx.—My pigs seem to be taken suddenly sick when first commencing to drink; within a few seconds of the time they touch the swill they stagger back and fall in a spasm and act as though they were going to die, but after trembling violently for a minute or two they jump up and appear all right. They are kept in a nice dry shed and I am at a loss to know what ails them. A. W. T., Wilmet, Mich.—If you will feed your pigs warm swill and food they will not have those choking fits any more.

W. H. P. P., Henderson, Mich.—Feed your five 10-weeks-old pigs warm slop and food instead of cold and they will not suffer from spasmodic throat trouble.

Wounds on Hips.—Will you kindly advise me how to treat flesh wounds on hips of horses caused by kicks some two weeks ago? R. D., Gagetown, Mich.—Apply peroxide-hydrogen if the wounds are suppurating; 10 minutes later apply a dusting powder composed of equal parts boric acid, oxide of zinc and powdered alum. If the wound is not suppurating use the powder alone.

Book 5-A

Book 5-B

Book 5-C

Book 5-D

Book 5-E

Book 5-F

Book 5-G

Investigate—Then You Will Know—and Profit

Any or all of these booklets sent FREE
Please ask for the books by number

"MORE AND BETTER CORN," is a 40-page booklet, full of profit-bringing information. Every paragraph is practical.

We publish this book and send it FREE because we are interested in improved methods of corn growing. Every vital thing about corn and corn planting is in this book.

We manufacture the largest and most complete line of corn-planting machinery, all of the highest quality.

Tell us your requirements and we will furnish full and complete information.

ALFALFA

Its Seeding, Culture and Curing, by one of the highest authorities in Kansas, the greatest Alfalfa State, is full of practical information about this new and important crop. Get posted on this interesting subject.

DISC HARROWS

The Disc Harrow is the most necessary tool on the farm today. The advantages of thorough discing are just beginning to be understood.

The DEERE MODEL B. Disc Harrows control the gangs and force them into the ground by a spring pressure, thereby securing the most even and thorough penetration and cultivation.

Whether you buy a disc harrow or not this year, it will pay you to read up all the new features of the DEERE line of Harrows and the MODEL B. in particular.

REMEMBER, it is the only spring-pressure harrow made and spring-pressure control insures more perfect work.

BETTER HAY

If you have ten or more acres of hay, you will be interested in the New Deere Hay Loader.

The Loader that lasts a lifetime; that has absolutely the lightest draft of its width; that delivers the hay at the highest point; rakes absolutely clean without gathering trash; will handle the hay in swaths, windrows of any size or bunches.

The New Deere couples automatically and unhitches from the load and has many other exclusive and valuable features. ALL IN THE BOOK.

THE DEERE DOUBLE ACTION

Disc Harrow cultivates the ground twice in one operation and leaves the land true. The rear gangs instantly detached, makes a regular disc harrow.

The DEERE MODEL K. and MODEL OB. Harrows now in use can be equipped with tandem gangs by boring a few holes in the stub pole. This combination is a great time and labor saver and at the same time secures more thorough pulverization, as the soil has no time to dry out between cultivations.

FARMERS' POCKET LEDGER

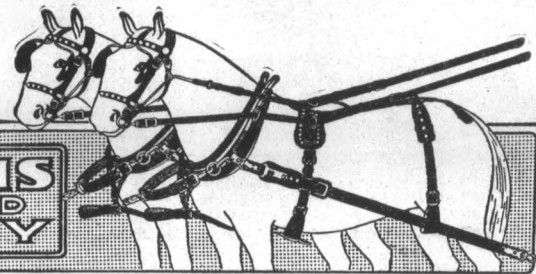
The Farmers' Pocket Ledger is a new, durable and handsome memorandum book which contains lots of practical information and has plenty of room for recording important transactions.

The most popular little book of its kind.

Address

DEERE & MANSUR CO.
Moline, Illinois

WILLIAMS
GUARANTEED
QUALITY



If your harness bears this label you need ask no further questions about it. Williams' Guaranteed Quality simply means the best product of the best men in the harness trade. It means that, quality, value and service considered, the price is the lowest. No similar harness offered for the same price elsewhere could be the equal of this one, simply because no other maker can offer you Williams' Guaranteed Quality.

The above Double Farm Harness is our No. 10F35567. Bridles, 7/8 inch, short cheeks, spotted—Lines, 1 1/2 inches wide, 18 feet long—Breast Straps and Martin-gales, 1 1/2 inches—Traces, 1 1/2 inches, with Hooks and Moeller Hame Tugs—Hip Straps, \$29.50
1 1/2 inches. Price, without collars,

Our special Harness Catalog fully describes more than seventy different patterns in Williams' Guaranteed Quality Harness; also saddles and saddlery goods of every kind. Free for the asking. You need this book if you want harness of quality.

Sears, Roebuck and Co.
Chicago, Illinois



DISTEMPERINE

Is a wonderfully effective remedy for the treatment of distemper, chills and fevers influenza, catarrhal and shipping fevers, pinkeye, epizootic, heaves, coughs, colds and various ailments affecting horses and other animals.

WISE HORSE-OWNERS ARE NEVER WITHOUT IT.

50c. a bottle; \$5 a doz. Ask your druggist, or order of us. We prepay express. Write today for valuable free booklet.

GOSHEN DISTEMPERINE CO., Dept. C, GOSHEN, INDIANA. Trade "The Turk" Mark.



HOLD YOUR MONEY! RISK NOTHING!

Our local representative in your town will put a

SHARPLES Dairy Tubular Cream Separator

into your own home, for thorough, free trial, without one cent of expense to you for freight or anything else.

Later than, different from, superior to all others. No disks or other contraptions. Wears a lifetime, washes many times easier, produces twice the skimming force, skims faster and twice as clean as others.

When you can try The World's Best without cost, why take risk, pay freight or waste time on any "mail order" or other (so called) cheap machine?

A Tubular is cheap, because it lasts a lifetime, and is guaranteed forever by America's oldest and the world's biggest cream separator concern. But inferior machines are very expensive, because they last only about one year on the average.

You can own and use a Sharples Dairy Tubular cheaper than any other separator built.

Write for 1911 catalog No. 124, and prove it for yourself without risking one cent.

THE SHARPLES SEPARATOR CO.
WEST CHESTER, PA.
Chicago, Ill., San Francisco, Cal., Portland, Ore.
Toronto, Can. Winnipeg, Can.

BOWSHER

(Sold with or without elevator)
CRUSH our corn (with or without shucks) and **GRIND** all kinds of small grain. Use **Conical Shape Grinders**. Different from all others.

LIGHTEST RUNNING.
(Our Circular Tells Why.)
Handy to Operate. 10 Sizes—2 to 35 h. p. One size for wind-wheel use.

Also Make Sweep Grinders both Geared and Plain.
D.N.P. Bowsher Co.
South Bend, Ind.

FEED MILLS

HARRIS STEEL CHAIN HANGING WOODLINED STANCHIONS AND SANITARY STEEL STALLS.

Send for our new catalog which shows photographs of some of the most up-to-date barns in the country. You will be convinced that we make the very best there is at the lowest price.

THE HARRIS MFG. COMPANY,
816 Cleveland Ave., Salem Ohio.

THE ROSS SILO

The only thoroughly manufactured silo on the market. Full length stave. Continuous door frame complete with ladder. Triple beveled silo door with hinges. Equipped with extra heavy hoops at bottom.

AIR TIGHT
Makes winter feed equal to June grass. THE ROSS will more than pay for itself in one season. Write today for catalog which gives facts that will save you money. Agents wanted.
The E. W. Ross Co. (Est. 1850)
Box 14, SPRINGFIELD, OHIO

Dairymen Take a Look at the Strite Governor Pulley. It's the original and "only thing" for driving cream separators with gasoline engines. Once tried, always used. **TRY ONE.** Ask your dealer for a "STRITE" or write us direct. Don't take an imitation.
Strite Governor Pulley Co.,
308 So. Third St., Minneapolis, Minn.

Owl Brand Cotton Seed Meal

41 Percent Protein Guaranteed

Standard for 35 Years.
Corn can't replace cottonseed meal. Animals need Protein. Feed a balanced ration. Write for our booklet "Science of Feeding."
F. W. BRODE & CO., Memphis, Tennessee—Established 1875

BEST MILL EVER MADE

Will make table meal whole wheat flour for bread, crack corn for poultry, will grind oats, barley, rye and all kinds of grain.

Equipped With Automatic Sieve furnished on a box base, one end of which will receive the meal and the other the coarse parts and the hulls of grain. One to four horse power.

Just the mill you have been looking for. You won't make any mistake in buying. We furnish two different mesh sieves and an extra set of burrs with each mill. Write for catalog and information.

Duplex Mill & Mfg. Co., Box 217 Springfield, Ohio

CALVES RAISE THEM WITHOUT MILK

BOOKLET FREE
J. E. BARTLETT, Co., Jackson, Mich.

THE DAIRY

CONDUCTED BY COLON C. LILLIE.

A RATION RICH IN PROTEIN.

I would be pleased to get information through the columns of your paper regarding a balanced ration for my cows. I have five cows in number, grade Jerseys. I am feeding ensilage, about 35 lbs. daily, two feeds, morning and evening, with about 4 lbs. of gluten feed and about 5 lbs. of linseed meal (old process), and a basketful of raw beet pulp. At noon I feed a little mixed hay or cornstalks. I have made no practice of getting any pulp ahead. I do not know how to keep it from spoiling and when I stop feeding beet pulp the milk quantity decreases slowly. Now what should I feed in place of beet pulp to keep up supply of milk? Should I feed more gluten and oil meal? I have fed oil meal (old process), and cottonseed meal but I am of the opinion that I get more milk from gluten and have less trouble with cows' bags. But how is it with the fertility, is there as much fertility in gluten meal after same has passed through the cow as in other concentrates? My silage is very rich in corn but it is cut quite late on account of wet weather.

Ottawa Co. E. R.
Four pounds of gluten feed and five pounds of old process oil meal make a ration which I think is richer in protein than there is any necessity of, and consequently too expensive. This amount of these two feeds would make about three pounds of protein per day, and three pounds of protein per day in the concentrated part of the ration alone is more than is necessary. I realize, of course, that you lack clover hay, but you have one feed a day of mixed hay and all the ensilage the cows will eat, with beet pulp at noon. I would not think the cows ought to drop off very much when you deprive them of beet pulp at noon with this ration, where they have corn silage at night and morning and such a liberal amount of grain, but I am inclined to think that your cows are overfed, and that you would get just as good results if you feed less of this rich grain. I believe that you could substitute a cheaper grain ration for the one you are now feeding, and get just as good and perhaps better results. I would recommend that you mix one-third of your grain ration with corn meal, which is much cheaper per ton now than either of the foods you are feeding. Mix, for instance, 100 lbs. gluten feed, with 100 lbs. of corn meal and 100 lbs. of oil meal. Now, instead of feeding the same amount of grain to each cow, feed each cow as many pounds per day of this mixture of grain as she produces pounds of butter-fat in a week. All cows in a herd do not require to be fed the same ration. They ought to be fed according to the work which they do; that is, according to the amount of butter-fat which they produce. A cow that is only producing six or seven pounds of butter-fat in a week, ought not to have as much grain as one producing 12 or 14 pounds, neither can we afford to feed them as much. If we do feed them as much, then we are actually overfeeding and wasting feed, consequently we are lessening our profit very materially.

While beet pulp makes a nice appetizing food for the cows at noon, as long as you have plenty of corn silage, it does not seem to me that they would suffer for a succulent food, and I believe that if you will follow my advice you will feed your cows more cheaply than you are now, and get just as good results. If the cows would eat a little more corn silage at noon, you might feed them a feed of that, if you have plenty of it, providing you cannot get the beet pulp. I am of the opinion that gluten feed is about as good a concentrated food as you could buy. I know farmers who would prefer to have this than cottonseed meal, although both of them are splendid concentrated foods. You say that when you feed cottonseed meal you have some trouble in getting your cows to breed? Also that you have some trouble with caked udders. Now this leads me to believe that you are feeding more protein in your ration than there is any particular use of, making the ration both detrimental and extravagant.

The cow's manger should be easily cleaned, it should have partitions to prevent stealing of grain, it should not hinder circulation of good air in front of the animals by too great a height, and yet should be of sufficient size to hold roughage and grain from being tossed about on the floor of the stable. To gain all of the requisites is not always an easy matter, but their importance is well enough understood to require no argument.



A Size
for Every
Man's Needs

Once Is Enough To Buy a Cream Separator—

If you have never owned a separator, let your first machine be your last. Don't buy carelessly or buy only on price and then find that you need and want a really good machine.

If you have an unsatisfactory, or worn out separator, let your next one be a lifetime investment. You will not be genuinely satisfied, you will not be making the dairy money you could, you will not be producing the finest dairy products with the least work, until you get a Great Western Cream Separator. Don't waste money on other machines to find this out. Let others experiment—you be sure from the start. Decide now to investigate and test

The GREAT WESTERN

On Free Trial—5-Year Guarantee

Thousands have written us of their experience with other machines before they got a Great Western. Send for our book and read the letters.

Read our Free Trial Offer—any kind of arrangement you say. Read our guarantee—not for 1 or 2 years, but for 5 years, backed by \$1,000,000.00.

Cow owners who want all the cream, highest quality cream, least work, the biggest profits for the longest term of years, come to the Great Western Separator sooner or later.

It is the only separator with a skimming system that follows nature's laws—the milk sinks, the cream rises. The only separator that will skim cold milk clean, with the only close skimming, easy turning bowl that is kept perfectly clean without effort. Imported ball bearings throughout and more accurate adjustments than used in many watches make the Great Western easier for a boy or girl to turn than for a man to turn any other separator. Low tank and low gears, with high crank, mean greatest convenience, least vibration, velvety cream and longest wear without repairs.

FREE—Valuable Information Learn in a few minutes from our large dairyman's book what thousands have been trying to accomplish for generations. Turn to page 19 of our Art Catalog and get the cream of knowledge regarding milk separation. Study these facts a little, then study the Great Western Separator. The rest we leave to your judgment. You'll decide to try a Great Western anyway—all at our risk. If it doesn't beat every other, on every point we don't expect you to keep it. Write for book now. Ask for Separator Catalog No. C331

SMITH MANUFACTURING CO., 158 East Harrison St., Chicago, Ill.

Which One Will You Test on Your Farm for Ninety Days? Freight Prepaid

Which will you try, 30 Days' Free or 90 Days' Approval Test?

—Any capacity from 200 to 950 pounds per hour, according to your needs, and I'll save you from \$25.00 to \$50.00 on the price.

—The only Separator whose gearing runs in a "Bath of Oil" like a \$5,000 automobile—Feature worth \$50.00 alone.

—Automatically oils itself—Pour oil at the top, once a month from your oil jug or can—No danger of running dry, or ruining it like others—No oil cups to remember to fill or turn up twice a day.

—Dust-proof—Danger-proof—All gears enclosed—simple but standard built and absolutely dependable.

—As you ever saw or could find. Beautiful finish.

GALLOWAY'S New "Bath in Oil"

HIGH GRADE STANDARD CREAM SEPARATORS

—Has the only revolving supply tank—worth \$15.00 alone.

—Easiest to clean and the few parts come out easy and can't get back out of place.

—Easiest to run—high crank—low tank. With no high lifting and no "back-breaking" cranking.

—Gets the finest quality cream and all of it—no lumps or churning, as Nature's true principle is followed without forcing either the milk or cream the wrong way up or down.

—Skims closest in any climate or season, no matter whether your milk is warm or cold.

—Is as handsome a machine, compact and substantial, as you ever saw or could find. Beautiful finish.



Only
\$29.75
and
Up

It'll
Save
You
\$25
to
\$50

Easy For The Boy

A LOUDEN LITTER CARRIER changes barn drudgery into child's play.

With wonderful worm gear (an exclusive Louden feature) 1 pound pull on chain lifts 40 pounds in box—boy can hoist half a ton.

Raises and lowers any distance up to 25 feet. Stands where put; can't fall. Fill the box, raise it and give it a shove. It carries the load out of the barn to manure spreader or litter heap, wherever you want it; dumps load automatically and returns to you.

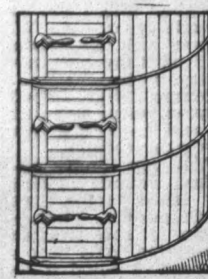
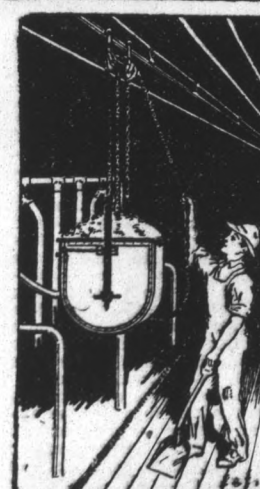
The Louden Way

Keeps barns clean and sanitary—Keeps cows healthy—they will give more and richer milk. Saves time, labor and money. A Louden Litter Carrier will save its cost many times in a year.

Louden's special electro-galvanizing process gives all Louden products a beautiful, lasting finish. Looks clean—easy to keep clean—never rusts—lasts much longer than ordinary hot process galvanizing.

Our 40 years experience in fitting barns is at your service for the asking. Hand your dealer a rough ground plan of your barn, and ask him to mail it to us for price. This will entail no obligation either on your part or the dealer's. Don't accept any carriers but LOUDEN'S. There are none "just as good." Write us for complete catalog of barn equipment and valuable book on manure values.

LOUDEN MACHINERY CO., 603 Broadway, Fairfield, Iowa.



SILOS OR ROUND BARN

SHOULD BE CONTRACTED FOR BEFORE CORN PLANTING—CAN SERVE YOURSELF AND NEIGHBORS BY BUNCHING THEM IN CAR LOTS AS

EARLY BUYERS SAVE MONEY

AS WE SHALL PAY FREIGHT OVER THE ROAD ONCE ONLY FROM THE MILL

DIRECT TO YOUR HOME TOWN

CATALOGUES OF ENSILAGE CUTTERS DISTRIBUTORS & CATTLE STANCHIONS FOR DAIRYMEN AND FEEDERS

KALAMAZOO TANK & SILO CO.
MICHIGAN

When Writing to advertisers mention the Michigan Farmer

A BALANCED RATION WITH ALFALFA.

Please give me a balanced ration for milch cows, with the following feeds, regardless of price: Beet pulp, linseed meal, cottonseed meal, and corn and oats, mixed equal parts and ground. For roughage I feed alfalfa in the morning, corn stalks at noon and clover hay at night. Jackson Co. F. E. W.

Since the roughage part of your ration contains both alfalfa and clover hay, which are rich in protein, it will not be necessary for you to use both linseed meal and cottonseed meal to get a balanced ration. And since you have beet pulp to feed you can safely feed cottonseed meal in connection with it. As you probably well know, cottonseed meal is somewhat constipating, and if fed too liberally without a succulent food in the ration, it may get the cows out of condition. However, with a food like beet pulp there is no trouble whatever, and probably there would be no trouble with beet pulp when fed in connection with alfalfa or clover hay, for both these foods are somewhat laxative, and since they are, this would also be an argument for leaving out linseed meal, because all of them put together might make the ration too laxative for the best results. I would recommend that you use beet pulp, cottonseed meal, and corn and oats ground together, mixed in equal parts; that is, 100 lbs. of beet pulp, 100 lbs. cottonseed meal, and 100 lbs. corn and oats ground together, for your grain ration. A good rule for feeding this grain ration would be to feed as many pounds per day to each cow as she produces seven pounds of butter-fat in a week, then give her seven pounds of the grain ration per day; 3½ pounds in the morning and 3½ pounds at night. The roughage part of your ration cannot well be improved upon. It is a splendid ration. If you have plenty of alfalfa and clover hay, you should feed what they will eat up clean, and perhaps you could get along without feeding quite as much grain as I have recommended, although if you have first-class dairy cows, they will stand this ration, and make you a good profit out of it. Cornstalks can be fed rather liberally at noon, as you would not expect the cows to clean them all up. Allow them to pick out the better portions of the fodder and the balance can be used for bedding.

DIFFICULTIES TO CHURNING OVERCOME.

At this time of the year farm butter-makers encounter difficulties in butter-making not experienced during the summer season. One of these is the failure of the cream to churn in a reasonable length of time. The chief cause of slow churning is too low a temperature. Cream, as a rule, must be churned at a higher temperature in winter than in summer. This is so because the butter-fat is harder in winter. Dry feeds and cows far advanced in lactation (strippers) produce a relatively hard butter-fat and the harder the butter-fat the higher the churning temperature must be. Cream which will churn nicely at 55 degrees F. in summer may have to be churned at 60 degrees F. in winter. Too many have the mistaken idea that cream may be churned at the same temperature the year round or that the same churning temperature may be employed upon different farms. A farmer who milks Holstein, Friesian cows may find 50 degrees F. a satisfactory churning temperature, whereas the producer of Jersey cream may find it necessary to churn his cream at 60 degrees F. The butter-fat in Holstein cream is softer than that in Jersey cream and hence must be churned at a low temperature.

It is perfectly possible, however, to obtain a satisfactory churning at 60 degrees one day and experience trouble at the same temperature the next. If the cream is cooled from 65 to 60 degrees just before churning one day and warmed up from 55 to 60 degrees the next, the former cream will churn in much less time than the latter, though both were placed in the churn at the same temperature. The reason for this is that the butter-fat cools and warms up much more slowly than the other parts of the cream, and hence when the cream is cooled suddenly five degrees the temperature of the butter-fat itself may have been reduced only one or two degrees. Similarly, when cream is warmed up five degrees the butter-fat itself may have warmed up only slightly. Cream should be held at the churning temperature at least half an hour before churning in order to be sure that the butter-fat has the same temperature as the rest of the cream.

Always use a reliable thermometer. We have passed the day when the finger will be depended on to tell the temperature of the cream.

Another trouble in churning results from too sweet cream. Cream should be held at a temperature of about 70 degrees F., until it becomes distinctly sour. Well soured cream will pour from a dipper like thick syrup, will taste sour and will smell sour. The actual per cent of acid at churning should be between five and six-tenths as determined by tests especially made for this purpose. Sour cream will make better butter and more butter, and will churn more easily than sweet or partially soured cream.

Sweet cream, especially if thin or at a low temperature, will cause endless trouble in churning. With such cream there is more or less foaming and, if very thin, the butter will not gather.

With a five-gallon churn, cream testing 25 per cent will give the best results in churning, while 30 per cent will give best results with churns of ten or fifteen gallons capacity. Never fill a churn quite half full. The best churning is obtained when the churn is one-third full.

During cold weather it is easy to keep cream sweet several days, but it should be remembered that old cream will make poor butter. While a low temperature will prevent cream from souring it will not stop other fermentations which give rise to various objectionable flavors in butter. The sooner the cream is soured the better the flavor of the butter.

At this season of the year there is also much mottled (unevenly colored) butter to be found upon the market. Mottled butter is due to insufficient working, which results in an uneven distribution of the salt. Butter should be kept reasonably soft during working to allow the salt to dissolve and penetrate every particle of butter. Cold salt may cause mottles and the safest practice is to have the salt at practically the same temperature as the cream when applied to the butter.

Wisconsin. JOHN MICHELS.

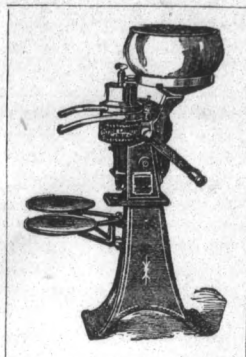
COW DOES NOT PRODUCE WELL.

Will you advise me through your columns what treatment to give a cow that does not give the amount of milk she gave at the time of freshening? She is in good flesh and seems to be in good health. She was fed ground oats, corn and shredded fodder before and after parturition. She cleaned a short time afterwards. The calf is quite small. St. Joseph Co. V. J. H.

With such a meagre description of the case, I cannot give an intelligent reason why this cow does not do as well as she ought to. On reading the letter over carefully, I am inclined to think that he did not have the cow go dry long enough. If she was a persistent milker, and milked up to almost the time of parturition this last time, this would have a marked effect on the quantity of milk which she would give after freshening again. Usually cows that give milk right up to the next period of parturition do not give very large quantities of milk immediately afterward. You can't expect it. The fact that the calf was small would also warrant me in forming this opinion. I believe that, everything taken into consideration, it is better to have a cow go dry four to six weeks, at least, before they freshen. This gives a better chance for the development of the foetus, produces a larger and stronger calf, gives the cow an opportunity of resting up, or recovering from the former period of lactation. They usually do better and give more milk during the next period of lactation than where they are milked too long. If my theory of the case is correct, there is no help. The cow probably will not give as much milk during this period of lactation as she did formerly, but next time she comes fresh, she will do better, because she will practically rest a little during this whole period of lactation. Of course, it is barely possible that there is something the matter with the cow, but if my diagnosis of the case is right, this is simply the result of her working too long during the last period of lactation, without any rest before she dropped her last calf. If this is so, she will be all right next year.

One does not need to consult ancient history to learn of the fraudulent sale of oleomargarine as butter. The inefficiency of state pure food laws to regulate the sale of oleomargarine—when it is yellow—is strikingly emphasized in the large cities. The guest at the medium-priced hotel or restaurant is served yellow oleomargarine in the majority of cases, especially in Chicago, St. Louis and other cities of their class.

READ THIS VERY CAREFULLY. IT MAY SAVE YOU MONEY AND A LOT OF COSTLY SEPARATOR EXPERIENCE.



How to Choose a Cream Separator

HERE IS THE STANDARD BY WHICH THE EFFICIENCY OF A CREAM SEPARATOR SHOULD BE TESTED:

It Should Skim Cool Milk.

It's much harder to skim milk at 65 to 70 degrees than milk at 85 or 90. Some machines that will do fair work with milk at 90 degrees will get all clogged up with milk at 70. Remember that lots of times in the winter your milk will be nearer 65 than 85.

It should produce heavy or thin cream as desired.

Whether you are churning your own cream, selling it to a local creamery, or shipping it to some distant point, it is desirable to produce a very thick cream. Thick cream churns easier, is less liable to spoil, and has less bulk. It pays to make thick cream, but to do this the machine must be mechanically perfect. A poorly or cheaply constructed separator cannot be adjusted to secure the desired results.

It should separate its full rated capacity.

All cream separators are rated upon the basis of their capacity for one hour. The DE LAVAL is the only machine made that will, under all conditions, separate its rated capacity for one full hour, and at the same time skim clean and produce cream of uniform quality.

In addition to the above a cream separator should be simple in construction, durable, easy to operate and easy to clean.

The DE LAVAL meets all these requirements.

We don't know of any other separator that does. If anyone representing any other separator comes to you with a lot of claims make them prove up to this test. Your creameryman or your state experiment station will tell you that it's a fair test.

We know that the DE LAVAL will give you better service and last longer than any other cream separator on the market, and we stand ready to prove it at all times and against all comers.

Why not write today for catalog and prices?

THE DE LAVAL SEPARATOR COMPANY

165-167 BROADWAY NEW YORK 42 E. MADISON STREET CHICAGO DRUM & SACRAMENTO STS. SAN FRANCISCO
173-177 WILLIAM STREET MONTREAL 14 & 16 PRINCESS STREET WINNIPEG 1016 WESTERN AVENUE SEATTLE

\$15.95
AND UPWARD
SENT ON TRIAL.
FULLY
GUARANTEED.
—AMERICAN—
SEPARATOR

A brand new, well made, easy running, easily cleaned, perfect skimming separator for \$15.95. Skims warm or cold milk. Makes thick or thin cream. Thousands in use giving splendid satisfaction. Different from this picture which illustrates our large capacity machines. The bowl is a sanitary marvel and embodies all our latest improvements. Our richly illustrated catalog tells all about it. Our wonderfully low prices on all sizes and generous terms of trial will astonish you. We sell direct to user. No agents. Our guarantee protects you on every American Separator. Western orders filled from Western points. Whether your dairy is large or small, get our great offer and handsome free catalog. ADDRESS,

AMERICAN SEPARATOR CO., BOX 1061, BAINBRIDGE, N. Y.

When Writing to advertisers mention the Michigan Farmer



MENTION THE MICHIGAN FARMER when writing to advertisers.

SOWING FERTILIZERS WITH GRAIN.

There has been a great deal said and done on the subject of sowing fertilizers with wheat and other small grains. In most states it is acknowledged that it pays to use commercial fertilizers. Those who have had the greatest experience with these soil enrichers, agree that they are difficult to handle, being very easily affected by climatic conditions. That is, they gather moisture, and therefore, at times, become pasty and sticky. This causes corrosion, gumming and cementing of the fertilizer feeds. In order to overcome this difficulty the makers of the Buckeye Grain and Fertilizer Drill have adopted a glass cone feed which does not corrode. They have also lined the fertilizer hopper with galvanized iron and provided same with an agitator which swings slowly in the fertilizer hopper, keeps the fertilizer from banking up and prevents lumps from causing trouble. The prongs on this agitator play over the hopper bottom and around the non-corrosive glass discs, thoroughly cleaning and scraping same. It makes no difference what kind the fertilizer is, the Buckeye is guaranteed to handle and sow it in great range of quantities. The Buckeye Grain Drill has many good points not to be found on other drills. The grain feed is of the internal type, with two throats or feeding channels, and change of quantity is obtained by changing the speed of the distributor wheel in the double feed cup. This feed will sow all large seeds—Lima beans, red kidney beans, peas, beets, oats—as well as wheat and all other small grains. In other words, there is no seed too large and none too small for the positive force feed of a Buckeye Drill and the quantity is under absolute control of the user at all times. The frame is of square steel tubing and furnishes a most solid and substantial foundation for the drill. The manufacturers, The American Seeding-Machine Co., Incorporated, of Springfield, Ohio, will be pleased to send any of our readers a Buckeye catalogue. We would also recommend prospective purchasers to go to their local implement dealer and insist on seeing the Buckeye Drill, which is made in plain and fertilizer styles in single disc, double disc, hoe and shoe.

Get Your Share of \$1,000,000,000 Chicken Money

—In 1911.—Poultry and eggs bring handsome prices—steadily. The farmer is the natural poultryman. Eggs and poultry are staple crops for him. But go into poultry raising in dead earnest—with the right equipment.

CYPHERS Incubators and Brooders are the World's Standard Hatchers—tried and proved; fireproof, insurable, guaranteed. Genuine, non-moisture machines—self-ventilating, self-regulating.

Used by more Government Experiment Stations, more large poultry plants, more leading fanciers, than all others put together.

The Cyphers is always the final choice of the poultryman or woman who means business. It's true economy to start right. Send today for our Big Free Book—"Profitable Poultry Raising," and complete catalog of Cyphers Incubators, Brooders and Standard Supplies. Address nearest office.

Cyphers Incubator Co., Dept. 35, Buffalo, N. Y., New York City, Chicago, Ill., Boston, Mass., Kansas City, Mo., Oakland, Cal. Fireproof Incubators.

\$7.55 Buys Best 140-Egg Incubator

Double cases all over; best copper tank; nursery, self-regulating. Best 140-chick hot-water brooder, \$4.85. Both ordered together, \$11.50. Freight prepaid (E. of Rockies). No machines at any price are better. Satisfaction guaranteed. Write for book today or send price now and save time.

Belle City Incubator Company, Box 14 Racine, Wisconsin

140 EGG INCUBATOR and 140 CHICK BROODER Both For \$10

The incubator is California Redwood, covered with asbestos and galvanized iron; has triple walls, copper tank; nursery; egg tester, thermometer, ready to use. 30 Days' Trial—money back if not O. K. Write for Free Catalog today.

Ironclad Incubator Co., Dept. 55 Racine, Wis.

125 Egg Incubator and Brooder Both For \$10

If ordered together we send both for \$10. Freight paid east of Rockies. Hot water, copper tanks, double walls, double glass doors. Free catalog describes them. Send for it today.

Wisconsin Incubator Co., Box 128, Racine, Wis.

POULTRY

THE INCUBATOR VS. THE HEN.

The modern incubator is recognized as an absolute necessity by the man who, in this latitude, would get chickens out of the shell before the first, or even the middle, of April. It is equally true that in these times of year-round demand for all kinds of poultry products it is essential that a considerable proportion of the annual poultry crop be hatched before the latter date. Hence it is that the incubator is coming into more general use year by year as its capabilities are being better understood and appreciated.

There is little doubt that the incubator has not always been given the credit it deserves for having brought the poultry industry up to its present enviable position. To the contrary, it has many times been charged with results for which it was in no way responsible. The dyed-in-the-wool advocates of natural hatching tell us that it is possible to hatch chickens just as successfully with hens as with the best machine on the market. The incubator manufacturer does not dispute this but a proposal from him to conduct a test of the two methods during the winter months would prove a little disconcerting to the friends of the hen. The followers of the hen would then no doubt point to the undisputed fact that the percentage of strong, healthy chicks from early hatches is sometimes low. The trouble is they do not stop to consider the conditions under which the eggs that go into the incubators in January, February and March are produced. Practically all of them come from stock that is closely confined; some are from hens whose vitality has been impaired through heavy laying during the early winter, while some are from immature pullets, and all must admit that it is scarcely possible to have a high average of fertility or strong germinative power under such conditions.

It has become rather common to attribute weakness in chicks to the fact that they were hatched artificially. Some even go so far as to blame artificial incubation for the development of that mysterious ailment known as white diarrhoea, and predict that the continued use of incubators will finally work permanent injury to the vitality of our poultry stock. It is a fact that more weak chickens are hatched in incubators than under hens, for, as intimated in the preceding paragraph, the sitting hen does business only at that season of the year when the breeding stock is upon the range and fertility and germinative power are at the highest point. The remedy for weak chicks among early hatches lies in more rational handling of the breeding stock, not in discarding the incubator. The white diarrhoea "mystery," simmered down, appears to be largely a matter of cleanliness—or uncleanness, rather. At any rate it is rather significant that some incubator users who formerly were troubled with this disease have been able to avoid it by thoroughly disinfecting the machines before each hatch. Also that in some instances the infection has been traced to the litter used in brooders, all of which would indicate that cleanliness is the greatest essential, no matter what system of incubation is used.

Saginaw Co. A. L. J.

PROVIDE CLEAN NESTS FOR HENS.

When we examine some of the chicken houses in the country and see the filthy nests the hens are expected to lay in we are not surprised to hear the owner complain that his hens do not lay. Hens like clean nests, and boxes or barrels containing a little filthy straw, or nests of their own making in the dirt and manure upon the floor, are enough to discourage a respectable hen for a whole season.

Barrels are all right for nests but they are better lying down than standing upright, for the hens are liable to break the eggs when jumping into the upright barrel. Boxes big enough for one hen make nice nests, and old buckets and cans may be used by putting stones in the bottom to prevent upsetting. Keep plenty of straw in the nests and renew it frequently, burning the old. The boxes and barrels can be scrubbed occasionally, and the buckets and cans scalded to keep them clean and free from lice.

There are very few farmers who do not keep from 75 to 100 hens the year around, and yet many do not have enough eggs for their own use a good part of the

time. Of course, clean nests will not solve the whole problem of making hens lay, but it is one step in the right direction.

Ohio.

M. M. ICHLER.

IN ANSWER TO INQUIRIES.

Poultry Journals—Frog Culture.

1. What is best poultry journal one can get, in your opinion? Would like a weekly, the best that I can get.

2. Do you know of any place I can get a treatise on frog culture? Does anyone in this state raise frogs for commercial purposes? C. S. R.

1. So far as we know, there is no poultry journal that is published weekly. A good semi-monthly and a number of excellent monthly poultry journals are included in the clubbing list which has appeared in recent issues of this paper. By sending for sample copies of the different ones you should be able to determine which one will best meet your wants.

2. We have never heard of a book on the subject named, nor do we know of anyone who is producing frogs for commercial purposes.

Preventing Disease in Turkeys.

I would like some information in regard to the raising and feeding of turkeys. This was my first year in raising them and I lost a good many, both little and big. I examined one of the large ones that died and found the liver enlarged and covered with yellow spots. They seemed very free from lice while young. Did not feed them corn until they were pretty well grown. Also please tell me where I can procure a sitting of White Holland turkey eggs this spring.

Wayne Co. Mrs. J. S. L.

From your description it is practically certain that your turkeys had the disease known as blackhead. This disease has, during the last few years, brought heavy losses to the big growers in the eastern states besides having become rather common throughout the middle west. It is called blackhead from the fact that the head of the fowl generally turns dark or purplish, although such is not always the case. It is caused by an animal parasite which is taken into the body in the food or water and becomes lodged in the mucous membrane of the caecum, or blind intestine. Inflammation sets in, ulcers are formed and the trouble spreads to the liver, resulting in the enlargement of that organ and the formation of the whitish or yellowish green spots which you found.

A careful study of this disease has been made at several of the state experiment stations, and Dr. Curtice, of the Rhode Island station, declares that the parasite which is responsible for the trouble exists rather commonly in other kinds of poultry but is not fatal to those fowls. He believes that turkeys become infested with the parasites from running with other poultry and therefore advises keeping them away from other fowls, especially upon farms where the disease has made its appearance. This would seem to render turkey raising both difficult and inconvenient upon most farms, since it is impossible to grow turkeys successfully on very limited range. Likewise, it is hard to so confine the other poultry to a yard or orchard that the turkeys will not gain access to it.

Since the parasite enters the fowl's body through the mouth it is clear that the ground over which the turkeys range should be free from contamination. If any of the ground they are to occupy was used by last season's flock or by your other fowls it should be turned over with the plow or be well disinfected with a five per cent solution of carbolic acid. Disinfecting will, of course, prove too expensive except for very limited areas. Then we suggest that you get rid of all your old turkeys and use considerable care in securing eggs from a flock that has not suffered from blackhead. Hatch the eggs in an incubator or under chicken hens. It is claimed that infection is rarely carried by the egg, but as a precaution Dr. Curtice advises wiping the eggs, about three or four days before completion of the hatch, with 90 per cent alcohol. For the first few weeks keep the young turkeys on a clean board floor and out of contact with other fowls. Provide a hover or outdoor brooder at night, with ample protection from wet at all times, as this system of brooding will insure freedom from lice. Throughout the season practice feeding in clean troughs rather than upon the ground. A teaspoonful of dilute hydrochloric acid to each quart of drinking water is also advised as an intestinal antiseptic where blackhead is feared.

As to where you may obtain White Holland turkey eggs we cannot do more than advise you to watch our advertising columns.

All Fired

That was the condition of the cornfields in our last great drought season in the central states, excepting in those fields where the farmers used

BASHUMUS FERTILIZERS

The reason is simple. Filler is the main bulk and weight of all fertilizers. In other brands this filler is practically worthless. In Bashumus Fertilizers the filler is all *Humus*, which furnishes plant food, loosens the soil, and retains the moisture, thus neutralizing drought conditions. Don't buy waste—buy *Humus*. Ask your dealer for Bashumus Fertilizers. If he doesn't carry them, write us. We will send you free a valuable booklet, "Richer Soil for Richer Profits," and will see that you are supplied with Bashumus Fertilizers. Write us a card now.

BASH FERTILIZER CO., Dept. B Ft. Wayne, Ind.

The Kind That Brings Results

Try Them 30 Days Free

Prove this the greatest Incubator and Brooder bargain of 1911 at our expense. We sell highest quality goods direct from factory at lowest prices—guarantee satisfaction or refund money. The United

100-Egg Incubator \$10
100-Chick Brooder

gives surest results and biggest profits on smallest investment. Incubator alone \$7.50; Brooder alone \$3.50; both \$10.00. Remember you take no risk when you order on our try-before-you-buy plan. Send today for Free catalogue illustrated and giving full particulars.

The United Factories Co., Dept. X22 Cleveland, Ohio

LIFE PRODUCERS

SUCCESSFUL INCUBATORS

LIFE PRESERVERS

SUCCESSFUL BROODERS

The only machines that rival the mother hen. Sold on a Direct-to-You Factory Price. Get our Big FREE Incubator Book and save 40%. Send postal now. Booklet, "Proper Care and Feeding of Small Chicks, Ducks and Turkeys" sent for 10c.

DES MOINES INCUBATOR CO., 368 Second St., Des Moines, Ia.

48 BREEDS Fine pure bred chickens. Northern raised, ducks, geese and turkeys. Fowls, eggs and incubators at low prices. America's greatest poultry farm. Send 4c. for fine 100-page 17th Annual Poultry Book. R. F. NEUBERT, Box 813, Mankato, Minn.

CHOICE business & prize bred Mammoth Toulouse Geese & S. C. White Leghorns low prices for quality. New catalogue free. Write. F. R. FROST, R. 2, Bucyrus, Ohio.

BUFF PLYMOUTH ROCKS—Only perfect standard cockerels. April and May hatch at \$2 and \$3 each. Excellent laying strain. Fred Nickel, Monroe, Mich.

Barred Plymouth Rocks—A choice lot of cockerels and pullets at farmers prices. Write. W. C. KEMPSTER, Coldwater, Michigan.

THOROUGHbred S. C. BROWN LEGHORN Cockerels. Price for Jan. \$1.25 each. 4 for \$4.50. ELWIS T. OPPENLANDER, R. No. 4, Lansing, Mich.

Buff Rock Cockerels—Farm raised. Healthy, good size, shape and color. From \$1.50 up. WILLIS S. MEADE, R. No. 3, Holly, Mich.

Big Business Barred Rocks J. E. TAYLOR, Belding, Michigan.

COCKERELS FOR SALE—Light Brahma White Wyandotte & B. P. Rocks, good ones, also pullets. E. D. BISHOP, Route 23, Lake Odessa, Michigan.

BUFF PLY. ROCK and S. C. Buff Leghorn Cockerels. Exceptionally good stock at farmers' prices. Eggs in season. F. J. H. BURCH, Blaine, Michigan.

MRS. FLORENCE HOWARD, Petersburg, Mich., Rose Comb White Leghorns and White Rocks. Choice stock and eggs in season. Write your wants.

R. C. B. Leghorn Cockerels—Kulp strain, the best there is, \$1 to \$3. Eggs in season. C. W. WAITE, Gobsville, Michigan.

SILVER, GOLDEN and WHITE WYANDOTTES 100 White cockerels at \$2 and \$3 each. New circular after January 15th. C. W. Browning, Portland, Me.

BARRED PLYMOUTH ROCK—Hurry! Hurry! Write quick if you want your pick out of a bunch of Cockerels the large type, narrow barring, bred right sired by first Cockerel at Grand Rapids Poultry Show. A. J. GORDEN, Dorrt, R. No. 2, Michigan.

Barred Rock Ckls.—Vigorous, farm raised, and bred from prize winners. \$3 each two for \$5. J. A. BARNUM, Union City, Mich.

S. C. B. MINORCAS—Large, beautiful plumage—alright every way. Priced to sell. Guaranteed to please. Eggs \$3 per 15. R. W. Mills, Salem, Mich.

White Wyandotte Cockerels—A few good breeders left. Write soon. A. FRANKLIN SMITH, Ann Arbor, Michigan.

WE will have a few ckls. to sell from Barred and White Rocks, Buff and White Orpingtons Black Minorcas and White Leghorns. Write for prices. H. H. KING, WILLIS, MICHIGAN.

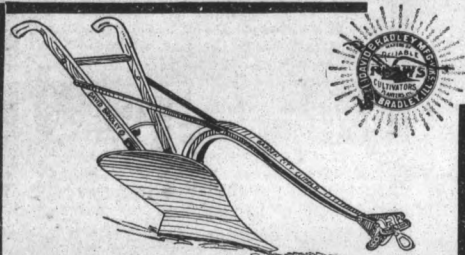
DOGS.

TRAINED foxhounds and bound pups for hunting fox and coons. Also collies. Inclusive 2-cent stamp. W. E. LECKY, Holmesville, Ohio.

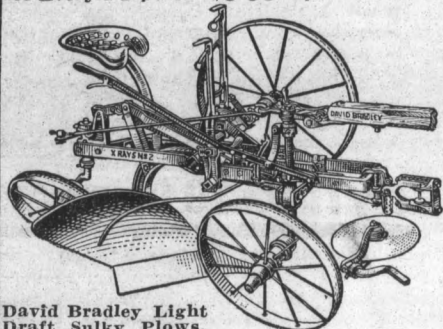
YOU WRITE W. J. ROSS, Rochester, Michigan, for those beautiful sable and white Collie Puppies, of the finest breeding, and from stock workers.

DAVID BRADLEY FARM IMPLEMENTS

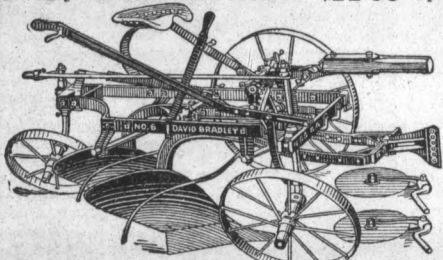
No Excuse Now for paying a High Price for a Good Farm Implement. David Bradley Implements, for Eighty Years the Standard, Now Direct From Factory to You at Lower Prices Than Dealers Paid Before We Bought the Big David Bradley Plant.



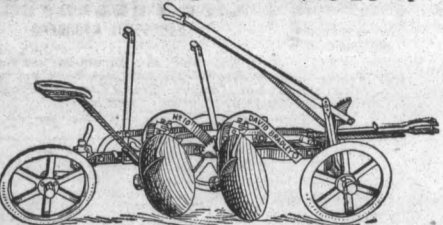
David Bradley Garden City Clipper Walking Plows. Wood and Steel Beam. A Style for Every Purpose. \$3.68 Up.



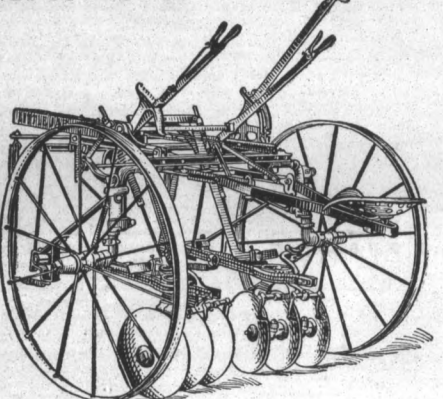
David Bradley Light Draft Sulky Plows. Twenty-Six Sizes and Models. \$22.95 Up.



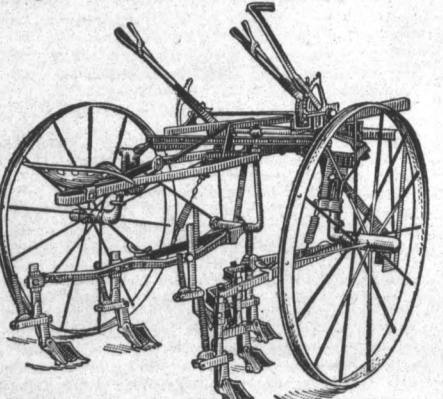
David Bradley High Lift Foot Lift Gang Plows. \$45.25 Up.



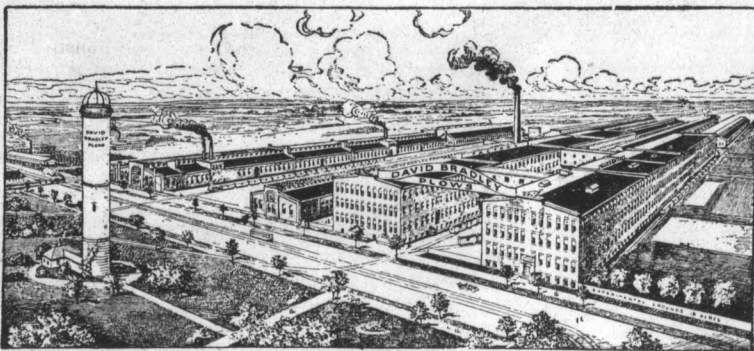
David Bradley Ball Bearing Disc Plows. \$29.85 to \$52.65.



David Bradley Little Jap Disc Cultivator. Balance Frame. Pivot Axles. Seat Bar Dodger. A World Beater. \$27.50.



David Bradley Little Jap Riding Cultivators. Thirteen Styles of Shovel, Spring Tooth and Surface Gangs. Balance Frame. Pivot Axles. Seat Bar Dodger. \$21.95 Up.

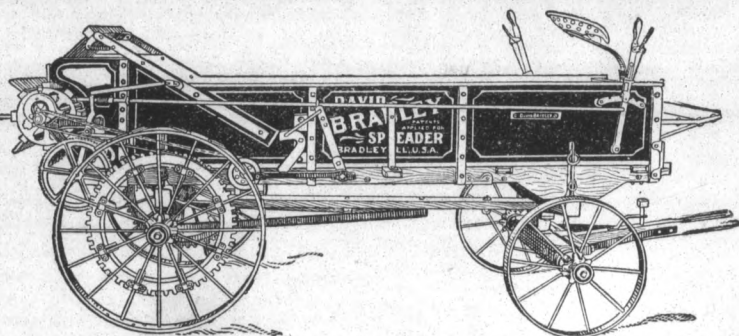


A matter of vital interest to every farmer is our recent purchase of the great David Bradley farm implement factory, the oldest and largest in the world selling direct to the farmer. The result is a sensational reduction in prices, brought about by the application of our famous factory to consumer selling methods. You pay actual cost of manufacture plus one single factory profit, eliminating at least three middlemen's profits.

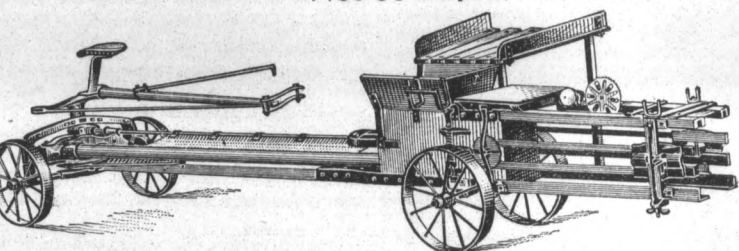
Four generations of American farmers have testified to the absolute superiority of David Bradley goods. Plain old fashioned honesty stands behind every Bradley implement, an incontestable insurance policy against disappointment. Bradley quality has been supreme since 1832, and the sons and grandsons of the men who made it so maintain it today in our employ.

Send for our David Bradley Book of Farm Implements with full descriptions and prices of the complete Bradley line, sold under our binding guarantee of perfect satisfaction or money back.

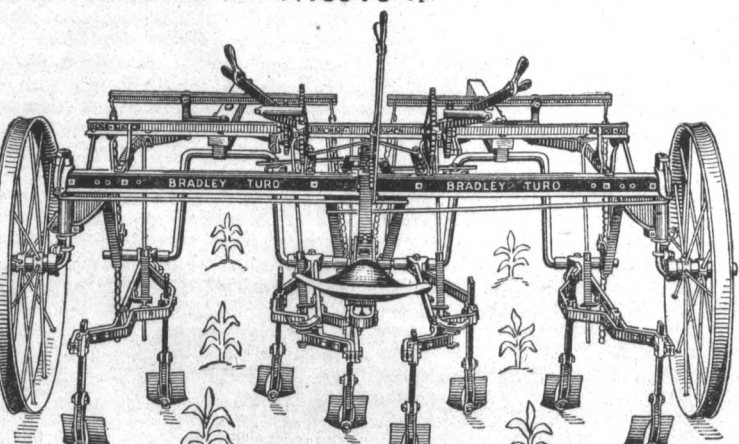
We have the patterns for every Bradley implement ever made and can always furnish promptly any Bradley repair or part, no matter when or where the original implement was purchased.



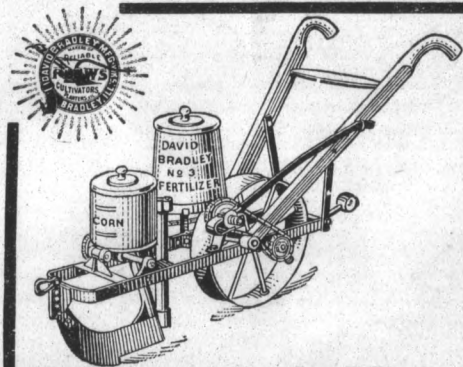
David Bradley Manure Spreader. The Strongest, Simplest and Best. Six Models. \$42.50 Without Truck; \$69.50 Complete, as Illustrated.



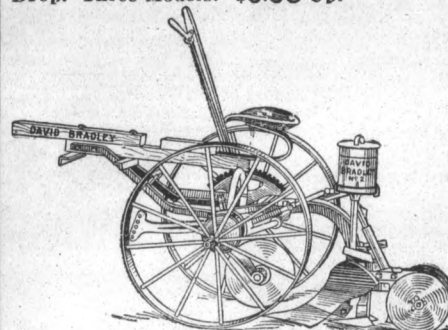
David Bradley Double Cam All Steel Hay Press. Dealers Sold for \$200.00 to \$250.00. Our Prices, \$135.75 Up.



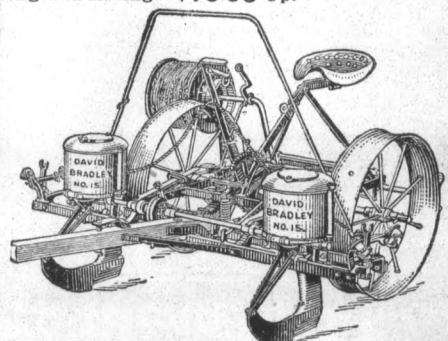
David Bradley Tu-Ro Pivot Axle Cultivators. Seat Bar Dodger. Expanding Lever. Cultivates Two Rows at Once. \$41.00 Up.



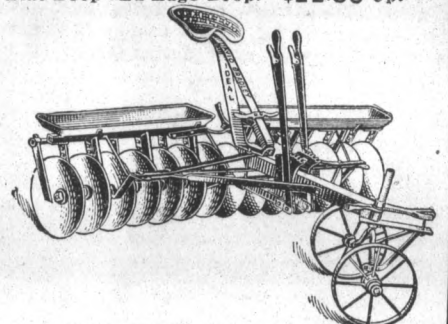
David Bradley One-Horse Corn Drills. Force Drop. Three Models. \$6.98 Up.



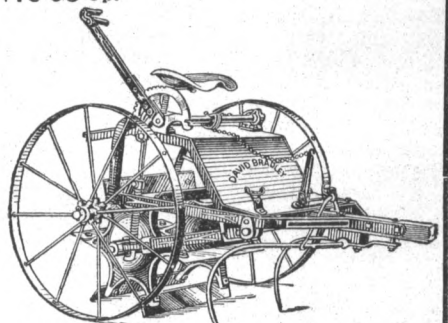
David Bradley Listers. Three Styles, Walking and Riding. \$16.95 Up.



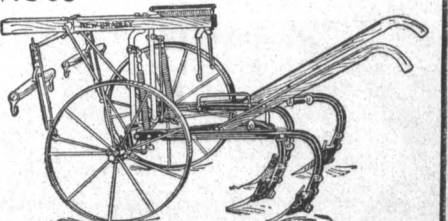
David Bradley Force Drop Corn Planters. Flat Drop and Edge Drop. \$22.85 Up.



David Bradley Ideal Disc Harrows. Tongue or Tongueless. Solid or Cut Out Discs. \$15.95 Up.



David Bradley Cotton and Cornstalk Cutter. \$18.95.



David Bradley Walking Cultivators. \$11.87 Up.

—SEND TODAY FOR OUR DAVID BRADLEY BOOK OF FARM IMPLEMENTS—
SEARS, ROEBUCK AND CO., CHICAGO

The Michigan Farmer

ESTABLISHED 1843.

THE LAWRENCE PUBLISHING CO.,

EDITORS AND PROPRIETORS.

39 to 45 Congress Street West, Detroit, Michigan.

TELEPHONE MAIN 4525.

NEW YORK OFFICE—41 Park Row.
CHICAGO OFFICE—600 First Nat'l Bank Building.
CLEVELAND OFFICE—1011-1015 Oregon Ave., N. E.
GRAND RAPIDS OFFICE—5 & 6 New Hawkins Building.M. J. LAWRENCE.....President.
M. L. LAWRENCE.....Vice-President.
E. H. HOUGHTON.....Sec. Treas.I. H. WATERBURY.....Associate
O. E. YOUNG.....Editors.
BURT WERMUTH.....
ALTA LAWSON LITTELL.....

E. H. HOUGHTON.....Business Manager

TERMS OF SUBSCRIPTION:

Five Years 260 Copies Postpaid **\$2.75**
Three Years, 156 Copies, Postpaid.....\$2.00
One Year, 52 copies, postpaid.....\$1.00
Six Months, 26 copies, postpaid.....60 cts.
 Canadian subscriptions 50 cents a year extra for postage.

Always send money by draft, postoffice money order, registered letter, or by express. We will not be responsible for money sent in letters. Address all communications to, and make all drafts, checks and postoffice orders payable to, the Lawrence Publishing Co.

RATES OF ADVERTISING:

40 cents per line agate measurement, or \$5.60 per inch, each insertion, with reasonable discount on orders amounting to \$24 or over. No advt inserted for less than \$1.20 per insertion.
 No lottery, quack doctor or swindling advertisements inserted at any price.
 Entered as second class matter at the Detroit, Michigan postoffice.

COPYRIGHT 1910

by the Lawrence Pub. Co. All persons are warned against reprinting any portion of the contents of this issue without our written permission.

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, JAN. 28, 1911.

CURRENT COMMENT.

There seems to be a good prospect that the present legislature will take some action looking toward the state control of our state fair. There is at present a resolution pending in the state senate looking toward that end, and as preliminary to such action there is talk of a legislative inquiry into state fair matters.

That the farmers of the state would welcome a step of this kind is certain, since the placing of the management of the fair in the hands of officials who are directly accountable to them would not only assure the upbuilding of Michigan's state fair along agricultural lines and put it on a basis comparable with the best agricultural and industrial fairs of the country, but would as well insure that it would be conducted in a clean and wholesome manner, something which has been demanded in no uncertain terms by the farmers of the state, but which would appear to be as far from practical realization as ever, notwithstanding the pledges which have been publicly made by prominent men identified with its management, only to be disregarded when the show was staged in the same old setting, either openly or in disguise.

It is a matter for congratulation that many of the men who have been prominently identified with the state fair during the years of its more progressive development are expressing themselves as favorable to the taking over of the fair by the state and making it in fact, what it now is only in name, a real state fair. The rather general expression of such sentiment by men who are at present connected with the management of the state fair would seem to indicate that there will be little open opposition to the proposition of the state taking over and assuming control of the state fair. But the plan under which such control is exercised will, of course, be an important factor in its success, and the working out of its details will have much to do with the future success of the state fair, and its economic importance in giving adequate publicity on a competitive basis to the agricultural and industrial resources of Michigan.

The plan which has been suggested is

to make the lieutenant-governor of the state the official head of the state fair, and place upon his shoulders the responsibility for its proper and efficient management. At first thought it would seem to be a wiser plan to investigate the plan of organization by which other fairs which are controlled by the states that have fairs of recognized merit are conducted, as a means of insuring the best results in our own state. Yet the plan which has been suggested has some well defined advantages. It will be objected to by some on the ground that it is a scheme to make the office of lieutenant governor a more desirable berth than it is at present. But the lieutenant governor is an officer who is nominated as well as elected by the direct vote of the people, and it would seem to be certain that the farmers of the state will take more interest in the nomination of candidates for this office if the successful candidate is to be the executive head of the state fair as well as the presiding officer of the senate. It will quite naturally follow that if the selection made is a representative man of sufficient attainments and capacity to make a good manager for the fair, he will as well be a representative man who will be mindful of the interests of his farmer constituents in discharging the constitutional duties of his office as at present designated. In fact, we believe it to be of rather minor importance whether the conduct of the fair be delegated to a single elective officer who is thus directly responsible to the people of the state, or to an elective board such as the state board of agriculture, whom it has previously been suggested should be placed in charge of the state fair so long as a workable plan is devised which will place the electors of the state in a position to get what they believe they are entitled to in the way of a state fair. In other words, we believe that the formulation of the details of a plan may be safely left to the legislature to work out. But legislation providing for the state operation of the state fair will be more certain of enactment if those who are interested in the matter will make their interest known to their representatives and senators on the legislature. This is a matter in which Michigan Farmer readers are interested, and regarding which their interest should be expressed in a personal letter to, or interview with, their representatives in the state legislative body at an early date.

As announced in our "Farm Management" prospectus for 1911, the discussion of the various phases of

farm management and its relation to the success of our business as farmers, has been given special prominence in the January issues of the Michigan Farmer. The men who have written upon the different phases of this problem are all men who have made a success of their own business in the various departments of agriculture in which they are engaged, some upon large farms where a variety of special products are produced, and others upon smaller farms where only general agriculture, or some one specialty at most is engaged in.

We believe that the reader who has carefully read these various special articles on farm management has derived some good ideas from them. But to be made helpful in the best sense of the word those ideas must be acted upon. No one among the readers of the Michigan Farmer is so successful a manager that his methods and practices cannot be improved, notwithstanding the fact that a list of our readers would include a large majority of the most successful farmers in the state. The more successful a man has been in his business, the more progressive he will generally be found to be in the adoption of new and better methods and in the improvement of his equipment for the most economic conduct of his business.

But the first essential in every case is the recognition of the need of improvement, and this is where the more progressive farm managers excel over their less fortunate brothers. It is true that some are better equipped by nature to become successful farm managers than others, yet good management is a faculty which can be largely acquired by any man who will study the problem persistently and carefully, with due regard to the local conditions with which he is surrounded and his own limitations as to ability or temperament. When so considered the problem of farm management becomes an individual problem for each of us, and we should set about its solution on that basis. Because some one of our acquaintance has succeeded in one branch of agricul-

ture and some one else in another department of special production, it does not necessarily follow that we will meet with success by trying to imitate them. The good manager must lead, rather than follow, utilizing the experience of others so far as it may properly apply to the case in hand, but making it subordinate to personal initiative as required for the most successful solution of our individual problems of farm management. This discussion was scheduled for January because it is a month in which every farmer has the time for careful thought and study, and if both are applied to the problem by a fair proportion of Michigan Farmer readers as a result of this discussion, its object will have been served.

CORN GROWERS' WEEK AT M. A. C.

The week's course in corn production given at the Agricultural College last week was rather lightly attended, but a large number of the regular short course students were given the opportunity to benefit from the lectures as well as the practice work. The course consisted of a program of three lectures each forenoon, the afternoons being devoted to practice work in the selection and judging of corn. Two lecturers from other states assisted—Mr. C. G. Williams, of the Ohio experiment station, and Mr. J. P. Prigg, of Indiana, the latter also conducting the daily practice work and judging the exhibits. The remainder of the lecture work was performed by members of the college faculty and of the experiment station staff.

The Annual Corn Show.

The Michigan Corn Improvement Association held its seventh annual meeting and corn show in connection with the above course of instruction. The show



Michigan Farmer Silver Cup Awarded for Best Ear of Corn.

was the best, as regards both size and quality, that has been held by the Association, more than 20 samples competing for the liberal prizes offered. Several of the classes were exceptionally large, while a few failed to fill, as the list of winners below indicates. The special automobile premium, offered for the best ten ears of corn exhibited by a boy or girl under twenty years of age, was awarded to Miss Florine Folks, of Jackson Co., who showed a very fine sample of white cap dent. Miss Folks participated in the boys' and girls' corn growing contest conducted in Jackson Co. last season and captured the sweepstakes premium in the county show. In the open-to-all class, however, her exhibit was forced to take second place, first going to her father, Wm. Folks, who showed a superior sample of the same variety. This latter sample was given the sweepstakes award for best ten ears in the show, and it also contained what was declared to be the best single ear in the entire show, thereby winning the silver cup offered by the Michigan Farmer.

In District 1, comprising the lower four tiers of counties, the premiums offered in the various classes were awarded to the following exhibitors:

Class A—Yellow Dent.—1. Levi J. Miller, Kent Co. 2. L. J. Bradley, Kalamazoo Co. 3. Edw. J. Miller, Kent Co. 4. Earl Pickett, Kent Co. 5. Jesse W. Pickett, Kent Co. 6. A. A. Wood & Sons, Washtenaw Co. 7. J. J. Nyenhuis, Ottawa Co. 8. David Dunlop, Kent Co. 9. L. L. Lawrence, Cass Co. 10. John Schipper, Allegan Co.

Class B—White Dent.—1. Artie Austin, Livingston Co. 2. R. I. Vandercook, Livingston Co. 3. Allen B. Simmons, Jackson Co. 4. Artie Jewett, Ingham Co. 5. R. D. Simmons, Jackson Co.

Class C—White Cap Dent.—1. Wm. Folks, Jackson Co. 2. Florine Folks, Jackson Co. 3. D. E. Turner, Jackson Co. 4. L. S. Turner, Jackson Co. 5. E. M. Moore, Oakland Co. 6. Lloyd Hunsberger, Kent Co. 7. Oscar E. Page, Barry Co. 8. L. E. Woodin, Jackson Co. 9. Edwin Santee, Eaton Co. 10. Albert Nesman, Eaton Co.

Class D—Other Dents.—1. Daniel Cruger, Jackson Co. 2. Karl Gruner, Branch Co. 3. Earl Pickett, Kent Co.

Class E—Flints.—1. Geo. J. Friedrich, Jackson Co.

In District 2, comprising the remainder of the lower peninsula, the following were winners in the various classes:

Class A—Yellow Dent.—1. Guy Hayward, Bay Co. 2. E. O. Ladd, Grand Traverse Co. 3. Herman Kolk, Newaygo Co. 4. Peter Wermuth, Gratiot Co. 5. Ted Atchison, Newaygo Co. 6. Harry J. Hatfield, Mecosta Co. 7. Henry Hayward, Bay Co. 8. Albert Johnson, Muskegon Co. 9. Fred Wermuth, Gratiot Co. 10. Ivan Olson, Muskegon Co.

Class B—White Dent.—1. Lester L. Benston, Muskegon Co.

Class C—White Cap Dent.—1. Hugh Watson, Isabella Co. 2. Roy Rossman, Montcalm Co. 3. Sylvester W. Helfrich, Huron Co.

Class E—Flints.—1. A. R. Vincent, Sanilac Co. 2. Raymond Youmans, Saginaw Co.

The annual business meeting of the Michigan Corn Improvement Association was held on Wednesday evening. A committee was appointed to consider the advisability of holding the next annual meeting and show at some point other than the Agricultural College. At a later session this committee reported in favor of taking the show to the city offering the best accommodations, and this recommendation received the approval of the Association. A resolution designed to "graduate" winners of first prizes was presented and adopted, the resolution providing that the winning of three first premiums or of one sweepstakes premium (other than sweepstakes trophies), shall bar an exhibitor from competing for prizes other than trophies, ribbons or certificates of merit. Officers for the ensuing year were elected as follows: President, Chas. H. Sudborough, Adrian; vice-president, R. I. Vandercook, Linden; secretary-treasurer, L. J. Bradley, Augata; directors, W. F. Raven, East Lansing, L. L. Lawrence, Decatur, and J. S. Walker, Muskegon. Prof. V. M. Shoemith was elected state vice-president of the National Corn Association.

HAPPENINGS OF THE WEEK.

National.

With no details made public, it is reported that the representatives of the American and Canadian governments closeted at Washington have agreed upon a convention between the two countries for reciprocal trade relations. The proposed treaty will be submitted to Secretary Knox and British Ambassador Bryce for their signatures after which it will go to congress and the Canadian parliament for sanction.

A suit is about to be filed in the Michigan supreme court to determine whether the general primary law, or the former law will control in the spring election in Wayne county. The new law does not provide for all officers of the county, and this incompleteness is believed to be sufficient ground for retaining the old law until the former is amended.

At a meeting of the directors of the Michigan Agricultural Society it was shown that at the last state fair the society made over and about expenses, about \$19,000. This is the best showing from a financial point of view the society has made since the fair was moved to Detroit. Several changes have been made in the committees and management for the coming season.

New Mexico electors have adopted the constitution submitted to them by a constitutional convention at an election held Saturday.

Statistics for 1910 show that the total of exports for this country was the greatest in its history, reaching the enormous total of \$1,827,100,000. There was an increase in the exportation of manufactured articles, while in all lines of food-stuffs there was a shrinkage; the increase in the former being large enough to push up the gross amount to a new high record.

Fire in Metcalf Hall, Adrian College, resulted in a \$4,000 loss of property to the institution Sunday.

The Tennessee legislature, after a very complicated fight succeeded in electing Luke Lea, a strong advocate of prohibition, as United States Senator to succeed James B. Frazier.

In the West Virginia senate there are 15 democrats and 15 republicans and the body is seeking to choose a president. Because the democrats would not trade favors the 15 republicans left the state and took up their residence in Cincinnati. The latest report is that an agreement has been reached and the exiles are returning to Charleston.

Foreign.

The revolution in Mexico is largely confined to the northern states, the chief activity of the rebels being in Chihuahua which borders the United States along the western coast of Texas. The rebels are attempting to get a clear line of communications through El Paso, Texas, for the purpose of securing supplies, and to gain this end attacks on several places held by the federal forces have been made the past few days. Some of the attacks have been successful, while others have failed. The most important engagement occurred at Galena, a town about 100 miles to the southwest of El Paso, where it is stated that fully 300 persons were killed. At Casa Grandes to the northwest of Galena the federals

have held out stubbornly but it is expected that at any moment the rebels will take the place. While the outbreak will give the Mexican government a great deal of trouble it is generally believed that the federal authorities will soon put down the disturbance. However, larger forces are being moved into the northern states and it appears that President Diaz and his advisers are aware that the disfavor to those in authority will not be readily overcome.

Peruvian forces have been sent against rebels entrenched on the heights of Tayabamba, 200 miles north of Lima.

A request has come from Hankow, China, for a gunboat to protect American interests should rioting there continue.

China is soliciting the co-operation of scientists from all quarters of the world to study the pneumonic plague and means of its extermination in districts now affected.

The largest non-rigid dirigible balloon ever constructed made its initial trip at Berlin, Germany, Monday, and the test was entirely successful.

The new English battleship Neptune, which was recently launched, promises to introduce an entirely new battleship architecture whereby the efficiency of the guns on the ship may be doubled. The guns may be trained upon either beam and when desired one can be fired over another. The monster ship is being constructed under the greatest secrecy.

An investigation is being made into the rumor that Americans have succeeded in getting plans of the fortifications on top of the heights of Beaumont near the city of Quebec. So quietly had the work of fortifying these heights been conducted that few Canadians were aware of the work. The plans were furnished by the British government.

German and British sailors were landed at Hankow, China, to quiet a mob. The rioting started when a British policeman was suspected of having killed a coolie. Native troops are being sent to quiet the disturbance.

The great oil fire in the oil field at Potrero del Llano, Mexico, has finally been extinguished after having burned fully 500,000 barrels of oil.

The situation of the insurrection in Honduras was interrupted by the action of the United States in sending the battleship Tacoma to take charge of the gunboat Hornet. The movement was a great blow to the aspirations of the revolutionists, and may mean their defeat. The rebels have, however, made headway and now threaten the town of Ceiba, which but for a misunderstanding would have been taken several days ago. Bonilla, the leader of the insurrection, is now practically a prisoner of the American naval officers. It is generally believed that the insurrection has been instigated by strong financial interests in New York and Washington, and it is upon this ground that the government is anxious to do what they can to prevent American interests disturbing the peace of the central American republics.

CROP AND MARKET NOTES.

Gratiot Co., Jan. 17.—Sleighs have been run in Gratiot county since Dec. 4, though sleighing has been good only by spells since Dec. 26. The fields have been covered since the first snow fell and the ground is not deeply frozen. Since Jan. 10 the fields are crusted and the roads are ice beds. The weather has reached some low temperatures but has been given to frequent changes. Little change in farm produce since last month.

Ottawa Co., Jan. 20.—For a number of days the roads and paths or walks everywhere, have been so icy that traveling with team or on foot has been difficult, and at this writing rain is falling which freezes, making it more difficult than ever to travel. A number of accidents have happened to pedestrians and teams. The farmers in this section have drawn more gravel this winter than ever before. It will be used in the spring for cement work, such as stable and barn floors, walls under buildings, walks around dwellings, and new silos. As dairying is one of the principal industries of this section, the sudden drop in the price of butter will make a big cut in profits, because feed remains correspondingly high. The county round-up farmers' institute will be held at Coopersville, Jan. 31 and Feb. 1.

Sanilac Co., Jan. 14.—So far January has been a typical winter month, with plenty of snow, frosty nights and about every third day comes an old-time blizzard. The meadows and wheat are pretty well covered with snow. Stock is wintering well and milch cows are very high in prices. The cheapest products the farmer has to sell are potatoes and oats at 25c and 30c respectively. Sugar beet growers are demanding more money for their beets, which seems a reasonable proposition. Farmers are doing chores and visiting. Markets as follows: Wheat, 87c; barley, \$1.25 per cwt; beans, \$1.85; hay, \$13 per ton; butter, dairy, 20c; creamery, 27c.

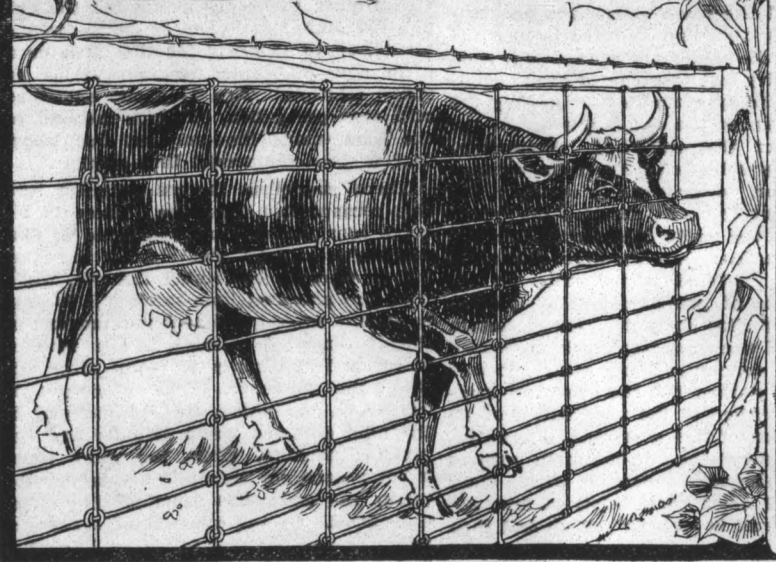
Ohio.

Montgomery Co., Jan. 16.—The ground has been covered with snow nearly all winter. The snow melted off last week. The wheat came out from under the snow looking fine. Tobacco stripping in full blast. No sales made as yet. All stock wintering well. Markets as follows: Cattle, 4@5c; hogs, 7½c; eggs, 32c; butter, 30c; corn, 40c; potatoes, 60c.

Hardin Co., Jan. 11.—We are having nice winter weather. Plenty of wind and not much snow, but a little on the ground most of the time has afforded good protection for the grain and grass. Lots of corn out yet. Hogs have advanced to the 8c mark again. Fat cattle not so active. Butter, 26c; eggs, 33c; clover hay, \$8 per ton; timothy, \$12; oats, 31c per bu; corn, 45c per bu; good cows, \$60 @75.

Better be safe than sorry

Jackson Stiff Stay Fence
Guaranteed Full Gauge Hard Steel Wire



JACKSON Stiff Stay Fence is the SAFE kind—both the line wires, stay wires and knots of equally large, hard steel wire. Nothing can slip stays or laterals up or down or sidewise.

Properly crimped to provide for expansion and contraction—uniformly made by absolutely accurate machines; no uneven length of line wires is possible. Thoroughly galvanized. (No fence wears out—it rusts out.) No sharp turns to scale the galvanizing. This sums up the perfection of Jackson Stiff Stay Fence.

Jackson Fence Tool—FREE

If you will mail us the attached coupon properly filled out, we will send you without charge the Jackson Fence Tool, the handles thing on the farm.

Jackson Fence Company
Box 14 Jackson, Mich.

Dealers—Our double-barreled selling plan for 1911 will increase your sales. Write us.

FREE TOOL COUPON

Jackson Fence Co.
Box 14 Jackson, Mich.
Please send me free a Jackson Fence Tool. I expect to use this season.... rods of fence.... ft. high

I trade at (town)

Name

P.O.

R.F.D. State



Turn Your Waste Into Meat and Profits

How? Fence your farm so as to utilize your waste products. Fence is the important factor in rotation and alternate pasture. It enables you to convert waste into profit. With liberal use of gates, small fields are quickly thrown into big ones giving unlimited extension and alternation. The fence thus cuts down the cost and increases the production of the farm by turning waste into meat—your big profit-maker.

Royal Fence

Is made of heavy, hard, stiff steel wire, the strongest and best possible to produce for fencing purposes. The stay or upright wires are continuous from top to bottom of the fence, and are secured to the horizontal wires by the Royal loop. The stays are rigidly held in place and side slipping prevented by being wrapped around the horizontal wires entirely within the tension curves. This construction forms a fabric of the utmost strength and flexibility—the best of the continuous stay fences.

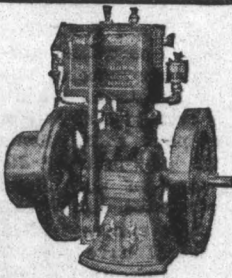
Royal Fence Dealers Everywhere There is a dealer in your town. particular needs. He will gladly show you his different styles of fence and explain their merits right on the ground where you can have them before your eyes and make your own comparisons. He buys in large quantities, gets the lowest carload freight rates and can sell you good fence at the lowest possible price.

FRANK BAACKES, Vice President and General Sales Agent

American Steel & Wire Company

Chicago New York Denver San Francisco

Send for copy of "Royal Fence News," profusely illustrated, devoted to the interests of farmers and showing how fence may be employed to enhance the earning power of a farm. Furnished free upon application.



The "New-Way" Air Cooled

The Best Farm Power for All Work

BANCROFT, Mich., Nov. 4, 1910.

GENTLEMEN:—My 7 H. P. "NEW WAY" saws wood, grinds feed, etc. It is impossible to stick the engine. I have cut sticks 20 inches in diameter cutting 8¾ cords in nine hours.

JOHN FRAQUIER.

IT WILL DO IT FOR YOU. GET CATALOG "C."

The "New-Way" MOTOR COMPANY
LANSING, MICHIGAN, U.S.A.

7 Ash Street.

WHITE WIRE FENCE

and gates. For lawns, gardens, parks, cemeteries, etc. Inexpensive, but neat, durable and effective, made of No. 9 galvanized crimped wire and coated with a special white paint. Shipped in rolls any length, any height. Booklet on request.

THE AGNE WIRE FENCE CO. 6830 E. ATWATER ST., DETROIT, MICH.

Ornamental Fence

Hundreds of patterns for Lawns, Churches, Cemeteries and public grounds. Send for pattern book with manufacturers' lowest prices.

THE WARD FENCE CO. BOX 843, DECATUR, IND.

Get It From the Factory Direct



Kitzelman Fence

Made from thoroughly galvanized open hearth steel wire. Our Free Catalog shows 75 styles and heights of hog, farm and poultry fence at from

13½ Cents a Rod Up

Sold on 30 days free trial. If not satisfied return it at our expense and we will refund your money. 80-rod spool of Ideal galvanized BARBED WIRE \$1.45

Write today for large Free Catalogue.

KITZELMAN BROS. Box 278 Muncie, Indiana.

A-7 Million Rod Price

Our new prices are based on this enormous output. Prices the lowest ever made for a high grade fence. We can

Save You 5 to 15 Cents a Rod

and you'll say it is the best fence you ever used. Easiest put up, lasts longest and is the strongest fence made. Sell to user at

Dealers Prices Freight Prepaid

Don't buy fence AT ANY PRICE before getting our prices. They will surprise you. We give customers **30 Days Free Trial**

that they may be sure they are satisfied. Full line of Farm and Poultry Fence. Very low prices on BARBED WIRE and GATES. Write for Free Catalogue.

COILED SPRING FENCE COMPANY,
Box 21 WINCHESTER, INDIANA.

BROWN

WE PAY THE FREIGHT
Heaviest Fence Made Heaviest Galvanizing We make 160 styles. Horse cattle, sheep, hog, and bull proof fences made of No. 9 double galvanized wires and absolutely rust proof. Bargain Prices: 14 cents per Rod Up Poultry and Rabbit Proof Fences, Lawn Fences and Gates. Send for Catalog and Free sample for test. The Brown Fence & Wire Co. Dept. 49 Cleveland, Ohio

FENCE

LAWN FENCE
Many designs. Cheap as wood. 32 page Catalogue free. Special Prices to Churches and Cemeteries. Coiled Spring Fence Co. Box 1 Winchester, Ind.



Make Money Spraying Your Neighbors' Trees

A lot of people in your neighborhood who have small orchards, fruit and truck gardens, etc., would gladly hire them sprayed. An energetic man in every neighborhood can make money if he uses a

Deming Spray Pump

—substantial, durable; made with brass working parts. Use a Deming, and you will do thorough work and please your customers. We will grant local agencies where we are not already represented. Pumps for all uses.

THE DEMING CO., 885 Depot St., Salem, Ohio

Triple Your Fruit Crop
You Can Do It by Spraying

Government Tests have proven that unsprayed trees only produce about 25% first grade, salable fruit, while trees properly sprayed will yield at least 90% perfect fruit—fruit that will also save through the winter. Can you afford not to spray? Buy the famous

CRESTLINE
Double Acting Spray Pump

—the barrel pattern. It makes the work easy, is the most simple to operate, and produces a constant, uniform spray that is most effective. Let us send you descriptive circular—free.

CRESTLINE MFG. CO., 39 Henry St., Crestline, Ohio

You Can Depend on These Sprayers

Don't waste your money on uncertain sprayers—the kind that are often out of order. The largest fruit growers use the "Hardie" because it's a sprayer with the trouble left out.

This Hardie No. 2 Power Sprayer has 150 gal. tank, all brass pump, 1 1/2 h. p. engine. Weight 750 lbs. Price \$180.00.

The Hardie Sprayers

are made in 25 different sizes and styles; prices \$35.00 to \$350. Our catalogue describes these sprayers, and shows you the best way to spray. It's free. Send for a copy.

THE HARDIE MFG. CO.,
9422 Mechanic St., Hudson, Mich.
also 49 No. Front St., Portland, Ore.

GOOD SEEDS

BIG SEED BOOK FREE

BEST NEW CROP GROWN SEEDS IN THE WORLD AT FARMER PRICES. In addition we give a whole lot of extra seeds with every order. OUR BIG ILLUSTRATED CATALOGUE OF FARM AND GARDEN SEEDS IS NOW READY. It is FREE to you. A postal card will bring it to your door. Write for it today; also send the address of your neighbors who buy seeds. Address,

RATEKIN'S SEED HOUSE,
SHENANDOAH, IOWA

\$1.00 Worth of Flower SEEDS

Postpaid For Only **10c**

- 1 Pkt. Asters, Floral Park Mixture
- 1 Pkt. Pansies, Extra Giant Mixed
- 1 Pkt. Carnations, Finest Mixed
- 1 Pkt. Mignonette, Sweet Scented
- 1 Pkt. Alyssum, Carpet of Snow
- 1 Pkt. Poppy, Double Carnation Flid.
- 1 Pkt. Petunia, Finest Mixed
- 1 Pkt. Portulaca, Choicest Mixed
- 1 Pkt. Verbena, Extra Special Mixed
- 1 Pkt. Sweet Pea, Large Flid. Mixed

To get our Garden Annuals into the hands of as many flower lovers as possible we will send the above 10 packets of first class seeds for only 10 cents postpaid.

J. ROSCOE FULLER & CO., BOX 343 FLORAL PARK, N. Y.

10,000 SEEDS 10c.

We want you to try our Prize Seeds this year and have selected 50 best varieties and put up 10,000 seeds especially to grow Prize Vegetables and Flowers. They will produce more than \$25. worth of Vegetables and 10 bushels of Flowers.

800 Seeds Cabbage 3 Best Varieties 3 pkts.
2,000 " Lettuce 4 " " 4 " "
800 " Onion 2 " " 2 " "
1,000 " Radish 4 " " 4 " "
300 " Tomato 3 " " 3 " "
2,000 " Turnip 4 " " 4 " "
2,500 " Flowers 30 Grand Flowering Varieties

In all 10,000 Seeds, and our new Seed Book with a 10c Credit Check good for 10c selection, postpaid, 10c. FAIRVIEW SEED FARMS, Box 122, Syracuse, N. Y.

The Winters Farm Pedigree Oats

The best seed oats on the market. Yield 77 bushels one year, 76 bu. each year for 5 years.

We have tested most of the leading varieties of oats in America, Canada and England.

\$1.25 per bu. Bags free.

BYRAM L. WINTERS, Proprietor,
Smithboro, Tioga Co., N. Y.

HORTICULTURE

ANOTHER POSSIBILITY OF THE ORGANIZED COMMUNITY.

These columns are in closest sympathy with that scheme of organizing communities for the disposal of special farm products; and the more experience accumulated along this line and the deeper the plan is studied the more we are convinced of the utility and economy of such organization. The opportunities for getting the public to know, use and buy more of the products of the organized community, seem to be unlimited. A certain western organization of growers is sending exhibits about the east showing the urban population the grade of apples the organization handles. Only the other day there came into the hands of the writer an announcement of prizes offered by another concern of like character, for a certain number of wrappers from fruit purchased from this concern. Many other schemes are being worked but the above are suggestive of some of the possibilities of an organization of this character. These activities are collateral to the main purpose of the concerns conducting them, their larger and chief work being to first see that the fruit is properly put up and then to see that it gets where it is wanted most. This was their primary purpose for being. But after the machinery was once put in motion, it was easily seen that other ends could be readily gained, and so they use the same organization to tell the country what they are growing, urge individuals to try, and to buy, and then make further inducement for them to keep on buying. Large industrial concerns have been developed through activity along similar lines. The success of a few organizations of this nature among fruit men, as well as among other agricultural workers, will not only make it desirable for further organization, but will ultimately make it necessary that other communities follow if they will get a market for their products. It is peculiar, but nevertheless true, that we have to be pushed into some of the things most helpful and desirable. It may be so with organization for distribution among producers of agricultural products.

WITH WHAT SHALL WE SPRAY?

What shall we spray with the coming season? After the years in which spraying has been done it would seem that the spraying calendar and formulas should be well established, but such is not the case, and this question is being frequently asked. Apples were quite badly russeted the past season and there is a quite general impression that this was due to the use of Bordeaux mixture. The thought is, therefore, that by substituting dilute lime-sulphur as a summer spray this difficulty may be avoided. In fact, in all seasons there is more or less of what is known as Bordeaux injury of the fruit. Some have tested the two sprays side by side and find much less russetting where the sulphur compound is used. The writer used both last season and could detect not the slightest difference in the russetting. There is reason to believe that much of the injury last season was caused by the unusual cold and freezing just about blossoming time. But there is no question that less injury results where the lime-sulphur is used than is the case with Bordeaux. A question is, will it be as effective in controlling the apple scab, and another is the comparative expense. Some experiments in former years seem to indicate that the sulphur is not so reliable in holding the scab in check as the Bordeaux, and the scab is a more serious injury than the russetting. Last season apples that were treated with either spray were quite free from scab and it is probable that the question of comparative efficiency in this particular will require further tests to determine.

The difference in the expense of the two mixtures will depend somewhat on the cost of the materials, but it may be approximated in this way. If the commercial lime-sulphur is used and is bought at a cost of \$10 per barrel of 50 gallons and diluted according to the usual formula of 1 to 40 for the summer spray and the 50 gallons will make 2,000 gallons of the dilute mixture and the cost will be half a cent per gallon. If the dilution is carried to 1 to 50 the barrel will make 2,500 gallons and the spray will cost two-fifths of a cent per gallon. In case the home-made concentrated lime-sulphur is used and made after the formula of 125 pounds

of sulphur, 60 pounds of lime to 50 gallons of water, if the sulphur is bought at \$2 per 100 pounds the expense will be \$2.50 for sulphur, about 35 cents for the lime and the expense of boiling, or say, \$32.25 for the 50 gallons of concentrated mixture. Diluted 1 to 40 and the cost of this spray is about one-sixth of a cent per gallon. In preparing Bordeaux we use 12 pounds of copper sulphate, 18 to 20 of lime to 200 gallons of water. If the vitriol costs five cents per pound the expense of this mixture is 60 cents for the vitriol, 10 to 12 cents for the lime, or a little over 70 cents for 200 gallons of spray mixture. This is about one-third of a cent per gallon, or twice the cost of the home-made lime-sulphur, but below that of the commercial lime-sulphur.

There are other factors entering into this computation, however. There is always considerable time consumed in dissolving the vitriol and slaking the lime and in properly combining the two, while with the prepared lime-sulphur it is only necessary to add the required amount of the concentrated solution to the tank of water and the spray is ready after adding the arsenate. The Bordeaux is harder on the pump, too, as the grit in the lime cuts the pump cylinder and the plunger packing, while the clear lime-sulphur does not so rapidly wear out the pump and so avoids much of the pump difficulties. On the other hand, a cheaper arsenate can be used with the Bordeaux and a saving be effected in this way. For the earlier sprays we use arsenate of soda, which is the cheapest and most convenient form of arsenate that we can use. We run a steam pipe into a barrel and put in 15 to 20 pounds of white arsenate with two pounds of sal soda and two gallons of water for each pound of arsenic. The cooking boiler is steamed up and this mixture is boiled 15 to 20 minutes when the arsenic is dissolved and in liquid form. It is only necessary to dip the desired amount of this liquid into the spraying tank and it stands in suspension and is both convenient and reliable. Two gallons of this liquid is equal in strength and insecticidal value to two pounds of Paris green, costing 40 cents, or 10 pounds of arsenate of lead, costing 80 cents. The cost of the two gallons of arsenate of soda, boiling included, is not over 15 cents. It is understood that only the arsenate of lead can safely be used with the lime-sulphur, hence this expense is considerably increased. It is some trouble to reduce the arsenate of lead as well. The arsenate of lead is regarded as more desirable because of its better sticking qualities and because there is less danger of burning the foliage with it. We find, however, that as much as one pound of arsenic can be used in 200 gallons of Bordeaux without injuring the foliage, and where the spray is applied as often as once in two weeks, as is the case early in the season, and oftener in case of rain, the washing off is not so serious. Later we like to use the lead. A pound of arsenic in 200 gallons of spray makes an unusually strong arsenical mixture.

I am frequently asked if I am going to continue to cook my own lime-sulphur or use the commercial article. If I only used a small quantity I should not bother to cook it, but with the amount that we use the difference in expense is such that I can well afford to do my own cooking. If I had no facilities I should buy a good jacketed kettle to do the boiling in. By using the formula given above, if desired, a clear concentrated solution can be prepared and stored in advance of the busy season ready for use when wanted, provided it is kept in tight barrels.

Doubtless we shall continue to hear the objections of the dealers in the commercial article that the home-boiled is uncertain in strength and unreliable, that no two batches of it will test alike, that the lime used is not pure, and several other things, which are more or less plausible, and more or less true. I don't suppose that I have ever had any pure lime to make lime-sulphur with. Some that I have used I am now satisfied did not contain 60 per cent of pure lime. And probably I never have made two batches that would show similar hydro-metric tests. Some that I have made I have tested and know they were unequal in strength. But there is one thing that can be said of this spray, and that is, it has done the business. I have not used it sufficiently in summer to be able to speak very definitely, though what I have used has shown up equally with Bordeaux. But after several years' experience with the home-boiled mixture for San Jose scale I am very much gratified with our success in controlling this insect. We find just enough scale in dif-

GREAT CROPS OF STRAWBERRIES AND HOW TO GROW THEM

FREE BOOK

Kellogg Plants Will Yield \$500 to \$800 per Acre

THE Kellogg 1911 strawberry book is the most complete treatise on strawberry growing ever written. It tells the farmer how to grow big crops of big, red strawberries and how to sell them at big prices. No matter where you live or what kind of soil you have, this book will tell you how to prepare your soil, what varieties to set, and how to manage the plants to insure best results. One acre of Kellogg Thoroughbred plants grown the Kellogg way will yield \$500 to \$800. Get this beautifully illustrated 64-page book and learn how easy it is to grow strawberries for market or home use. It's free.

R. M. KELLOGG COMPANY, Box 575 Three Rivers, Mich.

ALFALFA

The largest grower of pure Alfalfa Clover, Timothy, Red, Alsike and Mammoth Clovers. The kind the gentleman farmer and the farmer who respects his lands wants to sow on account of their absolute purity, namely 99.80 and 100 per cent growth. The kind America's famous agriculturist, Ex-Gov. Hoard, of Wisconsin, endorses, sows and praises.

Salzer's Seed Catalog Free

It's the most original seed book published, bristling with seed truths, and is mailed free to intending purchasers. Or remit 10c in stamps for 10 pkgs. remarkable farm seed samples, including our famous Alfalfa, Billion Dollar Grass, Speltz, etc.

JOHN A. SALZER SEED CO.
135 So. 8th Street LaCrosse, Wis.

PEACH TREES

fine, stocky, hardy, grown on the bank of Lake Erie. Free from borers and other diseases. All kinds of Fruit Trees in large supply. Headquarters for Ornamentals. 50 acres in Hardy Roses, none better grown. The Best Flower and Vegetable Seeds. 44 greenhouses of Everblooming Roses, Palms, Ferns, Ficus, Geraniums and other things too numerous to mention. Mail size postpaid, safe arrival and satisfaction guaranteed. Immense stock of SUPERB CANNAS, the queen of bedding plants. Acres of Pæonias and other Perennials. No. 1 Catalog, 112 pages, for Fruits and Ornamentals; No. 2, 168 pages, for Seeds and Plants. Both FREE. Direct deal will insure you the best at first cost. Try it. 57 years. 1,200 acres. (19)

THE STORRS & HARRISON CO.
BOX 136, PAINESVILLE, O.

GOOD SEEDS

BEST IN THE WORLD

PRICES BELOW ALL OTHERS

I give a lot of new sorts for trial with every order I fill. A Grand Big Catalog FREE illustrated with over 700 engravings of vegetables and flowers. Send yours and your neighbors' addresses.

R. H. SHUMWAY, Rockford, Illinois

PLANT HARDY TREES

Healthy, acclimated, high grade, true to label fruit trees and plants for Northern States at wholesale prices, direct from nursery to planter. Send for catalogue.

CELERY CITY NURSERIES, DESK E, KALAMAZOO, MICH.

WHOLESALE PRICES

Our Strawberry, Raspberry, Blackberry, Gooseberry, Currant, Asparagus and Grape Plants, Heavy Rooted, High Grade Stock. 18th Annual Catalogue Free.

A. R. WESTON & CO., R. I. Bridgman, Michigan

Buy Direct—Save Money and Get the Best

Peach Trees, fine at \$4.00 per hundred. Apple, 10c; Cherry 8c. All kinds of Trees and Berry Plants. Cheap, Catalog free.

ERNST NURSERIES, Box 1, Moscow, O.

OATS

That Yield. Our Sensation Oats breaks all records. Nothing like it. Also Seed Corn. For samples and catalogue write, Theo. Burt & Sons, Melrose, Ohio.

FRUIT TREES—Small Fruit Plants, Shrubs

No Agents. Catalog free. **WOODBINE NURSERIES.** W. A. ALLEN & SONS, Geneva, Ohio.

TREES

—150 ACRES. Genesee Valley grown. "Not the cheapest but the best." Never have had San Jose Scale. Established 1869.

CATALOG FREE. Geo. A. Sweet Nursery Co. 65 Maple St., Dansville, N. Y.

BEST SEED POTATOES

Catalogue of 70 varieties free.

A. G. ALDRIDGE, Fisher's, Ontario County, N. Y.

SEED CORN—Early-Maturing, high-yield sorts. Selected early. Grown in Northern Illinois. In ear or shelled. Tested. L. C. BROWN, La Grange, Illinois.

SEED OATS—"Sixty-Day" and "Black Joannette"

pure heavy pedigree seed. L. C. BROWN, La Grange, Illinois

ferent places scattered around through the orchards to let us know that it is with us and must be combated, but not enough to cause any appreciable loss whatever. Any that may remain I am satisfied owe their lives more to a lack of thoroughness in spraying than to any lack of efficiency in the material used. So long as we meet with such gratifying results I shall not be greatly moved with the objections of the commercial lime-sulphur dispensers.

Allegan Co. EDWARD HUTCHINS.

GROWING HUBBARD SQUASHES FOR MARKET.

Will you kindly give explicit directions for growing Hubbard squashes for market? The soil is light sand, much run. Am thinking of planting the ground to corn and growing the squashes same as we grow pumpkins among it. Have some fresh horse manure and am saving the poultry manure.

Van Buren Co. Mrs. J. J. G.

On that kind of soil you will require all the moisture possible, so let the cultural operation be with that express object in view. Just as early as possible, haul the manure and spread evenly but just as thickly as your quantity will admit. As soon as the frost is out plow it under just as shallow as possible and still cover the manure, and harrow it over thoroughly. At least once a week, but especially after every shower, go over the ground with a fine-tooth harrow and continue until planting time. As to the proper time to plant, weather conditions will largely determine that, as the plants are tender and easily get a setback by cold and wet; but ordinarily from May 15 to 30 will be safe. In general, if not planted until about June 15 they will usually escape danger from the black squash borer or stink bug, but as they will require an average of 125 days in which to mature they are liable to get caught by early autumn frosts, and this last state is worse than the first. So, in growing large quantities it is safer to plant earlier and fight the bugs.

Whenever planting times comes, re-plow the ground and this time about six inches or more in depth. After harrowing run the plow lightly seven to eight feet apart both ways and make the hills at the intersection of the furrows. The hen manure will come in play now and had better be thoroughly mixed with well rotted stable manure or road dust so that too much will not be applied as it is liable to burn the plants. Work a quantity of this mixture into each hill and plant the seeds not more than an inch in depth. Plant six to ten seeds to the hill to make sure that you get a good stand, for the surplus can be easily pulled up. Give light and frequent cultivation just as long as the vines will admit.

The striped cucumber beetles will doubtless be the first enemies on the ground and ordinarily they can be held in check by dusting the vines with air-slaked lime and road dust in equal parts when the dew is on. When the plants are well established and begin to crowd, thin to three plants to the hill. The stink-bugs will doubtless be your worst enemy, but they will probably not come until the vines begin to run. Usually they will be found on the under side of the vine and near the hill. They are easily caught and destroyed, and may also be trapped by laying shingles or pieces of board near the hill. They will crawl under these at night and can thus be caught early in the morning. They deposit their eggs on the under side of the leaves and these can be scraped off and destroyed. The vines will require close watching for often much damage is done in a short time. If they become too troublesome, though, spraying with kerosene emulsion will clean them out. Now with these safeguards you will be able to keep them in check, but close watching will be necessary.

If the ground is planted to corn the above directions will hold good, but the worn, light, sandy soil will hardly stand the strain of both crops, and either one or both will be liable to suffer. My preference would be potatoes instead of corn, but if desirable to plant two crops on the same ground try planting a part with corn and a part with potatoes and prove which is the better.

Wayne Co. J. E. MORSE.

While the English markets are conservative about retaining the barrel as a package for handling apples, a number of wholesalers state that the box is being used more there and it appears to be finding favor with a large number of dealers. Fancy fruits had better be sent in boxes to most foreign points.

Are you thinking of buying some fertilizers to use on your Spring crops? This matter is worth considerable thought. Write us for our booklet and find out how to fertilize properly and economically. We furnish quick acting high grade Fertilizers of many different compositions to meet the requirements of all crops grown on various kinds of soils. We make grades of

fertilizers

where either the Nitrogen, Phosphoric Acid or Potash are component parts, with the right percentages of the other elements of plant food to properly balance the Fertilizer to use on muck land, clay, light soils, etc.

If your land is rich in Nitrogen you will save money by using Phosphoric Acid and Potash to balance out the plant food in the soil. Progressive farmers who study out these things are more successful than those who have not realized the great difference in Fertilizers. Even at the same price, one grade of Fertilizer under certain conditions will produce more profitable results than another.

In selecting Fertilizer the farmer cannot be any too careful. He should make sure that the goods are manufactured by a reliable firm, so that he may depend upon getting full percentages of plant food and of the highest agricultural value, also in first-class mechanical condition. The reputation of the manufacturer is very important.

We guarantee that our Fertilizers conform in every respect to all the requirements of strictly high-grade goods. They have been sold continuously for the last fifty years and have established a record of popularity unequalled by any other Fertilizers on the market.

We want agents where we are not represented. Write us today for your home territory and particulars.

The American Agricultural Chemical Co.,

Largest manufacturers of high grade Fertilizers in the world.

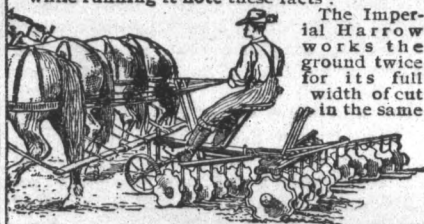
Detroit Sales Department, DETROIT, MICH.

Better Disking at Half the Cost

We know that the new Imperial double disc, flexible frame, scalloped blade Harrow will save you money and time, and give you a better seed bed than any other implement. We know this through recorded tests, and from the experience of thousands of farmers throughout the country. We want you to know it, too, from an actual test of an Imperial, conducted by yourself on your own farm.

Imperial Double Disc Harrows

Any Bucher & Gibbs dealer will be glad to let you have an Imperial Harrow to make this test. Get one from your dealer, and while running it note these facts:



The Imperial Harrow works the ground twice for its full width of cut in the same

time it takes the old style harrow to do it once. Four horses hitched to an Imperial will do twice as much work as three horses with an ordinary harrow.

The specially designed, scalloped blade cuts to greater depth and more perfectly pulverizes the soil. The flexible frame lightens the draft and leaves a perfectly level seed bed.

Write for all the facts about the Imperial double disc Harrow, and we will send you some printed matter that we know will be of value to you. Write to-day.

The BUCHER & GIBBS PLOW CO.
806 E. Seventh St., Canton, Ohio

Burpee's Seeds Grow!

And the Burpee-Business Grows!

If you would like to read about the Best Seeds that can be Grown and the Largest Mail-Order Seed Trade in the world, you should write to-day (a postal card will do) for *The 35th Anniversary Edition of THE LEADING AMERICAN SEED CATALOG*. A bright new book of 174 pages,—it is free to all who appreciate Quality in Seeds. Simply address **W. Atlee Burpee & Co., Philadelphia**

When writing to Advertisers mention the Michigan Farmer.

SCARFF'S GOOD SEED CORN

We sold over 11,000 bushels of it last year, and we expect to double it this year. Your money back if corn is not satisfactory. 10 days to test it. Can send either shelled or in the ear. Also choice lot of seed oats, barley, speltz, timothy and potatoes. We cannot tell you more about it here, but our catalog is free. Send for it to-day.

W. N. SCARFF, New Carlisle, Ohio

STRAWBERRY PLANTS

Guaranteed as good as grows at \$1 per 1000 and up. Catalog free. ALLEN BROS., Paw Paw, Michigan.

Regenerated Sweedish Select Oats.

The only pure bred, pedigreed oats. This variety is in a class by itself. The best yielder, the stiffest straw, the freest from rust, of any oat today. I have some choice seed, all cured under hay caps, not a drop of moisture ever touched these oats after they were cut. Every kernel has vitality.

COLON C. LILLIE, Coopersville, Michigan.

ALFALFA

All Northern grown, guaranteed to be 99 per cent pure and free from dodder. Write for free sample on which we invite you to get Government tests. This seed should produce hay at \$30 per acre, annually. Free instructions on growing.

GRAIN AND GRASS SEED

Northern grown and of strongest vitality. We handle export grade only and can furnish grass mixture suitable for any soils. Write for catalogue.

WING SEED CO., Box 242, Mechanicsburg, O.

ISELL'S SEEDS

For only 10c we send five packets Flower Seeds or five packets Vegetable Seeds and then return the money in the form of a Due Bill good for 10c to apply on any order amounting to 50c or more.

We also send free our large 104 page *Seed Annual*, quoting fresh, vital Michigan-grown seeds at very moderate prices. Perfect satisfaction or money refunded. Send to-day.

S. M. ISELL & CO., SEEDSMEN
Box 200 JACKSON, MICH.



HOME AND YOUTH

A RACE AND A RESCUE.

BY FRANK H. SWEET.

Allan was skimming along at a twenty-mile rate, his sail half reefed on account of the strong wind, and his tiller shifting from side to side to follow the windings of the shore. He had the whole afternoon before him and was in no hurry, and he preferred the variety of the shore to a bee-line down the river.

As he swept around a point of land he saw several boats coming up the river toward him, evidently testing each other's speed. They were scarcely a mile away, and while he was speculating on the number of seconds it would take them to arrive opposite, he heard a sudden shout and saw the boats near him swerve hastily in toward shore. He glanced round quickly to discover what had occasioned the alarm, but could see nothing but a finely modeled boat rushing toward him under a full stretch of canvas. He admired her proportions even while he condemned the risk of carrying so much sail, but was turning away when something in her erratic course made him look more closely. Then, suddenly he threw his whole weight against the tiller, swerving his boat so that it sped away at almost right angles to its former course.

He was not a moment too soon. Scarcely had he turned when he felt the wind of the great yacht as it rushed by, almost grazing his stern. It was a runaway, tearing on to its own destruction against some rocky shore and, what was more, threatening the destruction of any craft that might be unable to avoid its course. Involuntarily he uttered a low exclamation of relief, checked almost instantly, however, and changed to one of dismay, for in the box of the yacht as it rushed by he saw a white, frightened face that brought him to his feet and then sent the blood surging tumultuously through his veins. Doubtless the helmsman had been thrown out or in some way left behind, and now the girl was at the mercy of the mad thing that was tearing on.

There are some natures which act quickly, and Allan's was one of these. Even as the frightened eyes looked into his he began to lash the tiller in place. Then he unreefed the sail until its entire surface was spread to the wind, doing just what he had condemned a few seconds before.

The sail secured, he unlashed the tiller and seated himself with his feet firmly braced. It would be a hard chase, he knew, and very likely a futile one. The runaway was much the faster yacht, and, except for ice craft, the course was open. At this point the river was two miles wide, and the runaway was headed straight down, and apparently her tiller was lashed. Except for possible collisions she might run thirty or forty miles without touching either shore. Could he hope to overtake her in that time? It would be his skill against her lack of a helmsman, his ability to take advantage of any possible flaw in the wind or defect in the ice.

But the wind was too steady for much display of skill, and the course too straight. At the end of five minutes the runaway had gained half a mile. But now the pursuing yacht was also going at tremendous speed, every inch of her canvas reaching for its share of the wind, and the mast and timbers bending under the strain. Allan was leaning forward, grasping the tiller with tense hand, his eyes watching keenly for anything which might help him gain a rod, a yard, or even an inch. An express train, speeding along the shore at forty miles an hour, was opposite them for a time, then slowly fell behind.

Another five minutes and the watchful eyes saw the runaway quiver and swerve from her course, and her sail flap loosely for a moment and then regain its tautness. It was passing over a rough place, where a line of snow had been blown out from shore by some sharp flurry of wind and become frozen to the surface. But the delay brought Allan up to within one-fourth of a mile, for when he reached the line of frozen snow he threw his weight suddenly upon the tiller in such a manner that the yacht arose and cleared the snow with scarcely any check of her speed.

The swerving of the runaway from her course gave him, too, another advantage, although it meant that it was necessary

to overtake her quickly. As now headed, she would strike the opposite shore near what was known as "ledge point," six or seven miles down, and her present speed would take her there in twelve or fifteen minutes at the outside. But Allan's keen eyes convinced him that in crossing the ridge her tiller had somehow become changed, for instead of a straight course her direction was now slightly curved. By heading directly for some point near the outer end of the probable curve, he believed that he could intercept her before she struck. But he kept on his course for another thirty seconds, to make sure of her direction, then swung his tiller a little into the wind. Then on and on he flew, with the swiftness of a homing bird, so holding his boat that the light steel runners found the least possible friction from the ice. Little by little skill began to tell against chance. Even in their diverging courses he could see that the distance was lessening yard by yard, and rod by rod. At times, when she struck a bit of rough ice or line of snow, the runaway quivered and the tautness of her sail relaxed; such places, if wide, he met with a skill that scarcely lost him speed. Once he saw a narrow fissure of open water in front of his yacht, but not extending to the course of the runaway. To avoid it would have meant losing the race, losing her whose soul had for one brief instant looked into his; so he kept on, and at the every edge of the fissure swung the tiller so that the yacht rose in a leap which carried her to the other side. It was taking chances, but it meant her life, and his very promptness and the velocity of the boat made it successful.

After that there was little but watchfulness and skill. He had gained the advantage desired and now turned his boat

in toward the runaway, drawing nearer and nearer, and yet nearer, until they were rushing along side by side. Then he lashed them together and sprang across to the larger yacht, where he grasped the tiller and forced it sharply into the wind.

It was done just in time, for the ledge point was less than a mile away. As the lost headway and then swung around and curved gracefully back up the river he could count the icicles hanging from the frowning brows of the rocks.

Other yachts which had followed the wild race were now approaching. Allan ran off before the wind for a few lengths to slacken speed, and then luffed sharply, coming to a full stop. One by one the other yachts followed his example, their owners crowding about him and the girl with congratulations. Presently a yacht swung in beside them and a man sprang to the ice.

"Is she safe?" he gasped.

"Yes," Allan answered coldly.

"Thank God!" fervently. "I never expected to see her alive again. You see, I was all ready to start and stepped from my yacht for a moment after something, and she slipped away. I followed as rapidly as I could on another. I am sure I appreciate your—"

But Allan nodded a curt interruption and stepped from the boat. Only the day before this man had said things about him to the girl which he could not forget—did not care to forget.

As his feet touched the ice he felt a soft hand upon his shoulder.

"Mr. Wimsey," the girl said, in a voice that was slightly tremulous, "will you take me back in your yacht?"

Allan turned quickly and again they looked into each other's eyes. Then he held out his hand.

THE GATES OF BAKAPPLEIN

By { ELIZABETH JEWETT BROWN
and SUSAN JEWETT HOWE.

Chapter VII.—(Continued).

"A porper?" said the other deliberately. "Why, er—er—I suppose a porper is one who is dependent upon the town or some other person for support."

"One who has nothing but what somebody else gives him for his support," supplemented King, drily.

Malley's dim eyes kindled. "Well then, if that is the right definition, I am a poor pauper and you are a rich one, for I have nothing but what has been given me or will be given me, and you," he turned to Chase, "have nothing but what you inherited from your father. You have never added a dollar to it by your own endeavors and you know it, so I say you are an inherited pauper if I am an unfortunate one. And in the sight of God it is more honorable to become a pauper through misfortune than to live by the labor of another and never earn an honest dollar for yourself."

"Well," said Chase, coldly, "if that is the way you talk to your children I don't wonder they kicked you out. We can't waste any more time with you. It is Collins' for you, and I guess you can stand what the rest of the paupers stand, for a spell anyway. That will be your look out, not ours. The girl will go to the Home, of course; nobody wants such a freak as she around; but what are we going to do with the dog?" he asked of King. "This town ain't going to feed no dogs and pay their taxes, too. It is nothing but a worthless cur and ought to be killed."

Ned hurried to the door, but before he could speak King turned towards him. "Get the buggy, Ned, and take this old fellow around to Collins'es. I'll telephone that you are coming and I'll see to the dog."

Malley staggered to his feet, clutching at his heavy stick for support. There was certain dignity in his pathetic figure as he spoke firmly. "I will not go to Collins'es, and you shall not take my little dog from me." He bent and stroked the trembling little fellow who whined pitifully and licked his hand. "I have his tax here." He held out the money. "That young man there gave it to me this morning, and I will eat just so much less if I can keep my dog. No, you shall not touch him," he said warningly as King advanced towards them. "You shall not do it," he warned, raising his stick, but King retreated as the dog growled angrily.

King laughed a hollow, mirthless laugh. "Keep your dog if you want to keep him now, but Collins will attend to him when the time comes."

"I stand ready to pay the dog's board

as long as he lives, Mr. King," said Ned, quietly. "and I want it so understood. 'Come,' he turned to the shaking old man and the trembling dog, "you had better go with me, Mr. Malley. Rover shall go, too, and I will see that you both have fair play."

He brought the concord buggy and smart driving horse around to the office door and gently helped the broken-down old man in and tucked Rover under the seat. Laughing as if they had perpetrated a good joke, King and Chase watched them as they drove away and Ned's blood rose in anger. "You shan't stay there if I can prevent it," he said determinedly as he looked at his watch. He touched the horse with the whip. "I shall have to leave you there for today, anyway, as it is King's orders and I will be fired if I don't; but if I drive hard I can see Searls Jackson about you this noon. I will tell him about this wretched business and, if he says so, even Chase and King will have to pull in their horns. Don't give up, Mr. Malley; you will find that you have friends in this town who will not let you stay at that place and rot," he said comfortingly as he saw the old man wiping away the big tears that coursed down his thin, withered cheeks.

The old man raised his head and spoke sadly. "It is no use, boy; I thank you for your sympathy, but Searls Jackson is a politician and he can't afford to heed an old man's necessities. If he did, he might lose the next election, and that is a risk he does not dare to run."

"You don't know Searls," cried Ned, with a ring of pride in his voice. "He is not the politician that goes to the highest bidder but the kind that goes for the highest principle. Even if he did not look into this matter, why, Cousin Nell would, and I am going to see them both for you. I shall pull in there for dinner. I often do and I would today, if I knew that King would fire me for doing so. And what is more, I shall tell that son of yours what I think of him. I used to be his friend, but I have no use for a young fellow who will treat his old father worse than a dog."

"Don't be too hard on him, Ned," said the old man, pleadingly. "He is young yet, and young folks never think that sickness or old age will ever come to them; but they will, they will; it's nature."

He reached Collins'es just at dinner time. A hard-faced, slatternly man came out to meet them with the brief announcement that dinner was ready. Ned waited long enough to see the old man follow the dirty, pitiable old creatures into the kitchen where the food, coarse and

CHEATED FOR YEARS

Prejudice Will Cheat Us Often If We Let It.

You will be astonished to find how largely you are influenced in every way by unreasoning prejudice. In many cases you will also find that the prejudice has swindled you, or rather, made you swindle yourself. A case in illustration:

"I have been a constant user of Grape-Nuts for nearly three years," says a correspondent, "and I am happy to say that I am well pleased with the result of the experiment, for such it has been."

"Seeing your advertisement in almost all of the periodicals, for a long time I looked upon it as a hoax. But after years of suffering with gaseous and bitter eructations from my stomach, together with more or less loss of appetite and flesh, I concluded to try Grape-Nuts food for a little time and note the result."

"I found it delicious, and it was not long till I began to experience the beneficial effects. My stomach resumed its normal state, the eructations and bitterness ceased and I have gained all my lost weight back."

"I am so well satisfied with the result that so long as I may live and retain my reason Grape-Nuts shall constitute quite a portion of my daily food."

Read "The Road to Wellville," in pkgs. "There's a Reason."

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

Velvet
THE
SMOOTHEST
TOBACCO

When old farmer Burley discovered a new type of tobacco, he never dreamed of its reaching the degree of perfection it has in Velvet. He only knew that the rich land of Kentucky produced a tobacco far superior to others for pipe smoking. Experts have since cultivated the Burley plant and made it the thoroughbred of tobaccos. Velvet is made from the selected middle leaves, matured for two years before manufacture—that's the secret of its cool-smoking and rich fragrance. Right in every respect for the good old pipe.

At all dealers, but if yours should be out, send us 10 cents for the regular tin. This offer good in U. S. only.

SPAULDING & MERRICK
Chicago, Ill.
Dept. D.



RIDER AGENTS WANTED
In each town to ride and exhibit sample 1911 Bicycle. Write for special offer. We ship on approval without a cent deposit, allow 10 DAYS FREE TRIAL and prepaid freight on every bicycle. **FACTORY PRICES** on bicycles, tires and sundries. Do not buy until you receive our catalog and learn our unheard of prices & marvelous special offer. Tires, coaster brake rear wheels, lamps, sundries, half prices. **MEAD CYCLE CO., Dept. R. 77, Chicago, Ill.**

WANTED FOR U. S. ARMY—Able-bodied, unmarried men, between ages of 18 and 35; citizens of United States, of good character and temperate habits, who can speak, read and write the English language. For information apply to Recruiting Officer, 212 Griswold Street, Detroit, Michigan; Heavens Block; Saginaw, Michigan; Corner 1st & Saginaw Streets, Flint, Michigan; Sun Building, Jackson, Michigan; corner Huron Avenue & Quay Street, Port Huron, Mich.

Let Me Start You in Business!
I will furnish the advertising matter and the plans. I want one sincere, earnest man in every town and township. Farmers, Mechanics, Builders, Small business men, anyone anxious to improve his condition. Address Commercial Democracy, Dept. D-30, Elyria, Ohio.

Wanted-Agents to sell Farmers Account Book. Quick Seller. Big Inducements. Highly Indorsed. L. L. SYPHERS, Ft. Wayne, Ind.

RICE—NEW CROP. 100 pounds beautiful, clean, white table rice in double sacks, freight prepaid to your railroad station. \$3.85. J. ED. CABANISS, Rice Farmer, Katy, Texas.

ill-cooked, had literally been thrown upon a long table covered with a greasy old oil-cloth. Around this four toothless, wretched men and an idiotic old woman were grouped, helping themselves to the food and bolting it more like animals than human beings. Three of them showed the effect of strong drink; the others were idiotic, one man being afflicted with a nervous disease which kept him in constant motion. It was into such company that honest, God-fearing old Henry Malley had been sent by his native town.

Ned was sick at heart as he drove away. He knew that Nell would do something to help the old man and, if there was no other way, Ned promised himself that he would help him. All the better part of his nature was stirred and he longed for the chance to prove to the world that he, at least, would be a friend to the helpless and old.

Chapter VIII.—The Law of God.

Ned found Nell alone, as Merle had accompanied Searls to the Capitol that day, and she was glad of his company at dinner. She listened intently to his recital of the old man's wrongs, then lost no time in calling Searls on the long distance telephone while Ned listened eagerly to the one-sided conversation. Finally she turned to him triumphantly. "He is going to call King himself about this matter. Then I fancy both he and Chase will be ready to listen to reason when I call on them, as I shall, after interviewing Jimmy."

Ned went outside for a romp with Yvonne and Bruiser while Nell called Jimmy into the sitting-room. He came, calmly indifferent to anything she might say. He was supremely well satisfied with himself, and as he had just eaten an excellent dinner neatly served, he did not care what happened to the rest of the world. Looking at him, Nell was struck with his facial resemblance to a hog, a resemblance which would grow with the years, she thought, as she opened the conversation by remarking casually that she had heard Joe Green had brought his father to see him that morning.

The young man nodded. He had lost a half hour's work in consequence, he remarked drily, and he could not see why Joe could not have waited until he could have talked in his own time.

"The time does not matter in the least," said Nell, coldly. "What I wish to know is, what are you going to do towards the support of your old father?"

"If the old man had saved his money when he was able to work he would never have come to want," he told her, selfishly. He had never done anything for him from the time that he was fourteen, and he did not see why he should be burdened with him now. Besides he had always been too easy; he had played into the hands of King and other men, and if King had now got him by the throat, he (Jimmy) could not be held to blame for that. If his father had been smart, he would have known, several years ago, when King sold him two cows at a bargain, that he meant mischief. Tuberculous cows they were, which were soon condemned, leaving the old man with no money to buy another. That started the heavy grocery bill which afterwards he mortgaged his little home to pay and which, at the death of his second wife, had gone into King's hands. When he needed money he had sold at King's prices whatever King wished to have, instead of looking for other purchasers who would have given him their value; and so on until he had nothing left but his bench, the clothes on his back and his old dog, which had not been covered by debt. "Now I say," continued Jimmy, "Dad brought it on himself. He has spoiled his own life by his mismanagement, and he would spoil mine if he could. I want to buy a place with my money and I can't spare a cent. I am planning to settle down in the fall, and that is all there is about it."

Nell answered sternly with a ring in her voice which the young man remembered from his first school days. "When you are settled down in your home you will have a place there for your father."

"No; I won't have him in my home," he returned, sullenly. "What would she say to have to begin life by waiting on an old man. No ma'am. I won't ask no girl to marry a whole family."

"And no girl who knows what she is about would marry a young man who would let his parents go on the town," cried Nell, indignantly, struggling with the anger which swelled in her heart and her desire to take him by the collar and shake him as she had done when he was

a disagreeable, stubborn boy in school.

"Mary does know what she is about," he retorted, hotly; "and there ain't no law that can make me take care of the old man, and I ain't goin' to do it, neither."

"There is a law which requires us to take care of our parents," she answered, sternly. "It is the Law of God."

"When you get down to talking about the Law of God, Mrs. Jackson, I believe the Bible says that parents should provide for their children—not children for their parents," he sneered triumphantly. "All the old man has got left is his cobbler's bench, I believe. Mary would like that, perhaps, for a wash bench," he said, insultingly. "A fine record for sixty years, with all the money he has earned, and now to expect his children to look after him."

"If Mary Adams knows that you wickedly and selfishly neglect your father this way she must expect to receive no better treatment at your hands herself," she said, cuttingly, the lightning from her eyes causing him to drop his head in shame while she continued indignantly: "Any young man who will thus neglect his old father will abuse his wife and children; and remember this, in time he will surely suffer the same way, for the Law of God is written in letters of blood on the walls of our hearts and such measure as ye mete unto others will be measured to you again. You cannot oppress the aged, the infirm and the innocent but that in God's own time it will be measured back to you in three-fold measure."

"Let Him measure it, then," he fairly shouted. "I'll be ready for it, but I shan't open the first door to the poorhouse myself by tying myself down to an old man and a drunken woman's brat." He swung on his heel and turned to go, but she called him back sharply.

"James Malley," she said unflinchingly. "No man who refuses to assist his own kin can remain in our employ. I will give you your time at once and pay you up till your time expires, which is next month. There will be no need of appealing to Mr. Jackson when he returns," she added as he began to bluster. "I told him this noon what I should do in case you persisted in your inhuman treatment of your father."

Furious with rage the young fellow bolted from the room, colliding on the piazza with Joe Green, who had come to ask about the work. "This is your doings," he swore, shaking his fist in old Joe's face, "and by the Lord I'll get even with you if it takes a lifetime. I'll make you beller worse than you did when Young Joe got drunk by the ice pond. I fixed him that time, and I will again, you drunken old fool. You'll go to the Missus with lies about me, will you?" he roared, the last words ending in a surprised shriek as old Joe, who in spite of his huge bulk could be nimble when he tried, dexterously tripped him up and sent him sprawling on the gravelled walk. Before he could rise old Joe had nimbly planted himself upon his back, where he sat, calmly puffing at his pipe, apparently oblivious to the squirming, swearing fellow under him.

"Got through rippin' off s'wear words by the yard?" he asked presently. "coz ef you have you'll hev ter listen ter me a spell afore I let you up. There ain't no use to flop so; yew can't hist three hundred pounds with your hundred and seventy-five, and the sooner you take your medicine the sooner I'll let you up. I'll set light ef yew won't be so durned uneasy. That's right. I jest wanted to give yew a little taste uv the ups and downs and hard squeezin's yer dad is takin' these days. How de? yew suppose he liked his dinner at Collins'es?"

"Don't care? Well, that's a happy frame uv mind to be in. Folks say that they feed the porpers on tainted meat and wilted vegetables, to say nothin' uv poor flour and stale bread and skim-milk. Not very fattenin' is it? Why, Jackson's hogs here git better stuff than that. Wanter git up? Well, after I finish holdin' yew down till I git through tellin' yew a few things. I may never have another such a good chanst. I know what yew hev be'n doin' to my boy, Joe. I knowed it wuz your doin's, his gittin' drunk that day, and ef it hadn't ben fer Mis Nell's pleadin' Searls would ha' fired him, and then he'd a gone to the devil for sure. But he straightened up then and he's goin' to stay so in spite uv you. Do yew hear or hev I got to set down a leetle harder?"

"You let me up!" Jimmy foamed. "Ef you don't I'll hev the law on you." (To be continued.)

INSIDE HISTORY

Some Self-Explanatory Letters.

Battle Creek, Mich., Jan'y 7, '11.

Dr. E. H. Pratt,

Suite 1202, 100 State St.,
Chicago, Illinois.

My Dear Doctor:

"Owing to some disagreement with — magazine several years ago they have become quite vituperative, and of late have publicly charged me with falsehoods in my statements that we have genuine testimonial letters.

"It has been our rule to refrain from publishing the names either of laymen or physicians who have written to us in a complimentary way, and we have declined to accede to the demand of attorneys that we turn these letters over to them.

"I am asking a few men whom I deem to be friends to permit me to reproduce some of their letters over their signatures in order to refute the falsehoods.

"We have hundreds of letters from physicians, but I esteem the one that you write to me in 1906 among the very best particularly in view of the fact that it recognizes the work I have been trying to do partly through the little book, 'The Road to Wellville.'

"I do not sell or attempt to sell the higher thought which is more important than the kind of food, but I have taken considerable pains to extend to humanity such facts as may have come to me on this subject.

"In order that your mind may be refreshed I am herewith enclosing a copy of your good letter, also a copy of the little book, and if you will give me the privilege of printing this over your signature I will accompany the printing with an explanation as to why you permitted its use in publication in order to refute falsehoods, and under that method of treatment I feel, so far as I know, there would be no breach of the code of ethics.

"I trust this winter weather is finding you well, contented and enjoying the fruits that are yours by right.

With all best wishes I am,

Yours very truly,

C. W. Post.

Dr. Pratt, who is one of the most prominent and skillful surgeons in America, very kindly granted our request in the cause of truth and justice.

Chicago, Aug. 31, 1906.

Mr. C. W. Post,
Battle Creek, Mich.

My dear Sir:—

"I write to express my personal appreciation of one of your business methods, that of accompanying each package of your Grape-Nuts production with that little booklet, 'The Road to Wellville.' A more appropriate, clear headed and effective presentation of health-giving auto-suggestions could scarcely be penned.

"Grape-Nuts is a good food in itself, but the food contained in this little article is still better stuff. I commend the practice because I know that the greed and strenuousness, the consequent graft and other types of thievery and malicious mischief generally can never be cured by legislative action.

"The only hope for the betterment of the race rests in individual soul culture.

"In taking a step in this direction, your process has been so original and unique that it must set a pace for other concerns until finally the whole country gets flavored with genuine, practical Christianity.

"I shall do all that lies in my power to aid in the appreciation of Grape-Nuts not so much for the sake of the food itself as for the accompanying suggestions.

"Visiting Battle Creek the other day with a friend, Dr. Kelly of Evanston, Illinois, while I was consulting with Mr. Gregory, my friend visited your factories and came away greatly amazed, not only at the luxurious furnishings of the offices generally and the general equipment of the place, but with the sweet spirit of courtesy and kindness that seemed to fill the air with a spiritual ozone that was good to breathe.

"The principles expressed in the little booklet, 'The Road to Wellville,' I well know are practical and they work in business of all kinds, including sanitariums, as will be fairly tested before time is done.

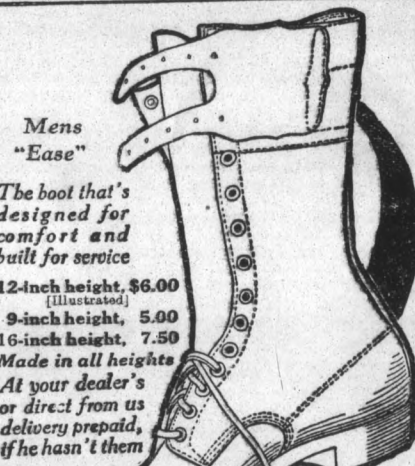
"I know you will not regard this letter of appreciation as an intruding one. It is simply the salutation of good fellow-

ship to you from a man who, although he has never seen you, feels drawn, to you by the kinship of thought.

"The only thing that makes a man live forever in the hearts of his countrymen and his race is the good that he does. Your position in this respect is an enviable one and I wish to extend my congratulations."

Yours respectfully,

E. H. PRATT.



The boot that's designed for comfort and built for service

12-inch height, \$6.00
9-inch height, 5.00
16-inch height, 7.50
Made in all heights

At your dealer's or direct from us delivery prepaid, if he hasn't them

The boot "that satisfies." Always comfortable, always fits like a glove in the leg and around ankle, instep and heel seat. Always as honest and reliable as a boot can be made. Uppers always cut from Menzies "Ease" Special Process of Tannage. The ideal leather for everyday shoes as it's tough as rawhide but soft as glove leather and neither heat, water nor service ever hardens it.

Name always on sole and yellow label. SEND FOR CATALOG T-FREE

MENZIES SHOE CO., Makers, Detroit, Mich.

ONCE IN A LIFE TIME is often enough to do some things. It's often enough to buy a wagon if you buy the right kind. The



ELECTRIC HANDY WAGON

lasts that long under ordinary conditions. First, the life of a wagon depends upon the wheels. This one is equipped with our Electric Steel Wheels, with straight or stagger spokes and wide tires. Wheels any height from 24 to 36 in. It lasts because tires can't get loose, no re-setting, hubs can't crack or spokes become loose, felloes can't rot, swell or dry out. Angle steel hounds. THOUSANDS NOW IN DAILY USE. Don't buy a wagon until you get our free book "Steel Spokes." ELECTRIC WHEEL CO., Box 35 Quincy, Ill.

SAW YOUR WOOD

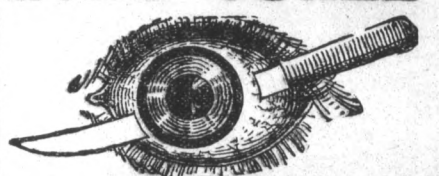


With a FOLDING SAWING MACHINE. 9 CORDS by ONE MAN in 10 hours. Send for Free catalog No. E-24 showing low prices and testimonials from thousands. First order secures agency. Folding Sawing Mach. Co. 158 E. Harrison St., Chicago, Ill.

Don't Wear a Truss

FREE STUART'S PLAS-TRAPADS are different from the painful truss, being made self-adhesive purposely to hold the rupture in place without straps, buckles or springs—cannot slip, so cannot chafe or compress against the pelvic bone. The most obstinate cases cured in the privacy of the home. Thousands have successfully treated themselves without hindrance from work. Soft as velvet—easy to apply—inexpensive. Process of cure is natural, so no further use for trusses. We prove what we say by sending you Trial of Plaspao TRIAL OF PLASP AO absolutely FREE. Write TODAY. Address—PLASP AO LABORATORIES, Block 72, St. Louis, Mo.

EYES CURED



WITHOUT THE KNIFE

Grateful Patients Tell of Almost Miraculous Cures of Cataracts, Granulated Lids, Wild Hairs, Ulcers, Weak, Watery Eyes and all Eye Diseases—many have thrown away their glasses after using this magic remedy one week. Send your name and address with full description of your trouble to the H. T. Schlegel Co., 4879 Home Bank Building, Peoria, Ill., or fill out the coupon below, and you will receive by return mail, prepaid, a trial bottle of this magic remedy that has restored many almost blind to sight.

FREE. This coupon is good for one trial bottle of Schlegel's Magic Eye Remedy sent to you prepaid. Simply fill in your name and address on dotted lines below and mail to the H. T. Schlegel Co., 4879 Home Bank Building, Peoria, Ill.

MARKETS

DETROIT WHOLESALE MARKETS.

January 25, 1911.

Grains and Seeds.

Wheat.—This has been a discouraging week for sellers, at every session the news showed conditions against them and values gradually drifted to a lower level. The milling demand is poor, and millers have found it difficult to get orders sufficient to keep the rollers going. As a result they have not called for much grain. The receipts in the northwest have been increasing and at many points offerings are exceeding shipments. However, in spite of the present bearish features of the trade the visible supplies of this country and Europe show a large decrease and, while there is a large amount afloat, it would seem that a reaction ought soon to come to the rescue of the bulls. It is a general opinion that large interests are letting the trade alone with the hopes that small dealers will get rid of their stocks and clear the way for larger operations later. A year ago the price for No. 2 red wheat was \$1.25 1/2c per bu. Quotations for the week are:

	No. 2	No. 1	Red.	White.	May.	July.
Thursday	98 3/4	97 3/4	1.03 1/2	.99		
Friday	98 3/4	97 3/4	1.03	.98 3/4		
Saturday	97 3/4	96 3/4	1.02	.97 3/4		
Monday	97 3/4	96 3/4	1.02	.97 3/4		
Tuesday	97	96	1.01 3/4	.97 1/4		
Wednesday	97	96	1.00 3/4	.97 1/4		

Corn.—While the weakness of the wheat deal gave a gloomy atmosphere to the corn deal the trade held closer to last week's prices than did wheat, and the undertone shows firmness. It is expected that this week will see the end of the big rush of offerings from rural sections, and since the market held almost steady under the stress it is believed that there is improvement ahead for the seller. The local market is very quiet. No. 2 corn was selling at 67 1/4c per bu. a year ago. Quotations for the past week are:

	No. 3	No. 2	Corn.	Yellow.
Thursday	48	49		
Friday	47 3/4	48 3/4		
Saturday	48	49		
Monday	47 3/4	48 3/4		
Tuesday	47 1/2	48 1/2		
Wednesday	47 1/2	48 1/2		

Oats.—Oat values have held steady at a fractional advance over the closing price of a week ago. There is little activity in the deal and no news to change the situation from last week. One year ago the price paid for standard oats was 50 1/2c per bu. Quotations for the past week are:

	Standard.	No. 3	White.
Thursday	35	34 1/2	
Friday	35	34 1/2	
Saturday	35	34 1/2	
Monday	35	34 1/2	
Tuesday	35	34 1/2	
Wednesday	35	34 1/2	

Beans.—At the opening Monday there was a decline of three cents in quotations for beans. There is nothing doing and the quotations given below are merely nominal. They are:

	Cash.	Jan.
Thursday	\$2.05	\$2.10
Friday	2.05	2.10
Saturday	2.05	2.10
Monday	2.02	2.07
Tuesday	2.02	2.07
Wednesday	2.02	2.07

Clover Seed.—While a great deal of seed is changing hands the conditions this past week did not support former prices and a decline was made in prices. We are not informed that the reduction was for any other purpose than to allow certain large dealers to scare smaller holders into releasing their stock that a better price can be had later by those who get control of the market. Alsike remains steady. Quotations for the week are:

	Prime Spot.	Mar.	Alsike.
Thursday	\$9.00	\$9.05	\$9.10
Friday	9.00	9.05	9.10
Saturday	8.75	8.75	9.10
Monday	8.75	8.75	9.10
Tuesday	8.75	8.75	9.10
Wednesday	8.75	8.75	9.10

Barley.—Prices here are reduced and the better grades are selling at \$1.70@1.85 per cwt., which is 15c below the figures given out last week.

Rye.—Receipts are small and the price for No. 1 rye has remained at \$4 1/2c per bu. while for No. 2 a decline of a half cent is reported.

Visible Supply of Grains.

	This week.	Last week.
Wheat	42,101,000	43,287,000
Corn	7,406,000	6,893,000
Oats	15,390,000	15,045,000

Flour, Feed, Provisions, Etc.

Flour.—The flour trade is easy with prices changed. Patent Michigan declined while other grades advanced. Quotations are:

Clear	\$4.45
Straight	4.85
Patent Michigan	5.15
Ordinary Patent	4.95

Hay and Straw.—Hay values are steady. Quotations on baled hay in car lots f. o. b. Detroit are: No. 1 timothy, \$16.50@17; No. 2 timothy, \$15.50@16; clover, mixed, \$15.50@16; rye straw, \$7@7.50; wheat and oat straw, \$6@6.50 per ton.

Feed.—Feeds containing corn are down while other grades remain steady. Carlot prices on track are: Bran, \$25 per ton; coarse middlings, \$26; fine middlings, \$28; cracked corn, \$22; coarse corn meal, \$22; corn and oat chop, \$20 per ton.

Potatoes.—We must state once more the cheerless news that potato values are

unaltered and conditions are unchanged. In car lots Michigan potatoes are selling at 37@40c per bu.

Provisions.—Family pork, \$23@24; mess pork, \$22; medium clear, \$20@21; smoked hams, 14@14 1/2c; briskets, 13 1/2c; shoulders, 11 1/2c; picnic hams, 11 1/2c; bacon, 17@18c; pure lard in tierces, 11c; kettle rendered lard, 12c.

Dairy and Poultry Products.

Butter.—All along the line prices for butter have gone down, a general decline of two cents having been made below the reduced values given a week ago. The large stocks that are now being offered are credited with influencing prices earthward. Extra creameries are now quoted at 25 1/2c; firsts, 23c; dairy, 17c; packing stock at 14 1/2c per lb.

Eggs.—The decline of 3 1/2c in egg prices the past week was followed by a 3 cent drop this week. The attempt of storage men to put their holdings on the market at the time when fresh stock is coming in has proved detrimental to those wishing to see values remain high. Fresh receipts, case count, cases included, are now quoted at 24c per doz.

Poultry.—This deal is dull and values are a little off; especially noticeable are the lower prices for chickens and fowls. Quotations are: Dressed—Turkeys, 20@23c; chickens, 14c; fowls, 13@13 1/2c; ducks, 18c; geese, 14@15c per lb. Live—Spring chickens, 13 1/2c; fowls, 13c; old roosters, 9c; turkeys, 13@20c; geese, 13@14c; ducks, 14@15c per lb.

Cheese.—Michigan, 17c; Michigan, late, 15@16c; York state, 17@18c; York state sharp, 19c; Limburger, old, 16@17c; Swiss domestic block, 20@22c; cream brick, 17@18c.

Dressed Pork.—Price is steady at 10@10 1/2c per lb.

Veal.—Market steady. Choice, 12c; ordinary, 9@10c per lb.

Rabbits.—Steady. Per dozen, \$1.75.

Fruits and Vegetables.

Apples.—Market is quiet and steady. Fancy greenings are quoted at \$5.25@5.50; Kings, \$5.25@5.50; Baldwins, \$4.50; Steel reds, \$6; ordinary grades, \$3@3.50 per bbl.

Cranberries.—Steady. Quoted at \$3.25 per bu.

Cabbage.—Steady. Selling at \$1.75 per bbl. for new.

Onions.—Easy and lower. 80@85c bu.

Honey.—Choice to fancy comb, 15@17c per lb.

OTHER MARKETS.

Grand Rapids.

Eggs and butter continue to slide downwards. Dealers are quoting 22c for fresh eggs and 18c for storage. Butter, both dairy and creamery is off 2c, being quoted at 20c and 24 1/2c respectively. The potato market is reported a little easier, although prices are steady at 25@30c.

Quite a good many potatoes are moving now, during the milder weather. White beans are off 5c, the price to farmers ranging around \$1.70. Red kidneys continue firm at \$2.75@3. Dressed hogs are somewhat easier, the price paid this week being 9@9 1/2c. Poultry is steady. Grain prices are as follows: Wheat, 93c; buckwheat, 70c; oats, 34c; rye, 75c; corn, 48c.

Chicago.

Wheat.—No. 2 red, 98@98 1/2; May, 98 3/4; July, 95 1/2c per bu.

Corn.—No. 2, 47@47 1/2c; May, 50 1/2c; July, 51 1/2c per bu.

Oats.—No. 2 white, 32 1/2@34c; May, 34 1/2c; July, 34 1/2c.

Barley.—Malting grades, 79@92c per bu; feeding, 65@75c.

Butter.—Market weaker under heavy accumulations of the lower grades of product. No change from last week's low figures. Quotations now are: Creameries, 17@25c; dairies, 19@22c.

Eggs.—The demand has failed to show the expected improvement and the market is very slow with all grades materially lower. Quotations: Prime firsts, 24c; firsts, 23c; at mark, cases included, 20@22c per doz.

Potatoes.—Supplies are regarded as light for the time of year; market showing more life with prices about 2c higher. Choice to fancy quoted at 48@50c per bu; fair to good, 42@45c.

Elgin.

Butter.—Market weak at 25c per lb., which is 2c below the quotation of last week. Output for the week, 579,300 lbs. as compared with 557,600 lbs. for the previous week.

THE LIVE STOCK MARKETS.

Buffalo.

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

Receipts of stock here today as follows: Cattle, 160 cars; hogs, 18,400; sheep and lambs, 28,400; calves, 800.

With 160 loads of cattle on our market here today, and 28,000 reported in Chicago, our market on all grades of cattle is from 10@15c per hundred weight lower than last week, except bulls, which sold at about last week's prices, and in some instances 10c per hundred weight higher.

We quote: Best 1,300 to 1,400-lb. steers \$6.40@6.65; good prime 1,200 to 1,300-lb. steers, \$5.75@6.35; best 1,100 to 1,200-lb. shipping steers, \$5.50@6.25; medium butcher steers, 1,000 to 1,100 lbs., \$5.35@5.85; light butcher steers, \$4.65@5.25; best fat cows, \$4.75@5.25; fair to good do., \$3.75@4.35; common to medium do., \$3.50@4; trimmers, \$2.75@3.25; best fat heifers, \$5.50@6; good do., \$5@5.50; fair to good do., \$4.25@4.65; stock heifers, \$3.25@3.50; best feeding steers, dehorned, \$4.50@4.75; medium to good feeding steers \$4@4.25; stockers, all grades, \$3.75@4; best bulls, \$5@5.50; bologna bulls, \$4.25@4.75; stock bulls, \$4@4.25; best milkers and springers, \$5@6; good to best do., \$4@5; common to good do., \$2.50@3.

Best milkers and springers sold \$2@3

higher; late springers still hard to sell at satisfactory prices.

Hog market opened strong 5@10c lower or heavier than Saturday's close, and 15@20c lower on lights and pigs. Fair clearance of all desirable grades. Quite a number of cars of heavies going over without any bids.

We quote: Heavy mediums and heavy hogs, \$8@8.05; mixed, \$8.10@8.15; light mixed, \$8.15@8.20; yorkers, \$8.15@8.25; pigs mostly \$8.25@8.30; roughs, \$7.10@7.15; stags, \$6@6.50 as to quality. All desirable light weights are sold. Prospects look only fair.

The lamb market opened very slow today; few of the choice handy lambs selling from \$6@6.10; few fancy at \$6.15@6.20. Lambs weighing 85 lbs. and over, simply demoralized; few sold to countrymen around \$5.25@5.90. Buyers offering 5 1/2c for lambs weighing around 90 lbs. Heavy lambs, that is, weighing 100 lbs. and over, selling from \$5@5.25, mostly 5c. Don't look for much improvement, as there will be 40 loads holding over tonight. Sheep market was slow today; most of the choice ewes selling at \$4@4.15; wethers, \$4@4.25. Look for about steady prices on sheep balance of the week.

We quote: Best handy lambs, \$6@6.15; heavy lambs, \$5@5.25; bucks, \$3@3.25; heavy ewes \$3.75@4; yearlings, \$4.75@5; wethers, \$4.75@5; cull sheep, \$2.50@3.25; handy ewes, \$4@4.15; northern Michigan lambs, \$5.25@5.75; veals, choice to extra, \$10.50@11; fair to good do., \$7.50@10; heavy calves, \$5@6.50.

Chicago.

January 23, 1911.

Cattle. Hogs. Sheep.
Received today 28,000 48,000 32,000
Same day last year, 27,041 29,010 24,076
Received last week, 78,437 153,396 109,054
Same week last year, 70,141 143,141 77,137

Cattle started off in an uncertain kind of way today, with reported receipts much above later returns, and by the middle of the day trade was active at steady prices, following last week's decline of about 25c in beef steers and butcher stock. The percentage of cows and heifers today is unusually large, and they are in excellent demand. Hogs are off 10@15c, with sales at \$7.60@7.92 1/2, light hogs and strong-weight pigs going the highest. The top price for pigs last week was \$8.15, with a Saturday sale at \$8.10. There is not much trading in hogs today above \$7.85, with good buying on the break. Hogs received last week averaged in weight 224 lbs., compared with 209 lbs. a year ago, 204 lbs. two year ago and 216 lbs. three years ago. At the close of last week lambs were 25@40c lower than a week ago, while sheep showed little change, but lambs and sheep were 25@50c below the week's best time. Today's market shows no marked change, lambs going at \$5@6.25, while wethers are salable at \$3.75@4.50, ewes at \$2.75@4.25, bucks at \$2.75@3.25 and yearlings at \$4.50@5.50. Exporters are still operating in heavy lots of sheep, but are buying a commoner kind usually, the demand being for lots to ship to Liverpool. Clipped lambs are discriminated against by killers and sell largely at \$4.50@5.50. A great many Michigan lambs are showing up at this time.

There are times when there is a loud call for cheap meats, and it is reflected in the cattle market. And yet country buyers have been paying extraordinarily high prices for stockers and feeders as compared with ruling prices of finished beefs. Here are beef steers of the better class going at \$6@7.10, with choice kinds selling at \$6.50 and upward, and the cheaper grades at \$5@5.90, while feeders are fetching \$5.25@6 and stockers \$4.15@5.75.

Hogs were extremely good sellers as a general rule last week, a large percentage of the offerings going at \$8 and over, moderate receipts causing advances on several days. Eastern shippers took a good share of the hogs of the better class, and between their selections and purchases made by speculators, sellers were able to take a firm stand. Hogs were extremely good in quality.

Sheep and lambs had set-backs at times, especially after the early part of last week, fair buying by exporters bringing about some stiff advances during the first few days. Early tops were \$5.90 for yearlings, \$4.75 for two and three-year-old wethers, \$4.30 for heavy ewes and \$6.65 for choice handy-weight lambs, while feeding lambs were scarce and easily sold at \$5@6.10 for common to the best. Feeding wethers were also scarce and firm at \$3.75@4, while breeding ewes sold briskly at \$3.75@5, yearlings selling highest. More yearlings have shown up than ever before in January, and they are preferred by killers to the heavier lambs, causing such lambs to sell at an unusual discount. Sheep, yearlings and lambs continue to sell much lower than in former years as a result of larger supplies, more feeding being carried on than heretofore. The starting up of an export trade is the most favorable factor in the present situation, as it furnishes an outlet for heavy flocks.

MICHIGAN FARMERS' INSTITUTES.

County Institutes.

Oceana Co.—Shelby, Feb. 1-2; Sanilac Co., Sandusky, Feb. 1-2; Mecosta Co., Big Rapids, Feb. 2-3; Kalkaska Co., Kalkaska, Feb. 2-3; Allegan Co., Allegan, Feb. 2-3; St. Clair Co., Goodells, Feb. 2-3; St. Joseph Co., Centerville, Feb. 2-3; Newaygo Co., Fremont, Feb. 3-4; Antrim Co., Bellaire, Feb. 3-4; Kalamazoo Co., Comstock, Feb. 3-4; Lapeer Co., Lapeer, Feb. 3-4.

One-Day Institutes.

Jackson Co.—Rives, Feb. 1; Henrietta, Feb. 2; Grass Lake, Feb. 3; Michigan Center, Feb. 4; Norvell, Feb. 6; Brooklyn, Feb. 7; Liberty, Feb. 8; Hanover, Feb. 9; Concord, Feb. 10; Spring Arbor, Feb. 11; Osceola Co., Hersey, Feb. 4.

FARMS AND FARM LANDS FOR SALE OR EXCHANGE

MICHIGAN FARMS—Rich agricultural district. Write for list, TOLBERT & CO., Charlotte, Michigan.

128 ACRES—\$25 per a. Bldgs. ins. for \$3,000. Lays fine. Terms, 150 farms. Description and Cat. D. C. Morgan, Endicott, N. Y.

LIST No. 5 & 6 will tell you all about Fruit & Stock Farms near Fremont, White Cloud and Big Rapids. VAN NISS, White Cloud, Michigan.

FARMS FOR SALE—240 & 110 acres, in Holstein Center. W. K. Sexton, Howell, Livingston Co., Mich.

\$2,100 takes 175-acre fertile farm, valuable timber, first class bldgs., water, fruit, 1 mile creamery, church, R. R. town, school on farm, rural delivery, telephone, \$700 cash, balance time. Write for other farm bargains. Valley Farm Agency, Owego, N. Y.

Washington Fruit & Wheat Farms—100 acres, improved, 2 miles out, \$85. 320 acres, all in cultivation, good improvements, 2 miles to town, \$80. J. C. Ruth, Pullman, Washington.

For Sale—Michigan Farms, Any size, from 10, to 200 acres. Prices from \$40. to \$110. per acre. Write for prices, or better still come and see. E. C. HANES & Co., Charlotte, Mich.

For Sale—69 Acres—8-room house, 2 barns, fruit, good water, sandy loam, R. D. Phone, 1 1/2 m. to town. Listen, \$2,500. The buildings are worth more. D. R. REES, 724 Dollar Bank Bldg., Youngstown, O.

FOR SALE—Eighty acres of the best land in Macomb Co. Near Romeo. Good buildings. Apple and peach orchard. Also a list of other farms. Eldred & Elliott, Romeo, Mich.

I SELL FARMS in Oceana, best County in United States. Fruit, Grain, Stock, Poultry. Write for list. J. S. HANSON, Hart, Mich.

Virginia Farms and Homes. FREE CATALOGUE OF SPLENDID BARGAINS. R. B. CHAFFIN & CO., Inc., Richmond, Va.

FOR SALE—One of the Best STOCK and GRAIN FARMS in Michigan. 268 acres. Fine, dark gravelly loam with stony subsoil, good fences, two sets of buildings, up to date and in splendid location. For A. I farm, investigate. Write owner. M. L. RAYMOND, Grass Lake, Mich.

Free 200 Page Book About Minnesota Compiled by the state, describing industries, crops, live stock, property values, schools, churches & towns of each county, and Minnesota's splendid opportunities for any man sent free by **STATE BOARD OF IMMIGRATION**, Room 269 State Capitol. ST. PAUL, MINNESOTA.

5 ACRES: 11 room house, modern plumbing, combination hot air and hot water heat, electric light, city water, beautiful grounds, 50 plum trees, peach, pear, cherry and apple trees, one thousand grape vines in full bearing, fine grove, tennis court, one of the most perfect homes in Southern Michigan, six blocks from center of town. Hillsdale has best small college in middle west. I bought this place and moved here from Minnesota to be with my son while he was attending college. It has answered my purpose and I desire to sell. Price, \$9,000, cash or terms. W. J. MOORE, 108 State St., Hillsdale, Michigan.

Fertile Farms in Tennessee \$5 to \$10 per acre

Fortunes are being made on fertile Tennessee farms raising big crops of grain and grasses of almost every kind, also Cantaloupes, Cabbage, Tomatoes, String Beans, Green Corn, etc., also Horses, Cattle, Sheep, Swine, Poultry and Eggs. Write me at once for **Free Literature**, which advises how to get one of these splendid farms for \$5 to \$10 per acre. Act quickly! H. F. Smith, Traf. Mgr. N. C. & St. L. Ry. Dept. F. Nashville, Tenn.

FOR INFORMATION AS TO LANDS IN

The Nation's Garden Spot—
THAT GREAT FRUIT AND TRUCK GROWING SECTION—
along the
Atlantic Coast Line RAILROAD
in Virginia, North and South Carolina, Georgia, Alabama and Florida, write to
WILBUR MCCOY, E. N. CLARK,
A. & I. Agt. for Florida, A. & I. Agt. for Virginia
Alabama, Georgia, and the Carolinas,
Jacksonville, Fla. Wilmington, N. C.

SPLENDID CROPS in Saskatchewan (Western Canada)

60 ACRES **800 Bushels From 20 Acres**
of wheat was the thrasher's return from a Lloydminster farm in the season of 1910. Many fields in that as well as other districts yielded from 25 to 35 bushels of wheat to the acre. Other grains in proportion.
Large Profits
are thus derived from the **FREE HOMESTEAD** **LANDS** of Western Canada.
This excellent showing causes prices to advance. Land values should double in two years' time.
Grain growing, mixed farming, cattle raising and dairying are all profitable. Free Homesteads of 160 acres are to be had in the very best districts; 160-acre pre-emption at \$3.00 per acre within certain areas. Schools and churches in every settlement, climate unexcelled, soil the richest, wood, water and building material plentiful.
For low settlers' railway rates and illustrated pamphlet, "Last Best West," and other information, write to Sup't of Immig., Ottawa, Can., or Can. Gov't Agt. (52)
M. V. McInnes
176 Jefferson Ave., Detroit, Mich.
C. A. Laurier, Marquette, Mich.

PATENTS: For facts about Prize and Reward offers and Inventions that will bring from \$5000 to Ten Million Dollars, and for books of Invention Interest to Inventors, send 8c. postage to Pubs. Patent Sencs, Dept. 89, Barrister Bldg., Washington, D. C.

THIS IS THE FIRST 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.
January 19, 1911.
Cattle.

Receipts, 1,188. Market steady at last week's prices on all grades.

We quote: Extra dry-fed steers and heifers, \$6@6.50; steers and heifers, 1,000 to 1,200, \$5.25@5.50; steers and heifers, 800 to 1,000, \$4.75@5.25; steers and heifers that are fat, 500 to 700, \$4.25@5; choice fat cows, \$4.50@4.65; good fat cows \$4@4.25; common cows, \$3.25@3.75; canners, \$2.75@3; choice heavy bulls, \$4.50@4.75; fair to good bolognas, bulls, \$4@4.25; choice feeding steers, 800 to 1,000, \$4.50@5; fair feeding steers, 800 to 1,000, \$4@4.25; choice stockers, 500 to 700, \$4@4.50; fair stockers, 500 to 700, \$3.50@3.75; stock heifers, \$3.50@3.75; milkers, large, young, medium age, \$4@60; common milkers, \$25@35.

The big run of cattle has overloaded the market and prices at the close were 10@15c lower than the opening quotations.

Bishop, B. & H. sold Goose 2 heifers av 690 at \$4.50; to Parker, W. & Co. 8 steers av 962 at \$5.65, 1 cow weighing 840 at \$3.15; to Hammond, S. & Co. 1 bull weighing 1,300 at \$4.75, 1 cow weighing 950 at \$3.25, 1 heifer weighing 580 at \$4.50, 7 steers av 1,003 at \$5.50, 2 do av 1,000 at \$5.50, 10 do av 805 at \$5, 2 bulls av 1,090 at \$4.65, 2 do av 1,055 at \$4.50, 2 do av 350 at \$4.50, 2 cows av 1,295 at \$4.75, 5 butchers av 866 at \$3.25, 4 do av 980 at \$3.50, 1 bull weighing 1,300 at \$4.75, 2 steers av 935 at \$5; to Mich. B. Co. 30 heifers av 800 at \$5.20, 2 butchers av 780 at \$4.50, 4 do av 860 at \$5.50; to Sullivan P. Co. 9 cows av 1,011 at \$4; to Parker, W. & Co. 30 heifers av 800 at \$5.10, 2 do av 850 at \$5; to Regan 5 do av 524 at \$4.25, 1 bull weighing 730 at \$4; to Fromm 1 cow weighing 1,090 at \$4.25; to Kamman B. Co. 1 steer weighing 930 at \$5, 20 do av 980 at \$5.75; to Parker, W. & Co. 6 butchers av 875 at \$4.60, 2 steers av 870 at \$5.50, 2 cows av 890 at \$3; to Newton B. Co. 8 steers av 1,400 at \$6.50, 2 do av 1,000 at \$5.25, 3 cows av 1,133 at \$4.50; to Sullivan P. Co. 3 cows av 1,080 at \$4.60, 22 steers av 1,143 at \$5.90, 1 cow weighing 1,200 at \$4.50; to Kamman, B. Co. 4 do av 962 at \$4.50, 3 do av 960 at \$4.50; to Breitenbeck 12 butchers av 946 at \$3.65; to Copp 3 canners av 880 at \$3.25, 3 do av 860 at \$3.75; to Kamman 3 cows av 1,013 at \$4, 14 butchers av 922 at \$4.65.

Spicer & R. sold Mich. B. Co. 63 butchers av 800 at \$5; to Parker, W. & Co. 27 do av 863 at \$5; to Thompson Bros. 8 cows and bulls av 1,045 at \$4.50, 1 cow weighing 1,050 at \$3, 7 steers av 907 at \$5.50, 10 butchers av 613 at \$4.40; to Sullivan P. Co. 2 do av 805 at \$4.75.

Haley & M. sold Parker, W. & Co. 5 cows av 1,018 at \$3.40, 1 do weighing 1,070 at \$3.40; to Sullivan P. Co. 8 do av 1,200 at \$4.60, 3 butchers av 760 at \$5, 2 steers av 1,045 at \$5.75; to Goose 11 butchers av 360 at \$4.40; to Hammond, S. & Co. 3 bulls av 1,133 at \$4.85, 1 cow weighing 850 at \$3.50, 2 do av 990 at \$4; to Lingeman 2 steers av 625 at \$5.35, 8 butchers av 615 at \$4.20; to Breitenbeck 7 do av 604 at \$4.50, 9 do av 620 at \$4.65.

Wilson sold Mich. B. Co. 1 bull weighing 1,690 at \$4.75, 3 cows av 1,157 at \$3.50. Knowles sold Sullivan P. Co. 2 heifers av 690 at \$4.50, 6 steers av 803 at \$5.

Peabody sold same 1 cow weighing 940 at \$4.50, 6 butchers av 961 at \$5, 8 do av 957 at \$5.50.

Wilson sold same 5 do av 944 at \$5, 3 cows av 1,070 at \$4.60.

Veal Calves.

Receipts, 491. Market steady at last week's prices. Best, \$9@9.50; others, \$4@8.50; milch cows and springers steady.

Kendall sold Burnstine 5 av 150 at \$9, 17 av 140 at \$9.

Leach sold same 5 av 165 at \$6, 6 av 130 at \$9; Kendall sold same 19 av 125 at \$8.50.

Bishop, B. & H. sold Parker, W. & Co. 6 av 150 at \$9.50, 2 av 115 at \$8.50, 21 av 130 at \$9; to Newton B. Co. 5 av 400 at \$4.50; to Hammond, S. & Co. 1 weighing 160 at \$9.50, 2 av 120 at \$9, 1 weighing 140 at \$9.50; to Nagle P. Co. 2 av 310 at \$5.50, 3 av 170 at \$9; to Hammond, S. & Co. 3 av 135 at \$9.50, 5 av 135 at \$9, 6 av 140 at \$9.50.

Spicer & R. sold Mich. B. Co. 5 av 125 at \$9; to Hammond, S. & Co. 4 av 140 at \$9.25, 3 av 110 at \$8, 11 av 140 at \$9, 1 weighing 110 at \$9, 5 av 125 at \$9, 2 av 120 at \$7.50.

Receipts, 6,929. Lambs 25c lower than on Wednesday of last week. Sheep 25c higher. Best lambs, \$5.75@6; heavy lambs \$5@5.50; light to common lambs, \$4.50@5.25; fair to good sheep, \$3.50@4.25; culls and common, \$2.75@3.25.

Over 10,000 sheep and lambs today; close will see many unsold and market 25c lower than opening.

Bishop, B. & H. sold Sullivan P. Co. 12 lambs av 55 at \$5.50, 14 do av 110 at \$5.35, 11 sheep av 100 at \$4, 15 do av 90 at \$3.50; to Nagle P. Co. 284 lambs av 75 at \$5.90, 82 do av 85 at \$5.50, 210 do av 85 at \$6, 90 do av 77 at \$5.75, 194 do av 90 at \$6; to Hammond, S. & Co. 17 sheep av 120 at \$3.50, 9 lambs av 110 at \$4.50, 84 do av 80 at \$6, 13 do av 50 at \$5, 43 sheep av 110 at \$3.75; to Fitzpatrick Bros. 15 do av 110 at \$3.75, 21 do av 120 at \$4; to Swift & Co. 216 lambs av 85 at \$6.

Sharp sold Newton B. Co. 10 lambs av 67 at \$5, 73 do av 80 at \$5.50.

Hogs.

Receipts, 2,640. Market 10@15c higher than last Thursday.

Range of prices: Light to good butchers, \$8.15; pigs, \$8.10@8.15; light yorkers \$8.10@8.15.

Bishop, B. & H. sold Hammond, S. & Co. 1,335 av 175 at \$8.15, 415 av 250 at \$8.10.

Roe Com. Co. sold Parker, W. & Co. 341 av 200 at \$8.15.

Spicer & R. sold same 1,175 av 190 at \$8.15.

Sundry shippers sold same 460 av 195 at \$8.10.

Roe Com. Co. sold Sullivan P. Co. 150 av 180 at \$8.15, 60 av 165 at \$8.20.

Haley & M. sold same 360 av 175 at \$8.15.

Friday's Market.

January 20, 1911.

Cattle.

Receipts, this week, 1,747; last week, 1,306. Market 15@25c lower than Thursday's opening.

We quote: Extra dry-fed steers and heifers, \$6; steers and heifers, 1,000 to 1,200, \$5.50@5.75; steers and heifers, 800 to 1,000, \$5@5.50; steers and heifers that are fat, 500 to 700, \$4.50@5; choice fat cows, \$4.50@4.75; good fat cows, \$3.75@4; common cows, \$3.25@3.50; canners, \$2.75@3.25; choice heavy bulls, \$4.75; fair to good bologna bulls, \$4.50@4.65; choice feeding steers, 800 to 1,000, \$4.50@4.75; fair feeding steers, 800 to 1,000, \$4@4.50; choice stockers, 500 to 700, \$4.25@4.75; fair stockers, 500 to 700, \$3.75@4.25; stock heifers, \$3.50@4; milkers, large, young, medium age, \$4@55; common milkers, \$25@35.

Veal Calves.

Receipts this week, 852; last week, 737. Market steady at Thursday's prices. Best grades, \$9@9.50; others, \$4@8.50. Milch cows and springers steady.

Sheep and Lambs.

Receipts this week, 11,278; last week, 8,962. Market 25c lower than Thursday's opening; steady with the close. Best lambs \$5.50@5.75; heavy lambs, \$4.75@5.25; light to common lambs \$4.50@5.25; fair to good sheep, \$3.50@4; culls and common, \$2.50@3.

Hogs.

Receipts this week, 5,343; last week, 5,317. Market 10@15c lower than on Thursday. Range of prices: Light to good butchers, \$8; pigs, \$8; light yorkers, \$8.



I WILL MAKE YOU PROSPEROUS

If you are honest and ambitious write me today. No matter where you live or what your occupation, I will teach you the Real Estate business by mail; appoint you Special Representative of my company in your town; start you in a profitable business of your own, and help you make big money at once.

Unusual opportunity for men without capital to become independent for life. Valuable Book and full particulars FREE. Write today.

NATIONAL CO-OPERATIVE REALTY CO.

E. R. HARDEN
President

1612 Marden Building
Washington, D. C.

"THE DAMNING OF JONES."

The Implement Trust says: "Dann JONES and out of business with him" because he is the only man who dares to sell you a warranted take-it-home-and-try-it-before-buying-scale of any size or kind at the dealers price. Money talks and your money is as good as any dealers' and your credit better. Send for my offer and their reason for "damning Jones."

"JONES He Pays the Freight."

18 Key St., BINGHAMTON, N. Y.

OATS

NEW SEED OATS. Big money in right kind of oats. Here's your chance. Imported Canadian seed oats, raised on Galloway Brothers' big farm in Canada. New, clean land. Regenerated Swedish Select went 116 bushels to acre; Early New Market 110 bushels to acre. Farmers who bought this seed from us last year raised as high as 75 to 100 bushels in this country, and found out their old seed was inbred and run out. Change your seed. Try some of this new seed. Send for free sample, or 10 cents for large packet. Will also send our free booklet, entitled "Big Money in Oats and How to Grow Them." Galloway Bros.-Bowman Company 642 Galloway Station Waterloo, Iowa

Champion Evaporator

For Maple, Sorghum, Cider and Fruit Jellies

Easy to operate; Saves labor and fuel. Write for descriptive data.

Champion Evaporator Co., Hudson, Ohio

We handle Sugar Makers' Supplies.



Give Number of trees you treat

PIONEER SEEDS

For all kinds of CLOVER and FIELD SEEDS also GARDEN, FLOWER SEEDS and Implements, write to this Old Reliable House. Catalog free and Field Seed price list mailed you on application.

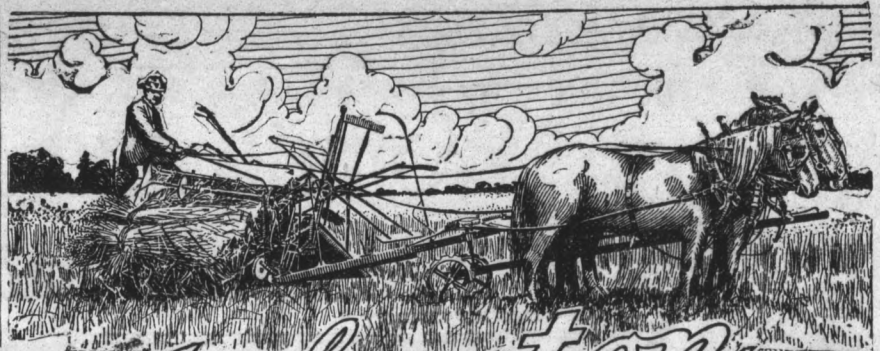
The Henry Phillips Seed and Implement Co., Toledo, O.

Dowagiac Drills & Seeders Are the Leaders THERE ARE MANY REASONS WHY DOWAGIAC MANUFACTURING CO. DOWAGIAC, MICH.

WANTED—First-Class Poultryman.

One who thoroughly understands care and raising of poultry. Must be sober and reliable man with good references. No other need apply. Address 1203 FORD BUILDING, DETROIT.

WARFIELD—Strawberry Plants \$1 per 1000. Sen. Dunlap \$2 per 1000. 100 varieties. Catalog free. J. G. Prestage, Allegan, Mich



Johnston CONTINENTAL BINDER

The reputation and popularity of the JOHNSTON Binder is the result of the many good, reliable features which proclaim its individuality, its meritorious construction, and its durability. The JOHNSTON Binder is all that a binder should be—light, yet strong—built almost entirely of steel. It is simply constructed—no experimental or "freakish" parts—and works perfectly in all kinds of soil and grain. Built in several sizes, with or without tongue truck.

Farmers experience great satisfaction in owning JOHNSTON machines because they are built along quality lines, are durable and economical to maintain.

JOHNSTON machines have been used on two hemispheres for over half a century. They have won the farmer's confidence and are keeping that confidence. A wonderful record.

The JOHNSTON line includes Grain Binders, Reapers, Corn Binders, Mowers, Rakes, Tedders, Manure Spreaders, Spring and Spike Tooth Harrows, Side-Delivery Rakes, Hay



1911 CATALOG

If you are interested in getting a machine that will give you many years of good, faithful work, buy a JOHNSTON—and be sure of results. Send for our new 1911 Catalog, which is profusely illustrated and goes into detail about JOHNSTON quality machines. We also issue a separate book on each machine. All literature sent free.

ADDRESS BOX 105-B

THE JOHNSTON HARVESTER CO., BATAVIA, N. Y.

BUFFALO FERTILIZERS

Correct acidity and sweeten the soil, as well as furnish a full supply of plant food. They give results where others fail.

WE ALSO SELL:

Muriate and Sulphate of Potash, Nitrate of Soda, Acid Phosphate, Tankage, Agricultural Lime.

Agents Wanted in Every Community.

Buffalo Fertilizer Co. BUFFALO, N. Y.

AGRICULTURE

OUR TILE

DRAIN TILE

LAST FOREVER

H. B. CAMPCO., Fulton Bldg., Pittsburg, Pa.

Are Thoroughly Hard Burnt. Made of best Ohio Clay, sold in car-load lots. Also manufacturers of HOLLOW BUILDING BLOCK AND SEWER PIPE.

California Farms

20 acres in the beautiful Sacramento Valley will produce more real profit than 80 acres in Michigan. The climate is perfect for rapid growth and water for irrigation in unlimited quantities is brought to the farms. You can raise anything in the Sacramento Valley that you can anywhere in Michigan or any part of California. Oranges, lemons, peaches, pears, prunes, cherries, berries, in fact all kinds of fruits are raised in abundance. Six crops of alfalfa are produced every year and it pays from \$50 to \$75 per acre. Sugar beets grow prolific. A million dollar sugar beet factory is located nearby. Live stock thrives and dairying and poultry raising is very profitable. These lands are in a thorough state of cultivation and in a settled country, adjoining the beautiful village of Willows, with a population of 3,800, the county seat of Glenn county, 80 miles north of Sacramento, on the main line of the Southern Pacific railroad from San Francisco to Portland. The eastern boundary, is the Sacramento river, which is navigable for many miles north of the company's land, and on the west by the Coast range mountains (only a few miles away), where trout fishing has no equal and wild game is plentiful. Beautiful gravel roads surround every half mile of this land. They are the most productive lands in the world and will increase in value five times within the next ten years. You can buy these lands at \$15 per acre down and 10 years to pay balance. 20 to 40 acres will be all the land necessary to produce large income.

The only place in the world where a man, with moderate means, may be independent, is on the farm. Buy a farm in sunny California, which will make money for you always. Success certain, failures unknown, every advantage, located in a beautiful, settled, prosperous section. If you are not ready to occupy it, you can have it worked by parties there and the profits will pay the balance.

This is positively the last opportunity to buy a farm in sunny California at such reasonable prices. Thousands of people, weary of toiling hard during the summer to earn enough to carry through the winter, will be glad of the opportunity to locate where you find orange blossoms instead of snow and the failure of crops is unknown. SEND FOR OUR DESCRIPTIVE BOOKLETS.

H. L. HOLLISTER & COMPANY, 620 Ford Building, DETROIT, MICHIGAN James Slocum, Michigan Manager

CHOICE VIRGINIA FARMS

Along Chesapeake & Ohio Railway as low as \$15.00 per acre. Rich soil, mild winters, nearby eastern markets. Exceptional Fruit Growing Possibilities. Write for illustrated booklet of farms for sale "COUNTRY LIFE IN VIRGINIA" (160 pages) and low excursion rates

ADDRESS K. T. CRAWLEY, INDUSTRIAL AGT.

C. & O. RY., Box U RICHMOND, VA.



Woman and Her Needs

At Home and Elsewhere

A HOMELY TALK ON A HOMELY THEME.

DON'T try to teach your grandmother to wash dishes," is a saying we hear so frequently as to give rise to the belief that the dear old ladies know just how that job should be done. Perhaps they do, I hope so. But if they do, my experience and the experience of cooking school teachers whom I know leads me to believe that the mothers and daughters have not mastered the simplest detail of this art.

"Out of the 300 girls who come to my classes during the week there is not one I can trust to wash and dry the dishes." This is the charge of one teacher in the Detroit schools. "If one girl removes all the dirt from her dishes she will put them away half dried. Another will leave particles of food sticking in crevices, others slip knives and forks away unscoured, while unpolished, lousy glasses are so common I no longer feel my gorge rise when I see them. It is some work, however, to inspect those dishes every class hour, but I always do and make every girl do her work over again until it satisfies me.

Now what do you suppose their mothers are like? Nearly every one of those girls comes from a family where they keep no help. They surely wash dishes occasionally for their mothers. Are the mothers as careless and untidy as the girls, or are they too weak-willed to make the daughters do their work right?"

I should like to believe that the mothers are careful themselves and negligent with their daughters, but I'm afraid such is not the case. Just at present I am being "helped" by a woman who has been married and has kept house eight years. Dishes come to the table with traces of rinsing water lingering in saucers and on plates, pitcher handles are sticky, basins are thrust in the cupboard with touches of puddings and gravy clinging lovingly to the edges and spots of rust show up occasionally on the carving set. Of course I try discreetly and tactfully to call attention to these trifles, but it is very wearing on the nerves. Especially does it hurt when the man of the house takes his clean napkin and carefully rubs the plates before serving the dinner. And the nervous strain has become so great that next week will find the lady of the house washing her own dishes and the erstwhile queen of this kitchen sending in half-washed dishes to another mistress.

Really, with plenty of clean, hot water,

soap and clean dish towels, why isn't it really easier to wash dishes clean than to leave them half done? When I occasionally peep into a kitchen and see a woman or girl with a quart of cold, dirty, greasy water in a large pan making desperate and ineffectual efforts to remove grease from cold plates and platters, I do not wonder that so many women "just hate to wash dishes."

Many sneers are cast at the cooking schools by those housekeepers who are not friends with new ideas. But at least the cooking teachers are doing their noble best to make this irksome task pleasanter for the girls. And the first step they take is the introduction of system into the chore. Dishes must all be collected first and arranged neatly according to class, glasses, cups, saucers, plates, etc., by themselves in neat piles. Of course, all crumbs and particles of food are carefully removed before the dishes are stacked up. Then the pan is well filled with plenty of hot water, water not hot enough to injure the enamel of the dishes but hot enough to quickly remove the food, a good suds is made and the work begins.

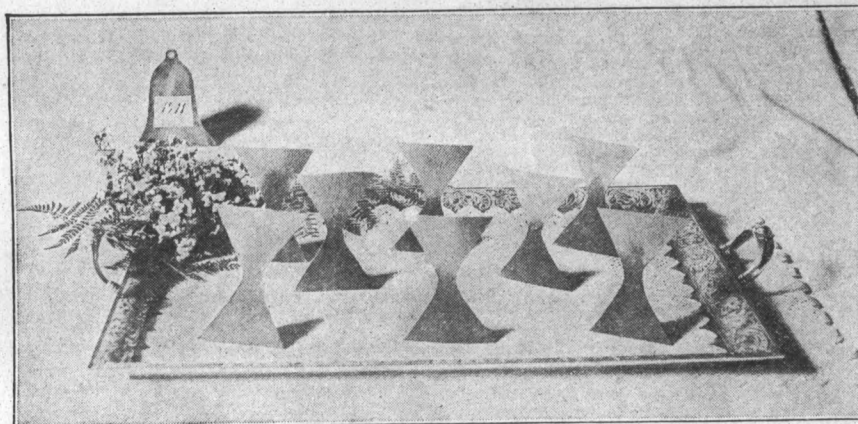
Glasses are washed first, rinsed, and then dried and polished on a cloth reserved especially for them. Then come the cups, saucers and teaspoons, the knives and forks, plates and other dishes, the cleanest being first washed. Every dish is rinsed in hot water and carefully dried and polished. Absolute cleanness and dryness is secured by having plenty of clean cloths. Instead of drying everything from glasses to pans on one cloth, there is a cloth especially for glasses, another for silver and a third for china. Neither is the same dish cloth used for everything, but one is kept for the tins

and frying pans. Then, when all the dishes are disposed of the table is scrubbed, the dishpans carefully washed clean and as carefully dried, and the dish towels rinsed out and hung up to dry for another day. If the water gets cold or dirty during the dishwashing, it is emptied out and clean hot suds procured.

Now who would mind washing dishes that way? Surely it is far easier than the other slovenly method of cold water with floating crusts and grease all over

Fortunes can also be told if desired, by the host, dressed up as "Father Time." Upon leaving the guests he can present each with a wee envelope which he can say is a new kind of sachet powder named after himself which he gives to them all. Much amusement will be shown when these are opened and are found to contain "thyme."

Our illustrations show two pretty fancies for a party any time during January. One shows a "Calendar Cake." A



Hour-glass Boxes Covered with Tissue Paper, Containing Trifling Gifts for the Guests.

the top. By the first method one could not fail to have clean dishes; by the second, only a miracle could bring the dishes out spotless and well dried.

There is a saying that little things show character more than great. If that is so, dishwashing must be a terrible revealer of souls. A motto I should like to see put in practice in this "menial task" as well as in every other branch of housework, reads thus: "Whatsoever thy hand findeth to do, do it with thy might."

DEBORAH.

A JANUARY PARTY.—By Marjorie March.

The New Year can be the motif for a pretty little party any time during the month of January, for it is not necessary that one ask one's guests to "see the old year out" to make this possible. To almost everyone New Year's comes so quickly after Christmas that there is hardly time to grasp the fact that the old year has gone and new calendars are to be hung high and a new numeral grace one's writing paper.

New Year's bells and calendars of every shape, and festoons of crepe paper

or paper moss make dainty decorations any time during January. Even if calendars have been plentiful before Christmas they are more so now, besides being cheaper in the shops, and who can have too many calendars?

Odd little invitations may be sent out on cards decorated with a ship under full sail. It is quite possible that one can find these on picture post cards. On the sail write "1911" and underneath:

"The ship is all ready asail

And we've quite a journey to go

We start out together

Lets hope for fair weather

That joy winds of gladness may blow.
Come aboard 8 o'clock without fail."

An interesting game for the guests to play when all have arrived, would be to have a "yacht race" upon the Sea of 1911. Give each person a paper sail to represent a sail boat with one month of the year written upon it. The "sea" of 1911 can be marked off into twelve sections and some trifling prize can be given to the ones who place their yachts upon the square that their month should come in, according to the calendar.

Little calendars would be dainty prizes or boxes of stuffed "dates" would be good. These can be made very easily. Remove the stones from dates and insert a peanut kernel in each. Then roll the dates in granulated sugar.

Another pleasing game to play is to hide small rounds of cardboard with an abbreviation of one of the months of the year on each one. January, February, March, etc. Have a time limit and let all hunt until as many of the rounds are found as is possible. Then ring a bell to proclaim the hunt off and give some trifling prize to the one whose year will have the most months in it, or to the one who shows the most complete calendar, as preferred.

Another idea is to call upon each person to speak a piece or sing a song illustrating the month in which they were born.

large cake iced with ornamental frosting put on in abbreviation of the different months of the year. Stuffed dates ornament the top of the cake and little flags fly from their tops bearing the date 1911.

The second picture shows a tray with hour glass boxes covered with tissue paper. These can be filled with candy, both top and bottom. Tiny little candies should, of course, be used, as the boxes must necessarily be small. Forget-me-nots, a floral reminder of the year that is past, can grace the tray at the left and a bell-shaped card may be marked 1911. Similar cards are used as place cards, or flowers may be used tied to a simple calendar at each place by means of baby ribbon. It would be a pretty fancy to use 12 different kinds of flowers to typify the 12 months of the year.

I give below some recipes which the hostess will find acceptable during the month of January when cold weather appetites prevail. If one lives near a lake or pond where there is good skating, a festivity described above may be combined with skating upon the pond, having supper after the skaters come in, when the warmth of the cheery dining-room and the pretty decorations will add a spice to viands that are savory of themselves.

A Good Snow Pudding.

Pour a cup of boiling water over a cup of sugar. Let boil two minutes and add a tablespoonful of gelatine that has soaked for a short time in a little water. Take from the fire and stir in some pistachio extract. Beat the whites of three eggs stiffly and pour the mixture over them, beating all the time. Let it chill quickly and put in a pretty dish to cool. It can be decorated with strips of marmalade and candied cherries which make it a pretty sweet.

Potato Fingers.

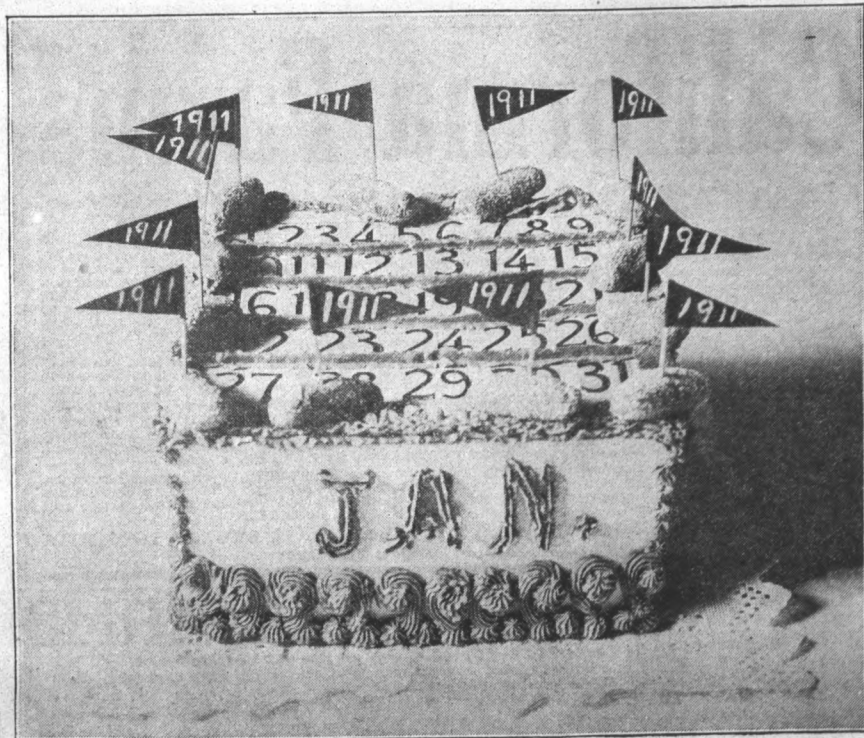
To a pint of cold mashed potatoes add a cup of flour, one teaspoonful of baking powder and two well-beaten eggs. Mix thoroughly, mould into "fingers" and fry in hot fat.

Chowder Toast.

Cut pieces of bacon into small cubes and fry brown. Add two cups of canned corn and two of canned tomatoes, with enough water to make of the proper consistency and cook slowly for half an hour. Season with salt and pepper and pour over slices of well-browned toast.

Baked Date Pudding.

This dainty is particularly suitable for January when "dates" are in order. Cut two cups of dates in small pieces, add two cups of English walnut meats broken fine, the whites of five well-beaten eggs to which are added two teaspoonfuls of



A Calendar Cake for a Centerpiece.

Austin Manufacturing Co., Chicago

The Quickest, Simplest Cough Cure

Easily and Cheaply Made at
Home. Saves You \$2.

This recipe makes a pint of cough syrup—enough to last a family a long time. You couldn't buy as much or as good cough syrup for \$2.50.

Simple as it is, it gives almost instant relief and usually stops the most obstinate cough in 24 hours. This is partly due to the fact that it is slightly laxative, stimulates the appetite and has an excellent tonic effect. It is pleasant to take—children like it. An excellent remedy, too, for whooping cough, sore lungs, asthma, throat troubles, etc.

Mix one pint of granulated sugar with ½ pint of warm water, and stir for 2 minutes. Put 2½ ounces of Pinex (50 cents' worth) in a pint bottle and add the Sugar Syrup. It keeps perfectly. Take a teaspoonful every one, two or three hours.

Pine is one of the oldest and best known remedial agents for the throat membranes. Pinex is the most valuable concentrated compound of Norway white pine extract, and is rich in gualic acid and all the other natural healing elements. Other preparations will not work in this formula.

The prompt results from this recipe have endeared it to thousands of housewives in the United States and Canada, which explains why the plan has been imitated often, but never successfully.

A guarantee of absolute satisfaction, or money promptly refunded, goes with this recipe. Your druggist has Pinex or will get it for you. If not, send to The Pinex Co., 232 Main St., Ft. Wayne, Ind.

When You Buy a Piano you want to know you are getting the best for your money

Cornish

Sent To You For A Year's Free Trial
Cornish Pianos, for real merit, are unexcelled by any other, whatever the price, or name, or reputation.



Three Years' Credit, If Needed,
On This BABY GRAND

Send For The New CORNISH BOOK

The most beautiful piano catalogue issued—it explains things that you ought to know whether you buy from us or elsewhere. The book is yours for the asking. Write for it now.



Save One-third—Buy On The
CORNISH PLAN—Easy Terms
Cornish Co. Washington, New Jersey
Established Over 50 Years

Test "IMPERIAL" 30 an In Your Own Home at OUR RISK

Has EXCLUSIVE FEATURES such as:
Odor Hood—Carries all steam and odors from cooking to chimney. Ash Sifter—Permits sifting ashes right in range. Oven Thermometer—Stone Oven Bottom—Absorbs and holds heat in oven; a fuel saver.

Direct from factory to you at Wholesale Price. Freight Prepaid. Easy Credit Terms if Wanted. 365 Days Guarantee. Write today for Free Catalog and Special Prices. THE IMPERIAL STEEL RANGE CO. 530 State St., Cleveland, O.

WONDER LAMP

The Factories Sales Co., 823 Wyandotte St., Kansas City, Mo., is making an offer to send a lamp free, to one person in each locality FREE to whom they can refer new customers and who will show and recommend this marvelous, new, incandescent 100 candle power oil lamp. Simply send name and nearest express office.

CUSTOM TANNING CATALOG FREE
No tanning charge over \$3.50. Lining samples sent on request. We make coats all complete for \$10.00 out of one 65-lb. hide. No extra charge where you furnish six Muekat for collar. W. W. WEAVER, Reading Michigan.

Prunes are a sort of plum, dried. They contain 3.56 per cent sugar, 1.5 per cent acid, and a purgative principle which makes them a valuable addition to the dietary. In cooking they should be thoroughly washed, and soaked for 12 hours, then stewed slowly in the water in which they have soaked. Raisins are said to save the waste of nitrogenous tissues of the body and to form fat. They contain a large amount of grape sugar, and as they are nutritious and easily carried, they are frequently carried by travelers as a good food. It is claimed that they increase the flow of urine, and so are frequently given to children for this purpose. Currants of commerce come principally from Greece. They are picked from the stalks and dried in the sun, and as the pure food and sanitary packing laws of the United States are not in force in that country, it is advisable to clean them thoroughly before using.

Pineapples contain a vegetable pepsin, which is of great value in aiding in the digestion of albuminous foods. Its value is lost, however, if the juice is scalded, and is best obtained by serving the fruit raw without sugar. The pineapple is valuable in throat trouble and cases of malaria.

Bananas, while containing proteids and fats and sugars, making them a nutritious food, are not a valuable food for children. They are served raw, in salads, in puddings, baked and fried. They are particularly good cut in quarters and sautéed in butter with a tablespoonful of Worcestershire.

Figs, which are natives of the Mediterranean region, are very nutritious, containing from 60 per cent to 70 per cent of sugar. Dates are imported from northern Africa, Persia and Palestine. They form a large part of the food of the Arabs, a fact which speaks for their nutritive value.

A NEW STYLE ROASTER.

If you are thinking of buying a self-basting roaster there is one which seems an improvement over the old style. Instead of having a cover rounding up, this cover is hollowed out so that a convex surface rests over the roast or fowl. The steam condensed runs down to the center and falls directly on the meat. In the other style the moisture runs to the sides and drips around the edges, often never touching the meat or fowl.

A HOME-MADE DRESS FORM.

BY E. J. LYNCH.

For the woman who makes her own dresses the fitting of the waist is the greatest problem. This difficulty can easily be overcome by making a fitting form. Cut from cheap cotton, a waist lining, sleeves and all, that fits exactly. Stitch it together. Put a row of hooks and eyes down the front. Have the sleeves the exact length. Stuff this with excelsior or short straw rounding it out so that it is perfectly even in every part. Cut a bottom for the form of firm cardboard and fasten the "dummy" to it. Cut a collar of limber pasteboard to fit the neck and baste it in at the top. When this is done you have a waist form as useful for all practical purposes as the most modern dressmaker's model, at a cost of a little time and about ten cents.

SHORT CUTS TO HOUSEKEEPING.

Take hard boiled eggs and halve them. Remove the yolks and chop up with a mixture of vinegar, parsley, salt, pepper and butter. Replace them in the whites of the eggs and serve for lunch.—Mrs. Z. I. D.

Black stockings are apt to assume a peculiar greenish look after repeated washings. A simple way of preserving the color is to wash them with soap that is free from soda and to add to the last rinsing water a teaspoonful of good vinegar. The stockings should be wrung out and clapped into shape. A hot iron will destroy the color of stockings, particularly if they are wet.—Mrs. J. J. O'C.

To raise a low table to a convenient height for dishwashing or other work, place the legs on four bricks. A still simpler method where a table of ordinary height is used for various purposes is to place the dishpan upon an inverted milk pan or on a wooden box three or four inches high. Low stoves and tables are conducive to stoop shoulders.—E. E. R.

Leave a salt bag of ashes in the cistern to keep the water in good condition. Fasten a clean salt bag over the spout and save straining the water.—Mrs. Z. I. D.

I Will Make \$72,000 This Year

To accomplish this remarkable record my agents will have to sell thousands of Channing Pianos for me.

If you are not one of these agents you should be, for

My Agents make More Money than I do

They get a good liberal commission on every sale, and take no risk, while I am content with a narrow manufacturer's margin.

It is the Enormous Combined Output that makes my money, and I want more agents.

It costs the ordinary retail piano dealer nearly as much to make a sale as it does the factory to make a piano, but the regular piano dealer has a lot of money tied up in his business. He has to pay store rent, clerk hire and carry accounts besides. My agents invest nothing and have no expense. By virtue of our output and because I sell practically at cash (on 30 days trial) I am able to sell to the customer direct, a

Beautiful Channing Piano for \$185

The Channing is as good a piano as is usually sold at \$300 to \$400. It is of excellent tone—full, rich tone—contains all modern improvements and is guaranteed for 10 years.

Ever since pianos have been made they have been sold on the installment plan at outrageous prices—and that's the way most pianos are sold now. In buying that way you pay for the piano twice over, and help make up losses on bad accounts. That's all that "easy payments" mean. You can buy almost any make of piano, except the Channing, on any terms of long payment you want, but you will pay two or three times the honest value of the instrument, and not get the real piano-value then that you get when you buy a Channing.



You Can't Buy a Channing on Long Time

Any responsible person can have it for 30 days free trial. Put it right in your home, play it every day, have your musician-friends play it, put it to every honest test. If you don't want to keep it you can send it back at my expense, or you can keep it, protected by my 10-year guarantee, for only \$185. Or if you will represent me as agent in your vicinity you can keep the piano and pay me only the special agent's net wholesale price. Some of your friends will be sure to want a piano like yours, and you might just as well get the commissions. Write me at once for trial order blanks, detail description of the CHANNING Piano and agent's terms so your territory can be assigned near your home.

HAROLD E. WATSON, Manufacturer, 39 Jackson Boul., Dept. E, Chicago

Be An Independent Buyer

A Kalamazoo Direct to You

TRADE MARK REGISTERED

"And Gas
Stoves, Too"



Oven Thermom-
eter Makes
Baking Easy

tomers in 21,000 towns. Over 400 styles and sizes to select from. \$100,000 bank bond guarantee. We prepay all freight and give you

—30 Days' Free Trial
—360 Days' Approval Test
—CASH OR CREDIT

Write a postal for our book today—any responsible person can have same credit as your home stores would give you—and you save \$5 to \$40 cash. No better stoves or ranges than the Kalamazoo could be made—at any price. Prove it, before we keep your money. Be an independent buyer. Send name for Free Catalogue No. 113.

Kalamazoo Stove Company, Mfrs., Kalamazoo, Michigan



Spend One Cent For This Big FREE Book

Our Big Free Stove and Range Book gives you our factory wholesale prices and explains all—saving you \$5 to \$40 on any famous Kalamazoo stove or range, including gas stoves. Sold only direct to homes.

Over 140,000 satisfied customers in 21,000 towns. Over 400 styles and sizes to select from. \$100,000 bank bond guarantee. We prepay all freight and give you

—30 Days' Free Trial
—360 Days' Approval Test
—CASH OR CREDIT

Write a postal for our book today—any responsible person can have same credit as your home stores would give you—and you save \$5 to \$40 cash. No better stoves or ranges than the Kalamazoo could be made—at any price. Prove it, before we keep your money. Be an independent buyer. Send name for Free Catalogue No. 113.

Kalamazoo Stove Company, Mfrs., Kalamazoo, Michigan

The "ENTERPRISE" Meat and Food Chopper

The only true Meat and Food Chopper. Cuts by means of a sharp, four-bladed steel knife and perforated plate. Useful in the kitchen every day. Indispensable at butchering time. Easily cleaned. Cannot rust. Strong, simple, reliable.

The "ENTERPRISE" CHOPPER IS USED BY THE U. S. ARMY AND NAVY. Made in 45 sizes and styles for hand, steam or electric power. We also make the "Enterprise" Coffee Mills, Sausage Stuffers and Lard Presses, Bone, Shell and Corn Mills, Raisin Seeders, etc. Catalogue free. Sold by Hardware and General Stores Everywhere.

Send 4c in stamps for "The Enterprising Housekeeper"—a book of over 200 valuable recipes and kitchen helps.

THE ENTERPRISE MFG. CO. OF PA. Dept. 48 Philadelphia, Pa.



No. 8

\$1.75

No. 10

\$2.50



\$225 an Acre from Potatoes

Early potatoes are one of the best-paying crops raised in Southern Alabama, Western Florida, Tennessee and along the Gulf Coast. Good prices are always obtainable and demand for same beyond the supply. Read what a farmer at Summerdale, Ala., has to say on this crop:

"My yield of salable potatoes this year, per acre, was 150 bushels, which sold readily at \$1.50 per bushel, this being the first crop on the land. I followed this crop with sweet potatoes and sweet corn and then planted cow peas. I raised three crops on the land in one year, all of which brought good prices."

Sweet potatoes produce big returns and are usually planted after Irish potatoes have been dug. Two to three hundred bushels an acre are produced and bring from 50 cents to \$1.75 per bushel. Let me send you our illustrated booklets and learn what can be done in a country where fertile land can be purchased cheaply and where there are 312 working days a year. Low round-trip fares 1st and 3d Tuesdays each month.

G. A. PARK, Gen'l Ind. and Imm. Agt., Louisville & Nashville R. R. Room 213 Louisville, Ky.

When writing to Advertisers mention the Michigan Farmer.

GRANGE

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

THE FEBRUARY PROGRAMS.

State Lecturer's Suggestions for First Meeting.

Music led by Grange chorus.
Recitation.
Dairying, I—Making good milk. Talks by a man and woman, followed by discussion.
Use of the Babcock Test.
Three anecdotes concerning Abraham Lincoln.
Public affairs in which we are specially interested: (a) National; (b) State; (c) County; (d) Local.
Stunts, in charge of a Surprise Committee of young people.

Suggestions for Second Meeting.

Opening song.
Reading, "The Worth of a Boy."
Review of a late number of my favorite paper or magazine, briefly reported by a man and woman.
Music, by Grange orchestra.
Home Nursing, I—Hints on care of the sick—in charge of Woman's Work Committee.
Music.
Distinguished guests—some illustrious Americans.
Song.

PRINTED PROGRAMS AND YEAR BOOKS.

In the past year or two a number of the more enterprising subordinate Granges have made a practice of issuing printed programs, on special occasions, at least, while several of the stronger Pomona Granges have demonstrated the practicability of the year book. In some instances the printed programs have been made to cover the meetings for two or three months in advance. In one case a subordinate Grange last year issued its programs quarterly in the form of a good-sized calendar for each quarter. It is not a very great step from this to the year book containing dates and programs of all meetings and other events to occur under Pomona auspices during the year. The advantage of announcing programs several months or even a year in advance, and of having them in an easily preserved form, is coming to be generally appreciated by lecturers. The use of the year book seems the more commendable, for Pomona Granges at least, since experience has shown that for a book that is to be distributed over an entire county it is possible to secure sufficient local advertising to cover the cost of issuing the book. It is hoped that every Grange will at least consider the feasibility of improving the lecture work this year through the issuance of advance programs in some form.

50,000 NEW MEMBERS WANTED.

State Master Hull has set a stake at 100,000 as the total Michigan Grange membership desired at the close of 1911. This means practically the doubling of our present membership. If all Granges in the state might somehow be inoculated with the spirit and enthusiasm in which some are already preparing to bring in their quota of this gain, success would seem to be already assured.

But spirit and enthusiasm, ranging however high, will not alone suffice in any campaign for progress. A membership campaign is no exception to this rule. In order to succeed, it must be organized; it must have definite ends; and, certainly, if the Grange in Michigan aspires to double its membership, it has a definite aim in view. Moreover, it has a job on its hands that calls for most skilled handling.

At least three necessary features must be forthcoming if such a campaign is to succeed, that is, if we win 50,000 new members. In concise terms, the three essential features of such a proposed campaign will need to be system, persistence and stimulus.

1. System. "Given two minutes in which to act, take one in determining how to act," is a rule that rarely leads amiss in matters of this sort. Decide early upon some orderly system for going about the doubling of Grange membership, remembering that definite concert of action will avail more than scattering individual efforts.

2. Persistence. That "no plan will work itself" is a trite saying, I well know, but it is so true that one who really wishes to succeed will not forget it for a day.

3. Stimulus. Have you ever had your attention drawn to the fact "that it takes a certain amount of heat to keep the locomotive warm but it is the extra fire

that draws the train?" Believing the principle, make the practical application in this matter of securing new members for Michigan Granges. Set standards, offer prizes, inaugurate contests, and by all just means stimulate action of the Grange body for this splendid burst of effort which, if successful, will make Michigan the foremost state in the Grange union.

JENNIE BUELL.

SYLVAN GRANGE HOME-COMING.

Saturday, Jan. 14, was a day never to be forgotten by the members of Sylvan Grange, of Oceana Co. It was the occasion of our "Home Coming," and invitations had been issued to all former members whose addresses were known. A very pleasant response to one of these invitations came from Sister Wilson of Iowa, in a paper entitled, "The Home Beautiful." Seldom have we witnessed a larger gathering, and, probably never in its history has Sylvan Grange enjoyed a more profitable meeting.

The "roll call," conducted by the lecturer, consisted of responses from those present to the question, "Why I like the Grange." Bro. Marvin, of Benona Center Grange, installed the officers for the ensuing year and gave a good report of the meeting of the State Grange held at Traverse City.

Deputy State Master D. E. McClure, of Muskegon Co., delivered the address. The presence of Bro. McClure brought back memories of the old days, the days that witnessed his splendid work in the educational field as county commissioner of schools, uniting, by his untiring efforts, home, Grange and school, and thus placing Oceana county in the front rank in those things that pertain to higher living and better citizenship.

The Home Coming will be made an annual affair in our Grange.—W. F. Taylor.

COMING EVENTS.

Pomona Meetings.

Arenac Co., with Bay Grange, at Arenac, Friday, Feb. 17. Geo. B. Horton, state speaker. Installation of officers.

FARMERS' CLUBS

Address all communications relative to the organization of new Clubs to Mrs. C. P. Johnson, Metamora, Mich.

Associational Motto.—

The skillful hand, with cultured mind, is the farmer's most valuable asset.

Associational Sentiment.—

The farmer, he garners from the soil the primal wealth of nations.

CLUB DISCUSSIONS.

Have Reports on Production.—The Looking-glass Valley Farmers' Club enjoyed a regular gala day Jan. 10, when nine sleigh loads, and others to the number of 120, rose early, did the chores and started on the ten-mile ride to the new and beautiful home of their late president, A. B. Niles. Their efforts were well rewarded by the warm welcome and genial smiles of President Niles and wife, and then such a dinner, and such appetites. The gentlemen spent the forenoon in looking over the well-equipped dairy barn, while the ladies sang the praises of the fine lighting and water system in the house. The afternoon program opened with music by the "old folks," followed by a report by J. J. Maier on 20 hogs raised at a cost of \$172 and sold for \$285.60, and a report by Carl Miller on nine acres of corn grown at a cost of \$177, and value at \$288, after which the following officers were elected for the new year: Pres., King Lee; vice-pres., H. S. Bliss; sec'y, F. C. Openlander; treas., C. N. Plowman, with a good strong force of ladies' committees.—Bel Maier, Reporter.

Hear About Western Forest Fires.—The January meeting of the Ingham Co. Farmers' Club was held at the city home of Mrs. Haskell, Jan. 19, with a good attendance. Ion Courtwright, a senior at M. A. C., was present and gave an account of his western trip this last summer. He was a guard in the national forest and helped fight fires. There are three classes of fire—the ground fire, running on the ground; that which takes the underbrush; then the top fire, which is the most dangerous. Fires catch in various ways, such as sun shining on glass bottles, lightning, and locomotives—and some times a burning mass will fly two or more miles. Smoke was intense—could not see the sun for days. He was 19 hours without water, 24 hours without food but had taken the examination for assistant guard and wanted to go back again. Mr. Courtwright is an easy talker and gave some fine descriptions of the country. Miss Mudge gave a recitation "The Fashionable School Girl," and Don Casterlin told of the possibilities of North Dakota. He has taken up a claim near Ambrose—and told of the soil and climate—saying they expected three blizzards a year, each one lasting three days. The country was built upon credit, commercial men expecting to carry the farmer from fall to fall. The government is doing what it can to furnish seed. It was

purely an agricultural state, no manufacturing, and the three main crops are wheat, oats and flax. The United States furnishes seven-tenths of the flax of the world and North Dakota seven-eighths of that. They are now experimenting, trying to make linen from the flax straw. This Club was organized in 1872 and Mr. Casterlin has the honor of being the first grandson of a charter member to give us an address, although we have had recitations from grandchildren of other charter members. After brief memorial talks for Mr. Watts and Mrs. Elizabeth Rowe, the Club adjourned to meet the second Saturday of February with Mr. and Mrs. W. H. Taylor, at Lone Oak Farm.—Mrs. J. E. Tanswell, Cor. Sec.

Do Not Favor County Road System.—The Spring Arbor Farmers' Club met with Mr. and Mrs. Samuel Hunsicker, on Jan. 7. The meeting was called to order by President J. W. Dart. After the opening song, devotionals and reading of the minutes of the two previous meetings, the usual routine of business was taken up until dinner was served. After the chicken pie was disposed of business was resumed. Election of officers came first. Then the discussion of the "County Road System" was taken up. An expression in regards to adopting the "County Road System" was taken, which resulted in a unanimous disapproval. Club adjourned to meet the first Saturday in February with Mr. and Mrs. Charles Forsythe.—Mrs. J. W. Dart, Club Reporter.

Oppose Taxation of Mortgages.—On Jan. 11 the Wixom Farmers' Club held its annual meeting at the Maccabee Hall at Wixom, being entertained by our president and wife, Mr. and Mrs. B. L. Nicholson. It was a very stormy day, but none the less dinner was served to 50 people. At 2 o'clock the president called the meeting to order and the following officers were elected for the coming year: President, B. F. Nicholson, this making ten years he has been our president; first vice-president, D. Gage; second vice-president, J. Bishop; recording secretary, Miss Neva Kinney; corresponding secretary, Mrs. R. D. Stephens; treasurer, C. H. Kinney. The question most thoroughly discussed was, "Taxation of Mortgages." The decision was that we do not want double taxation. An excellent recitation was given by Mrs. H. Richardson, entitled, "The Tramp." Club then adjourned to meet Feb. 8, 1911.—Mrs. R. D. Stephens, Cor. Sec.

Elect Officers.—The Wise Farmers' Club met with Rev. and Mrs. I. Walker at the M. E. parsonage in Clare, Dec. 14, 1910. After a sumptuous dinner the president, J. H. Seeley, called the Club to order. Opening song, America. Prayer by J. Phillips. Words of welcome by the host. Response by S. H. Wilson. This being the annual meeting the Club proceeded to elect officers for the ensuing year: Pres., Jas. H. Hersey; vice-pres., P. M. Loomis; sec., Maggie Phillips; treas., Samuel McJames; organist, Edna Seeley; chaplain, Jas. Phillips. Symposium, "Watchmen, what of the night." P. A. Bennett gave a good talk on the political issues of the day, and J. H. Wilson, J. F. Fatman on reform. Mrs. S. McJames and Rev. Walker on religion. The talks were all good and right to the point. Mrs. Mabel Glover read an Irish story that brought the house down. A vote of thanks was extended to Rev. and Mrs. Walker for their hospitality. Adjourned to meet with Mr. and Mrs. J. H. Seeley in January.

Have Report of State Meeting.—The East Otisco Farmers' Club met at the pleasant home of Mr. and Mrs. Fred Currey, of Orleans, Thursday, Jan. 5. There were between 35 and 40 present. After a sumptuous dinner was served, the president, A. L. Benedict, called the meeting to order and the election of officers was first. M. L. Howe was elected pres.; C. V. Cooper, vice-pres.; Miss Edna Nummer, sec.; Mrs. M. L. Howe, cor. sec.; S. G. Chickering, treas. There was a very interesting report of the State Association of Farmers' Clubs at Lansing, by the delegates, Mr. and Mrs. John Kohn, and a reading by Mrs. Emory Chickering, which was good. The next meeting will be at the home of Mr. and Mrs. John Kohn the first Thursday in February.—Mrs. M. L. Howe, Cor. Sec.

Discuss Advantages of Farm Life.—The Twentieth Century Farmers' Club met in January with Floyd Dancer and wife, with a good attendance of both members and visitors. The secretary and treasurer gave their annual reports, showing the Club on a better financial standing than usual. We were thankful that there were no deaths and a gain of four members and, during the year, an average attendance of 30 or more. Our re-elected president, Wm. Hewlett, gave his inaugural address. The retiring secretary, Mrs. Hewlett, gave words of thanks for the kindness and support given her during the ten years she had held the office and commended to us her successor, Mr. Burr Ashley. The question, "Advantages and disadvantages of country life," was discussed vigorously. Two fine papers were read, written by Mrs. Wm. Hewlett and Mrs. Geo. Dancer, respectively. The difference in public sentiment on this question now and 15 years ago was very noticeable. Not once during the day was there one note of discontent or murmuring because of farm life and duties. All seem proud of their occupation and most of them thought their position in no way inferior to that of their city cousins. Great stress was laid upon the pure air and food of the country and its tendency to produce strong body and intellect, and that it was the place par excellence for rearing children. A committee was appointed to aid in the plans for holding a union meeting of the nearby Clubs at Horton in the near future. Adjourned to meet with Mrs. and Mrs. Geo. Dancer the first Wednesday in February.—Jennie M. Ford, Reporter.

Without a Cook?

Never mind—you can have a good breakfast if there's a package of

Post Toasties

in the house.

This delicious food, ready to serve without cooking, is always welcome and makes

Breakfast a Delight

"The Memory Lingers"

Postum Cereal Co., Ltd.,
Battle Creek, Mich.



UNFERTILIZED FERTILIZED

Nearly Doubled the Crop

One customer writes:

"I have used your fertilizers for the past eight years with good success and consider them the best I have ever used. Have found from repeated experience that when used on corn they nearly double the crop."

Increase your yield of corn. Don't be satisfied if you are not getting 80 to 100 bushels per acre.



will get it for you. The ears will be fuller, the grains better developed.

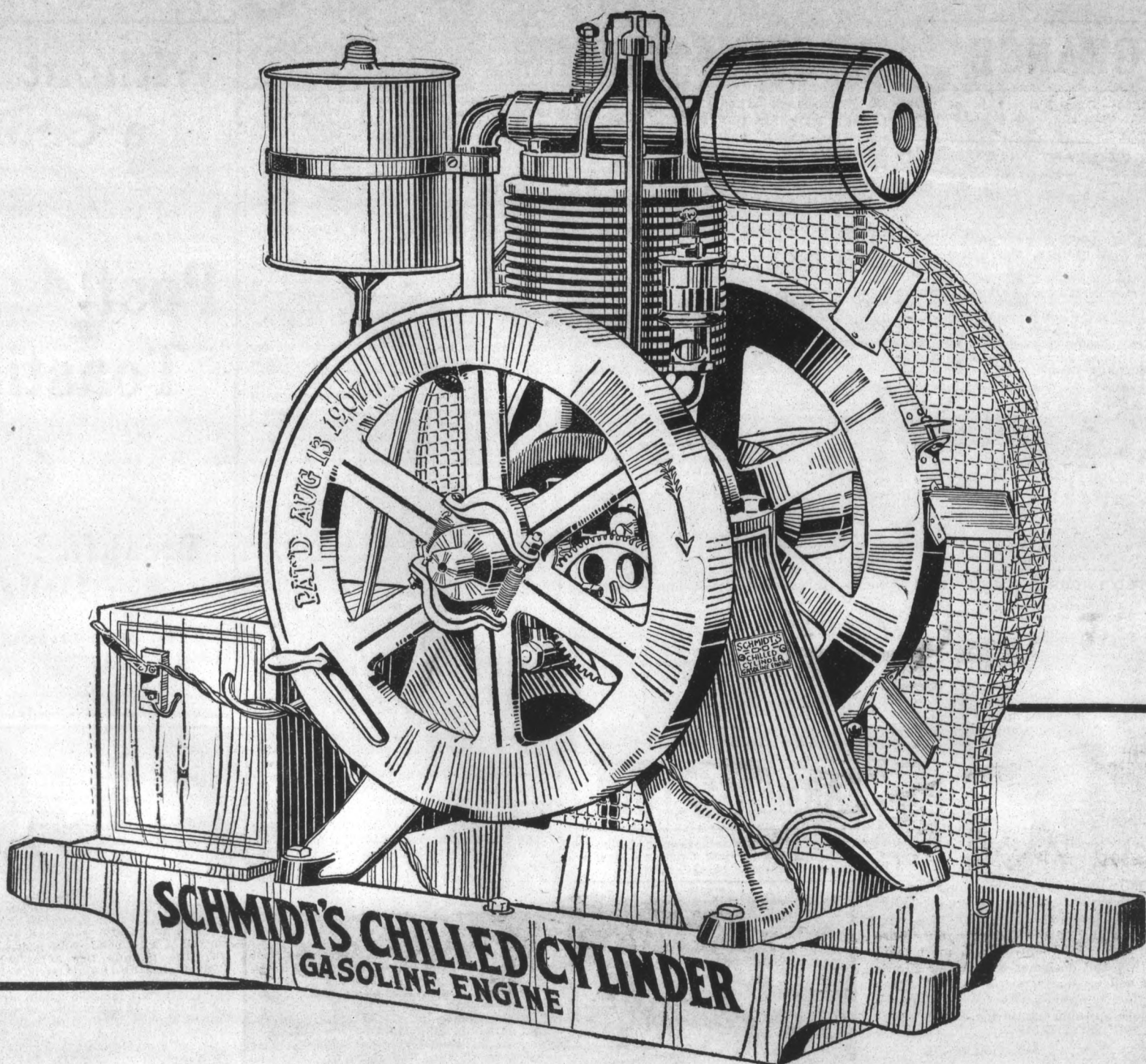
Write for free memorandum calendar book. Contains valuable information on the scientific growing of grains, vegetables, etc., etc.

THE CINCINNATI PHOSPHATE CO.
Cincinnati, O.
Station P.
Agents wanted in every vicinity. An opportunity to make money during odd hours. Write us.

Harness at Wholesale Prices!

Direct from our shops to you. FREIGHT PAID. We Can Save You Money. Write to-day for a copy of our HARNES BARGAIN Catalogue. JOE'S HONEST HARNES CO., CARO, MICHIGAN.

Experienced and Capable, married man work. I. S. Care Michigan Farmer, Detroit.



This Engine Sent

Here is an absolutely free trial offer on our marvelous new gasoline engine. Actually free to you on your own place for ten days. Schmidt's Chilled Cylinder Gasoline Engine, the marvelous new type gasoline engine for general use. The engine with the chilled cylinder. The engine that is revolutionizing the gasoline engine industry. The engine so perfect that we want you to try it free so that you may see how easy it is to run. Can be used in more ways than was thought possible before we perfected this sensational new type engine. The only engine today with a Schmidt process chilled cylinder. It has all our other new improvements and patents also. Easiest to run—most powerful and economical. Lightest 3 h. p. and takes up less room. Needs no foundation.

FREE

Send Us No Money Just a request for a free trial brings the engine to you. Use it ten days just the same as if it were your own. If you are not entirely pleased with it send it back at our expense.

Dealer's Price to you on this great engine if you want to keep it. Easy payments if you want and long time credit without notes, mortgages, or security of any kind. This is our stupendous introductory offer on the best engine made. Five years guarantee on the engine and all parts. We want everybody who has any kind of farm or shop machinery to try this engine while we are making this unparalleled introductory offer. This offer is now open. This offer is so liberal that you can't afford to go without an engine. The terms we offer are more liberal than you can possibly believe until you get all particulars. If this wasn't the best engine made we couldn't make an offer like this. Nobody could afford to make an offer like this with any other engine. We put everything in your hands to decide. Send the coupon or just your name and address and we will send you all particulars and catalogs and valuable book "How to Use Power."

Best Pump Engine With Schmidt's Pump Jack you can run any pump. Run all the pumps on your place. You can move this engine from one pump to another. Two men can carry it around. A boy can haul it on the hand truck.

Have Your Own Power Plant With Schmidt's Chilled Cylinder Gasoline Engine and Schmidt's Farm and Shop Equipment you can fit up a perfect power plant on your farm, shop or dairy at very little cost. Special equipment for farm power plants. Special hangers, pulleys, etc., for farm machinery. You can run your cream separator, churn, butter maker, washing machine, wringer, mangle, grindstone, corn sheller and fanning mill from the same shaft and run a belt out to the well and run a pump at the same time.

"How to Use Power" This book should be in the hands of every farmer and every owner of a shop. It tells things you ought to know for saving work, time and money. This book is sent absolutely free to everybody.

Easy Payments If you like the engine after trying it free you can keep it on easy payments—seven months to pay for it without interest or security. Send coupon and we will tell you all the amazing particulars of this offer and send you the valuable book free, prepaid.

FREE COUPON

Schmidt Bros. Co., Dept. F-3631, Davenport, Iowa

Gentlemen: Without any obligations whatever on me, send me (free and prepaid) your catalogs and all particulars of your introductory free trial offer on Schmidt's Chilled Cylinder Gasoline Engine, also your new book "How to Use Power on the Farm."

Name

Address

**Send
FREE
Coupon**

SCHMIDT BROS. ENGINE WORKS

DEPT. F-3631, DAVENPORT, IOWA