

MICHIGAN FARMER

AND
LIVE STOCK
PUBLISHED WEEKLY.

JOURNAL.
ESTABLISHED 1843.

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

VOL. CXLVII. No. 18
Whole Number 3912

DETROIT, MICH., SATURDAY, OCTOBER 28, 1916

50 CENTS A YEAR
\$2 FOR 5 YEARS

Michigan Milk Producers' Meeting

If the pessimists who are continually asserting that farmers cannot be successfully held together for co-operative undertakings, had been present at the annual meeting of the Michigan Milk Producers' Association, held at the Agricultural College on October 17, they would have been compelled to change their opinion in this matter. Between 500 and 600 milk producers gathered in the audience room of the Agricultural Building at the College for this event. They came early in order to not miss anything which might be of interest to them.

The meeting was called to order promptly at ten o'clock by President N. P. Hull, who introduced John C. Ketcham, Master of the State Grange, as the first speaker. He gave a brief address on the value of an organized effort in the attainment of any desired object. He gave as an illustration the effective work of the organization of railroad employees in forcing their demands for an eight-hour day by standing as one man in their appeal to the government as well as their demands from the railroads. Whether they were right in their contention or not, they took the right way to gain their point, and the milk producers of Michigan are proceeding along right lines in working together.

The next speaker on the morning program was Milo D. Campbell, of Coldwater, who represented his local milk producers' association which effectively enforced their demand for a compensatory price for the product sold to a Cleveland company. He told how the local association sent him to Cleveland to negotiate with this firm. At first the officials of this firm refused to discuss the proposition with him, but once they understood that he represented the united dairymen who supplied their product from this section, with full power to negotiate or withhold the sale of their product, they were ready to talk business and made a satisfactory contract for future months.

Prof. Anderson, of M. A. C., was the next speaker on the program, and told the assembled milk producers something of the methods which were followed by the College in arriving at the cost of milk production in the different sections of the state where surveys had been made. State Director of Markets James N. McBride was the last speaker at the morning session and gave interesting information on general market conditions, particularly the demand for tinned or condensed milk, purchasers for which had sought information from him as to where their needs could be satisfied.

At the opening of the afternoon session President Hull gave a brief report of the activities of the organization since its inception last May. Mr. Hull told how the directors elected at the May meeting had after thorough consideration concluded that the membership fees of the association would not provide adequate finances for its successful conduct, for which reason the

guaranty fund proposition was adopted after careful consideration, and had been successfully carried out largely through the efforts of Director H. W. Norton, and Field Secretary R. C. Reed. Under this guaranty plan between \$8,000 and \$9,000 was quickly subscribed to this guaranty fund, thus insuring the perpetuity and success of the organization. The action of the directors in proposing a price of milk for the ensuing year averaging \$2.00 per hundred during seven months and \$1.60 per hundred for five months was explained by President Hull to be the best judgment of the directors under conditions which prevailed at the time the price was made as to what the milk producers of the state could take for their product and still make a reasonable living profit.

The fixing of the first of November as the date when these price demands

organization every day during the year than the entire campaign had cost to date, which he thought a pretty good return on any investment.

Mr. R. C. Reed, field secretary of the Milk Producers' Association, was next called upon for his report. Mr. Reed related some of the facts which ultimately led up to the organization of the Michigan Milk Producers' Association which really grew out of an attempt of the milk producers of the different sections contributing to the supply of the Borden condenseries undertaking to get a conference with an official of that company relative to the making of a price for their product last year. Mr. Reed stated that after much delay a representative of this company finally appeared before the representative of the milk producers and advised them to go home and attend to their own end of the business

households had shown in this regard. He reported 80 active local milk producers' organizations and a total membership of 4,000 in the Michigan Milk Producers' Association. Mr. Reed congratulated the members of the association upon the fact that in no case where a campaign had been made for a compensatory price had failure been made, and that in no case had it been necessary to hold up the supply for a single day.

Following the report of Secretary-Treasurer S. H. Munsell, which showed the organization to be on a sound financial footing, Mr. W. J. Kittle, secretary of the Chicago Milk Producers' Association, was introduced and told the story of the activities of that organization and their success in securing a compensatory price for the milk produced by their members. Space will not permit us to dwell upon that story in this issue. It will be told in an abbreviated form in a future issue.

Reports of committees appointed earlier in the day were next in order. The following resolutions were reported by Chairman Ketcham of the resolutions committee and unanimously adopted by the organization:

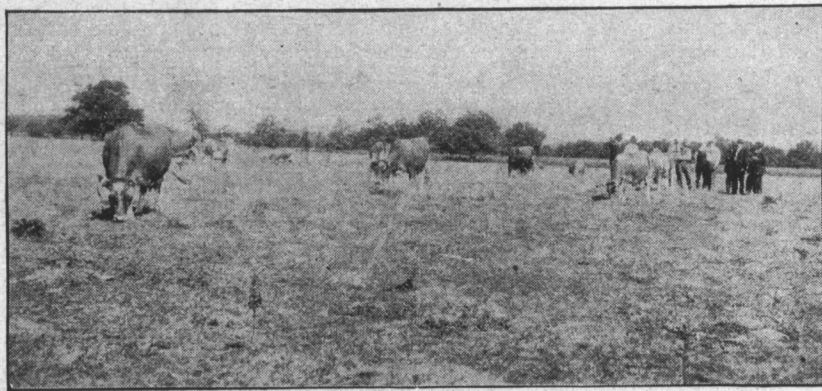
The milk producers of Michigan, having carefully studied and considered the various problems pertaining to their business are brought face to face with serious economic questions that threaten its existence. The importance of the dairy industry to the state and the high rank of dairy products in our schedule of foods demand that the business of milk production shall be profitable and that the call for high-grade dairy products shall be met. The Michigan Milk Producers' Association, with a desire to meet its problems in a spirit of fairness, presents to the public the following conditions that are confronting its membership.

1. Milk and its products furnish one-sixth of the food used by man.
2. It supplies a larger number of food units for its cost than any other animal food.
3. Investigation, widely scattered, shows that the cost of production has increased, while the corresponding increase in price received for milk products has been small. Feeds have advanced 30 per cent, labor 50 per cent, while the price for milk has advanced but six per cent.
4. Higher grade cows, increased capital, stiffer sanitary requirements by boards of health, have materially added to the cost of production.
5. While milk has advanced but six per cent in price, beef products have advanced 60 per cent and pork the same. If price re-adjustments are not made to place the production of milk on a more profitable basis, it is easy to see the inevitable trend of the business in Michigan.

We affirm the justice of the action recommended by the directors, viz: an average price of \$2.00 per hundred for 3.5 per cent market milk for the six months, beginning November 1, 1916. This price is now being paid at points in this state, and is an average of less than four cents per quart.

We further recommend that future prices be made a subject for contract April, 1917, and that no contracts be made for a period of less than six months. We urge the Association to produce a standard milk contract with adequate provision for a square deal in the use of the Babcock test.

We endorse and commend the work
(Continued on page 413).



Michigan Farmers Visiting Wisconsin Dairy Farms. (See Page 402).



should be enforced and in aiming to first establish a satisfactory price in the districts where large condensing establishments were operated was due to the fact that in their investigations the directors found that the price of other market milk was largely based upon the price paid by these establishments which are the largest single users of raw milk, consequently it was deemed that this was the proper place to begin a campaign for better prices. Mr. Hull congratulated the members on the fact that the condenseries had met the price fixed for November 1 and declared that the milk producers would profit more from the work of the

by eliminating their poor cows and adopting better dairy methods and they would continue to attend to their end of the business. Mr. Reed emphasized the fact that the directors sought to enter upon a constructive campaign and build for the future as well as the present success of the organization, the adoption of the guaranty fund plan of financing the organization being the outgrowth of this idea.

He commented upon the liberality with which common dairymen, as well as breeders of pure-bred stock had contributed to the guaranty fund, and particularly upon the great loyalty which the women of the dairy farm

The Michigan Farmer

Established 1843.

Copyright 1916.

The Lawrence Publishing Co.

Editors and Proprietors

39 to 45 Congress St. West, Detroit, Michigan
TELEPHONE MAIN 4525.NEW YORK OFFICE—381 Fourth Ave.
CHICAGO OFFICE—604 Advertising Building.
CLEVELAND OFFICE—1011-1015 Oregon Ave., N. E.
PHILADELPHIA OFFICE—261-263 South Third St.M. J. LAWRENCE.....President
M. L. LAWRENCE.....Vice-President
E. H. HOUGHTON.....Sec.-Treas.A. R. WATERBURY.....Associate Editor
BURT WERMUTH.....Associate Editor
FRANK A. WILKEN.....Associate Editor
ALTA LAWSON LITTELL.....Associate Editor
E. H. HOUGHTON.....Business Manager

TERMS OF SUBSCRIPTION:

One year, 52 issues.....\$0.50
Two years, 104 issues.....1.00
Three years, 156 issues.....1.25
Five years, 260 issues.....2.00

All sent postpaid.

Canadian subscriptions 50c a year extra for postage.

RATES OF ADVERTISING:

40 cents per line agate type measurement, or \$5.60 per inch (14 agate lines per inch) per insertion. No advt. in series for less than \$1.20 each insertion. No objectionable advertisements inserted at any price.

Mem. Standard Farm Papers Association and Audit Bureau of Circulation.

Entered as second class matter at the Detroit, Michigan, postoffice.

DETROIT, OCTOBER 28, 1916

CURRENT COMMENT.

A Rural Credit Swindle. Recent advices from Washington indicate that a land bank swindle, so-called, is being exploited by a syndicate with headquarters in Kansas City. According to this information this swindle is being conducted through agents who are said to have secured large sums of money fraudulently from farmers in Kentucky through their operations. The Federal Farm Loan Board is taking steps to prosecute the offenders in this case. In every case where a transient agent makes propositions looking toward the securing of loans through federal land banks the incident should be promptly reported to the Federal Farm Loan Board at Washington, D. C., as there are no authorized agents of this kind.

The Federal Farm Loan Board is now holding in the southern states hearings similar to those held in the northern states during the past months relating to the location of the federal land banks. Recent advice is to the effect that these hearings will be completed and the banks located by the first of next year, after which the machinery created by the Rural Credit act will be placed in operation at the earliest possible date.

Numerous inquiries are daily coming to this office relating to the possibility of securing farm loans from this source. According to the provisions of the Act, the only method by which loans can be secured through the federal land banks during the first year of the operation of the law is through National Farm Loan Associations organized by ten or more farmers desiring to make loans in an aggregate amount of \$20,000 or more. Provision is made in the Act for the appointment of existing banks or trust companies as agents for the making of loans in localities where the organization of such national farm loan associations is impractical after the law has been in effect for one year.

As previously noted in these columns literature will be sent upon application to the Federal Farm Loan Board at Washington, D. C., giving full information relating to the organization of national farm loan associations by ten or more farmers of any section who desire to make loans through this channel.

The Milk Producers' Campaign.

The report of the annual meeting of the Michigan Milk Producers' Association, which appears in this issue, should be a matter of inspiration as well as congratulation to the dairymen of Michigan. The members of the organization are to be congratulated, not only upon the liberal manner in

which this organization has been supported by pledges to the guaranty fund and the general loyalty of organized milk producers throughout the state, but as well upon the fact that the work of the organization has been so well directed by its officers. The re-election of these officers at the recent meeting is a mark of general appreciation of their work by the milk producers.

The real work of any organization of this character must be done by a few men who are chosen to represent the interests of the entire membership. The men who were chosen at that meeting to act for the milk producers' organization another year still have a strenuous task ahead of them, and the members of the organization may rest assured that this task will be performed to the very best of their ability. Fortunately they bring to it a degree of experience and judgment which is superior to that of the average farmer. They can be counted upon to meet every situation which may arise in a manner calculated to serve the best interests of the milk producers of the state, and they are entitled to the loyal support of every milk producer, even if individual opinion should at times be at variance with their official acts. It is only by such support and co-operation from individual milk producers that the campaign so auspiciously begun can be carried to successful completion. To this end the dairymen of every section of the state who are not already organized into local associations should interest themselves in effecting such an organization at the earliest practicable date.

The purpose of this organization as previously set forth is three-fold, viz: education, legislation and co-operation. A fair beginning has been made along one of these lines, but the association has only just begun to demonstrate its usefulness and has not in any sense accomplished its whole purpose. If this organization is to work the greatest good to the dairy industry of the state, its work must progress along these several lines without interruption, supported by the continued zeal of its membership.

Farmers and Anti-Trust Laws.

The question has been raised—whether farmers acting together in the sale of their products to maintain a compensatory price violate the anti-trust laws of the nation or state by their acts. This question would seem to be effectually settled by the fact that the Clayton amendment to the Sherman anti-trust law specifically exempts agricultural organizations not organized for profit and not having capital stock. While it was declared by many at the time this law was passed, that farmers were exempted from its provisions the better to enable the exemption of labor organizations, the exemption of farmers' organizations of the class named would seem to be based upon sound theory.

If the price of a product increased to a consumer operates to bring about an increased profit to the producers, a stimulation of production will be thereby effected. If, on the other hand, the profit accrued to a selling agency or distributor for the benefit of those who held stock in such agencies or acted as distributors, this would tend to discourage rather than increase production. This being true, any increase in the price of a product due to the co-operative action of producers would ultimately be subjected to the economic laws which govern the price making on a competitive basis, as competition in the production of such products would immediately be stimulated. This, then, would appear to be a valid reason for the exemption of farmers' organizations of this class from the operations of the national anti-trust law.

Again, the Supreme Court of the United States in a much discussed and often criticized decision, has construed the law to be operative only in

cases where an unreasonable restraint of trade has occurred. Certainly it is not unreasonable for producers to act co-operatively in the selling of their product, in order to secure a price which will compensate them for the cost of production and afford them a reasonable living profit above such cost. So long as farmers' organizations do not attempt to fix prices for their products above such a reasonable figure, they would not be subject to the operation of the national trust law under this ruling. As a general rule, federal rulings regarding criminal laws are followed in the administration of state laws. There is thus no apparent occasion for a criticism of the action of the Michigan Milk Producers' Association or the Michigan Bean Growers' Association in attempting to sustain prices for their products at a figure which will reimburse them for the cost of production and allow them a reasonable, living profit.

Right in this connection, however, a word of caution to the more radical members of these and other producers' organizations will not be out of place. As above noted, increased prices for agricultural products of any kind will have a natural tendency to increase production. Changed conditions may also tend to decrease the cost of production in future years just as changed conditions have tended to increase the cost of the product at the present time. In that event, it will be necessary for producers' organizations who seek to have a voice in the fixing of prices of their products to take cognizance of the operation of economic laws and not attempt to maintain prices above a point which will afford them a reasonable profit above the cost of production, since their efforts would be doomed to failure and their industry injured rather than benefited by any other course.

For this reason the question of the cost of production should be carefully studied by every farmer who makes a specialty of producing any commodity. Accurate knowledge of this kind is essential to successful co-operative selling by farmers just as truly as it is essential to the successful conduct of other lines of business which lend themselves readily to corporate management.

The National Dairy Show.

The tenth annual dairy show, held under the auspices of the National Dairy Show Association, staged at Springfield, Mass., October 12-21, was the greatest in both membership and number of exhibits of any show yet held by the Association. The total paid admissions for the ten days exceeded 250,000, with 35,000 present on the opening day and a large attendance right up to the closing day. There were exhibited 873 cattle from 20 different states and Canada. The distribution of the exhibits was wide, being fairly representative of the territory east of the Rocky Mountains. While in point of numbers the eastern states contributed the bulk of the exhibits, the high honors went largely to the middle west. Five breeds were represented in the exhibits, with numbers ranging from 98 to 272.

The machinery and dairy equipment was large and in every way a fine demonstration of the manner in which invention and manufacture has kept pace with the development of the great dairy industry. The dairy products show was the largest and best ever held by the association. The educational features included a students' judging contest, a demonstration of the varying cost of producing dairy products from good and poor cows, a domestic science demonstration covering several subjects of interest to visitors, and a boys' and girls' club exhibit. Owing to the national character of this event and the interest which will be taken by Michigan dairymen in its features, a complete report of same will be published in our next issue.

HAPPENINGS OF THE WEEK.

Foreign.

The European War.—The central powers are continuing their drive against Roumania. In the province of Dobrudja they have pushed back the Russian and Roumanian armies over the whole front. In the Transylvania mountains the Teutons are also meeting with success, notwithstanding the desperate fighting of the defense. The Serbs continue their advance toward Monastir and their successes are so threatening established lines of communication that large forces are being rushed to that section by the central powers to check the advance. British troops have added to their gains in the Somme district near the Ancre river. The Austro-German troops attacked the Russian positions southeast of Lemberg, causing the latter to fall back a short distance. No further engagements in Galicia or in the north are chronicled in recent reports. David Lloyd-George of England prophesies that the war will approach a conclusion in the spring or more probably in the summer of 1917. It is reported that the Belgian army has been thoroughly reorganized and is now ready to operate with the British and French along the western front.

Last week a battle between Gen. Carranza and Gen. Villa's forces occurred at Palomas near Chihuahua city. Both sides have claimed a victory. Gen. Ozuna, considered the most loyal of Carranza's commanders was killed in the battle.

It is announced that Gen. Carranza is making his campaign for the presidency of Mexico on the premises that the country should not be governed by decree but according to statute of law. The new constitution for which he is laboring he believes will provide for contingencies such as have arisen in recent years and make government by statute possible.

A cargo of foodstuffs and clothing valued at \$700,000 will be sent, probably this week, from New York to Beirut, Syria, for the relief of refugees. The United States has donated the use of a collier for carrying the provisions.

The total wheat harvest of the world is estimated by the International Agricultural Institute as seven per cent below the average and 25 per cent below last year's crop. The Institute's report includes for the first time since the European war began, an estimate on the crop of European Russia, which it places at 20 per cent less than that of last year.

The Austrian premier, Count Karl Stuergh, was assassinated recently by a Socialist leader who gave as a motive for the act that the premier refused to convene the Austrian parliament.

Japan, and possibly Russia, Great Britain and France are gathering evidence as a basis of protesting against the action of the Chinese government in awarding a contract for the reconstruction of the Grand Canal in Shantung province to an American firm. These countries claim that such action is in violation of previous agreements between China and these powers.

National.

Three vessels were lost on Lake Erie during the terrific storm of last Friday and probably 27 members of the crews were lost with the vessels.

Towns in southern California were shaken by two earthquake shocks last Sunday. While no lives are reported lost, considerable damage to property resulted from the disturbance.

The new Engineering Hall now under course of construction at the Michigan Agricultural College, will be completed about January 1. The College reports on a variety of winter barley that will stand our climate and has produced here a yield of 59.3 bushels per acre.

A survey issued by the District Attorney of New York City, places the number of persons in the American metropolis who are addicted to drug habits, at 200,000.

The new super-dreadnaught Arizona was officially commissioned at the Brooklyn navy yard Tuesday of last week. This great fighting vessel requires a complement of 53 officers and 950 men.

Nine prominent cattlemen of western Nebraska, and a boy, lost their lives in a collision between two sections of a heavy stock train near Bertrand, Neb., recently.

Had Fine Luck.

D. D. Morrice, Morrice, Mich., advertising live stock, writes as follows: "Had fine luck with the little ad in the Michigan Farmer. After this I will feel obliged in justice to myself, to take space in the Michigan Farmer, when we have anything to sell."

"We have the best of success with our ad. in your paper. We make 90 per cent of our own sales through The Farmer, sold 17 head this week."—W. Brewbaker & Sons, Elsie, Mich.

Fall Plowing

R EPORTS coming in from different sections of the country indicate that the amount of fall plowing done this year is about one-fifth of what it was last year at this time. It is also estimated that the total crops for this year will not be as great as they were last. We can take this to mean that prices of farm products will maintain a high level until the next crop is marketed. We can also deduce from these statements that farmers will get good prices for their next crop because of the small surplus.

It is further reasonable to assume that a bumper crop next year will not materially lower the high prices.

The dry weather that has continued up to the present time has kept farmers from fall plowing. Now that general rains have softened the soil it would seem that farmers might do all their fall plowing before the weather gets too cold.

Putting off plowing that can be done this fall until the spring may mean a still further curtailment in the crop production of next year. No one can prophesy what kind of weather we will have. It may be wet or it may be a dry spring. If the season happens to be wet as it was last spring the chances are very much against the farmer getting all of his plowing done. If he should, he certainly will not have the proper time to compact the ground into the proper seed bed for spring sown crops.

On account of the wet and lateness of last spring, thousands of acres of good farm land in the United States did not turn the owners one cent in revenues because of their inability to plow them. These patches of land are growing a bountiful crop of weeds. Farmers will be disappointed in the crops they hope to grow on these fields unless they prevent the weeds from getting the start of the crop.

Another phase of extreme importance in plowing this fall is that the ground will be in much better shape for nature to pack it during the winter's freezing. The late fall rains tend to percolate deeper into the ground, thus holding more moisture.

Another benefit of early fall plowing is that the ground has the advantage of being aerated at a time when the air will do the most good. Warmth must be connected with the circulation of the air around the soil particles if the greatest benefit is to be derived.

While it is true that the farmer does severe injury by plowing when too dry, the fall rains that have recently fallen have put the ground in ideal condition for plowing, much better than it has been for years, for the simple reason that there is not too much moisture in the ground to interfere with the proper aerating while plowing. Farmers who take it upon themselves to get into the field as soon as possible and plow the ground while it is in the present moist condition, will be greatly surprised at the quality of the crops they will grow on this land next year.

Farmers who fall plowed last year when the ground was in the wet condition, complained that their crops this year were lighter than they should be. This can largely be accounted for on account of the excessive moisture in the ground last fall, winter and spring. It is reasonable to assume that nature could not make available the proper plant food when it was needed, on account of the superabundance of moisture. It is also reasonable to assume that much of the nitric acid necessary in the formation of plant food was washed away and formed into other compounds, making it unavailable for the plants.

Farmers who plow this fall will not have this condition to meet. If they plow deep, bury all trash, stubble and weeds at the bottom of the furrow, they will be doing themselves the greatest possible good that can be

done. They need not fear that bumper crops next year will eat into their profits because there will be a demand for all they can grow.

Indiana.

B. A. C.

FALLOW FIELD FARMING.

A characteristic system of fallow-field farming, which might be called the "idle field system," is described in Farmers' Bulletin No. 716. The bulletin thus sets forth the evils of such a system, as practiced on certain sandy-land areas in northern Indiana, southern Michigan, and northwestern Ohio:

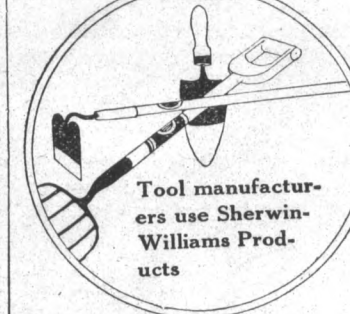
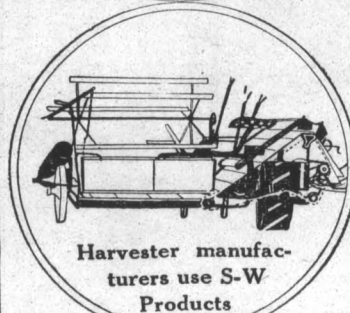
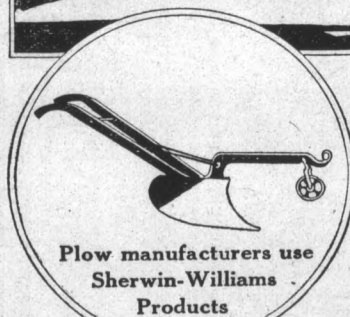
"Fields left idle to grow up in weeds for one or more years are of very common occurrence throughout the area. When the fertility of the soil reaches an extremely low point these fields are turned out to allow nature to improve them by whatever increase of vegetation may accumulate from the growth of weeds, grass, etc. Very often it happens, however, that the soil has been so reduced in fertility that even the weeds can make only a scant growth. The results at best are not good. Notwithstanding this, when the time arrives to put in another crop, the weeds, old stalks, etc., are plowed under, and generally either wheat or rye is sown. After the wheat or rye is taken off, the field is left idle till the next spring, when it is plowed and corn is planted. Thus the cropping system is wheat and corn or rye and corn, with an occasional period of one or more years for the fields to remain idle or uncropped.

"Such a system is unprofitable in that the fields yield no income during the idle period and the slight increase in yields which results from the land remaining fallow for a time does not compensate for this loss. Aside from incurring a loss in this way, an opportunity is missed for growing a crop of soy beans or cowpeas which would be profitable and at the same time improve the soil conditions much more rapidly than this period of inactivity can possibly do. While there is an apparent increase in production by allowing a field to remain idle, there can be no permanent improvement in a cropping system built principally on this idea.

"In the long run such a system is very harmful. As generally managed it is one of the surest ways to reduce the productiveness of a farm that can be devised. Throughout the hot growing season there is little protection for the uncropped fields. Because of the sandy nature of the soil in this section much heat is absorbed and a greater proportion of the organic matter remaining in the surface is burned out and rapidly consumed. Much of the nitrogen liberated by this process is lost because there is no crop on the land to take it up and use it. These sandy lands are very deficient in nitrogen and organic matter already, and it takes special effort in this direction to keep pace with the amounts consumed in ordinary cropping. With the present system this condition is rapidly made worse instead of better. The soil still further loses its power to retain moisture for crop growth and has a greater tendency to crust after rains. The idle field gains little and loses much."

As a substitute for this system the following plan is suggested: "Rye and inoculated vetch seed, or rye alone, should be sown in the corn fields about the middle of August. These crops should be allowed to grow until May 25 of the next season, and then should be plowed under to prepare for sowing a crop of soy beans or cowpeas by June 1. Such a practice does much more toward the improvement of the land, and at the same time yields greater profits."

But victory, unless gained in a certain spirit, (is) no victory; defeat, sustained in a certain spirit, (is) itself a victory.—Thomas Carlyle.



Let these Great Manufacturers Select the Paint for Your Farm

Sherwin-Williams makes paints and varnishes for 25,000 manufacturers. Everything these big users buy is analyzed and tested. The finishes they use must stand up, as they become part of the products on which they have built their reputations. You can bank on the approval which these great industries have given Sherwin-Williams Paint and Varnishes. You can be sure when you use

S W P for your house

that it will last, hold its color, cover well and stay on; that it is worth its price in the protection it gives and the value it adds to your property.

The same is true of

Barn Red

for your barns, corn cribs, silo, fences, etc. It's a durable, weather-resisting paint for rough or smooth lumber. It sinks in, sticks tight and saves repairs.

Wagon and Implement Paint

will add years to your vehicles and farm machinery. It is what the big manufacturers buy and they know what's what.

There is a Sherwin-Williams finish for every farm need. If there is no dealer near you, write direct to us.

Send for Book—The A B C of Home Painting—written by a practical painter and telling how to paint or varnish every surface around the farm.

SHERWIN-WILLIAMS

PAINTS & VARNISHES

Main Office 669 Canal Road, N. W., Cleveland, O.
Sales Offices and Warehouses in principal cities. Best dealers everywhere.
Address inquiries to our main office above or to our branch office:
Chicago, Pullman Station.



WINCHESTER

RIFLE AND PISTOL CARTRIDGES

When you go to buy cartridges for your rifle or pistol, you want to consider that you're buying something "sight unseen." In other words, "you don't know what's in 'em." That's the very reason why you should buy a reliable make. The reputation of Winchester cartridges is sufficient for you. They are always reliable. They are made for all kinds of rifles and pistols, and you'll be sure to get this celebrated make if you ask for

THE **W** BRAND

AN ALFALFA STORY.

Mr. Victor Maki, a Finnish farmer living four miles south of Republic on the Michigamme river road carefully manured, plowed and harrowed an acre of ground last spring and thoroughly worked four tons of crushed limestone into it. On the sixteenth of June this acre was seeded with 15 lbs. of Montana grown alfalfa seed without a nurse crop. The alfalfa grew beyond all expectations and began to blossom and Mr. Maki cut it on the seventh day of August, just 52 days after seeding and the writer visited Mr. Maki on the tenth day of August and while in the alfalfa field counted 44 cocks of alfalfa hay. It was estimated that the cocks would average about 50 pounds each, making the crop go at least a ton. The stand was almost perfect and free from weeds except a very small area next to the river bank where it seemed a little too wet and the spurry grass was taking advantage of the moisture, as the alfalfa was not able to do so. This is the first place of alfalfa grown in Republic or vicinity to be cut and harvested and the writer believes it will be hard to beat it in any vicinity in Michigan or elsewhere.

Marquette Co. L. R. WALKER.

COMMERCIAL VARIETIES OF ALFALFA.

The increased interest in varieties of alfalfa and the need for the farmer to know whether a certain variety is suitable for his neighborhood have led to the publication of U. S. Department of Agriculture Farmers' Bulletin 757, Commercial Varieties of Alfalfa. In this bulletin of 24 pages, the authors, R. A. Oakley and H. L. Westover, of the Bureau of Plant Industry, discuss in detail the characteristics and habits of the nine fairly distinctive commercial strains of alfalfa now recognized in the United States, together with their adaptation to climatic conditions. Some give the best results in the north and northwest, while others succeed only in the south and southwest where the winters are mild. Wherever possible, the authors have indicated methods of distinguishing the seed of one variety from another.

"Common alfalfa" is a term that is used to include all of the alfalfas that are not clearly of hybrid origin or that do not have distinct and uniform varietal characteristics, such as the Peruvian and Arabian varieties. Numerous strains are coming to be recognized in the "common" group. They are often designated by the geographic name of the locality where grown, as Kansas-grown alfalfa, Montana-grown alfalfa, and many others, or by some term descriptive of the conditions under which the crop has developed, such as dry-land alfalfa, irrigated alfalfa, and non-irrigated alfalfa.

Strains developed in the south usually produce larger yields than those developed in the northern states, but they are less hardy. The "dry-land" alfalfa seed offered on the market has so far failed to show any noticeable superiority in ability to resist drought over that grown with an abundance of moisture.

The commercial Turkestan alfalfa has been tested quite thoroughly in all parts of this country, and in nearly every case has proved inferior to American-grown strains.

The leading commercial strains of variegated alfalfa are the Grimm, the Baltic, the Canadian variegated, and sand lucern. With the exception of sand lucern, they have been found more resistant to cold than other commercial varieties or strains and are therefore recommended for sections where winter-killing occurs frequently.

Peruvian alfalfa is not resistant to severe cold and can be grown successfully only where the winter temperature is comparatively mild, as in the southern and southwestern states. Under favorable conditions it outyields any other commercial strain.

Arabian alfalfa is not a satisfactory variety because of its tendency to be short lived.

As a result of numerous experimental tests the adaptations of the various varieties and strains of alfalfa have been quite definitely determined.

It is highly advisable that the farmer should learn to distinguish good from poor seed. Plump seed of an olive-green color almost invariably germinates well, while shriveled or brown seed generally germinates poorly. The presence of any appreciable quantity of seeds or other impurities indicates a poor quality of seed.

Owing to the fact that alfalfa does not produce seed satisfactorily under humid conditions, there is little use in trying to grow it for seed in the eastern states.

Breeding work with alfalfa offers great possibilities, but the time and expense involved are so great that a farmer can not afford to undertake it.

LILLIE FARMSTEAD NOTES.

The sweet cornstalks are all in the silo and the 40-foot silo is only filled 28 feet. The other silo was not full of pea vines so this makes us a little short on silage. We will simply have to scrimp some.

One of the corn stubble fields is already plowed, (October 16), and the weeds are out of sight at last. The other field is well started and in a few days more there will be no evidence left that we had the weediest corn fields in 1916 that we ever had. May nothing like it ever occur again.

The potatoes have stopped growing at last. The frost got them. I want to leave them in the ground just as long as I can for they will improve in quality considerably by so doing. It is simply remarkable how such late potatoes will seemingly ripen after the tops are killed by the frost, if they can be left in the ground for several days before harvesting. Of course, it will not pay to leave them too long. There is risk that the ground will get too wet to operate the digger successfully, and certainly we want to get them in before freezing weather sets in. However, we shall continue to plow and let the potatoes go for another week, and run the risk of these adverse conditions. It can't be that we will have freezing weather for some time for as yet we have only had a good frost.

Alfalfa is eight to 10 inches high for the fourth time this season, and it is still growing rapidly. There will be a fine covering for winter protection. I am planning now to top-dress the alfalfa this winter with manure from the stables. Otherwise we would have to draw the manure more than half a mile to the field and I expect to have the field plowed this fall so that it will be very difficult to spread the manure this winter. Two of the fields close to the barn are now in wheat and they do not need stable manure anyway. Two other fields were manured last winter. The alfalfa has received no stable manure for two years and under the circumstances I think this is the place to put the stable manure this winter. I won't object to putting it on good and thick. If conditions get so we can not use the spreader we will spread by hand. A plant that will produce three good crops in one season year after year is worth feeding liberally.

COLON C. LILLIE.

HOUSE THE TOOLS.

Now that the season's work is about completed the farm tools should be housed for the winter. Note should be made of any repairs that are needed in order that same may be ordered and in hand when needed. In packing away the tools it will save time to so place them in the tool shed that those first needed will be accessible without moving the others. This is a job which is likely to be neglected until a more favorable time, but neglect does not pay.

ATKINS SAWS

Clean up that Wood Lot

MUCH valuable timber and fuel for this winter is on your place. Now is the time to clear it up ready for spring breaking. It is the time for all repair work on

the farm—for the use of good saws. You can do the work 25% easier than you have thought.

Atkins Silver Steel Cross-Cut Saws cut 25% more timber in the same time

The Atkins "Segment-Ground" blade is thicker on the tooth-edge than at the back, and thinnest at the center of the back. The blade follows the teeth

through the wood without a struggle. It cuts ribbon-like sawdust—does not chew away the wood. The "Segment-Ground" blade is an exclusive Atkins feature.

The Finest on Earth

The Silver Steel is as fine as razor steel, tempered exactly right. It keeps its cutting edge longest—sharpest. Atkins Cross-Cut Saws—or any Atkins saw, and there is one for every purpose—are superior to any others in Material, Temper, Grinding and Polish. If your dealer won't supply you let us know.

FREE OFFER

Send for our valuable booklet, "The Saw on the Farm." Contains information on the care of saws and many short-cuts in farm carpentry, also information about Mill Saws. Every farmer should have one. We will include a strong, handy carpenter's apron, canvas, sewed double stitch, with nail pockets, etc., for fifteen cents in stamps. Send for Free Offer "J"

E. C. Atkins & Company, Inc.

World's Largest Saw Company

Indianapolis, Ind.

AGENTS WANTED

to represent a reliable concern canvassing among farmers in your own neighborhood or elsewhere. No experience necessary. Liberal pay and supplies furnished free to right parties. Reference required. Address, ADVERTISER, CARE THE MICHIGAN FARMER, Detroit, Michigan

KEROSENE ENGINES

Durable, Powerful, Reliable, Massive. Built to last; to do hard, heavy work. Uses Cheapest Fuel. Pull 1/4 to 1/2 horse-power more than rated. 3 Months Trial, Easy Terms. Sizes 1 1/2 to 22 H.P. Easy to start. No Cranking. No batteries. 10 Year Guarantee. Most practical engine ever built. Engine book free. A Postal brings it. THE OTTAWA MANUFACTURING CO., 1361 King Street, OTTAWA, KANSAS.

Wanted Agents to sell Farmers Account Books. Quick Seller Big Profits. Exclusive Territory. Address L. L. Syphers, Fort Wayne, Ind. 46800

The Value of a Garden

MUCH has been written in recent months concerning gardens and gardening. The subject is a pertinent one. Indeed, with the unparalleled increase in the cost of living, the question of a garden grows ever more important. The matter of a garden ought to be of immediate concern, not only to all farmers, but to all owners or renters of a plot of ground large enough to permit of gardening. In the case of the farmer, a garden or the lack of one may, on general principles, be considered as an index of successful or unsuccessful farming. Of course this rule can not be applied without limitations and exceptions, but in general, it will hold true. In the case of the town dweller, a garden is equally an index of thrift and industry.

With the above statements in mind, it is truly astonishing to note in a recent trip through the country, how many farmers ignore either in part or altogether, the value of a garden as a farm asset. In far too many cases, the garden fever which breaks out each spring dies out as soon as the seeds are fairly planted, and the weeds lord it over the spot chosen. If there is any one thing about a farm which makes it appear slovenly and uncared-for, it is a patch of weeds knee high and waist high, over-running a place where the garden ought to have been.

Garden Economics.

In discussing the question of value and advisability of a garden, it takes but a moment, in this age of high prices, to show how the case stands. In a very small spot, asparagus enough for a good-sized family may be grown. To buy this same asparagus at the common rate of ten cents per small bunch, would amount to several dollars, during the season. In a somewhat lesser degree, the same thing is true of rhubarb. The same condition exists in the case of green peas, and in fact, of nearly all vegetables. How often it happens that the successful gardener saves several dollars each summer, by possessing a small patch of early potatoes. These potatoes are sufficient to tide over the time that comes each year, when tubers are high, selling in the markets from thirty to forty or even fifty cents per peck. To a farmer or village dweller, the total value of a vegetable garden during a single summer, amounts to many dollars. When garden sauce is plentiful, less of other things are necessary or required. These same garden products must be had in greater or smaller quantities, during the spring and summer months. Their price now, as compared to a few years ago, is amazingly high. On the other hand, it costs no more to grow them on the farm or in the home garden, than in former years.

The case of small fruit affords another illustration in point: Strawberries at from seven to fifteen cents per quart; red raspberries at from fifteen to eighteen cents per quart; black raspberries at from eight to twelve cents per quart; these prices are not over stated, and represent what is paid these days, for small fruit, by the farmer or small town resident. On a small piece of ground, with a little labor, these berries may be grown and had fresh for table use, in their season. Keeping the Garden in Good Fertility.

From the facts above, it takes only half an eye to see that a good garden is valuable and profitable. On the farm, practically all the expense connected with the garden is represented in seeds and in labor. In town, often the question of fertilizer is added, and makes an important item. Dwellers in small towns, however, may have a fertile garden without much expense in this regard. If you keep a small flock of hens, the fertilizer from this source will go far toward enriching a small garden spot. If you have trees, save every leaf in the fall, and see to it that they find their way ultimately, to the garden. Leaves are nature's fertilizer.

They are worth much in replenishing and renewing the soil. If you have a lawn, see to it that all the lawn clippings not otherwise used, find their way to the garden. Utilize every scrap of material that will enrich your little garden patch, and you will be surprised to find how little fertilizer it is necessary to purchase.

In conclusion, let it be said that there is a certain satisfaction in having your own garden and growing your own vegetables and fruit. These products never taste quite so fine, when paid for in coin. There is a satisfaction, too, in conquering the weeds, in utilizing land that would otherwise be waste, and in helping nature produce the varied and useful products of the average garden. On the farm, the garden is a valuable farm asset. In the small town, it is often half the living of a family during the garden season. In either event, if you have not tried out the proposition, try it, and you will not regret your efforts. J. A. KAISER.

TROUBLE DEPARTMENT.

The Control of Leaf Curl.

The leaves of my peach trees curled up this year and a great many dropped after being affected. What causes this and what can I do to control it? F. G.

The curling of the leaves of your peach trees is caused by a fungous disease called leaf curl. This fungus attacks the tissue of the leaf, produces a reddish colored distortion and destroys the leaf as a starch-producing organ. Because of the loss of this foliage the tree is depleted in vitality and the setting of buds for next year's crop greatly reduced.

The fungus becomes active very early in spring, even before the middle of March when the spring opens early and warm. It attacks the swelling bud and gets into the tissues before the leaf is unfolded. Therefore spraying after the disease is noticed is practically of no value because the spray cannot get at the spores of the fungus. Spraying must be done when these spores are dormant or in their winter stage. Therefore the spraying should be done before the middle of March in ordinary seasons or earlier in seasons which are advanced.

There are a number of fungicides which will keep this trouble in check. The standard remedy used to be copper sulphate at the strength of two pounds to fifty gallons of water. This proved very efficient but it was difficult to tell whether all parts of the tree were covered or not. Bordeaux mixture, made of four pounds of copper sulphate and five pounds of lime, also does good work and is better than copper sulphate because it leaves a mark by which one can tell whether the entire tree has been covered.

Since annual sprayings for scale are necessary the use of a combined contact insecticide is preferred. The best among these are lime-sulphur and Scalecide, a miscible oil. Spraying at any time during the dormant season will give results for both scale and the leaf curl but it is conceded that early spring is best for both purposes.

It is very essential to spray thoroughly to get good results as any bud left uncovered will be likely to develop curl leaf if the season is at all favorable to the development of the fungi.

ANNUAL MEETING OF STATE FRUIT GROWERS.

The Michigan State Horticultural Society will hold its annual meeting at Grand Rapids, December 5-6-7, 1916. This annual meeting is Michigan's greatest gathering of fruit growers and is of sufficient importance to all who derive income from fruit to make it worth their while to attend. Problems of the past season and things which will bring permanent improvement to the fruit growing industry will be discussed. Paste the date and place in your hat as a remembrance of the fact that for those three days you have business in Grand Rapids.

"Any Luck?"

UNLESS you are an unusually optimistic mortal you have the same feeling the rest of us do when you shoulder the old shotgun for a tramp through the fields and woods. You feel that a good bag is apt to be as much a matter of good luck as of good shooting.

You know why, too. Game is scarce. The days of half a century ago, when a hunter never returned empty handed and often shot more than he could carry, have gone.

But not for good. Game farming is remedying the condition. It will remedy it much more rapidly when men like you, with the land and the ability, take a hand and start game farms of your own.

The raising of game birds is not difficult and there is money in it as well as good sport. We will be glad to tell you how to start a game farm and how it will pay you. Write for our book "Game Farming for Profit and Pleasure". It will be sent free on request. You will find it interesting. Please use the coupon below.

How About the Powder?

Every man knows that he can shoot better with his own gun than with a friend's. Most men have a favorite brand of shell they always use because they have confidence in it. But how about the powder?

Do you know what powder is used in the loaded shells you buy? You can find out by looking on the top wad.

It won't do your shooting any harm and it may do it a lot of good if you always use the same powder.

We are probably prejudiced but we know this for certain—results have proved it—you can't do better than to select one of the Hercules Smokeless Shotgun Powders, either Infalible or "E. C.", and stick to it. Both of these powders are of high and uniform quality. You can depend upon them. The next time you buy shells tell your dealer you want Infalible or "E. C." They can be obtained in all standard makes of shell.

Game Breeding Dept., Room 208
HERCULES POWDER CO.
Wilmington, Delaware

Game Breeding Department, Room 208
Hercules Powder Company,
Wilmington, Delaware

Gentlemen:—Please send me a copy of "Game Farming for Profit and Pleasure". I am interested in game breeding from the standpoint of.....

Name

Address

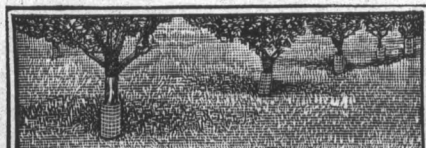
Stop Crop Destruction

Solve the drainage problem. Write for free book and letters from hundreds of farmers telling what they do with the Martin.

THE Martin
D.D. & CO.

Farm Ditcher and Road Grader
cuts ditches, throws up terraces, levels bumps, fills gullies, makes levees, builds roads. All-steel, adjustable and reversible for wide and narrow cutting. 10 days' trial. Money back guarantee.

Owensboro Ditcher and Grader Co., Inc., Box 310, Owensboro, Ky.



The Ounce of Prevention

Prevent injuries to your fruit trees NOW—don't have them girdled and killed by mice or rabbits this winter. Put an inexpensive

EXCELSIOR WIRE MESH GUARD

around each one. Can be set up in a moment and taken off next spring. Galvanized—lasts for years. Write for sizes and prices.

WRIGHT WIRE CO., Dept. T. Worcester, Mass.

WE WANT VETCH. SEND US SAMPLES.
YOUNG-RANDOLPH SEED CO., Owosso, Mich.

Whys and Wherefores of Fall Spraying

is the title of a little booklet, giving seven reasons, official and non-official, why it is the best time to spray. This booklet will besent out by the B. G. Pratt Co., 50 Church St., New York, manufacturers of the well-known "SCALECIDE" at a very early date. If you are not on their mailing list, send them a postal today giving the number of your trees and your dealer's name and you will receive a copy free. Address Dept. 22.

Seeds Wanted

Soy Beans, Cow Peas, Field Peas, Vetch, Sweet Clover, Alfalfa. Edw. E. EVANS, West Branch, Michigan.

LIME

Pulverized lime rock for "sour" soils. Write for LOW PRICES DIRECT TO YOU and we will send sample and full particulars. Write to office nearest you.

LAKE SHORE STONE COMPANY,
Muskegon, Mich., and Benton Harbor, Mich.

Northern Grown Hairy Vetch Seed.
DORR D. BUELL, Elmira, Michigan.

WANTED

to buy Beans, Sweet corn and Field Pumpkin also Vetch and other seeds. S. M. Isbell & Company, Jackson, Mich.

"ROUGH ON RATS" ends RATS, MICE, BUGS. Don't Die in the House. Unbeatable Exterminator. Ends Prairie Dogs, Gophers, Ground Hogs, Chipmunks, Weasels, Squirrels, Crows, Hawks, etc. The Recognized Standard Exterminator at Drug & Country Stores. Economy Sizes 25c, 50c. Small Size. Used the World Over. Used by U.S. Gov't. Pouch on Rats Never Fails. Refuse ALL Substitutes.

WANTED—AN IDEA. Who can think of simple things to patent? Protect your ideas they may bring you wealth. Write for "Needed Inventions" and "How to get Your Patent and Your Money." RANDOLPH & CO., PATENT ATTORNEYS, DEPT. 67, WASHINGTON, D. C.

Mich. Farmers Visit Wisconsin Dairymen

EVERYONE recognizes the educational advantages of travel. To no one is a trip fuller of educational pointers than to the farmer, for he is usually a keen observer. It is not expensive for a group of farmers to get together and go on a tour of inspection and is usually worth many times the cost of the trip. There are scores of communities in Michigan as well as in nearby states where special crop growing, dairying, etc., are carried on in such admirable manner that the seeing of the crops or herds, and having the workings explained, would mean a broader conception—a real vision—to the man from a less highly specialized community.

But this is to be a story of a most delightful and satisfactory trip made a few weeks ago by a group of enterprising farmers from Kent and Newaygo counties, under the direction of County Agents Smith and Blandford, to a portion of the great dairy section of Wisconsin.

The Start.

Some fifty men had promised to go but when the day for starting came only about a third of them appeared. The trip was made by boat from Grand Haven to Milwaukee. They then went out to Waukesha—the capital of the greatest dairy cattle county in America. Two leading dairymen, Mr. Baird and Mr. Fox, furnished automobiles and conducted the party to several of the leading dairy farms. Only very brief descriptions can be given here of a few of the herds visited.

The first farm visited was that of Fox Brothers. They have developed a splendid herd of Guernseys that are housed in excellent barns and practically all of their animals are being tested out. Then the Baird Farm was next visited. This is an accredited farm and stands out as a fine example of what can be done in a practical way under good farm management. Mr. Baird has 85 head of A. R. O. cows. Mr. Baird gave a 15 minute talk explaining something of his methods and also of the splendid co-operation between the College of Agriculture and the farmers in developing dairy and other farm industries.

The Result of Good Breeding.

Mucklestone Bros. have a herd of 50 Holsteins. They ship their milk direct to Milwaukee and get \$1.40 for an eight-gallon can. Mr. D. J. Howell's farm was next in line. He has worked along very practical lines. When he started he was not sure that he had the right type of cattle so he took 14 animals to the State Fair to get a check on his breeding operations. He carried away 12 ribbons. Mr. Howell thinks breeders are nowhere near to the maximum performances of dairy cattle.

Wm. M. Jones, who has the reputation of being one of the best Guernsey breeders in Wisconsin, was the next man to be visited. He has a remarkable herd of 75 head. One cow has made a record of 982 lbs. of butter-fat, another 752 lbs. His best five cows have averaged 750 lbs. of fat, the ten best 665 lbs., and the best 16, 604 lbs. His cows are of remarkably uniform type. An accompanying cut shows the herd sire, now 12 years old. On being asked how much longer he intended to keep him, Mr. Jones said emphatically: "As long as he lives."

Fruit Brothers were visited next. They have a splendid herd of Guernseys. They test twice each year for tuberculosis. Their best cow made 650 lbs. of fat in one year, but more remarkable yet is the fact that their first twenty cows made an average of 510 lbs. at an average age of three years. Many of their cows are long distance milkers. For instance, one cow was pointed out that, for the first month of testing, made 38 lbs. of fat, but after milking 12 months she produced, the twelfth month, 50 lbs. One of the most noticeable things seen on the Broad Ripple farm was the splendid

set of buildings, with all modern improvements. After a hurried inspection of these and the fine herd of 75 Guernseys the party was taken to Baird Brothers' farm. These men own 240 acres and keep 80 Holstein cows. They were out on the Fall Fair Circuit with 21 head, but the ones left behind were all splendid individuals.

A Famous Dairy Farm.

A run was made to catch the train for Fort Atkinson. After dinner the party went to Ex-Governor Hoard's farm, a place which every man had a great longing to see. Mr. Glover conducted the party about the farm, barns, showed the cattle and gave short talks on "Breeding Dairy Cattle," and "Farm Management." Mr. Glover showed the two types of cows from two different herd sires. The differences were very marked and an impressive lesson was given to all of the men. The Hoard herd is tested annually for tuberculosis. For 14 years no trace of the disease has been found in the herd. The barns were very commonplace, yet perfectly sanitary and comfortable. In a nearby field stood the white capped cocks of a remarkably fine cutting of alfalfa.

Ex-Governor Hoard, though too feeble to get out of his car, expressed a wish to shake hands with each member of the party. It was a great pleasure to meet him, for every dairyman knows that no man in America has done more, or even as much, for dairying as Ex-Governor Hoard.

Just inside the cow stable door was the following notice:

A man's usefulness in a herd ceases at once

When he loses his temper and bestows rough usage.

It injures me as well as the cow.

Men must be patient.

Cattle are not reasoning beings.

Remember that this is the home of mothers.

Treat each cow as a mother should be treated.

The giving of milk is a function of motherhood.

Always keep these ideas in view.

When dealing with my cows.

(Signed) W. D. HOARD.

This is a sign which should be in every dairy barn.

Model Barns.

The Edgewater Barns, which housed several hundred head of stock were next inspected. They are models in lighting, ventilation and sanitation. After a most interesting tour through all of the departments of the James Factory, where the James Dairy Barn Equipment is made, the party was conducted to the top floor and there listened to a lecture by Mr. James on "Dairy Ventilation," also an address by Prof. Krage on "The Food Value of Milk."

After supper the trip was made by train to Madison. Prof. Humphrey, of the Animal Husbandry Department, met the party and conducted them to their hotel. All agreed that it had been not only a busy day, but a wonderful one.

The next day was spent at the Agricultural College.

In the forenoon Prof. Moore honored the party with a very excellent address on "Plant Breeding and Pedigreed Grains." Prof. Moore has piloted Wisconsin farmers in developing what is without doubt the greatest pedigree seed business in the world. He stated that it would be comparatively easy for Wisconsin to fill a million bushel order for pedigree grain. During the past year Wisconsin has shipped pedigree grain to more than a dozen foreign countries. The Dairy and Soils Buildings were also visited during the forenoon.

In the afternoon a lecture was given on "Successful Growing of Alfalfa," and the "Movies" in alfalfa culture were shown. The stock barns were visited and considerable time given to an inspection of the excellent types of dairy cattle in the herd.

The party stopped long enough in
(Continued on page 408).

The Separator That Gets All the Cream

Consider first the question of profits—*Cream profits*. A separator that gets more cream than others is a profit maker—Isn't it?

A saving of a small portion of cream every time amounts to a large saving in a year. This feature alone had much to do with the sale of over 100,000 in two years.

Get the facts about the

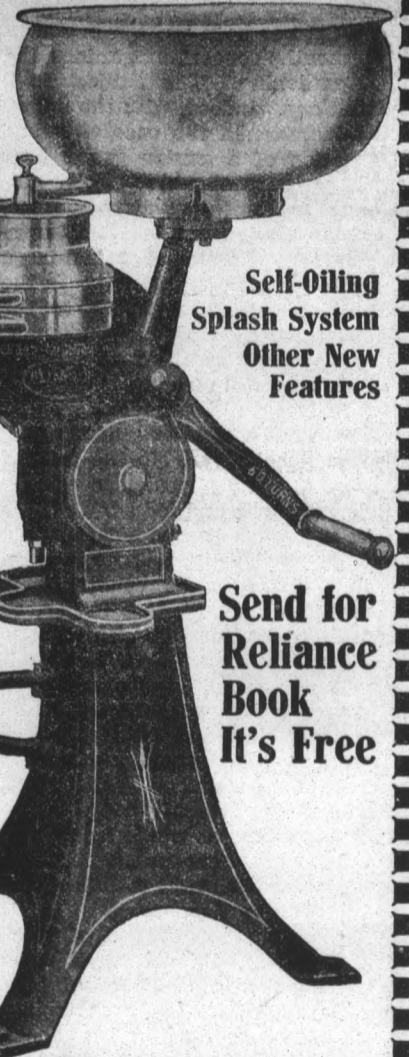
Reliance Cream Separator

before you buy any machine. There is always one that qualifies as best, and the Reliance Cream Separator is that one. The other exclusive "best" features are patented bowl device—self oiling by splash system (same as autos use)—every bearing lubricated. Easy to operate; right height (waist high)—can't tip or splash, few parts—and is Easily Cleaned. Carries our guarantee. The price is right. Write us first.

Reliance Engineering Co.
Box 563 Lansing, Mich.

Self-Oiling
Splash System
Other New
Features

Send for
Reliance
Book
It's Free



A Wonderful FEED

THAT'S GUARANTEED

—to produce more milk than any other ration either home mixed or purchased and do it without giving your cows constipation or udder trouble. Ready to use right out of the sack without any mixing.

Larro-feed

Absolutely free from adulterants and fillers, just like the feed you would mix for yourself, is a special combination of choice cottonseed meal, dried beet pulp, gluten feed, corn distillers' grains, wheat bran, wheat middlings and a little salt, that's all; each ingredient weighed by automatic scales and all thoroughly mixed in huge power driven mixers, so that it is always absolutely uniform, and always good. An extra quart or two of milk daily from each cow may turn a loss into a profit. Try LARRO-FEED for more profits. Sold on "money back if not satisfied" plan, the decision being entirely up to you. Ask your local dealer. Write us if none near you.

THE LARROE MILLING CO., 1055 Gillespie Bldg., Detroit, Mich.

THE "TALE" OF A PIG

WRITE FOR IT

This snappy, little story has some money-making pointers, it is highly interesting free. Get it. Also receive particulars about the widely known

HEESEN STOCK FEED COOKER

Cast Iron Hog Troughs, etc. Learn how 55,000 farmers are Boosting Profits and Eliminating Disease by feeding their stock cooked feed. A cooker has a hundred uses on the farm. Write us.

HEESEN BROS. & CO.
Box 619 Tecumseh, Michigan

Pull 100 Stumps A Day—With The Hercules

NO STUMPS too big. Get the richest, most productive land into crops. Make more money. Hercules on 30 days' free trial. Three-year guaranty. Safe and fast. Send post card for free book. Introductory price offer now.

HERCULES MFG. CO.
937 25th Street
CENTERVILLE, IOWA

Farm Seeds WANTED

We are in the market and prepared to pay cash for any quantity of Timothy, Clovers, Timothy and Clovers mixed—also other field seed. Send us samples, description, state quantity you have and quote cash price per bushel f. o. b. your station. No lot too small nor too large. Address

Hyde Seed Farms, Pattonsburg, Missouri.

This is the Year to Pick Your Own Beans

We sell individual bean picking machines for \$4.00 F. O. B. Vassar, Mich. Write to THE MILLER CO., Vassar, Michigan, for catalog.

Farms and Farm Lands For Sale

Independence Rewards Thrift

In the Seaboard Southeast. Real farms, partly cleared, ready for cultivation each with new house, barn, well, fresh cow, two pigs, dozen chickens, prices and terms give buyers benefit increases in value created by their presence and labor. Your success on a Seaboard farm means more products for us to haul to markets. So we give you help of our crop experts in planting plans and cultural advice. Send today for free copy Seaboard Magazine and full particulars our ready-to-cultivate farms. Address B. L. Hammer, General Development Agent, Seaboard Air Line Railway Company, 762 Royster Bldg., Norfolk, Va.

Raise Livestock, Hay, Grain, Poultry, Vegetables and Fruit in the South.

Thousands of acres of timber land for sale near the Queen & Crescent Route, suitable for such purposes. Six to ten dollars per acre, easy terms. Great opportunity for realty companies, agricultural college graduates who are able to finance and manage corporation farms. Information cheerfully furnished. Write E. D. Stratton, General Industrial Agent, Chattanooga Tenn.

Duval County, Florida invites your closest investigation, fine opportunities for farmer, stock grower or poultryman. Good fertile land can be bought cheaply in any size tract. Hard surfaced roads abound. Good schools. Excellent market. Big creamery and packing plant. Delightful climate. Year round work on the farm. Official information can be obtained by writing to Publicity Department, Duval County Commissioners, Jacksonville, Fla.

New Land,

In Gladwin and Midland Counties, Michigan. Well located. Low prices and easy terms. Staffed Bros (owners). 15 Merrill Bldg., Saginaw, (westside), Mich.

160 Acres, level clay loam, no waste, past-dwelling, basement barn, good repair, \$70.00 acre. terms. Gleason, The Farm Man, Greenville, Mich.

The Modern Promised Land is a book you want be. Wheat, Clover, Alfalfa. Mild climate. No crop failures. Alluvial soil Land of Opportunity in Southeast Missouri. C. F. Bruton Real Estate & Investment Co., Sikeston, Missouri.

ROSS LAND CO.
Michigan Farm Dealers
1002 Penobscot Bldg., Detroit.

GOOD improved 79 acre Dairy Farm near Birch Run, \$5,000. Immediate possession. Please write for complete description. Owner Myron Tremper, Birch Run, Mich.

MONEY TO LOAN On improved farms anywhere in West half of Michigan. **R. E. JENNINGS, Paw Paw, Mich.**

DOGS
Skunk and Rabbit dogs. Fox Hounds of all ages, 500 Ferrets, send 2c stamp. **W. E. LECKY, Holmesville, Ohio.**

Bright, Clean, Intelligent Collie puppies from heel driving parents. Females \$5. Males \$3. **G. A. WIGENT, Watervliet, Michigan.**

Feeders' Problems

Grain Ration for Cows and Hogs.

Our corn and other grain crops are not up to standard this year, both corn and oats short. Will milk 12 cows this winter and shall have to buy much of the grain to feed them. Have plenty of ensilage and good clover hay. Will you give the least expensive grain ration I could feed these cows to keep them in fairly good flesh with no effort to get maximum milk or butter-fat production—a grain ration that, fed with corn ensilage and clover hay, will keep cows in good health, fairly good flesh and ready for good spring pasture, with sacrifice if necessary of a percentage of production this winter. Also shall winter five Duroc brood sows that are farrowing now. From these five sows I expect also to get pigs next spring. We have some corn but not enough to feed liberally. Shall also winter five or six sows that will be a year old in March, 1917, and farrow in April. The 10 or 11 sows mentioned can have most of the skim-milk coming from 12 cows. Is there any grain less expensive than corn, or that would help to make corn go further that I could buy and feed in conjunction with skim-milk and corn and thus keep expenses down? In other words, please tell me the least expensive way to keep the pigs farrowing now growing at a normal pace and brood sows in fairly good condition until rye and vetch pasture is ready next May.

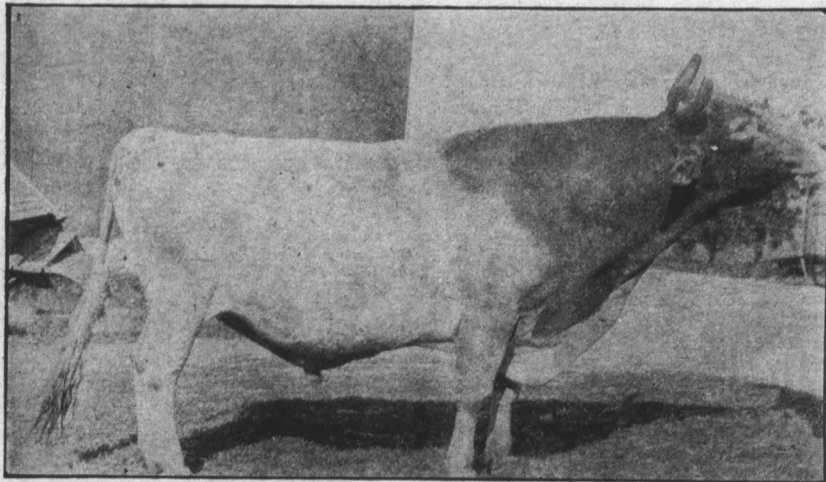
Allegan Co. SUBSCRIBER.

If you do not care to figure on good production and simply wish to get the cows through the winter as cheaply as possible you can get along with little or no grain at all. Cows will winter

steer. These are the results secured in a recent test at the Missouri Agricultural Experiment Station in which some steers were full-fed while others received much less feed.

The steers which received feed insufficient for the greatest growth were most affected by such ailments as indigestion and pink-eye, and their sickness was more likely to result in death. In fact, among more than a hundred steers in the experiments, all losses except one were among the low-fed animals.

Steers fed for long periods, such as three years and a half on feed insufficient for the greatest growth, did not seem to be able to digest their feed and to make good gains when later put on full feed. Even a steer whose growth was greatly retarded for only one year never equaled in weight a steer of the same age which had been full-fed from birth, although when put back on full feed he made very profitable gains and developed a very choice carcass of beef. These results do not disagree with the common observation that thin steers often make the most profitable gains. Such feeders have usually not been starved so long or so steadily. They have usually had bulky feed which kept up the stomach capacity even though it didn't furnish a great deal of nourishment and were very likely to have at least occasional large quantities of good nutritious feed while the steers in the test were kept



A 12-Year-Old Herd Sire. (See Farmers Visit Wis. Dairy Farms, Page 402).

well on clover hay and corn silage. But it will be more profitable to feed for good production even though the ration costs more, because the extra production will more than offset the extra cost of feed. There never can be anything gained by scrimping on a ration for any kind of live stock. Extra growth or production will more than offset the extra cost. Animals that will not do this are unprofitable.

I would recommend hominy feed and dried brewers' grains, equal parts by weight, and feed a pound of this per day for every pound of butter-fat produced in a week.

Hominy feed and wheat middlings made into a slop with the skim-milk and water, will be excellent for the pigs and brood sows. In addition a moderate feed of corn for the brood sows and a good feed for the growing pigs will, I believe, be found more profitable than to try to winter them as cheap as possible. Feed them all they will eat. It is the only way to make a profit.

COLON C. LILLIE.

CATTLE FEEDING LESSONS FROM MISSOURI STATION TESTS.

Steers that are full-fed from birth should not be held beyond 20 or 22 months of age because there is a decided falling off in the rate of gain. After this age the carcasses are overdone, there is an undue waste of excess fat and the gain in weight in proportion to feed consumed is much reduced as well as the gain per day per

regularly on small quantities of food for long periods so that they seemed to lose the capacity to eat and digest as large quantities as they must handle to make the most profitable gains.

Thrifty yearlings put on feed that is not sufficient, even to keep up the body weight they already have, continue to grow in height and framework even when made to lose half a pound a day. Measurements of the skeletons did not indicate any decrease in the rate of growth for several months. Even when these animals were using the body fat to supplement the lack of feed there was a very noticeable addition of fat in the skeleton. Only when approximately all the fat was taken from the soft parts did the animals begin to draw on the fat in the skeleton to maintain existence.

The most economical choice beef resulted from the use of a feeder weighing about 750 pounds so fed as to make a gain of 500 pounds. Such a steer will probably not quite top the market but he should make the greatest possible profit to the feeder and furnish an economical carcass for the butcher and housewife and meat of a quality to please the most exacting. The carcasses show that of this 500-pound gain, 38 per cent is water, 49 per cent fat, and 12 per cent protein. When similar steers were fattened until they had gained another 500 pounds or gone from 1,250 pounds to 1,750 pounds, the carcasses were much overdone and the second 500 pounds was 76 per cent fat, 18 per cent water, and five per cent protein.

Mo. Exp. Sta. P. F. TROWBRIDGE.



When Nature Turns Outlaw

"Blow, winds, and crack your cheeks! rage! blow!—
You cataracts and hurricanoes, spout"

Thus King Lear, in Shakespeare's tragedy, defies the elements. But man, even today, cannot challenge nature with impunity.

The unsinkable ship goes down like a rock from the impact of an iceberg. The fireproof building is burned. The monument, built for unborn generations, is riven by lightning or shaken down by an earthquake.

There are storms which make train service impossible, which delay the mails and which close the public highways to the usual traffic. Even in the cities there are times when the street cars do not run, and neither automobiles nor horse-drawn vehicles can be driven through floods or high-piled snowdrifts.

Such conditions increase the dependence on telephone wires, which themselves are not exempt from the same natural hazards. Fortunately, however, the Bell System has faced these dangers and well-nigh overcome them. Masses of wires are buried underground and lonely pole lines, even the most stoutly built, are practically paralleled by other lines to which their business can be transferred.

Each year the lines are stronger and the guardians of the wires are prepared to make repairs more quickly. So each year increasing millions of subscribers find their telephones more dependable and, within the limits of human power, they count upon their use in storm as well as in fair weather.



AMERICAN TELEPHONE AND TELEGRAPH COMPANY
AND ASSOCIATED COMPANIES

One Policy One System Universal Service

Your Live Stock Will Pay Big Profits

if you will do your part. When you move your stock from pasture to barn—change from juicy green feed to dry feed—you always expect trouble. Change of feed—lack of exercise and confinement—produce constipation and other disorders, which mean loss and worry to you.

Pratts Animal Regulator

will positively keep your stock in prime condition at little cost. It sharpens the appetite—improves digestion—expels intestinal worms—regulates the bowels—makes stock healthy and productive.

Pratts Dip and Disinfectant

exterminates lice and ticks—kills disease germs—keeps pens and stables sweet, clean and sanitary. Absolutely safe and pleasant. Our dealer in your town has instructions to supply you with Pratts Preparations under our square-deal guarantee—"Your money back if YOU are not satisfied"—the guarantee that has stood for nearly 50 years.

Write for 64 page Stock Book—FREE.
PRATT FOOD COMPANY
Philadelphia Chicago Toronto

pratts

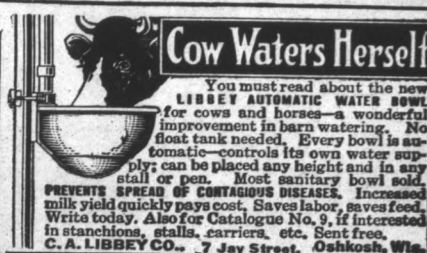


On page 1461

of our new big General Catalog we show a complete feed grinding outfit for \$52.95. It includes 2½-horse power Economy Engine, Little Wonder Feed Grinder and 20-foot belt.

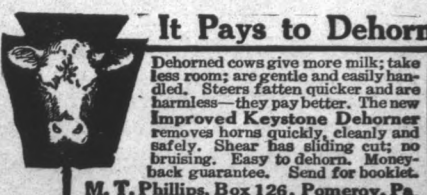
Sears, Roebuck and Co., Chicago.

LEARN AUCTIONEERING at World's Original and become independent with no capital invested. Every branch of the business taught in 5 weeks. Write today for free catalog. JONES' NAT'L SCHOOL OF AUCTIONEERING, 28 N. Sacramento Blvd., Chicago, Ill. Carey M. Jones, Pres.



Cow Waters Herself

You must read about the new LIBBEY AUTOMATIC WATER BOWL for cows and horses—a wonderful improvement in barn watering. No float tank needed. Every bowl is automatic—controls its own water supply; can be placed any height and in any stall or pen. Most sanitary bowl sold. PREVENTS SPREAD OF CONTAGIOUS DISEASE. Increased milk yield quickly pays cost. Saves labor, saves feed. Write today. Also for Catalogue No. 9, if interested in stanchions, stalls, carriers, etc. Sent free. C. A. LIBBEY CO., 7 Jay Street, Oshkosh, Wis.

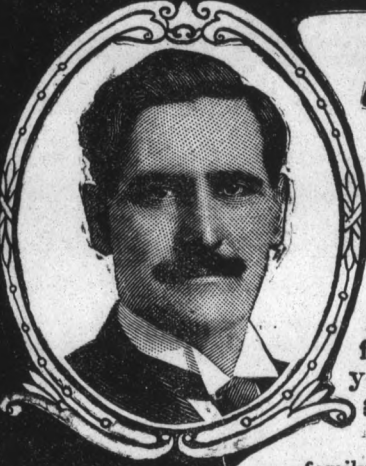


It Pays to Dehorn

Dehorned cows give more milk; take less room; are gentle and easily handled. Steers fatten quicker and are harmless—they pay better. The new Improved Keystone Dehorner removes horns quickly, cleanly and safely. Shear has sliding cut; no bruising. Easy to dehorn. Money-back guarantee. Send for booklet.

M. T. Phillips, Box 126, Pomeroy, Pa.

THESE FREE BOOKS NOW READY!



ASK TODAY!

These books are now ready to mail. I want you to get your copies. The first edition of my big 1916 catalog was exhausted in four months. The second edition is just off the press. That is why I say, **ASK TODAY.** Galloway's Fall Book, 96 pages in size **printed in four colors** is also just off the press. I want you to have it. In fact,

I WANT THESE BOOKS IN EVERY FARM AND CITY HOME

I want you to compare the quality of goods and prices I offer with those you have been used to paying and figure out the saving for yourself. You will easily see that these books will save you from \$100 to \$500 on your fall buying of Gasoline Engines, Cream Separators, Manure Spreaders, Farm Tractors, Wagons, Buggies, Harness, Farm Implements and Farm Machinery, Dairy Supplies, Metal Grain Bins, Fanning Mills, Disc Drills, Farm Shop Tools, Cement Mixers, Feed Grinders, Roofing Materials, Sewing Machines, Trunks and Bags, Washing Machines, Stoves and Ranges, Kitchen Utensils, Silverware, Dishes, Carpets, Rugs, Furniture, Clothing and Shoes for the entire family, and Farm Hardware and Sporting Goods. Ask now for these two books and commence saving at once.

NEW MODEL 1917 SPREADER! NOW READY

I just wish you could see it! Better built than ever! The beater bolts are 1/2 inch larger, with lock nut. Beater-bar bolts increased in size and strength. Beater teeth longer and stronger, which means they now tear the toughest manure **finer than ever** and spread it easily. Heavier bolts hold the beater bars in the beater head. The rear shaft increased in strength—higher carbon steel used. Additional strength in the beater bracket. Larger drive sprockets, which mean **lighter draft than ever**. Fifth wheel castings are larger and increased in strength. The spreader box steeper in turning. The rear conveyor shaft is now made of 40 carbon steel. Pressed steel tongue. All metal parts thoroughly coated with asphaltum weather-proof paint. Spreader box is better finished and painted. These and other qualities make the Galloway Spreader

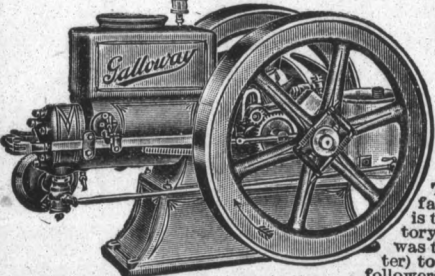
more invincible than ever in actual field work! No big four or three-horse team is necessary to handle the Galloway. Two average farm horses can spread anywhere with the Galloway. Complete details of this new spreader are in the new books. They tell how and why Galloway made the spreader famous and illustrate the Galloway invincible roller feed, Galloway patented automatic stop uniform clean-out push board and the new everlasting steel beater with V-rake. These improvements and inventions make the Galloway worth at least \$50.00 more than the average spreader, but not one cent more is charged you for them. Write today.



Spreaders \$64.75 and up

MASTERPIECE ENGINES \$26⁷⁵ TO \$298⁵⁰ FROM 1 1/2 TO 16 H. P. STATIONARY AND PORTABLE

My entire line of Masterpiece Engines is unshaken by competition. I build in my own factories here at Waterloo a complete line of my famous Masterpiece engines. For every farm and shop need from 1 1/2 to 16 horse power. Models that are power kings of their kind. My 1 1/2 and 2 1/4 pumping engines are BUILT RIGHT AND PRICED LOW. When you buy an engine insist on heavy weight because it costs more to build a heavy engine. Insist on large bore and low speed. The Galloway engines give a lifetime of service at the hard, tough jobs because they are built to stand up under the hardest work! Don't get fooled into buying high speed, light weight engines. That's why I want you to have these two books. In my new 100-page FALL BOOK and also the 250-page catalog I will tell you why an engine of the heavier type is best and give you complete details. Every style and size of Galloway engines illustrated and fully described. You can get the facts about these engines by sending for these two great books. They are filled from cover to cover with interesting, instructive engine facts. Tell you how to select the type of engine best suited to your needs. Postal will get them. Ask for them before the editions are exhausted.



gines, and that some of them are building cheaper engines and pricing them lower to throw dust in your eyes. Cheaper engines are almost invariably lighter engines speeded up to get their rated horse power, and they cannot stand up under the heavy, steady work you will

MY 1917 MODEL EFFICIENCY

Built with anti-friction bearings—21 sets Hyatt roller and ball bearings in this tractor. Four cylinder, Waukesha Tractor motor. Water-cooled, working parts protected; 12 h. p. guaranteed on the draw bar, 20 h. p. on the pulley; turns short; weighs 5,000 lbs. We have exclusive manufacturing right on its new patented transmission. On no other tractor can you secure it. It is the secret of this tractor's wonderful efficiency. Will do any portable engine job—sawing, silo filling, corn shelling, road grading, will handle 28-inch grain separator, do feed grinding, etc., handle three 14-inch bottoms 8 or 9 inches deep in clover or timothy sod. Double chain drive; gears run in oil-tight case in oil bath; rear wheels 58 in. high; the famous Waukesha motor; Holly carburetor; Kingston magneto; Waukesha governor, engine never races. Only two levers to control this tractor. It is as far ahead of one and two cylinder tractors as four and six cylinder cars are ahead of the old style one and two cylinder cars. This modern farm tractor is fully described in our two new books. My 250-page book and my 96-page book are yours for the asking. Get your copies while the supply lasts. They tell the whole story. Ask today. A postal will get them.



TRACTOR JUST OUT!

SANITARY CREAM SEPARATORS

My Galloway Sanitary bath-in-oil cream separator can not be excelled. This \$34.50 size separator skims 375 lbs. per hour. It is the best separator ever built. If you knew all there was to know about building cream separators and built one for yourself, it would not be a better machine. It would not run any easier, skim any closer and could not be built of better material, nor more wear and satisfaction be built right into it. We build the quality into the separator, and you get the service out. They are built up to a standard, not down to a price. Where other machines are good, the New Galloway Sanitary is as good or better. If you build as good a machine you could not build it at a lower price than my new 1916 direct from the fac-



Skims 375 lbs. Per Hour

DON'T DELAY - ASK NOW FOR THESE BOOKS

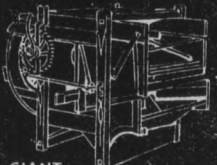
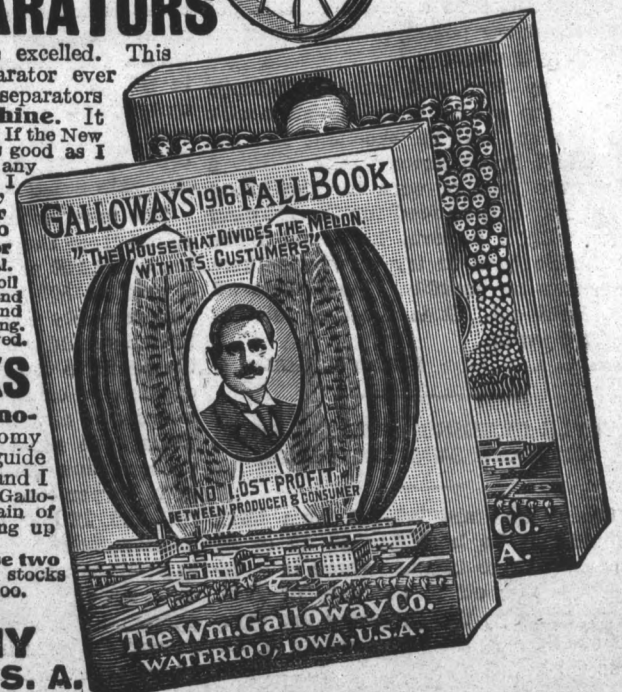
By all means, drop a postal to me asking for these books. Don't put it off. Economy is wealth. Saving money is earning money. You can practice economy and save money if you have these books in your home, and use them as a guide in buying. I have worked hard to get these books out for the fall buying season and I want you to see my efforts. Come to Waterloo if possible. I want to entertain you at the Galloway Club. I want you to eat one or more meals with me. I want to show you my great chain of factories right here in Waterloo. I want you to see the merchandise departments I am opening up this fall and the great stocks of merchandise we have for the heavy fall and winter trade. If you can't come and make me a visit, don't fail to drop me a post card and ask for these two books that describe and picture the offices, the Agricultural Club building, and the immense stocks of merchandise at low, one-profit figures. These books are just as good as a trip to Waterloo.

WILLIAM GALLOWAY, President

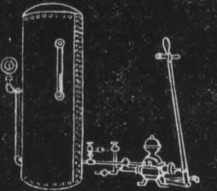
THE WILLIAM GALLOWAY COMPANY

FARM IMPLEMENT MANUFACTURING SPECIALISTS
137 Galloway Station

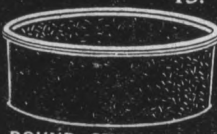
WATERLOO, IOWA, U. S. A.



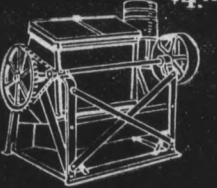
GIANT FANNING MILL \$10.75



WATER SUPPLY OUTFIT \$49.75



ROUND STOCK TANK \$4.45



CONCRETE MIXER \$33.75



FEED COOKER \$4.50



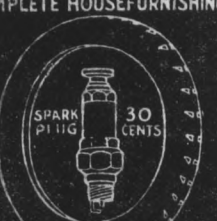
SHELLER \$5.65



SWEEP MILL \$23.25



COMPLETE HOUSEFURNISHINGS \$18.



AUTO ACCESSORIES

Magazine Section

LITERATURE
POETRY
HISTORY and
INFORMATION

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

The FARM BOY
and GIRL
SCIENTIFIC and
MECHANICAL

This Magazine Section forms a part of our paper every week.

Every article is written especially for it, and does not appear elsewhere

THE Indians will soon be a race remembered but in history, and even now this is so as regards the eastern part of this great country. What Indians remain conform to the white man's laws, and the relics of by-gone days are naturally becoming more and more scarce.

It has been years since the Indian used the bow with the flint arrow head, for the white man taught him the use of fire arms. It is of the primitive weapons and implements, those used before Columbus discovered San Salvadore and before the white men looked with covetous eyes on the land of the red hunter that I wish to call your attention.

It has been the writer's privilege to have access to a fine private collection of relics said to be the most complete of any collection in the state, and it is

Indian Relics In Michigan

By IRMA B. MATTHEWS

due to the kindness of the owner that much of this information was obtained, for the majority of these relics he has picked up himself. The larger number of them, especially those of warfare, are of flint.

Naturally, perhaps, our attention was first attracted by the arrowhead because it is the most common. In this collection I saw hundreds and hundreds of all sorts, sizes and colors. Some were made from pretty agates, others of hard flint. Some were very smooth and showed much labor, others were very crude.

There were tiny ones hardly as large as the nail on my smallest finger. I

thought these were very cunning and I was told that they were called "birds" by the archeologist. Some people believe they were used to shoot birds and small game, but there is nothing to warrant the belief.

While showing me the arrowheads the owner called my attention to one rather ordinary looking one that he said he prized very highly. I could not see anything extraordinary about it and asked the reason.

It was during a visit to Italy that he found the arrow he had called my attention to. The find was made about thirty miles northeast of Genoa. He found at the same place quite a num-

ber of flint chips. I examined the relic carefully and decided that it was exactly like those used by the Indians here.

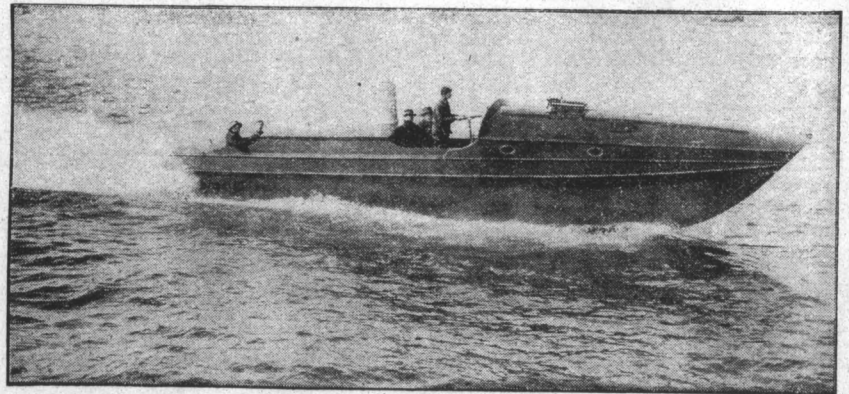
What this would prove I am not prepared to say, neither would the collector advance any theory, but dozens of ideas in reference to it have crowded themselves into my mind. Did the Italians use arrowheads centuries ago? Did they in any way ever communicate with this country before Columbus made his first voyage? Or did some visitor at that early day take the arrowhead from here to Italy, and if so how account for the chips? But I will desist, there is mystery enough in it I think to keep my young readers out of mischief for some time if they will only give it their careful attention.

Another treasured possession was an arrowhead made from hammered cop-

WORLD EVENTS IN PICTURES



Mrs. Anna Hawks, one of the Most Prominent Hymn Writers in the World is Critically Ill at her Home in Bennington, Vt.



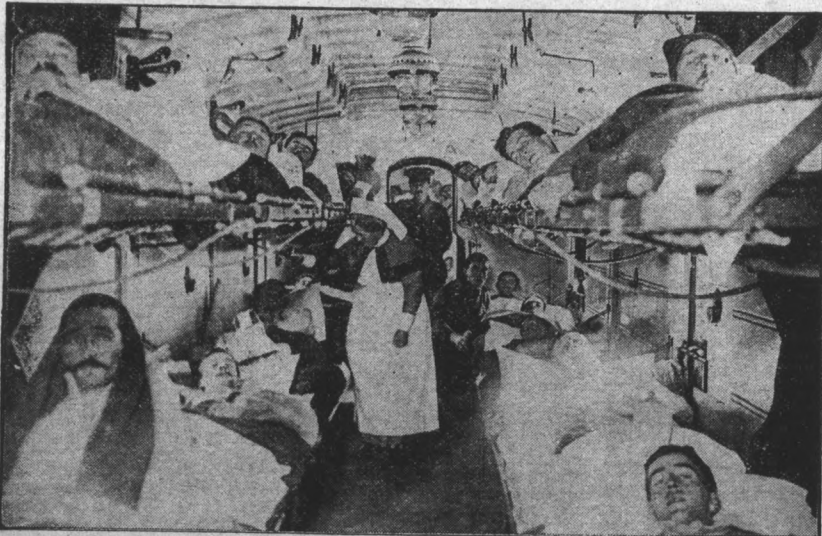
A Type of Motor Boat Suggested for Coast Patrol Service in Wartime.



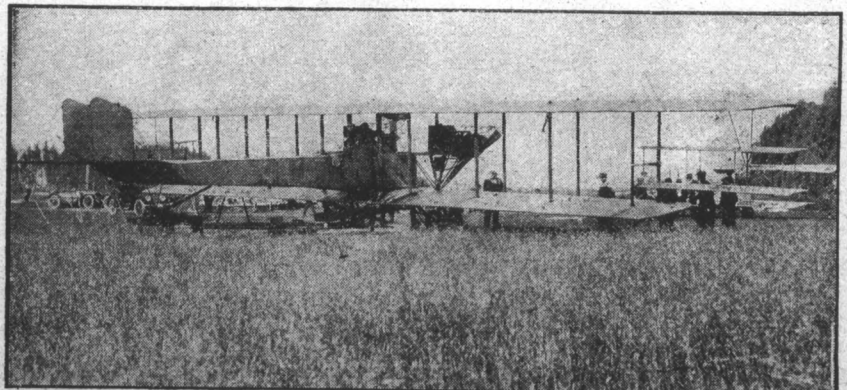
Gen. Sam Hughes, of Canada, and the Duchess of Devonshire.



Ambassador and Mrs. Gerard Arrive Home from Germany.



Wounded British Tommies Being Rushed from War Zone to Quiet England.



Greatest Aeroplane Built in this Country is Acquired by the U. S. Army.

Copyright by Underwood & Underwood, New York

THE DEATH OF A LEAF.

BY L. MYRTLE SOURS.

A little green leaf came fluttering down
Under a dull, gray sky;
"O, the world is so cold!" said the little green leaf,
"It is dreadfully hard to die."

But the sun broke out from the leaden sky
And covered it all with blue.
"Why, little green leaf," said the shining sun,
"I'm coming to stay with you;

"And you need not fear the chill in the air,
My smile will keep you warm."
So the leaf turned brown and curled in the sun
With never a fear of harm.

And it slept so sound and so sweet and long
That it never even knew
That all the leaves from the tree tops fell
When the breezes softly blew.

And the leaves all fluttered around till heaps
Lay brown in the shining sun,
And the snows of winter fell over them deep
And buried them every one.

And the little green leaf and all the leaves
Were softly, gently, crushed
In the sun's warm arms beneath the snow
Where every sound was hushed.

And they turned the earth all mellow and dark
Down where the violets grew;
But one day they woke and suddenly found
That they were violets too.

per. This and one other are the only specimens I have ever seen, but it surely goes to show that the natives must have known something of our rich copper deposits before they were discovered by the whites.

The spearheads were of nearly the same shape as the arrowheads but much larger, some of them measuring fully eight inches in length. They are not so plentiful, however, and are found mostly on the shores of some lake.

The knives were rather awkward looking instruments to me and I wondered how they had been made to do their bloody work. A small circular stone with a hole hollowed in one side, I was informed, was a paint pot. Probably some brave had mixed his war paint in it, and although it must have been many years ago the stone was still greasy. I have no doubt but what it had been used a long time for you must remember it required a great deal of patience to make such an article, and they were not regarded lightly, but handed down from father to son.

A hammer stone was also nearly round and flat, with one edge shaped for a hammer. On either side it was sunken or depressed as though the hands, by continual use, had worn away the stone.

The axes were very interesting. Some were polished until they were as smooth as glass, while others were rough. I believe they are divided generally into two classes, the grooved and the ungrooved.

The first class have deep grooves into which the handles were fitted. There were two ways of fitting these handles: one was to bind the ax to a stout stick by means of deer thongs, the other took more time and patience but was much better. A young branch was selected and carefully split, the ax was inserted, the limb carefully bound again, and then left until it had grown together and the ax had become as it were, a part of the wood.

One of the axes shown me is known as a celt and in my research I have only found record of one other exactly like it, and that was discovered in the West Indies. Plenty of others have been found but these are grooved for a handle, while the others are not.

I saw a large number of chisels, queer little instruments, slender and

sharp at one end. What they were used for we can only surmise, but among other things in this collection was an irregular shaped bead of bone, and I wondered if the chisels were not used to make the hole through this.

There were also little pieces of flint called fleshers and scrapers, that were likely used by the Indians to cure their deer skins, or rather to work them and make them soft and pliable, for there was no complicated machinery to do such work as we do it today.

I looked very attentively at some Indian pipes that were carefully made of solid stone. They were oblong and round, much the same shape of the pipe of today. The stems of the pipes which were likely made of some hollow reed were gone, but the bowls were perfect.

Last among the stone implements were some articles called ceremonials. The most of them were oblong with corners nearly square, and with a hole through each end. A few were pointed on the ends.

Many are the uses that have been assigned these strange articles. Some declare they were used as shuttles for rude looms, others that they were weights for their fish nets, a few contend that they were worn as ornaments, while still others believe they

are the famous scalping-sticks which in all probability were stones. It would be natural to carry a stick on a string about the neck. When a warrior took a scalp of the enemy he recorded the fact by cutting a notch on the scalping-stick. In support of this theory I found two in this collection that had notches cut in them and on one I counted over twenty.

One thing that puzzled me greatly was how the Indians managed to make their first weapon. They had nothing harder than the flint to work with and how was it accomplished. I will own that it seemed rather incredible to me when I was first told that they chipped the flint off with pieces of wood or bone from a deer. I have since learned that this was true.

Among this large collection of relics were some of a more recent date. There was an iron tomahawk, like those the French traders gave the red-men, then, too, there were some armlets that the collector had dug out of an Indian grave, that were made of silver. They were very thin. Some breast plates made of the same metal were also included.

There were Indian beads probably given them by the first traders, and others made of pieces of shell called "Wampum."

Free Will vs. Necessity

By F. J. YATES

THE question of Free Will and Necessity has taken up many pages of print and many hours of discussion throughout the religious history of humanity, and will continue so to do; and it is a question which we ordinary mortals cannot expect satisfactorily to solve. But the phrase often occurs to me in connection with the routine of life, and especially so in relation to rural life. How far are certain living conditions predestined and necessary, and to what extent can we bend circumstances to the gaining of worthy ends?

Necessity is a bogey which has had much to do with the young people's leaving the farm—a necessity often purely imaginary, and one which did not consider the "other side of the shield." Sometimes this Necessity has said that the family living could not be made unless all members of the family worked far in excess of the hours which are required of paid city workers; occasionally it has decreed that there was no possible chance for the setting aside of a small sum with which to purchase some of the things which make for the broader life; or it has cheerfully ordained that the front grass plot which rolled unbrokenly down to the road must be plowed and put into cabbages or strawberries, or some such money-making crop. Perhaps it has made it impossible for the women to have an occasional grant of a horse with which to make visits to friends at some distance; or it has added another bent to the barn and left the house without running water, or unscreened porches, or weatherbeaten sides. It may have taken the pet animal, duly transferred to some one younger member of the family, and cheerfully witnessed the selling of it for household expenses. It may have kept the boy out of school at that age when he has not yet awakened to the inestimable value of education, in order that he might give a lift at work with his elders. Necessity is a stern taskmaster and we cannot always escape its pitiless lash. Indeed, it is often a blessing in disguise, for it sometimes takes sluggards and makes useful workers out of them, and stiffens moral fibre, and develops will, but it can inhibit as well as strengthen, and we must be watchful what it is doing with us.

Above all, see that Necessity does not smother Free Will, its cheerful yokemate. Free Will is equally brave,

ever ready for self-denial, which means the broader life at the end of the denial. Free Will is not bowed down by lack of funds into submission and dismay. It realizes that even within bounds there is room for individual growth and co-operation. A tree is planted when a boughten improvement cannot be had. A value is seen in the unbroken stretch of lawn which cabages cannot replace. Gay flowers and friendly shrubs and climbing vines draw one's attention from the weather-beaten sides of the home. Belts may be tightened a bit, and that with smiling faces when a few good books

A Halloween Nut Party

By ADDIE FARRAR

A NOVEL way of celebrating All Hallowe'en Eve, especially for folk who have grown tired of ghost parties and masquerades, is by giving a nut party; and nuts were so thoroughly associated with ancient Hallowe'en celebrations that this sort of an entertainment seems fitting. Moreover, a nut party may be so arranged that it may be enjoyed by old or young, dancing folk or those who do not dance, and as many novel features may be added as an original hostess can think out.

It is pretty to send the invitations enclosed in walnut shells. Crack the walnuts carefully so as to keep the shells perfect, take out the meats, which come in handy in the kitchen, and in their place put the invitation, written on a piece of paper which is folded as small as possible. Glue the shells together and then tie them with narrow ribbon and attach a card on which is written, "A nut for you to crack." If, however, you do not care to take this trouble use brown paper invitation cards to write your invitation on, and paint a few nuts in the corners. A water color representation of an acorn leaf would also make a good invitation card. Other ideas may occur to the hostess.

As the guests arrive see that each gentleman is given a small nut cracker on which is tied a tiny ribbon bow, and each lady a walnut sealed like the invitation nuts, and tied with the same color of ribbon as is on the companion nut cracker. When the man finds the ribbon that matches the bow on his nut cracker, he claims the possessor



Mrs. Stanton, an American woman, has been successful in selling a new noiseless weapon to the British government. The weapon is operated by belt power and hurls missiles by centrifugal force with deadly aim.

and periodicals are needed to feed the young minds and refresh jaded ones. "Indian" gifts are withheld from the children rather than hurt their feelings and destroy their confidence. Most serious conference is held before the boy or girl is withdrawn from school for helping during sessions. Except for special seasons, such as harvest and threshing times, regular hours are found to be conducive to better health and equal profits, and evenings are found best spent in relaxation and pleasure rather than in odd jobs for the men and sewing for the women. Free Will may elect to see the wider view and the higher aim which makes for growth and improved moral fibre. Trust greatly, and desire greatly, Fathers and Mothers, and greater openings for activity will come to you. Plan with the opportunities of Free Will before you as well as with the exigencies of Necessity. Weigh and consider well and be very sure that in grasping for financial gains you are not inviting moral loss.

for his partner and proceeds to crack the nut she holds out. Out of this will fall a tiny card on which is written some stunt the pair must do for the amusement of the guests, as sing a song together, attempt a piano duet, give an exhibition of fox trotting, or try to whistle Yankee Doodle or some other tune together. This last is almost impossible to do, for nine times out of ten the couple will start laughing and will not be able to whistle the entire tune through. The stunts are really a part of the hostess' plan, who probably knows the talents of her guests, and even the repeating of a Mother Goose rhyme in unison causes much fun, as most of the guests will have forgotten and the attempt will be funny.

If, during the evening, you would like a real Hallowe'en love test, provide a number of halves of walnut shells and fasten in them the tiniest candles you can buy. To do this soften the bottom of each little taper over a match and then stick into the shell. Provide each guest with two or even three if desired, so that they may each be named. Have a large pan of water and at a signal let the shells be set sailing. Of course, one of the nuts has been named for the sender. The little ships must sail on, not being stirred by as much as a breath. If they drift away from each other there is no love, but if they stick close together one's fate is readily seen. If the candles go out there is supposed to be trouble brewing between the couple.

In the circle of fate the entire company joins hands in a circle. Holes

having been previously bored and ribbons strung through walnuts and Brazil nuts, they are hung around the necks of the guests. The walnut denotes good luck, the Brazil nut indifferent luck. A little basket containing an apple or two is inserted in the circle; that is, one couple hold the handles of the basket instead of each others hands. A blindfolded person is then placed in the middle of the ring and the circle moves silently and slowly around until "halt" is called. The blindfolded person then gropes and touches someone and the beribboned nut on him which denotes the luck. Much fun can be had by trying to discover the date on which the luck is to take place. The person touched is the month of January, and counting from the right, the basket of apples is the fateful month. For example some one is touched bearing a walnut. He is called January, the one on his right February and then March, and then comes the apples, which is April. Now go back to January and turn him into No. 1 and work the reverse way to the left, each person being counted. If the circle consists of twelve persons, No. "11" will fall to the basket and the blindfolded party will have a piece of great good luck on April 11. A second blindfolded person is then put into the center to try his luck, and so on until each one has tried.

Another interesting game is called "Nuts to Crack." Prepare a booklet by tying together as many blank leaves as there will be men present, and writing on the cover a different riddle, puzzle, anagram or conundrum, or some other "nut to crack." Tie a tiny pencil to the ribbon that holds the leaves together. Then write each puzzle and its solution on a small piece of paper and place inside a walnut shell glued together. The lady then hands her booklet to her partner and he attempts to solve the problem on the first page, signing his name. After a few minutes a bell is rung and partners are changed and this man, too, tries to solve the problem of his new partner, by signing his name, and so on.

When all the men have tried each puzzle, the bowls containing the nuts with the answers are passed and each lady takes one and hands it to her partner who cracks it and reads in his turn the answer it contains. As each puzzle is read the man takes his partner's book and reads aloud the various answers she has gained, and the revelations cause much merriment.

One hostess used this booklet game at supper, having the tables just large enough to seat two guests, a man and a woman, and the luncheon in order to prolong the fun was served in several courses. Partners were changed by the lady arising at the ringing of the bell and leaving her partner. Sometimes the bell would ring in the middle of a course and the lady would arise, seize her plate and napkin and go to another table, leaving the man who was not in the secret utterly bewildered. Of course, the signals were at the caprice of the hostess and this changing of partners caused much merriment.

If you have an open fireplace try burning nuts to test your fortunes. The nuts are named and placed upon a long-handled shovel in the fire. As they burn brightly, black, or burst with a loud report, prosperity, misfortune and early death are indicated. Two nuts, one named for the person making the test and another for an admirer or lady love are placed side by side on the shovel. If one cracks or jumps, the person whose name it bears will prove unfaithful; if it begins to blaze or burn brightly the person for whom it is named loves the other. This game is usually a favorite with the young folk.

Many other games will suggest themselves to the hostess, as charades on cocoanut, hazel nut, butternuts, etc., and prizes might be given for the one who could, within the shortest space of time, name the most nuts.



Mother Has Earned This Comfort and Convenience

You would not knowingly deny the mother in your home any comfort or convenience that you are able to provide.

Then why have you overlooked the biggest improvement of all—good light? The one modern farm convenience that will lighten her labors—and add to her happiness and pleasure each day of her life.

Pilot-Carbide-Outdoor Lighting and Cooking Plants

have totally changed the old-fashioned methods of house and barn lighting and cooking in the country home.

300,000 "mothers" in farm homes all over the country today are enjoying these benefits:

Fine bright lights in every room. Safe lights, no matches needed. Convenient lights which eliminate all the disagreeable labor of caring for old-fashioned lamps and lanterns—

A gas cook stove in the kitchen—as convenient as gas stoves used for cooking in practically every city home in the world. Like city gas it does away with the bother and work of handling coal, wood and ashes. You have a fire that is always ready—lighted instantly and which can be controlled to a degree by turning the valve up or down—

A self-heating flat iron—always hot. A convenience that cuts the work of ironing day in half—enabling you to do better work in quicker time and in greater comfort. No hot stove—no roasting kitchen—the heat is all in the iron.

The PILOT is bringing all these comforts and conveniences to "mothers" in other country homes.

Consider your women folks. They are the ones that have to spend half their days in the grime of filling, cleaning and carrying lamps about the house—in slaving away their life and health over hot, cranky stoves.

Ask the "mother in your home" how much this beautiful, clean, always-ready light—a real gas stove and gas iron—will mean to her.

Ask yourself if she has not earned this comfort and convenience—when you consider its low cost—a thousand times over.

Then send for our illustrated catalogs and descriptive booklets giving all the facts. Do this today.

A. R. GRAHAM, Supervisor

810 Mason St., FLINT, MICH.

OXWELD ACETYLENE COMPANY, CHICAGO

Largest Makers of Private Lighting and Cooking Plants in the World.

TRAPPERS

We will have some Big Specials to offer Fur Shippers throughout the coming Fur Season. It will pay you to get your name on our mailing list at once.

Your success depends on the Fur House you ship to. Start Right. Ship your first lot to us. Our return will convince you.

Write today for our free book, "Fur Facts," Price List, Tags and prices on Traps, Bait, Supplies.

The Trappers Fur House

ABRAHAM FUR CO.
96 Abraham Bldg., St. Louis, Mo.

TRAPPERS!
Mason's Square Deal Direct Buying Plan and Foxey Trappers Club nets more money for furs. No charge no commission. Write to-day.

MASON FUR CO. 72 TRAPPERS HOUSE, ST. LOUIS, MO.

SABO

SURE CATCH TRAP for skunk, coon, possum, fox, groundhog, rabbit, etc.

The SABO TRAP is the best trap in the world either for amateur or professional trappers. This trap is designed to be placed in the animal's burrow; it requires no bait and is positively sure catch first trip in or out; no chance for escape; it catches him over the body; no danger to hunters, dogs or cattle. Ask your hardware dealer for one. If he has not got them write us for free booklet which explains the SABO SURE CATCH TRAP.

Sabo Trap Mfg. Co., 3126 W. 25th, Cleveland, O.

Free Bait For Trappers

\$1.00 Bottle Free

Write today and get yours early, mentioning animals trapped. Don't delay for we have only a few thousand bottles to send Fur Shippers.

Bach Fur Co., Dept. 44 Chicago

BE WISE TRAPPERS

Remember this—we pay the highest prices for furs—and

We Charge No Commission

Send us a trial shipment today—let us PROVE our claims to you. Our higher prices, liberal grading and fair dealings have made us the Fastest Growing Fur House in America. Send for FUR price list, Trappers' Guide, State Game Laws, Catalogue of Trappers' Supplies—ALL SENT FREE—with particulars of our great FREE GIFT to trappers.

HILL BROS. FUR CO. 352 N. MAIN ST., ST. LOUIS, MO.

now ready to mail. They quote latest market prices. Furs from northern states are my specialty and I'll pay the most money for them. Correct grading means more money for you. I guarantee my grades or return your furs. Write today.

W. R. RUMBAUGH, 205 Court Ave., Des Moines, Ia.

FREE TO TRAPPERS

Get started right this season and make more money. Send your name today for

RUMBAUGH'S MARKET REPORTS

now ready to mail. They quote latest market prices. Furs from northern states are my specialty and I'll pay the most money for them. Correct grading means more money for you. I guarantee my grades or return your furs. Write today.

W. R. RUMBAUGH, 205 Court Ave., Des Moines, Ia.

Mention the Michigan Farmer when writing Advertisers

The Flood

By ZONA GALE

(Concluded from last week).

Ain't it like things was arranged to happen in patterns, same as crystals? For it was just in them next two minutes that two things happened: The first was that a boy came riding over on his wheel from the telegraph pole and give a telegram to Timothy. And Timothy opens it and waves it over his head, and come with it over to us: "First contribution for the flood-sufferers!" says he. "They telephoned the news over to Red Barns, and listen to this: 'Put me down for twenty-five dollars towards the flood folks' food. Zachariah Roper.'"

I looked over to Timothy straight. "Zachariah Roper," I says, "that owns the cement plant that some of the Flat folks got in the way of?"

Timothy jerked his shoulder distasteful. "The idear," says he, "of bringin' up business at a time like this."

With that I looked over at Silas, and I see him with the scarcest thing in the world for him—a little pinch of a smile on his face. Just for a minute he met my eyes. Then he looked down to get his hand a little farther away from where the old hen in the coop had been picking it.

And the other thing that happened was that up in front of me come running little Mrs. Bitty Marshall, and her eyes was full of tears.

"Oh, Mis' Marshall," she says, "what do you s'pose I done? I come off and left my lace curtain. I took it down first thing and pinned it up in a paper to bring. And then I come off and left it."

Before I could say a word Silas answered her:

"The water'll never get up that far, Mis' Marshall," he says, "don't you worry. Don't you worry one bit. But," says he, "if anything does happen to it, Mis' Marshall, I'll tell you now you can have as good a one as we've got in the store, on me. There now, you've had a present today a'ready!"

I guess she thanked him. I donno. All I remember is that pretty soon everybody begun to move towards town and I moved with 'em. And while we walked the whole thing kind of begun to take hold of me, what it meant, and things that had been coming to me all the morning came to me all together—and I wanted to chant 'em a chant, like Deborah—but pronounced Deborah when it's a relative). And I wanted to say:

"Oh, Lord, look down on these 80 families, old and young and real young, that we've lived neighbor to all our lives, and yet we don't know half of 'em, either by name or by face, till now. Till now!"

"And some of them we do know individual has showed up here today with a back-ground of families, wives and children they've got, just like anybody—Tippie that drives the dray and that's helped move everybody; for 12 years he's moved my refrigerator out and my cook stove in, and vicious verses, as regular as spring come and autumn arrived; and there all the time he had a wife, with a cameo pin, and three little Tippies in plaid skirts and pink cheeks, asking everybody for a drink of water just like your own child and one of 'em so nice that he might have been anybody's instead of just Tippie's."

"And Mamie Felt, that does up lace curtains of them that can afford to have 'em done up and dries 'em on a frame so's they hang straight and not like a waterfall with its expression blowing sideways, same as mine do—there's Mamie with her old mother and a cripple brother that we've never guessed about, and that she was doing for all the whole time."

"And Absalom Ricker's old mother, that's mourning bitter because she left her coral pint with a dog on behind on the Flats that her husband give it to her when they was engaged . . . and we knew she was married, but not one of us had thought of her as human enough ever to have been engaged. And Mis' Haskitt with her new black dress, and Mis' Dole with her clean-ironed clothes bars, and Mis' Bitty Marshall with her baby and her little chickens and her lace curtain, and Bitty with his grocery store."

"Lord, we thank thee for letting us

see them, and all the rest of 'em, close up to."

"We're glad that now just because the Mad river flower right into the homes that we ain't often been in or ever, if any, and drove up to us the folks that we've never thought so very much about, we're glad to get the feeling that I had when I heard our grocery-boy knew how to hand-carve wood and our mail man was announced to sing a bass solo, that we never thought they had any regular lives, separate from milk and mail."

"And let us keep that feeling, O Lord! Amen."

And I says right out of the fullness of the lump in my throat:

"Don't these folks seem so much more folks than they ever did before?"

Mis' Merriman that was near me, answered up:

"Why, of course," she says, "they're in trouble. Ain't you no compassion to you?"

"Some," says I, modest, "but where'd that compassion come from? It didn't just grow up now, did it?—like Abraham's gourd, or whoever it was that had one?"

"Why, no," she says irritably. "It's in us all, of course. But it takes trouble to bring it out."

"Why does it take trouble to bring it out?" I says and I looked ahead at us all a-streaming down Daphne street, just like it was some nice human doings. "Why does it? Here's us all, and it only takes a minute to get us all going, with our hands in our pockets and lumps in our throats and our sympathy just as busy as it ever was for our little family in-four-walls affairs. Now," I says, "that love and sympathy, and them pockets and them throats are all here, just the same, day after day. What I want to know is, what are them things doing with themselves when nobody is in active trouble?"

And then I said my creed:

"O, when we get to working as hard to keep things from happening as we work when it's happened, won't living be fun?"

"Well, of course we couldn't prevent floods," says Mis' Merriman, "and them natural things."

"Shucks!" I says, simple. "If we knew as much about frosts and hurricanes as we do about comets—we'd show you. And do you think it's any harder to bank in a river than it is to build a subway—if there was the same money in for the company?"

Just then the noon whistles blew—all of 'em together, round-house and brick-yard, so's you couldn't tell 'em apart; and the sun come shining down on us all, going along on Daphne street. And all of a sudden Mis' Merriman looked over to me and smiled, and so I done to her, and I saw that our morning together and our feeling together had made us forget whatever there'd been between us to forget about. And I ain't ever in my life felt so kin to folks. I felt kinner than I knew I was.

That night, tired as I was, I walked over to see Mis' Sykes's night-blooming cereus—I don't see enough pretty things to miss one when I can get to it. And there, sitting on Mis' Sykes's front porch, with her shoes slipped off to rest her feet, was Mis' Holcomb—that-was-Mame Bliss.

"Mis' Sykes is out getting in a few pieces she washed out and forgot," says Mame, "and the Marshalls is all down town in a body sending a postal to say they're safe. Silas went too."

"The Marshalls!" says I. "Are they here?"

Mame nodded. "Silas asked 'em," she says. "Him and Bitty've been looking over grocery stock catalogues. Silas's been advising him some."

Mame and I smiled in concert. But whether the flood done it, or whether we done it—who cared?"

"But, land, you, Mame!" I says. "I thought you—I thought Mis' Sykes—"

"I know it," says Mame. "I was. She

did. But the first thing I knew today, there we was peeling potatoes together in the same pan, and we done it all afternoon. I guess we kind of forgot about our bad feeling. . . ."

I set there, smiling in the dark. I donno whether you know a village along toward night, with the sky still pink, and folks watering their front lawns and calling to each other across the streets, and a little smell of bonfire smoke coming from somewheres? It was like that. And when Mis' Sykes come to tell us the flower was beginning to bloom, I says to myself that there was lots more in bloom in the world than any of us guessed.

A SUCCESSFUL LIGHTING PLANT.

THE evolution in house lighting has been as great in the last generation as that in other lines of enterprise. No farther back than our fathers' days the "tallow dip" was the sole means of domestic illumination—unless perchance it might have been the light from the fire in the old fireplace. The writer hereof was quite a boy and well remembers when the first kerosene lamp was introduced into the family. My, what a light we thought it gave. And how apprehensive we were lest it should explode. The younger members of the family were all severely cautioned not to meddle with that lamp.

While the kerosene lamp still survives in farm residences, yet among these there is a decided movement towards other and more efficient means of house lighting. It was in February, 1904, that this writer installed an acetylene gas lighting system in his home. It is a small and very simple plant, but has given excellent satisfaction. Every room in the house is provided with an abundance of light, and not the least among its advantages is getting away from the care of a lot of greasy lamps. A few minutes occasionally are required in renewing the charge of carbide, and the shades need only such care as other articles of household furniture to keep them clear of dust.

The generator is installed in the house cellar, and one winter when wife and I were in the south and the house unoccupied, the man who was left in charge was directed to empty the water out of the generator, but failed to do so and the machine froze up. The only damage resulting from this, however, was a slight leak. This repair has been the only one required since the plant was installed. So far as now observable it is good for years to come. The expense of running this plant is merely nominal. Just about 300 pounds of carbide are consumed in a year, costing \$4 per 100 pounds at the station here. During the time when lights are required we burn from one to three or four tips. Occasionally when there are some "doings" at our house the whole house is lighted up. And the lights in the living-rooms are equal to or greater in intensity or candle power than the ordinary electric bulb.

A thing that frightens a good many people in the use of acetylene gas is the possible danger of an explosion. It is true that this gas is inflammable, and like all inflammables should be used with caution. But did anyone ever hear of explosions in the use of gasoline? Still, gasoline is constantly in general use. Like all gas machines that are properly constructed, and that will be permitted in insured buildings, mine is provided with an overflow pipe which carries any surplus gas that may be generated out of doors. Our machine is as inoffensive in the cellar as a barrel of potatoes or a crate of onions, but if a person has any fears about installing a machine in the cellar a small frost-proof room may be constructed outside and away from the house where the machine may be placed and all danger avoided.

We have never tried this gas for cooking purposes. The ordinary tip

OCTOBER.

BY J. A. KAISER.

O golden month! O ripest harvest time!
When Nature's wildest fruits, the nuts and leaves
And hardy grapes and native apples wild,
In colors of a thousand gorgeous hues,
Bedeck the woods and fields, and pendant hang
Against the soft and dreamy autumn sky—
When over-head the wild geese southward bound
Their noisy clangor raise, and in the woods
The partridge from the thicket bursts away
Before the traveler's tread, a patch of brown
An instant whirling through some sunlit space,
Then lost from view amid the bright-hued woods:

Thou art the crowning glory of the year,
When Nature's lap is full and overfull
And when her genial smile is over all.
What fields! What woods! What skies.
What stores laid up
Against the coming winter's fruitless time!
What golden, russet-brown, and crimson hues.
What nights invigorated by the frosts!
What genial, sunny, warm and hazy days!
Words cannot paint thy charms, thou month of months:
He who would know, must loiter 'neath thy skies
And spend awhile amid thy fields and woods,
Thy golden, gorgeous, ever-glorious woods.

for acetylene burns from one-half to one cubic foot of gas an hour, while the tips for burning street gas consume five to six feet cubic feet an hour. This might make cooking a little costly, though, as I say, I never tried it.

Allegan Co.

EDW. HUTCHINS.

A HUNTER'S CODE.

Signals for deer and other hunters who are in trouble have been prepared by Thomas B. Wyman, secretary of the Northern Forest Protective Association. Large placards are being placed in the woods by Mr. Wyman in order to keep the signals ever before the minds of the hunters. Here are the signals:

Help—four shots in quick succession, as 0000.

Injured—Shot, pause, two shots, pause, shot, as 0-00-0.

Lost—Three quick shots, pause, one shot, as 000-0.

Man Found—One shot, pause, three quick shots, as 0-000.

Call Heard—Two quick shots, pause, two quick shots, as 00-00.

EVERY MEMBER OF THE FAMILY

Should read in next week's issue of the Michigan Farmer the first installment of our new serial, "Mister Forty-four," by E. J. Rath. This is one of the best serials of the season, and by reading the first chapter the folks will become intimately acquainted with the heroine's keen sense of justice. Every character in this story is human, full of life and energy. The story will thoroughly entertain and enthuse readers with those things which make for wholesome living. We believe that splendid practice of reading aloud to the whole family should be revived in the American home. Here is an opportunity to start with the winter's reading. Remember, the story will begin in next week's issue.

MICHIGAN FARMERS VISIT WISCONSIN DAIRYMEN.

(Continued from page 402.)
Madison to look through the capitol building, which is nearing completion and is accounted the most superb capitol building in America.

Everyone voted the three-day trip a grand success. The farmers are so enthusiastic that they want more trips of the same kind and say they will send their boys, too. I. B. McMURTRY.

There are a Lot of Careless Voters —and Therein Lies the Only Danger

THERE ISN'T THE SLIGHTEST DOUBT that Michigan is overwhelmingly "Dry" in sentiment. The saloon interests admit that.

BUT THERE'S JUST A CHANCE that that sentiment may not be fully recorded at the polls November 7th—and that chance lies in the carelessness or apathy of voters.

A TRAP HAS BEEN LAID to catch them. This ad is to warn you.

YOU KNOW THAT SOME PEOPLE pay less attention to the ballot they're going to cast than they do to the quality of the breakfast coffee.

AND YET IT IS VITAL not only that every citizen vote on November 7th on the Prohibition question, but that he vote right—intelligently, and with a full understanding of the ballots.

JUST SUPPOSE YOUR RIGHT to the ballot were cancelled—how sore you would be!

YOU PRIZE YOUR FRANCHISE as an American citizen above all else—you'd shed your last drop of blood to protect that right, if it were to be taken away from you.

AND YET THAT is precisely what is attempted when schemers, working in the interests of the saloons, so frame proposed laws and amendments as to fool you and make you actually vote the exact opposite of what you intended.

TAKE THAT SO-CALLED "HOME RULE" amendment for example!

SOUNDS INNOCENT—sounds like something any lover of home would want to vote for.

YET IT'S THE MOST VICIOUS amendment that could be devised. The term "Home Rule" covers a trick by which you are to be caught and induced to vote for an act that would result not in Home Rule, but Home Ruin.

IT'S A TRAP cunningly devised to catch the careless and the unsuspecting voter.

IT IS JUST A TRICK, of course. But what can you expect from such a source.

THEY MUST RESORT TO TRICKERY in order to make it possible for 5 per cent to outwit 95 per cent of Michigan voters.

WE SAY 5 PER CENT BECAUSE that is just about the proportion of people in this state who are financially interested and directly profit from saloons, breweries and closely related vices and "devices."

PERHAPS ONE-THIRD—not more—of the voters of this State really do not believe in Prohibition.

WE THINK THEY ARE WRONG—fundamentally wrong. But we grant their sincerity and their honesty. So we know they are not a party to this trick.

IN FACT, WE BELIEVE that if they will take the trouble to read carefully and to look into that amendment and learn its viciousness and the abuses to which it surely would lead, they would be as deeply incensed as are the most ardent believers in State-Wide Prohibition.

SO VOTE "YES" to the "Amendment to Article XVI of the Constitution"—State-Wide Prohibition. THEN VOTE "NO" to the "Amendment to Article VIII," which is the scheme of the saloon interests. AND WE REPEAT, don't fail to vote on both! This is vital!

Michigan "Dry" Campaign Committee

THE SALOON INTERESTS CALL IT the "Home Rule" amendment. Was ever term more misapplied!

LISTEN, HERE'S WHAT it would mean if enacted.

IT PROVIDES that "every incorporated city and village and organized township (get that—"township"!)" shall each have the right to determine whether or not there shall be prohibited therein the manufacture and sale of malt, fermented, vinous, distilled or intoxicating liquors!"

ANY VILLAGE OR TOWNSHIP, mind you!—how close does that bring the saloon to your own home?

YOU KNOW "PRACTICAL POLITICS" perhaps. Then just consider that by the simple plan of "colonization"—bringing 50 to 75 men (unprincipled hirelings!) into a village or township and keeping them there 21 days, that little district can be voted "Wet."

THE MAJORITIES FOR or against any measure in such communities are small. Think how easy it would be, and how cheap considering the stake—to swing the decision for a "Wet" township or village. And 100 "colonists" could swing most cities in Michigan—all but the very largest ones!

WHY IT IS DIABOLICAL in its cunning—nothing less.

IT BEHOOVES YOU, even tho you are apathetic on the State-Wide Prohibition subject, but do not want a saloon right next door to your home, to read carefully those two ballots.

FOR THERE ARE TWO, and they look so much alike it is impossible to tell which is which, except by reading the first paragraph (in black type) and the first few words of the second paragraph of both.

THEY LOOK ALIKE—BUT what a tremendous difference!

THE ONE IS "Amendment to Article XVI of the Constitution," and that provides for the most practical form of State-Wide Prohibition.

THE OTHER IS "Amendment to Article VIII." This is the "trick" of the saloons, and if enacted would bring about the worst possible conditions.

IT WOULD CREATE LITTLE PEST HOLES all over the State, from which pollution would spread into the surrounding "Dry" territory, and into your very home.

READ YOUR BALLOTS CAREFULLY—take your own time about it.

IT WOULDN'T BE A BAD IDEA to cut this ad out and, when in the booth, refer to the directions below and mark your ballots accordingly.

AND BE SURE to vote on both ballots. For there's another catch there.

IF YOU FAIL to vote "No" to the saloon "Amendment to Article VIII," you may be sure the saloon men and their friends will vote for it—and it might carry. They never fail to vote—it means money to them—much money.

U K C



Perfect Fit

Elastic-Ribbed

Fleece-Lined

Well Made

All Styles

Warm and Healthy

Comfort Union Suits

Shirts and Drawers

U K C

DOCTORS will tell you the best way to avoid colds and grippe this winter is to wear **VELLASTIC**—the scientific health underwear. The **VELLASTIC** patented fabric is the greatest non-conductor of heat and cold yet discovered.

VELLASTIC UNDERWEAR
Elastic Ribbed, Fleece-Lined

The inner fleece is soft and downy, pleasant to feel. It not only gives great warmth but keeps the body dry. The fleece will not wash away, knot or mat. The outer elastic ribbed fabric insures perfect fit and freedom of movement. **VELLASTIC** Union Suits or separate garments are the supreme luxury in winter underwear—in value, warmth, fit and comfort.

Wonderful Value in VELLASTIC
You can pay a lot more without getting **VELLASTIC** service and durability, think of it—**VELLASTIC** Union Suits and separate garments sell at 50c and up for men, women and children. Look for the **VELLASTIC** label. Don't take substitutes. Write for Bodygard booklet No. 23.

UTICA KNITTING CO.
350 Broadway New York

Bodygard

Woman and Her Needs

Team Work

EVERY sportsman can tell you how much depends upon team-work.

So essential is it that many a world's series game has been lost for lack of it, and even the eight-year-old fan playing the game in a vacant field will tell you heatedly that "Our side would a-won if Bill hadn't a-gone and throwed the game to the other side."

Team-work in sports is as essential as fine work on the part of individual players. Indeed, it seems more so, since average sportsmen, working together, often defeat teams of efficiency experts who fail to understand one another's signals.

Absolute co-operation being so necessary in the sporting world, doesn't it seem queer that so many of us fail to recognize its need in families? Just the lack of team-work in the home spells the difference between success and failure more often than any other thing. The husband may be ever so brilliant and talented, the wife may be clever and charming, but if there is no team-work, if each pulls in opposite directions, happiness is shipwrecked, and often financial success as well.

You remember Lydgate and Rosamond in "Middlemarch." To me Lydgate has always been one of the most pathetic figures in fiction. Well-born, well-educated, ambitious, filled with a love of his work and with a definite object in view he should have gone to the top of his profession, medicine. But at every turn he was thwarted by Rosamond, his wife, who "always knew best." Not that Rosy ever did anything unladylike or openly opposed Lydgate. In fact, she never said anything about any of Lydgate's suggestions, her silence leading him to think that she agreed. But Rosy was only silent because she knew her way was so much better there was no use talking it over. Thus Lydgate, thinking she meant to co-operate, would go ahead only to find in every crisis that Rosy had done some ridiculous thing which completely upset his plans and landed them farther in debt.

Three or four years of this sort of thing reduced Lydgate to failure so far as his ambitions were concerned. There was no use opposing Rosy, and she had her own way anyway. There was no team-work and never could be. So Lydgate gave up. He died a young man, a complete failure from his point of view. And his failure was due to one thing only, lack of team-work at home.

We do not need to look to fiction, however, to see illustrations of homes wrecked by lack of this essential feature. You all know homes where no one is head, where parents are at variance with one another and the children with themselves and parents as well. "Individualism," we call this attitude of each going his own way, but it is individualism very much over-worked. Of course, no two can be brought to the same pattern, there must be allowance for the peculiarities of each member of the family. But in order to make a success of family life each must give up some things that all may work together for harmony.

Many a man is living today with the fear of dying and leaving his family penniless, because the wife will not work with him with an idea of saving. "He had no business to marry me if he didn't want to spend his money on me," is one woman's plea. And she goes on blindly spending every cent the husband can bring in, with no thought of the lean years to come. A little co-operation, and agreement to save a specified sum each week would lift years

from the man's shoulders and make him better able to earn more.

Then the women, too, whose husbands are misers, who think that life was only meant as a time to accumulate dollars—how the wives long for a chance to rest and look about them, an opportunity to spend a few of the dollars they have earned, but which are jealously seized and stored away by the miserly husbands. A little team-work on the part of the husbands here would mean the difference between life and slavery to the tired out women. It would keep alive the love in hearts which hard work and stinginess are filling with seething hate.

Team-work should lead to the covering of domestic squabbles. Of course, we all have them now and then, but why tell the neighbors about it? They are only maliciously interested, and as there is always two sides to every quarrel we are only confessing our own shortcomings when we tell family affairs. In fact, team-work, if properly practiced would make family life as nearly idyllic as we can ever hope to make it in this vale of tears. It would cut down the divorce rate and increase the bank accounts almost as perceptibly as would prohibition. DEBORAH.

POTATOES IN FAT.

BY LALIA MITCHELL.

The fat in which doughnuts have been fried can be used for frying potatoes and these make a pleasant change.

Saratoga Chips.—Peel firm, medium-sized potatoes and slice very thin. Let stand four hours in cold salted water and drain, wiping off any remaining moisture with a dry towel. Drop in hot fat and let remain until light brown in color, and crisp. Remove with a skimmer, sprinkle lightly with salt and serve.

Sweet Potato Fritters.—Rub two cupfuls of sweet potatoes through a colander, add three well beaten eggs and a little butter. Lift in small spoonfuls and drop in hot fat until brown. Remove with skimmer, drain for a moment on white paper and serve hot.

Souffle Potatoes.—Slice small mealy potatoes lengthwise, being sure to have the pieces not more than twice as thick as for Saratoga chips. Have ready two kettles of fat, one very hot, and the other only moderately so. Drop slices of potato into the cool kettle, let remain until half done, skim out and dip into the hotter fat. When plunged into the hot kettle they will puff up.

FOR THE HALLOWE'EN PARTY.

BY DOROTHY CLARK.

Many of our young people who will entertain on Hallowe'en will be looking for ways of entertaining their guests. There are many old-time games which are amusing, but as Hallowe'en is often called the eve of all Saints, being the eve preceding All Saints' day, November 1, one might also use a guessing game called "The Game of All Saints," to help fill out the evening.

Prizes may be given, one to the person having the most correct answers, and one to the person having the least. It is not necessary to go to the expense of buying these prizes unless the hostess so desires. A hideous looking Jack o' lantern for the booby prize and a sack containing ten or twelve rosy cheeked apples for first prize will answer very nicely. Here are the questions and below them the answers:

1. What beautiful lake is named after a saint?
2. What saint's birthday is com-

"The Proof of the Pudding

is in the eating"—and everyone eats it, when it is light and tender. To have your steamed pudding and dumplings fluffy, appetizing and digestible—use **RUMFORD** as the leavener. It raises evenly, thoroughly—perfectly. Always uniform, dependable and successful. Prove it at our expense.

Send for **FREE** Trial Size Can and Test

Rumford
Chemical Works
Dept. 36
Providence, R. I.
Please send me
5 oz. Trial Can
and Cook Book
FREE.

Name _____
Street _____
City _____
(Publication) _____
C 67 8-16

Rumford
THE WHOLESOME
**BAKING
POWDER**



New KEROSENE LIGHT BEATS ELECTRIC OR GASOLINE

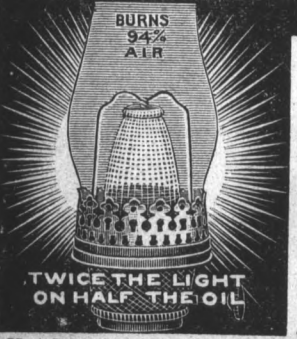
10 Days FREE—Send No Money

We don't ask you to pay us a cent until you have used this wonderful modern white light in your own home ten days, then you may return it at our expense if not perfectly satisfied. You can't possibly lose a cent. We want to prove to you that it makes an ordinary oil lamp look like a candle; beats electric, gasoline or acetylene. Lights and is put out like old oil lamp. Tests by U. S. Government and 34 leading Universities show that it

Burns 50 Hours on One Gallon
common kerosene (coal oil), no odor, smoke or noise, simple, clean, won't explode. Three million people already enjoying this powerful, white, steady light, nearest to sunlight. **Won Gold Medal at Panama Exposition.** Greatest invention of the age. Guaranteed.

\$1000 Reward will be given to the person who shows us an oil lamp equal to the new Aladdin in every way (details of offer given in our circular). We want one user in each locality to whom we can refer customers. To that person we have a special introductory offer to make. **Yours FREE** under which one lamp is given free. Write quick for our 10-day Absolutely Free Trial Proposition and learn how to get one free.

MANTLE LAMP COMPANY, 117 Aladdin Building, CHICAGO, ILL.
Largest Kerosene (Coal Oil) Mantle Lamp House in the World



Men With Rigs Make \$100 to \$300 Per Mo.

Our trial delivery plan makes it easy. No previous experience necessary. Practically every large home and small town home will buy after trying. One farmer who had never sold anything in his life before writes: "I sold 51 the first seven days." Christensen, Wis., says: "Have never seen an article that sells so easily." Norring, Iowa, says: "25 per cent of homes visited bought." Phillips, Ohio, says: "Every customer becomes a friend and booster." Kemering, Minn., says: "No flowery talk necessary. Sell itself." Thousands who are coming money endorse the Aladdin just as strongly. **NO MONEY REQUIRED.** We furnish stock to reliable men to get started. Ask for our distributor's plan, and learn how to secure an appointment and make big money in unoccupied territory. State occupation, age, whether you have rig or auto; whether can work spare time or steady; when can start; townships most convenient for you to work.

When Writing to advertisers please state that you saw their ad. in The Michigan Farmer.

memorated by sending love missives?

3. Who was the patron saint of Paris?

4. What saint is particularly loved by the Irish people?

5. What mission in this state was named for a saint?

6. What saint do the children all adore?

7. What river and city in Michigan are named for a saint?

8. Place the word "saint" before a name applied to a newly married man and you have the name of what saint?

9. What very old city in the United States was named for a famous saint?

10. What saint bore the same name as the given name of a great explorer?

11. What river and falls in the northern part of Michigan are named for an important saint?

12. What saints' day comes the fifteenth of July?

1. Saint Clair.
2. Saint Valentine.
3. Saint Genevieve.
4. Saint Patrick.
5. Saint Ignace.
6. Saint Nicholas.
7. Saint Joseph.
8. Saint Benedict.
9. Saint Augustine.
10. Saint Christopher.
11. Saint Mary.
12. Saint Swithens.

HOME QUERIES.

Household Editor:—How can we get rid of large black ants?—H. N.

A teaspoonful of tartar emetic in a saucer of sweetened water will drive ants away.

Household Editor:—I would like to ask the Michigan Farmer ladies for a good recipe for tomato catsup, so it is like the catsup you buy.—Mrs. H. K.

Household Editor:—Can anyone furnish a recipe for preserving the little pear tomatoes so they will be like preserved figs? Have read of them but never saw a recipe.—Subscriber.

MICHIGAN FARMER PATTERNS.

Our latest Fashion Book, containing illustrations of over 1,000 designs of ladies', misses' and children's garments in current fashions, also newest embroidery designs, and articles which give valuable hints to the home dress-maker, will be sent to any address upon receipt of ten cents. All patterns are ten cents each.



No. 7986—Ladies' Waist. Cut in sizes 36 to 42 inches bust measure. The waist has a hood collar and is very simple to make.

No. 7995—Ladies' Dress. Cut in sizes 36 to 44 inches, bust measure. The skirt of this dress is cut in three gores and is made with a slightly raised waistline.

No. 7977—Girls' Dress. Cut in sizes, 8, 10, 12 and 14 years. This dress has a plaited skirt attached to an underwaist.

Do You Eat?

What \$1.00 of Your Money Will Buy Today

Variety of Food	Price	Food Value for \$1.00
Eggs	\$.30	Doz. 3480 energy units
Beefsteak	.30	Lb. 3640 energy units
Breakfast Foods (average)	.07½	Lb. 5350 energy units
Mutton	.22	Lb. 6700 energy units
Pork Chops	.22	Lb. 6980 energy units
Cheese	.24	Lb. 7860 energy units
Milk	.08	Qt. 7880 energy units
Potatoes	2.00	Bu. 12500 energy units
Beans	6.00	Bu. 15600 energy units

WHEAT FLOUR.....10.00 BBL. 23600 ENERGY UNITS.

The United States Department of Agriculture, Bulletin No. 142, says white bread made from wheat flour is the most nourishing and cheapest food—above figures prove it.

Think of it! \$1.00's worth of wheat flour baked into bread provides enough nourishment to last a man in full vigor doing moderate muscular work, seven and one-half days.

This means that every dollar invested in

Lily White

"The Flour the Best Cooks Use"

goes almost twice as far, when baked into bread, as one dollar invested in any other variety of food.

Besides you save nearly one-half by baking your bread instead of buying it.

You will have better bread, too.

Every sack of Lily White Flour is all pure, wholesome, healthful and nutritious.

The next time you bake bread use Lily White Flour. Then spread a good, big slice of the fresh bread with good butter, and if you don't say Lily White bakes the best looking, best tasting, tenderest bread you ever ate we will treat.

Please remember every sack is guaranteed to give perfect satisfaction or money returned.

VALLEY CITY MILLING COMPANY,
Grand Rapids, Mich.

No Bitter Taste in Food Made with Cream of Tartar Baking Powder

The bitter taste often noticed in biscuits, cakes, muffins, corn bread etc., does not exist in food made with baking powder made from pure, cream of tartar like Royal Baking Powder.

Royal Baking Powder contains no alum nor phosphate, which are derived from mineral sources and used in some baking powders instead of cream of tartar, because they are cheaper.

Buy Your **COFFEE** WHOLESALE IN 5-LB LOTS
Get the BEST and SAVE 10 cts per pound.
WE PAY POST, EXPRESS or FREIGHT
IF YOU LOVE GOOD COFFEE SEND FOR PRICE LIST
JEVNE COFFEE CO. (Est. 1881) Coffee Specialists
Dept. 7, 2855-57 W. Madison St., CHICAGO.

When writing to advertisers please mention the Michigan Farmer.

LET US TAN YOUR HIDE.

Cattle or Horse hide, Calf, Dog, Deer or any kind of skin with hair or fur on. We tan and finish them right; make them into coats (for men and women), robes, rugs or gloves when ordered. Your fur goods will cost you less than to buy them, and be worth more. Our illustrated catalog gives a lot of information which every stock raiser should have, but we never send out this valuable book except upon request. It tells how to take off and care for hides; how and when we pay the freight both ways; about our safe dyeing process which is a tremendous advantage to the customer, especially on horse hides and calf skins; about the fur goods and game trophies we sell, taxidermy, etc. If you want a copy send us your correct address.

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



Wanted: Honest, Energetic Men

in every county to sell our big line of goods direct to farmers. Experience not necessary. We fully instruct you. Farmers, laborers, mechanics or any men willing to work can make

\$1000 to \$3000 a Year

handling our big sellers. Exclusive territory given. We furnish you the capital; you furnish the team to carry the goods. Be your own boss in a pleasant, permanent and profitable business. Write at once for full particulars, giving age and occupation.

THE DUOFORM CO., Dept. 2, North Java, N. Y.



No More Tired Feeling

If you have a Terriff Perfect Washer—a time and labor saver for every home. Washes all clothes sweet and clean without the use of the washboard. The Terriff Perfect Washer is absolutely guaranteed. Sold direct to you. Write for free booklet. Get washer without cost. Agents wanted, Terriff Perfect Washer Co., 62 Main St., Portland, Mich.



Styleplus \$17 Clothes

"The same price the nation over."
(In other countries duty added)

Still \$17—in spite of the War!

This trademark, renowned the world over, is unchanged! Our victory is *your* victory! We kept our nerve and won the great fight against a higher price for Styleplus. And you reap the harvest! It was a hard struggle. It took courage, while all other prices were soaring, to hold fast to the easy, popular price of \$17. By buying big and manufacturing scientifically we have done it. Think of it! You can get the splendid all-wool Styleplus suits and overcoats at the same price and be certain of the quality—for it's guaranteed! Here's a triumph for *you* to cash in on! Get yours today!

Style plus
+ all wool fabrics
+ perfect fit
+ easy price
+ guaranteed wear

You know the price *before* you go into the store—\$17 always, everywhere. Watch your local newspapers for advertisements of the nearest Styleplus Store. Look for Styleplus in the Store Window. Look for the Styleplus Label in the coat collar. If there should not be a Styleplus Store in your town, ask your favorite dealer to order a Styleplus suit or overcoat for you.

Write us (Dept. H) for free copy of "The Styleplus Book."

HENRY SONNEBORN & CO., INC.

Founded 1849

Baltimore, Md.

Automobile Tires—BIG BARGAINS

Buy by Mail—Save 40%

SENT ON
APPROVAL

You save money by buying from one of the largest Eastern tire houses. We buy surplus stock from high-grade tire manufacturers at big reductions and sell to you at one small profit. These tires are Firsts—only the serial number buffed, so you get same quality, same mileage—and look what you save—

FORD SIZES			
Plain Non-Skid Tubes			
30x3	\$6.25	\$6.95	\$2.00
30x3½	7.95	8.95	2.35

Larger Sizes			
28x3	\$5.50	\$6.20	\$1.90
31x3½	8.45	9.25	2.50

22x3½-2	8.80	9.75	2.60
23x4	11.95	13.65	3.30
24x4	12.10	13.95	3.40
25x4	12.25	14.25	3.50
26x4	12.75	14.75	3.80
28x4½-2	16.80	18.55	4.25
28x4½-2	17.10	18.95	4.35
27x4½-2	17.45	19.50	4.50
28x5	19.25	21.10	5.15
27x5	19.75	21.75	5.25

PAY AFTER EXAMINATION

We send C. O. D. subject to your inspection—You don't pay until you've seen the tires. In ordering state whether Clincher, Q. D., or S. S. 2 per cent discount if you prefer to send cash with order. (Our financial responsibility is assured by reliable bank references.)

SEND YOUR ORDER TODAY. We cannot guarantee against a raise in prices, due to threatened rubber shortage.

Philadelphia Motor Tire Co.,
240 N. Broad St., Philadelphia, Pa.

3,500

Mile
Guarantee
Against
Imperfection

KITSELMAN FENCE



Got It From the Factory Direct
HORSE-HIGH, BULL-STRONG, PIG-TIGHT
Made of Open Hearth wire, heavily galvanized—a strong, durable, long-lasting, rust-resisting fence. Sold direct to the Farmer at wire mill prices. Here's a few of our big values:
26-inch Hog Fence—15 cts. a rod.
47-inch Farm Fence—21 cts. a rod.
48-inch Poultry Fence—27 cts. a rod.
Special Prices on Galv. Barbed Wire.
Our big Catalog of fence values shows 100 styles and heights of Farm, Poultry and Lawn Fence at money-saving prices. Write for it to-day. It's free.
KITSELMAN BROS. Box 278 Muncie, Ind.



\$18.95 at the factory

That's the new low price on our David Bradley Corn and Cob Crusher and Feed Grinder. For full information see page 1440 of our big new General Catalog. Satisfaction guaranteed always.

Sears, Roebuck and Co., Chicago.

FREE
Wonderful Money Saving Fence Book. Over 150 Styles. 13¢ Per Rod Up. Gates-Steel Posts-Barb Wire. **DIRECT FROM FACTORY—FREIGHT PAID** All heavy DOUBLE GALVANIZED WIRES. 13¢ per rod up. Get free Book and Sample to test. **THE BROWN FENCE & WIRE CO.,** Dept. 49, Cleveland, Ohio

14½¢ ECONOMY.
Before you buy any more fence, write for facts about our 26-inch **ECONOMY HOG FENCE** at 14½¢. per rod. Many other styles and prices. **Keystone Steel & Wire Co.** 5904 Industrial St. PEORIA, ILL.

As low as \$7.90 **\$10,000.00**
Backs this **SAW** Hertzler & Zook Portable Wood
This is the cheapest saw made. Only \$7.90 saw frame to which a ripping table can be added. Guaranteed 1 year, money refunded and all charges paid if not satisfactory. Write for catalog. **Hertzler & Zook Co., Box 23 Belleville, Pa.**

GET IT FREE
We are giving Ropp's New Calculator **FREE** to every farmer or land owner who has not yet sent for a copy. Ropp's Calculator should be in the hands of every farmer. It will instantly give the correct answer to any business problem that can be settled by arithmetic. We will also send you our free illustrated catalog on **SQUARE DEAL FENCE**
Which tells you why it is better than any other fence and where to get it. Land owners, if you want a farm fence that will last, and stay trim and tight the year round, write for these **FREE** books today.
Keystone Steel and Wire Co. 2532 Industrial St. PEORIA, ILL.

BOOK ON DOG DISEASES And How to Feed
Mailed free to any address by the Author
H. CLAY GLOVER CO., Inc. 118 West 31st Street, New York

Farm Commerce.

Marketing the Farm Flock

By R. G. KIRBY

THE local markets for farm poultry seem very good this year in the average section. The farmer with a hundred or more fat hens of any of the American breeds can usually obtain about one dollar per hen for his birds and if the flock can be entirely replaced with pullets, about to lay the money from the mature flock can almost be classed as "clean velvet," as the hens have certainly paid their way during the past season of high-priced eggs, and they should have made a fair profit in addition.

The Late Broiler Market.

The early broiler market is always emphasized as prices are somewhat higher early in the season. Too frequently the later broiler market is neglected and on many local markets the later crop brings nearly as much and

know the practical value of the fat farm hen and that is why hens are in demand this year at extra good prices. One of the main reasons for enlarging the farm flock should be this opportunity of turning off a crop of two or three hundred hens annually for they will surely be a cash crop worth considering in seasons when droughts or an over supply of rain seriously reduce the cash income of the farm. The old hens are then immediately replaced with pullets of even greater laying capacity and there is thus no reduction in the breeding stock and no loss in the egg income through the disposal of the hens.

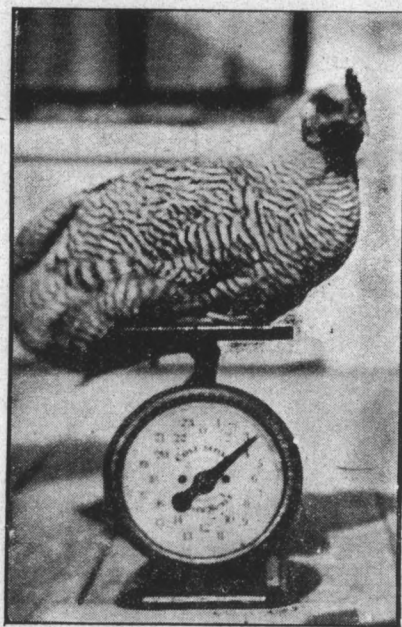
The market prices paid for capons in many large cities will frequently induce the farmer to consider this side line in the poultry game. Not all the breeders have been successful in making money from capons. It may offer profits to the specialist but the farmer who disposes of his flock on the local market may find that the housewife will buy the young cockerel or the fat hen when she will overlook the capon and as for paying a higher price for that delicacy she would consider it entirely absurd.

Fattening is Necessary.

Hens on the general farm may pick up the bulk of their ration from the fields during the summer. They balance their own ration from the wealth of bugs and seeds gathered, combined with the scraps and grain feeds furnished by the farmer. Many of these farm hens lay fairly well and pay their owner a profit but they seldom become fat and in the fall and early winter it is good business to add as many pounds as possible to their weight before furnishing them to the local market man or private customers. Possibly you have visited the butcher shop and noted the buyers select their Sunday supply of meat. Mrs. Smith may have decided on a pork roast or a beef stew, but she enters the market and notes a row of plump fat yellow-legged chickens. A poultry feast immediately appeals to her desire to please the family, and a dollar or more of Father Smith's hard-earned cash is turned over to the dealer and the farmer who raised the bird. If the fowls had been thin, with that appearance of withering for six months in a cold storage plant, the same fowl might never have furnished the Smiths with a healthful Sunday dinner. Poultry meat is considered very healthful by the majority of the physicians and the general public are learning every year to use poultry and poultry products to better advantage. This is the reason that the farm flock is bringing good prices and predictions from many sources seem to agree that high prices for poultry have come to stay. This is another reason why marketing the farm flock should be as important on the general farm as selling any of the general farm crops which furnish the spot cash for the many necessities of life which even farmers must pay for with real money.

Use By-products of the Dairy.

There are many rations for fattening fowls, and some of them are complicated and unnecessary in finishing the farm hens for the market. Restricting the exercise and increasing the amount of fat-producing foods will finish the birds in two or three weeks, depending on their condition of flesh when the fattening process begins. Corn and corn meal mash made with skim-milk, buttermilk or sour milk should be sufficient to fatten old hens. Separate the birds to be marketed



Three-pound Barred Rock Broilers Developed quickly on Sour Milk Find a Ready Sale on City Markets.

the cost of production is less. At the present time with my broiler crop out of the way I regret that the incubators were not run through one or two more hatches, as the local market is not supplied with broilers in sufficient quantities and two dealers have stopped me on the street and requested more. Three-pound Barred Rock broilers which will bring twenty cents a pound can be made a profitable summer crop with fair luck in hatching and brooding. It might be mentioned that the Leghorn broiler is received with favor by the hotel trade as the birds are sold at high prices in small portions. The hotel manager makes no more money by serving a large broiler and for this reason the fine tender young Leghorns bring a good price from the best hotel trade. The general trade on the local market appreciates broilers of the American breeds as they are larger and look more like a "real chicken." The marketing of broilers will probably be a side line on the majority of farms, but it can be made a profitable side line if the crop is produced in large enough quantities to make marketing possible far into the fall.

Old Hens Bringing Good Prices.

Fat old hens meet with the greatest favor on the local market. The housewife likes a hen which will cook up tender and furnish a square meal for a family of five or six people and possibly be sufficient for a left-over meal on Monday or Tuesday. The buyers at the local market have not been educated up to capon eating and many families cannot afford broilers but they

from the remainder of the flock and enclose them in a clean pen where there will be little chance for exercise. Feed them all they will eat and daily note the increase in flesh. When you can rub your knuckles over their backs and they feel plump and fairly spongy with oil, instead of like a metal wash-board, it is sure proof that the birds are growing into a good condition for the market.

Look After Marketing Early.

Before the birds are finished make arrangements with the local dealer to take them on a certain day. Do not wait to make a sale on the last day that the birds will stand cramming, as it may result in the dealer who pays the best prices being overstocked for that week-end and there is no money in holding them beyond a certain point. An arrangement for the season can frequently be made with a local dealer. He becomes responsible for a certain number of birds per week and you plan to deliver the stock as per agreement. If he likes your service he will be absolutely square if for no other reason than to prevent his rival from obtaining your output and you will be sure of a good market and obtain good prices for the birds.

Methods of Selling.

Local dealers receive the brisk demand for poultry from the Friday and Saturday buyers but they usually desire fowls on Tuesday or Wednesday to give them plenty of time to dress the birds during the first of the week when business at the selling end of the game is not so pressing. When shipping poultry to commission men in distant cities it pays to send a letter in advance and receive special shipping instructions as well as information regarding the dates that the shipments can receive the best attention. It does not pay to ship to unknown dealers who may not prove honorable in their dealings. A square commission man can be found by every farmer and there are many honest dealers in every market center. When a reliable dealer is found and the results from dealing with him are satisfactory it often pays to give him the exclusive right to handle your products. He will appreciate the favor and it will increase the profit from the farm flock. The Jewish holidays are especially desirable times to ship fat hens to large market centers.

Formerly it was the custom to urge farmers not to overcrowd poultry shipping coops from humanitarian principles. The federal poultry shippers' law now cares for that proposition. Coops must have solid bottoms and when slats are used they must not be over one and a half inches wide. Shipping in boxes is prohibited. Following is the number of fowls that can be shipped in one standard coop in a satisfactory manner:

Fowls.	Number per Crate.
7 to 10 pounds	8
5 to 7 pounds	10
4 to 5 pounds	14
3 to 4 pounds	16
2 to 3 pounds	18
1 to 2 pounds	20
Ducks.	
Large	10
Medium	14
Small	18
Geese.	
Large	6
Medium	8
Small	10
Turkeys.	
Gobblers	5
Hens	6

The shipping crates for springers and ducks must be at least 12 inches high; for geese and fowls, 16 inches, and for turkeys, 20 inches. All standard shipping crates are three feet long and two feet wide. A shipper disregarding the new law is liable to fine and imprisonment and any expenses incurred in caring for illegal shipments can be charged up against the consignment. The law should receive the approval of all farmers as the birds which are properly crated will arrive on the market in good condition and there will be fewer losses from suffocation, and less shrinkage. The sight of

half-smothered birds standing in the hot sun by the railway station has been too frequent in the past and this law will certainly improve the marketing conditions of the farm flock and the farmer and the city consumer will both be benefactors.

MICHIGAN MILK PRODUCERS' MEETING.

(Continued from first page.)

done by the officers of this Association, as being the most productive of positive results ever obtained in dairy organization in this state.

We recommend that the office of field secretary be made a permanent feature to complete and maintain the organization, so that no step backward be possible in the advantages now gained.

We commend the investigational and constructive work of the Michigan Agricultural College, which has been of inestimable value to the dairy interests of this state.

We submit for guidance the prices agreed to by the Illinois Milk Producers' Association, which includes all milk used by condenseries and milk powder plants.

Illinois.

October	\$1.90
November	2.00
December	2.10
January	2.10
February	1.85

New York.

Also the prices agreed to in New York state:	
October	\$2.17
November	2.27
December	2.27
January	2.27
February	2.12
March	2.07

Average

.....\$2.17 5-6
This is for what is known here as Grade B Milk, testing three per cent fat. Milk of a higher fat content is to be figured at the rate of three cents per hundred for each one-tenth of one per cent of additional fat. This price is established for what we call the first zone, where the freight rate is 27 cents per hundred. In the second zone district where the freight rate is higher, the price demanded will be 10 cents per hundred less.

Also prices of the Helvetia Co., of Hudson.

Prices for six months for 3.5 per cent milk:

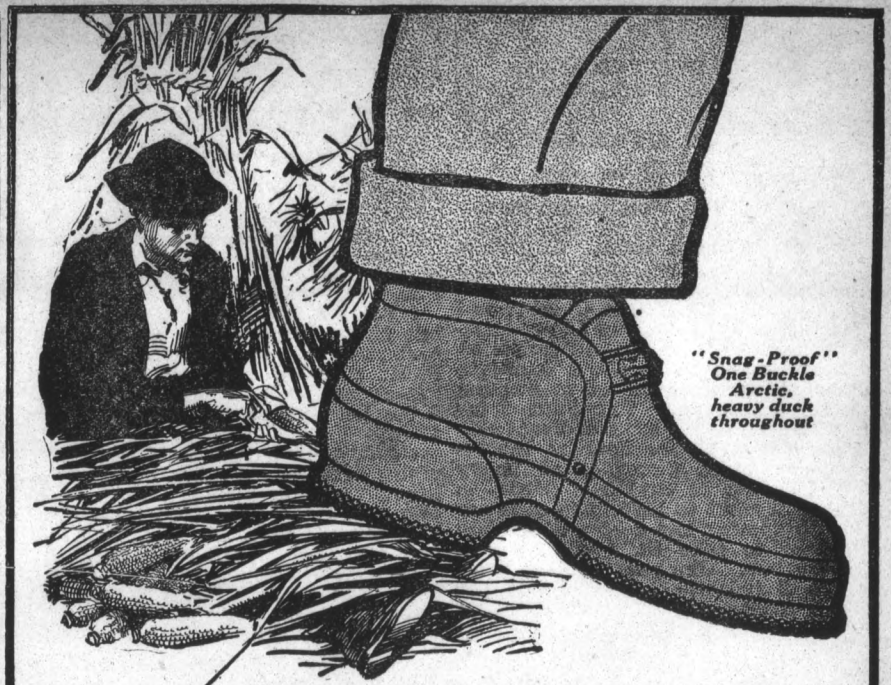
October	\$2.00
November	2.00
December	2.05
January	2.05
February	2.05
March	1.85

The power and efficiency of this organization will depend upon the extent to which the milk producers of Michigan affiliate with it and loyally support it. Your committee feel most strongly the importance of urging these two points upon all milk producers and it confidently asks this organization to start today the extension of its membership and to uphold its officials in their efforts to place the milk industry of Michigan upon a permanent and more profitable basis.

Prof. Anderson, of the M. A. C., chairman of the committee on revision of by-laws reported changes which increased the membership fee in the state organization to \$1.00 but gave members of local organizations their memberships at 50 cents through the medium of the local association. Another change provided that the directors of the organization be composed of the president, vice-president, secretary-treasurer, and nine other members to be elected at the meeting. These amendments were unanimously adopted by the association.

The following officers were elected for the ensuing year. President, N. P. Hull, Lansing; vice-president, R. C. Reed, Howell; secretary-treasurer, S. J. Munsell, Howell; directors, John C. Near, Wayne, Fred Shubell, Lansing, Cyrus Hunsberger, Grand Rapids, Charles S. Bartlett, Pontiac, F. F. Consul, Mt. Pleasant, A. L. Chandler, Owosso, Milo Godfrey, Napoleon, John C. Ketcham, Hastings, Milo D. Campbell, Coldwater.

The meeting adjourned with every member feeling enthusiastic with regard to the ability of the organization to not only maintain the successes already scored but to prove of still greater service to the dairy interests of the state in the future.



Lasting Wear and Satisfaction

What makes rubber arctics, boots and shoes wear out? Second-hand rubber loaded down with compounds and cheap workmanship will wreck any pair of boots before you get your money's worth.

Every Lambertville arctic, boot or shoe is made of fresh, tough rubber and stands the hardest wear you can give it.

LAMBERTVILLE RUBBER FOOTWEAR

is made in four brands. The "Snag-Proof," shown above, has seven thicknesses of pure rubber ground into the heavy sail duck, which make it durable and free from cracks and leaks. "Redskin" is all long-wearing red rubber. "L" brand has duck vamp. "Lamco" is pure gum, ribbed.

There is a Lambertville dealer near you. If you don't locate him, write us and we will see that you are supplied. Send for booklet.

LAMBERTVILLE RUBBER COMPANY
Lambertville, N. J.

Pull Big Stumps by hand



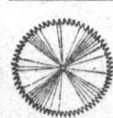
Showing easy lever operation

K HAND POWER Stump Puller

Clear your stump land cheaply—no digging, no expense for teams and powder. One man with a K can rip out any stump that can be pulled with the best inch steel cable. Works by leverage—same principle as a jack. 100 pounds pull on the lever gives a 48-ton pull on the stump. Made of Krupp steel—guaranteed against breakage. Endorsed by U. S. Government experts.

Write today for special offer and free booklet on Land Clearing.

Walter J. Fitzpatrick
Box 4
182 Fifth Street
San Francisco
California



Crucible Steel Cordwood Saws

Filed and set ready for use

1 1/2 inch Hole			
18 - -	\$2.30	26 - -	\$4.75
20 - -	2.80	28 - -	5.25
22 - -	3.50	30 - -	6.00
24 - -	4.25	32 - -	6.80

SAVE THIS ADD

For future reference. All Steel Saw Frame—Self aligning—dust proof boxes \$15.25.

Every Saw and Frame Guaranteed. Order direct from this Price List. Money promptly refunded if goods are not satisfactory.

Farmers Cement Tile Machine Co.
Drawer No. 1, St. Johns, Mich.

Mention the Michigan Farmer when writing Advertisers



BEST FOR THE READER
THEREFORE
BEST FOR THE ADVERTISER

Michigan Farmer, Detroit, Mich. (Rate 40c per line.)	Guaranteed Circulation	Rate Per Page Line
Ohio Farmer, Cleveland, Ohio, (Rate 60c per line.)	270,000	\$1.17
Pennsylvania Farmer, Philadelphia, Pa. (Rate 30c per line.)		
Indiana Farmer, Indianapolis, Ind.	57,101	.25
The Progressive Farmer, Birmingham—Raleigh Dallas—Memphis.	174,121	.80
Breeder's Gazette, Chicago, Ill.	90,000	.60
Prairie Farmer, Chicago.	100,000	.50
Hoard's Dairyman, Ft. Atkinson, Wis.	67,820	.45
Wisconsin Agriculturist, Racine, Wis.	63,454	.30
The Farmer, St. Paul, Minn.	140,855	.60
The Farmer's Wife, St. Paul, Minn.	750,000	3.00
Wallace's Farmer, Des Moines, Ia.	80,000	.40
Pacific Rural Press, San Francisco, Cal.	22,000	.16
	1,805,351	\$8.23

These publications are conceded to be the authoritative farm papers of their individual fields. For further information address

GEORGE W. HERBERT, Inc.
Western Representative, Advertising Bldg., CHICAGO, ILL.

WALLACE C. RICHARDSON, Inc.
Eastern Representative, 381 Fourth Ave. NEW YORK CITY.

Markets.

GRAINS AND SEEDS.

October 24, 1916.

Wheat.—Prices have advanced steadily during the past week. The short crop and liberal purchases by foreign agents affected the liberal advances. High grade wheat sold in Chicago and Minneapolis on Monday at \$2 per bushel. At northwestern points receipts on Monday amounted to about one-sixth of the receipts for the corresponding Monday a year ago. The demand for cash wheat is well sustained and millers say the call for flour at the recently advanced prices is so heavy that it cannot be supplied. There is nothing in sight to give hope of lower prices excepting the desire of holders of wheat to take their profits from time to time. One year ago the price for No. 2 red wheat was \$1.11½ per bushel. Last week's Detroit quotations were:

	No. 2	No. 1	Dec.
Wednesday	1.66½	1.61½	1.69½
Thursday	1.68½	1.63½	1.71½
Friday	1.69½	1.64½	1.72½
Saturday	1.70½	1.65½	1.73½
Monday	1.73½	1.68½	1.76½
Tuesday	1.77½	1.73½	1.80½

Chicago.—December wheat \$1.78½@1.79; May \$1.78½@1.78½; July \$1.44.

Corn.—Corn prices have been advancing rapidly in harmony with wheat. The demand is heavy and because of the short crop it would appear that prices are probably established above the dollar mark. Foreigners are buying this grain liberally; on Monday three-quarters of a million bushels were taken at seaboard for export. Bullish news from Argentina also added to the strength of the market. The visible supply decreased over a half million bushels last week. A year ago No. 3 corn sold at 68c per bushel. Last week's Detroit quotations were:

	No. 3	No. 3
	Mixed.	Yellow.
Wednesday	93	95
Thursday	94	96
Friday	96	98
Saturday	99	1.01
Monday	1.01	1.03
Tuesday	1.03	1.05

Chicago.—December corn 90c; May 90½c; July 90½c.

Oats.—Dealers are beginning to feel that at present prices the cheapest cereal on the market is oats and the demand has consequently increased in volume. Over 3,000,000 bushels of the grain were purchased Monday for export. The visible supply shows an increase of 1,300,000 bushels. Standard oats a year ago were quoted at 41c per bushel. Last week's Detroit quotations were:

	Standard.	No. 3
		White.
Wednesday	50½	49½
Thursday	51	50
Friday	52	51
Saturday	52½	51½
Monday	53	52
Tuesday	54½	53½

Chicago.—December oats 54c; May 57½c.

Rye.—This grain is in active demand and firm at new high prices for the season. No. 2 rye is now quoted at \$1.32 per bushel.

Beans.—The conservative action of farmers in holding their beans has caused dealers to bid up prices the past week. The Detroit Board of Trade now quote October shipment at \$6 per bushel. Practically no beans are changing hands at these figures on the local market. On the Chicago market there is an active demand for pea beans with quotations at \$5.50 per bu.

Seeds.—Market is steady to higher. Prime red clover \$10.35; alsike \$10; alfalfa \$9@10; timothy \$2.40.

FLOUR AND FEEDS.

Flour.—Jobbing lots in one-eighth paper sacks are selling on the Detroit market per 196 lbs., as follows: Best patent \$9; seconds \$8.70; straight \$8.50; spring wheat \$9.60; rye flour \$7.90.

Feed.—In 100-lb. sacks, jobbing lots are: Brand \$30; standard middlings \$31.50; fine middlings \$35; cracked corn \$41; coarse corn meal \$38; corn and oat chop \$36 per ton.

Hay.—In carlots at Detroit: No. 1 timothy \$14@15; standard timothy \$13.50@14; No. 2 timothy \$12@13; light mixed \$13.50@14; No. 1 mixed \$11@13; No. 1 clover \$10@12.

Straw.—Rye straw \$8.50@9; wheat and oat straw \$7.50@8 per ton in carlots.

DAIRY AND POULTRY PRODUCTS.

Butter.—The demand is brisk and

takes all receipts but prices are unchanged. Creamery extra 34½c; do. firsts 33c; dairy 30c; packing stock 27c a pound.

Elgin.—The price is unchanged and the feeling is firm. Prices, based on sales, 34½c.

Chicago.—The market is firm with demand good and supply moderate. Prices unchanged. Creamery extras quoted at 34½c; extra firsts 33½@34c; firsts 32½@33c.

Eggs.—The tone continues firm at unchanged prices. Receipts moderate. Firsts 33c; current receipts 30c.

Chicago.—The feeling continues firm but prices are a shade lower on current receipts. Storage stock is higher. Firsts 30@31c; ordinary firsts 28½@29½c; at mark, cases included 22@29½c per dozen; firsts, storage paid, 29½@29½c.

Poultry.—A steady market prevails, with prices for springers and hens ½c lower than last week. Live, spring chickens 17½@18c; No. 1 hens 16½@17c; others 15½@16c; ducks 16@17c; geese 14@14½c; turkeys 24@25c.

Chicago.—The market is well supplied but prices generally are well maintained on account of good demand. Good turkeys 22c; others 15@16c; fowls, general run, 14@14½c; others 13@16½c; spring chickens 16½c; ducks 15c; geese 12@14c.

FRUITS AND VEGETABLES.

Apples.—Market is firm and prices unchanged. Barreled stock \$3.50@4 for fancy; choice \$2@2.75; No. 2, 75¢@1 per bushel. At Chicago a steady feeling prevails for fancy stock which sells for \$2.50@5 per bbl; No. 2 stock \$1.50@2.

Potatoes.—At Detroit potatoes are higher and in carlots they bring in bulk \$1.50@1.55; sacks \$1.55@1.60. No Michigan potatoes are quoted at Chicago but others bring from \$1.25@1.75 per bushel.

GRAND RAPIDS.

The potato market is stronger again, with prices above the dollar mark. Some of the growers around Edmore are reported to be holding for \$2. The sales in this market of small lots are around \$1.40. There seems to be no decided break as yet in the bean situation. Quotations given out here by the dealers are \$4.40, while quotations elsewhere range from this price up to \$5 or even higher. Some of the farmers in different sections of Michigan who contracted their beans with canning people at \$2 are sorry. Apples range from 75c@1.50; pears 75c@1; celery brings 12½@15c; grain prices quoted at the mills as follows: No. 2 red wheat \$1.61; rye \$1.15; corn 95c; oats 50c; barley \$1; buckwheat 90c.

DETROIT EASTERN MARKET.

There was a good market Tuesday morning with prices firm to higher. A fairly good supply of apples was offered at 65c@1.25 per bushel. Some fancy Snows sold at \$2. Tomatoes \$1.25@2; cabbage \$1.35@1.50; potatoes \$1.35@2; bulk \$1.60@1.85; cauliflower \$2@2.50; Keifer pears \$1; eggs 50c per dozen; celery 25¢@40¢ per large bunch; loose hay moving slowly at \$17@19 a ton.

LIVE STOCK MARKETS.

Buffalo.

October 23, 1916.

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

Receipts here today as follows: Cattle 227 cars; hogs 135 d. d.; sheep 45 d. d.; calves 1200 head.

With 227 cars of cattle today, the quality was very poor and the best shipping steers and butcher cattle were very scarce and sold strong, 10@15c higher, and in some cases a quarter higher, but the bulk of the medium stuff sold about steady. There was a liberal run of cows, but they run very common and the bulk of them were trimmers, which sold 10@15c lower. Stockers and feeders and bulls ruled about steady. We look for a liberal run of cattle here next Monday and a good trade on the best grades.

Our receipts of hogs were about up to expectations, 135 double decks on sale. Market was rather uneven, and while prices were somewhat lower than Saturday's best time, bulk of the sales looked about steady with close of last week. Pigs and lights were from 15@25c higher. A few selected hogs sold at \$10.50, with the bulk around \$10.25 and a few closely sorted lots at \$10.30@10.40; pigs and lights generally \$9.50; roughs \$9.50; stags \$7.50@8.50. Quite a number of yorker weights were left at the close, but all good hogs and pig weights were cleaned up. Outlook balance of the week is about steady, but would not advise buying anything in the hog line to sell too high, present prices look plenty high, quality and all considered.

With a light run of lambs today our market opened active and 15c higher than the close of last week, and we look for steady to shade lower prices balance of the week.

We quote: Best lambs \$10.60@10.75; cull to common \$9@10.25; yearlings \$7@9; bucks \$5.50@6.50; ewes \$7.25@7.50; cull sheep \$3.50@5.50; wethers \$7.75@8; top veals \$10.75@11; heavy \$7@9; common and light \$8@9; grassers \$5.50@5.75.

Chicago.

October 23, 1916.

Cattle. Hogs. Sheep. Receipts today..27,000 55,000 35,000 Same day 1915..17,018 16,328 21,647 Last week.....77,355 167,672 128,724 Same wk 1915...43,615 127,422 73,309

There is a liberal cattle supply today including about 4,000 head from northern ranges, but the percentage of choice beefs is singularly small, and the best lots are tending upward under a good demand. Undesirable cattle are slow, and a little weakening in prices seems likely. Hogs are plentiful and 5@10c lower on an average, with a good demand at \$9.40@11.40. Hogs received last week averaged 211 pounds. Lambs include a large proportion of range feeders, and they are in good demand at recent prices. Packers are bidding lower for lambs, but the best are steady.

Cattle prices for common grades continued on the down-grade last week, because of the increasing receipts. The well-finished beefs, however, sold at well maintained prices, and so did fat butcher stock and choice feeders. The greater part of the native steers sold at a range of \$7.50@10.40, with the better class of these cattle taken at \$10.50@11.40 and a good class at \$9.50@10.45 while medium grade steers went at \$8.50@9.45 and fair killers at \$6 and upward, and inferior little grass-fed steers on the canning order selling at \$4.65@5.75. Yearling steers were salable at \$9@11.35 for the more desirable offerings, with sales down to \$8@8.75 for plain to fair kinds. Butcher stuff sold on the basis of \$4.80@8 for cows and \$4.25@9.85 for heifers, with scattering sales of fancy little yearling heifers at \$10@10.60. Cutters sold at \$4.55@4.75, canners at \$3.25@4.50 and bulls at \$4.50@8. There was an active demand for light weight veal calves at \$10.50@11.75, with sales all the way down to \$4.50 and upward for heavy offerings. The stocker and feeder trade was good at times only, prices ruling anywhere from \$4.75@5.75 for the poorer lots of light weights up to \$7@7.50 for a desirable class of feeders, with a few sales of prime feeders at \$7.60@8. Western range cattle at the close averaged 25c higher than a week earlier, while all cows and heifers below choice declined 40¢@50¢. Fat steers worth above \$9.50 sold higher, while others were irregularly lower.

Hogs were in a much stronger position most of the past week. Despite liberal receipts the offerings were all wanted, and most of the demand came from local packers. General conditions look promising for the future hog market, and there seems to be no valid reason for sacrificing light weight hogs. At the week's close hogs sold at \$9.50@10.50, with pigs at \$7.25@9.45. Butcher weight hogs sold highest, and the prime light shipping hogs brought \$10.40. Although hogs were in greatly increased supply, prices were much higher, prices a week earlier having been \$9.10@10.15.

Lambs are being marketed with a great deal of freedom. Everything in the sheep and lamb line sells at far higher prices than in past years. Fat lambs closed at a little better prices than a week earlier, while feeding lambs advanced 50c, with sales at \$9.50@10.35. Killing lambs closed at \$7.75@10.50; yearlings at \$7.25@8.90; wethers at \$7@8.25; ewes at \$3@7.50 and bucks at \$4.50@6. Breeding ewes brought \$6@9.50, and feeders bought yearlings at \$7.25@8.60; wethers at \$7@7.50 and ewes at \$5@6.25.

Horses were in smaller supply last week than usual and in good demand. They went largely at \$160@175, with army horses going at \$160@200, although not many sold over \$180, while little southern chunks brought \$50@125 and expressers \$185@200. Some heavy horses brought \$240@275 for eastern shipment, and feeders were taken to ship to Pennsylvania and Michigan at \$150@200. City chunks brought \$205@240.

LIVE STOCK NEWS.

The best corn-fed beef cattle offered on the Chicago market have been selling recently at \$11@11.40 per 100 lbs., these being scarce and firmly held at advancing prices. No steers that were really good have been offered below \$10, with a medium class going at \$9 and upwards, while inferior light weight grass steers went around \$5.50@6.50. The rush of cattle from west-

ern and southwestern pastures and from the northern ranges will be kept up until stopped by the advent of winter, and after that there may be expected to be a better show for the common and medium descriptions of steers. Meanwhile the market is apt to be glutted with common to medium grades of cattle, and frequent declines in prices have taken place, although prices will bear a favorable comparison with former years. As is always the case, the packers give the preference to well-bred fat rangers over their native competitors, as they dress better and look cheaper on the hooks in many cases.

While the pastures and ranges have been bountifully stocked with cattle this season, as is demonstrated by the enormous receipts recently in the markets of the country, there is an unusual scarcity of cattle well fattened on corn, and such descriptions, whether heavy long-fed lots or prime little yearlings, are commanding a big premium, the spread in quotations between the best beefs and the poorest grassers being extremely wide. Chicago received in a recent week a total of about 70,000 head of cattle in all, being the largest receipts for any week since the latter part of December, 1914. For the same week the combined receipts in the principal western markets amounted to 294,000 head, comparing with only 193,000 for the corresponding week last year. Many stockers and feeders are going to feeding districts, these being furnished to a great extent by the Missouri River markets, with such shipments headed for Iowa, Missouri and western Illinois. Good stockers have been purchased in many instances comparatively low, and as soon as new corn is ready for marketing a larger demand for stockers and feeders and much higher prices are probable.

CREAM WANTED

Farmers Ship Us Your Cream

We have a daily capacity of 5000 lbs. Butter. We are located nearly across the street from the Ford factory and have a large sale of Butter and Butter Milk which enables us to pay the very highest market price for butterfat at all times. We will pay 4¢ over Elgin quotations delivered in Detroit. We pay the same day we receive the cream, return the next day. We want cream buyers also. Give us a trial shipment. Write for shipping tags.

O. A. ELLIS CREAMERY
Highland Park, Mich.

MINERAL HEAVE COMPOUND
CURES HEAVES
Booklet Free
\$3 Package guaranteed to give satisfaction or money back. \$1 Package sufficient for ordinary cases.
MINERAL HEAVE REMEDY CO., 463 Fourth Ave., Pittsburg, Pa.

EGGS, ETC.—Small consignments from bring very attractive prices. Returns day of arrival. Refer to Dun or Bradstreet. Zenith Butter & Egg Co., 170 Duane Street, New York, N. Y.

BUY YOUR FEED IN CAR LOTS

We can save you money. Write for delivered prices
RANDOLPH, HALL & YOUNG, Owosso, Mich.

Farmers: We are now paying from three to nine cts. above the highest Official Detroit Market Quotation for eggs, shipped to us by express. Write us for information. It will pay you. **AMERICAN BUTTER & CHEESE CO., Detroit, Mich.**

HAY Ship To The Old Reliable House
Daniel McCaffrey's Sons Co.,
623-625 Wabash Bldg., Pittsburgh Pa.

HAY More Money if you Consign to THE
E. L. RICHMOND CO., Detroit.
21 years in business. Reference your Bank.

FOR SALE AT HALF PRICE

\$4-bbl. tank and tower, with complete pumping outfit for small water system. Also, 20' capacity steam heater in good condition. Address, Chas. H. Chase, East Lansing, Mich.

SHEEP.

Kope Kon Farms

Offers, One yearling Hampshire ram at \$50.00. One yearling Southdown ram at \$25.00. A few growthy well bred Oxford and Shropshire ram lambs at \$25.00. Kinderhook, Michigan.

INGLESIDE FARM

Offers Twenty registered Shropshire Ewes being-bred to a prize winning ram.
H. E. POWELL, IONIA, MICH.

Rambouillets A Few Young Rams

For Sale. **A. E. GREEN, Orchard Lake, Mich.**

Good Registered Lincoln Rams For Sale, Prices Reasonable. Robt. Knight & Son, Marlette, Mich.

When writing to advertisers please mention The Michigan Farmer.

THIS IS THE LAST EDITION.

The first edition is sent to those who have not expressed a desire for the latest markets. The late market edition will be sent on request at any time.

DETROIT LIVE STOCK MARKET.

Thursday's Market.

October 26, 1916.

Cattle.

Receipts 2411. There was another heavy supply of live stock of all kinds at the local stock yards this week and at the close on Wednesday a large amount had to be held over as it did not arrive in time to be sold before dark; Thursday's receipts did better and was mostly all in by noon.

In the cattle division the quality was again common as a rule, being made up largely of canners and light weight butcher grades; one or two loads of good steers were in the receipts and sold well, one load of Canadians bringing \$8.60, which was top; they averaged 1166. The demand from the country for stockers was good and quite a large number were bought for feeding purposes. Milch cows and springers brought steady prices. The general market was steady with last week on everything but canners, which were fully 25c lower. The close was steady as follows: Best heavy steers \$8@8.60; best handy weight butcher steers \$6.50@7.25; mixed steers and heifers \$5.50@6.25; handy light butchers \$5.25@5.75; light butchers \$5@5.25; best cows \$5.25@6; butcher cows \$4.50@5; common cows \$4.25@4.50; canners \$3.50@4; best heavy bulls \$5.50@6; Bologna bulls \$5@5.50; stock bulls \$4.50@4.75; feeders \$6@6.75; stockers \$4.50@6; milkers and springers \$4@7.50.

Erwin, S. & J. sold Fineman 9 butchers av 677 at \$5, 1 heifer wgh 680 at \$4.50; to Prentiss 14 feeders av 760 at \$5.40, 2 steers av 1040 at \$6.75, to Rattkowsky 3 butchers av 523 at \$4.50; to Mich. B. Co. 1 cow wgh 900 at \$4.90; to Hammond, S. & Co. 4 canners av 892 at \$3.75; to Prentiss 7 stockers av 653 at \$5, 1 do wgh 620 at \$5; to Hammond, S. & Co. 2 canners av 915 at \$3.25, 5 do av 822 at \$3.65; to Sullivan P. Co. 1 cow wgh 680 at \$4.50, 2 do av 905 at \$5, 18 do av 960 at \$4.75, 1 steer wgh 990 at \$7.50, 5 do av 926 at \$7.10, 7 butchers av 870 at \$5.50, 1 cow wgh 960 at \$5, 2 do av 1190 at \$5.75, 2 do av 1200 at \$5, 2 do av 820 at \$4.75; to Bray & B. 8 canners av 835 at \$3.75; to Hammond, S. & Co. 5 do av 868 at \$3.85, 2 steers av 885 at \$5; to Sullivan P. Co. 4 do av 930 at \$5.25; to Kull 4 butchers av 825 at \$5.50; to Bray & B. 3 cows av 723 at \$6, 4 do av 987 at \$4.

Veal Calves.

Receipts 914. The veal calf trade for anything good was much more active than at the close last week and good grades were generally 50c higher, bulk of sales being at \$10@10.50 with a few extra fancy at \$11. Heavy grades are still extremely dull at \$5@5.50.

Sandle, S., B. & G. sold Sullivan P. Co. 136 lambs av 75 at \$10.25, 16 d Co. 2 av 150 at \$10.25, 6 av 135 at \$9.50, 10 av 136 at \$10, 3 av 140 at \$10.50, 4 av 250 at \$6.50, 2 av 135 at \$10.25; to Rattkowsky 1 wgh 180 at \$12; to Barnstine 5 av 165 at \$11, 2 av 150 at \$9.

Erwin, S. & J. sold Mich. B. Co. 3 av 190 at \$10; to DeMaro 19 av 140 at \$10; to Sullivan P. Co. 11 av 150 at \$10.25; to Nagle P. Co. 2 av 180 at \$10; to Barnstine 8 av 150 at \$11, 8 av 140 at \$10.50; to Fineman 9 av 450 at \$4.50; to Nagle P. Co. 3 av 145 at \$10, 6 av 150 at \$10, 9 av 140 at \$10; to Barnstine 10 av 152 at \$11.

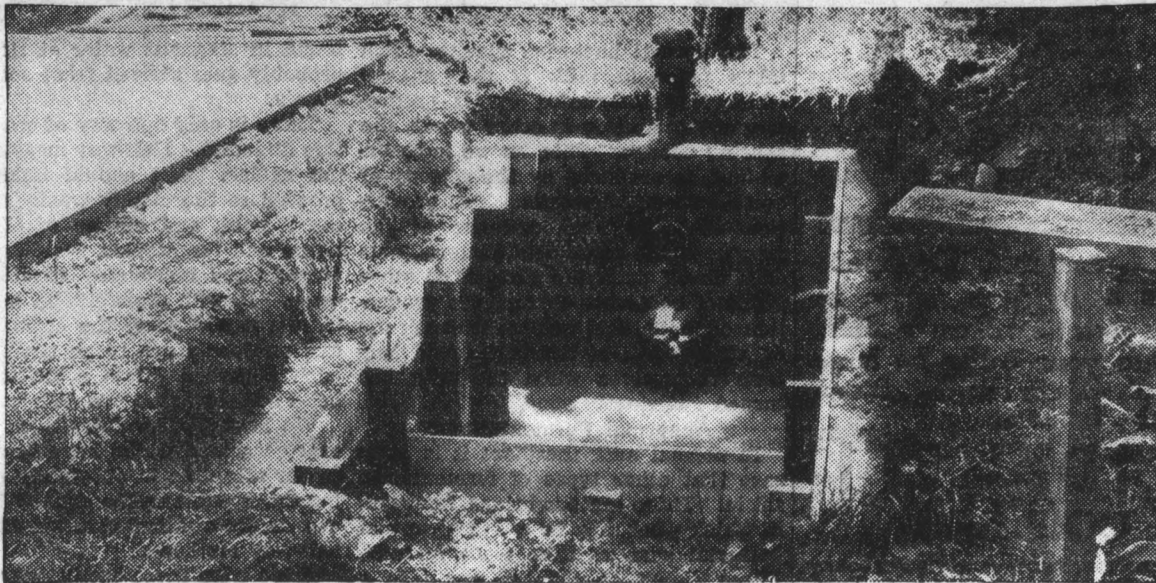
Sheep and Lambs.

Receipts 9142. The sheep and lamb trade was active from start to finish Wednesday; top lambs brought \$10.25 and on Thursday they were 10@15c higher, bringing \$10.40; sheep also sold well. Tops at \$6.50@7. The close was strong at the advance as follows: Best lambs \$10.25@10.40; fair lambs \$9.25@10; light to common lambs \$6.50@8.50; yearlings \$8@8.75; fair to good sheep \$3@7; culls and common \$4@5.

Sandel, S., B. & G. sold Sullivan P. Co. 136 lambs av 75 at \$10.25, 16 do av 60 at \$8.50, 52 goats av 60 at \$6, 8 sheep av 95 at \$5.50; to Lafanwell 120 lambs av 45 at \$8; to Nagle P. Co. 5 sheep av 100 at \$6.75, 5 do av 120 at \$6.50, 22 lambs av 70 at \$10, 23 do av 60 at \$9.50, 101 do av 70 at \$10.10, 27 do av 85 at \$9.75, 89 do av 65 at \$9.35, 50 do av 73 at \$9.50, 27 sheep av 85 at \$6.50, 9 do av 110 at \$5.50, 20 do av 95 at \$5.75, 11 lambs av 95 at \$10, 27 do av 75 at \$9.60.

Hogs.

Receipts 14,365. In the hog department the receipts ran largely to pigs and light grades of yorkers, averaging around 150, the market was active at early prices, pigs bringing \$9 and the mixed grades \$9.50@10, with the bulk around \$9.90.



Concrete Septic Tank in course of construction, with interior forms in place

A Concrete Septic Tank Safeguards Your Health

Health and comfort depend upon proper sanitation. Bathroom and indoor toilet can be had on the farm as well as in the city. They are a real economy, since they reduce sickness and sickness is an expense.

Everyone dependent upon the old cess-pool is familiar with the annoyances that come when the sewage backs up if the cess-pool becomes clogged. This is only one of its drawbacks. Worse yet, the liquids seeping into

the soil often find their way into the water supply and so spread disease throughout the family.

A concrete septic tank will remove the inconveniences and prevent the dangers of the cess-pool. It will so transform sewage that its final disposal may be accomplished in a safe, inoffensive manner. A concrete septic tank needs very little attention. It is permanent. The resulting benefits and health insurance represent more than the outlay.

**CONCRETE
FOR PERMANENCE**

Your free copy of "Concrete Septic Tanks" is waiting to be mailed to you

PORTLAND CEMENT ASSOCIATION

111 West Washington Street, Chicago

ATLANTA
Hurt Building
NEW YORK
101 Park Avenue

DALLAS
Southwestern Life Building
PARKERSBURG
Union Trust Building

INDIANAPOLIS
Merchants Bank Building
PITTSBURGH
Farmers' Bank Building

KANSAS CITY
Commerce Building
SAN FRANCISCO
116 New Montgomery Street

If You Approve Governor Ferris'
Administration Vote for
EDWIN F. SWEET
For Governor

His Firmness of Character and Constructive Executive Ability assure a continuance of the Ferris Record.

Mr. Farmer, Is This Good Business?

Do you propose to elect as Governor of Michigan and confer the appointive power of the State Commissioner of Banking upon a man who is financially interested in more than twenty-five banks in this state, many of which carry deposits of state money, and who is also a director in one of the leading railroad systems of the state?

If You Do Not Believe This Is Good Business
Vote for

Edwin F. Sweet for Governor
Democratic Ticket

A Business Man for U. S. Senator
Help President Wilson in His Battle for the Right by voting for
Lawrence Price for U. S. Senator

(This is a paid advertisement).

SHROPSHIRE

A few choice Rams. Dan Boohér, R. 4., Ewart, Mich.

Shropshires Am offering a few large ram lambs at reasonable prices.
C. J. THOMPSON, Rockford, Michigan.

Oxford Sheep: 20 Rams, 20 Ewes.
EARL C. McCARTY, Bad Axe, Michigan.

OXFORD DOWN RAMS AND EWES
O. M. YORK, Millington, Michigan.

Oxford Down Sheep No more for Sale.
M. F. GANSLEY, Lennon, Michigan.

Registered Oxford Down Rams For Sale. Direct all mail to Olmsted and J. Spaans, Muir, Michigan.

The Great Ohio flock of Merinos and Delaines, good size, only fleeces, heavy shears, priced to sell. Write wants. S. H. Sanders, Ashtabula, Ohio

HORSES

Percheron Stallions

For Sale: 4 Stallion colts, two 3 years old, and two 1 year old past. All pure bred and recorded in the Percheron Society of America. No better breeding can be found. All dark grays and perfectly sound. Will mature about ton horses. Clara B. Woodman, Paw Paw, Mich., R. R. 4, Executrix of the estate of the late

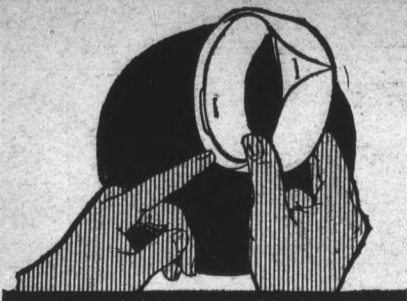
Edson Woodman

Percherons, Holsteins, Angus, Shropshires, Durocs
DORR D. BUELL, Elmira, Michigan.

FOR SALE—Registered Percheron Stallions, Mares and Fillies at reasonable prices. Inspection invited. F. L. KING & SON, Charlotte, Mich.

The Fairfield Stock Farm, Percheron and Belgian horses, Shorthorn Cattle and Oxford Down sheep. H. B. Peters, Carland, Mich.

Registered Percherons. Stallions from one to four years old and two 2 year old mares. Priced to sell. Inspection invited. L. C. HUNT, EATON RAPIDS, MICH.



This Graduated Tie-Space means a uniform space in which your tie will easily slide, whether your collar be large or small, wide or narrow. It's an exclusive feature in

SLIDEWELL COLLARS

This generous, uniform space is the result of a patented method of cutting and joining the collar top and band.

Better demand SLIDEWELL.
15 cents each \$1.75 per dozen.

Hall, Hartwell & Co., Makers, Troy, New York.



Indoor Closet

More Comfortable,
Healthful, Convenient

Eliminates the out-door privy, open vault and cess-pool, which are breeding places for germs. Have a warm, sanitary, odorless toilet right in your house. No going out in cold weather. A boon to invalids. Endorsed by State Boards of Health.

ABSOLUTELY ODORLESS

Put It Anywhere In The House
The germs are killed by a chemical process in water in the container, which you empty once a month. Absolutely no odor. No more trouble to empty than ashes. Closet absolutely guaranteed. Write for full description and price.
ROWE SANITARY INFO CO. 10353 ROWE BLDG., DETROIT, MICH.
Ask about the Ro-San Washstand—Hot and Cold Running Water Without Plumbing

Ship Your FURS to Funsten

Boys—men—experienced trappers—beginners—we need skins. Write for new price list on raccoon, skunk, mink, fox, muskrat and other furs.

We pay top prices and send money same day we receive shipment. Thousands send us their catch yearly because they get a square deal from Funsten on one pelt or a thousand.

Write for valuable FREE Trapper's Guide. Gives full instructions on trapping; all Game Laws; prices on skins, traps, guns, etc. Send for it today. FREE.
FUNSTEN BROS. & CO.
1203 Funsten Bldg. St. Louis, Mo.



Grinds oats, too

The David Bradley Feed Grinder is an all round utility machine. It's a wonder for corn-and-cob meal. And it will grind oats fine and fast. See page 1440 in our big new General Catalog.

Sears, Roebuck and Co., Chicago.

PAINT 75c PER Gallon

ORDER DIRECT FROM FACTORY

We will send you as many gallons as you want of the best quality red or brown

BARN PAINT

upon receipt of remittance. We are paint specialists and can supply you with paint for any purpose. Tell us your wants and let us quote you low prices. We can save you money by shipping direct from our factory. Satisfaction guaranteed.

All paint shipped F. O. B. Jersey City

AMALGAMATED PAINT CO.
Factory: 371 WAYNE ST., JERSEY CITY, N. J.

HONEY 5 lb. pail finest extracted honey, by parcel post, for 75c.
M. H. HUNT & SON, LANSING, MICH.

When writing to advertiser please mention The Michigan Farmer.

Milk and Public Health

By FLOYD W. ROBISON

The normal bacterial change which takes place in milk is the change which is accompanied by its production of lactic acid; in other words, the souring change. This, as we have explained, is produced by the activity of certain specific bacteria. The production of lactic acid, because of the growth of the lactic acid bacteria, acts as a check upon the growth of other types of bacteria. In fact the production of lactic acid acts as a check upon the growth of the lactic acid bacteria themselves when the milk has turned sufficiently sour.

Abnormal Fermentations.

In normal milk therefore it is quite rare that other types of fermentation set in. There are conditions, however, in which what may be called abnormal bacterial changes take place in milk. These abnormal changes result in a variety of effects. Some of them change the color of the milk; some the odor, and likewise the flavor or taste as the milk is very materially altered by some kinds of abnormal fermentation.

We say that milk is very prone to absorb odors from the air. Many times this absorption of odors is not in itself a true absorption but merely the result of the activity of an organism which has been able to get the start of the lactic acid organism and consequently produces a result peculiar to itself. Many times milk which is allowed to stand for a day or so will develop a limburger cheese odor, not due to the fact that it has absorbed an odor, but because the type of bacteria which has gotten into the milk is one which produces the peculiarly disagreeable odor of limburger cheese.

Yeast in Milk.

On several occasions we have observed milk to become accidentally inoculated with wild yeast and produce a peculiar yeast odor in the milk. This, if allowed to develop will ultimately show a very fine culture of that particular yeast. The odor is caused by the presence of the yeast itself in the milk and not due to the absorbing of the odor by the milk.

Colored Fermentations.

One of the most familiar abnormal conditions is the development of different colors in milk. Very frequently one notices what he calls "blue milk," a milk which has actually become colored blue. This is caused by an external contamination usually due to carelessness somewhere during the handling of the milk. The same thing applies to the production of red milk. This is not always due to the action of bacteria but sometimes actually due to the presence of blood in the milk. It has likewise been known to result from the effect of certain types of food. Probably the production of color in milk is of no special significance as far as its effect upon the health is concerned as none of these colors, as far as we know, have been shown to be harmful. They are not normal infections at all and where care is observed in the production and handling of the milk they will not be found to be bothersome.

Ropy or Slimy Milk.

One of the most abundant, and very annoying abnormal changes in milk is the condition known as slimy, or ropy milk. We have seen samples of ropy milk which could be drawn out into threads of considerable length. This slimy, or ropy, condition is the result of the activity of certain types of bacteria. The one probably which is present the greatest number of times is known as lactic viscosus. The very annoying feature of this fermentation is the peculiar persistence of the infection. Once the condition gets started in a herd it may persist for a considerable period of time. Just how this infection develops and where its source is, is not definitely known but it is

found in stagnant water at times and probably gets started from some such source.

There is only one way of eradicating this difficulty. Half-way measures will not suffice. One should immediately proceed to thoroughly wash and clean every nook and corner of the dairy house and the stables, scalding out all utensils and thoroughly sterilizing the same. It will probably be necessary to thoroughly wash the cows all over and one could use to an advantage in such a case a dilute solution of carbolic acid to finish the disinfection.

We have had no difficulty on the several occasions which have been called to our attention in absolutely eradicating this trouble at the start. When success is not attained it is usually due to half-way methods.

Aside from these conditions we have the abnormal fermentation producing buttermilk; fermentation, producing an alkaline condition in the milk, and certain types of fermentation which develop toxic poisons.

Poisonous Products.

Several years ago Vaughan eliminated a toxine from cheese and later on from milk, caused by the introduction as an infection of some bacteria which produced this very poisonous substance. These conditions all result through uncleanness and lack of care in the production and handling of the milk. They are not usually produced in a normal souring of milk so that our readers will readily see many of the reasons why we have not been enthusiastic over general pasteurization of milk, but have preferred to permit the normal souring changes to proceed on their way unchecked. We appreciate, however, that these are ideal conditions alone which will permit milk to sour properly without the modifying influence of some other infecting organism. Ideal conditions are rarely reached, consequently pasteurization is permissible. In fact it may be encouraged with reason but it is altogether an unsafe expedient to follow unless the process of pasteurization in the creameries is under exact control and is regularly inspected by some absolutely responsible party, preferably a milk inspector.

Adulterations in Milk.

Aside from the bacterial changes which hazard the public health we have the wilful addition of adulterants which at the present time even has not been entirely eliminated.

Skimming is Just as Bad when done by a Creamery as by the Dairyman.

The usual adulterations of milk consist in the removal of the cream, by skimming or by a separator, and not re-mixing; the addition of skim-milk, adding water, thickening agents, coloring matter, preservatives, etc. Of these classes of adulterants that of skimming is practiced most, and this is not confined solely, by any means, to farmers and dairymen. Many creameries seem to feel that skimming, or the removal in one way or another, of a portion of the milk fat is perfectly legitimate practice. We ourselves can see no reason why a procedure of this kind becomes legitimate in a creamery and illegal when conducted by a dairyman. We are unable to recognize any procedure allowable to one class of citizens and a misdemeanor or crime when committed by another class. We think probably dairy interests are all somewhat responsible for this condition, in that no provision is made in the law for the sale of milk or cream of varying percentages of milk fat. It is not reasonable to expect that a farmer or dairyman who produce a milk containing five per cent fat will contentedly sell that milk for the same price per 100 pounds that is paid to the dairyman whose milk only tests three per cent. There is every incentive for the adulteration of the milk by the re-

moval of two parts in every hundred of the milk fat. If it is not removed by the dairyman the chances are that it is removed, or a portion of it, when it reaches the creamery.

A lack of proper appreciation of these real conditions is to our mind responsible for them, and we would not condemn a dairyman for doing what we would condone in a creamery.

The Danger to Health in Watering Milk.

Another very common form of adulteration is the addition of water to milk. This, to our mind, is a very undesirable, in fact, vicious type of adulteration. Not only is the food value or the milk in general cut down, according to the amount of water which is added, but there is another factor that enters in which may make the procedure doubly prejudicial to health, and that is, that the farmer or dairyman who will adulterate milk with water usually is not particular what kind of water it is adulterated with, and infected water, as we have been able to demonstrate, is very frequently used. These are the conditions which should be made known to the dairyman, and the practice of watering milk cannot be too strongly condemned or too frequently brought to our attention.

LIVE STOCK NEWS.

Country buyers of stocker and feeder cattle in the Chicago and other western markets are making much smaller purchases this year than a year earlier, and the dearthness of corn seems to make more impression on them than the declines in prices for thin cattle well adapted for fattening. Medium grade feeders averaging from 750 to 900 lbs. have been selling recently at \$6.50@6.90 per 100 lbs., with nearby feeders buying numerous lots of 1100 to 1250-lb. feeders for a short feed at \$7.50@8. The greater part of the high-bred 700 to 1000-lb. feeders have sold for \$7@7.50 and one drove of choice range steers went out at \$8.25.

Fearing further sharp declines in prices, owners of marketable hogs are losing no unnecessary time in marketing them, and recent receipts in the Chicago stock yards have been averaging only 210 lbs., this weight comparing with 227 lbs. one month ago, 214 lbs. one year ago, 237 lbs. two years ago and 213 lbs. three years ago. At their highest time of the year, which was several weeks ago, the best hogs brought \$11.50 per 100 lbs. and a small panic was caused in feeding districts when a succession of big breaks landed the best hogs a little about \$9.60. Since then rallies in prices have taken place, the big packing concerns apparently not wishing to unduly stimulate marketing of underweights. Even at the material shrinking in hog values of late, prices are still much higher than in most former years, and the industry is certainly a paying one, notwithstanding the high prices asked for corn. The hogs arriving recently were the lightest in average weight for any time since the first of last March.

Since the decline in prices for range feeding lambs, yearlings and sheep the demand from farmers intending to do some winter feeding has increased materially, and large numbers have been shipped in recent weeks from Chicago, Omaha and other leading markets into feeding districts, the best lots being purchased in Chicago for \$9.75@9.90 per 100 lbs. Breeding ewes, too, have been offered at much lower prices, and increased numbers have gone to the country, the better class bringing from \$8@9 per 100 lbs. Even old ewes, such as in former years were sold to killers for from \$1@2 per head, have been sold at \$6@7 per head, buyers figuring that the ewes may, with careful handling, produce at least one crop of lambs and then be fattened. Western breeding ewes can be bought in carload lots in any of the western stock yards, from 130 to 140 head making up a carload, and one ram to from 35 to 50 ewes should be purchased. It is a good plan to buy good range breeding ewes sorted up for good mouths and udders, ranging from four to six years old. H. Hackerdorn of the Missouri Agricultural Experiment Station states that the breeding flock of sheep has been one of the best paying investments the farmers of that state ever had. Native or western ewes crossed with a good mutton ram produce good marketable lambs, and with present prices of wool, the fleece will more than pay the cost of keeping the ewes. Native ewes are high-priced.

Farmers' Clubs

Address all communications relative to the organization of new Clubs to Mrs. J. S. Brown, Howell, Mich.

FARMERS' CLUB FAIRS.

North Shade Club.

The North Shade Farmers' Club Fair was held on Friday, October 6, at the Todd house in North Shade. A large crowd enjoyed the chicken-pie dinner and the social hour. A splendid program was given, a feature of which was an address by Howard Potter, School Commissioner of Gratiot county, which was most appropriate in view of the part taken in the Fair by the schools. His subject was "The Standard School for the Rural District." He was fully alive to his subject, which at present is a topline in educational advancement, and presented it in such a convincing way that left no room for doubt in the minds of his hearers of what he hoped the North Shade schools would some day be. He pictured the conditions of the average rural school and closed his remarks with a plea to the fathers and mothers to assist in changing the conditions as they now exist.

The crowd then sang the Gratiot county fair song and six little boys from district six gave an exercise of this song in a realistic manner.

The exhibits of the different schools were neatly arranged and showed that both teacher and pupil had been interested in their preparation. The grains were placed in neatly labeled glass cans and the vegetables looked as though they were waiting to be cooked, while the fruit was of Michigan's best.

The Salisbury exhibit also contained specimens of kindergarten work, map drawing, and even some patchwork blocks were there. This display, as a whole, was given the blue ribbon.

The Hunter school had some nice pieces of fancy work along with other articles and the herbarium contained a large number of the different grasses with name attached. This had taken no little time to classify. The agricultural exhibit of this school was given the red ribbon.

The display from the Chick district was similar to the others and the name "Chick" made of corn kernels placed upon a red background, attracted much attention. This agricultural exhibit received the blue ribbon.

The North Shade Centre school had some artistic calendars decorated with pumpkins that wouldn't do for pies but were attractive novelties. Theodore Garner brought a coop of bantams which were the envy of all. This exhibit was almost entirely of regular school work and received the red ribbon on these merits.

The cleverly bound books of stories of foreign countries was an evidence of the work being done in the Chester district. Each article was placed in a cover which had a map in colors of the country represented, and this work was very neatly done. Many articles of fancy work told where the spare moments of the pupils had been spent.

Perhaps no school exhibit elsewhere had such a novel array as did the Dobson. Here were fancy articles of dress which were made in Austria-Hungary, and brought by children who are now pupils in this district. This attractive corner was much sought after.

The Walker exhibit was late in being placed but was along the same lines and was the recipient of many expressions of good will for their contribution.

The teachers and pupils who prepared these exhibits are deserving of great credit and the agricultural display was equal to anything ever seen at a county fair. To appreciate the work that is being done in the rural districts, one must visit and get in touch with them.

Not wishing to be outdone by the schools, North Shade ladies brought their fancy work along. The beautiful and useful pieces of tatting, crochet and embroidery outclassed those found in a Fifth Avenue art store and the two crocheted hats were models for a milliner.

The Inter-County Corn Growers' Association exhibit was loaned for this fair and was in charge of E. B. Stebbins. This consisted of grains and bunches of flax, millet, oats and various kinds of grass, and he brought two blue and two red ribbons home on this collection.

A treat was given the pupils at the close of the program which they all enjoyed.

About three hundred were present during the afternoon session, 40 cars

Grange.

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

NEWAYGO POMONA MEETING.

Newaygo County Pomona Grange met with Hesperia Grange October 3-4. A large crowd was there, every Grange in the county being represented. Mrs. Dora Stockman, lecturer of the State Grange being present held a short lecturers' conference and ideas were exchanged and much benefit derived.

Mr. James Caldwell, Master of Hesperia Grange, said the welcome words and Mr. Wm. Carter, Master of Pomona, responded.

"Sod Mulch for the Apple Orchard" was a fine talk by Wm. McCadum, an experienced apple man who brought out some fine ideas and made many good suggestions, and was asked many questions. John McKinley believed that the ground in the apple orchard should be thoroughly worked. James Caldwell believed there was nothing like the barnyard manure, and County Agent Blandford said that straw was the best mulch.

Mrs. Stockman was then introduced and said some complimentary things about Hesperia and its "movement," and then spoke on "Grange Possibilities." She told why the Grange was started and mentioned the Grange store, saying that Montgomery Ward was the first Grange store. She told how much the Grange was spending in Grange co-operative contracts, and the benefits derived from them, but said the dollar was not the only thing the Grange considered. Education was the basis of the Grange work. People demand amusements but the best were those people made themselves.

After telling of how the Grange developed leadership, and some of the leaders it produced, Mrs. Stockman closed with a strong plea for the "Drys." This address was well received and much enjoyed as this was Mrs. Stockman's first visit to Hesperia.

Mr. Blandford gave a fine talk. He said we should not find fault with conditions in talking of the past season, as things generally turn out all right. He told of a lesson he had brought home to him, of six men in his home town forming an association and raising the things that the market demanded.

After this talk the convention was called to order and delegates were presented, and delegates for the state convention elected.

At the evening session reports from subordinate Granges were read and after the business meeting the doors were thrown open and visitors admitted and a genuine old-fashioned temperance love feast was held and everybody got up and told why they wanted Michigan to go dry.

The Grange was called to order on Wednesday morning and the first question, "Would a strict account of farming operations be an incentive for better farming?" was taken up. There was a variety of opinions, but one man said farming was a business and should be carried on like any other business, and one should know what were losing propositions.

Mrs. Mary Robertson gave an address on "The Home and the Grange."

George Wilbur gave a fine recitation, "Leaks on the Farm," which brought out some practical suggestions, one of them being the loss of time by not having our work planned, and another lack of thoroughness.

Miss Carrie L. Carter, commissioner of Newaygo county schools, then gave an address on "The Needs of the Rural School," laying much stress on lighting, seating and ventilation. Especially did she mention the outbuildings, saying the law took care of them if no one else would. This address was full of good things.

With recitations from Mrs. Warren and Mrs. Wilcox, and the reading of a resolution asking the board of supervisors to appropriate a goodly sum to retain the county agent, the Grange closed, to meet with Fremont Grange in December.—Mrs. Mary Robertson.

being parked besides other conveyances. Visitors from Washington township, Pompeii, Middleton, Hubbardston, Carson City and Greenville were there.

This farm home was an ideal place for the gathering as its hospitality is state-wide and all who enter its portals realize that the latchstring is always on the outside. No doubt this day will be remembered as a red letter one in the history of the North Shade Farmers' Club fairs.

Wasn't It Worth While?

The old cabinet-makers joined seams so carefully that after generations of use their "antique" furniture is still as beautiful and good as ever. And its price shows that their labor was not wasted. We put the same honest effort into

1855 CURTIS WOODWORK

"The Permanent Furniture For Your Home"

Curtis Woodwork permanently beautifies your home—each piece is like an article of fine furniture and means lasting satisfaction. Ask your lumber dealer about it. Let him show you his catalog of trademarked Curtis designs.

Get Our Free Home-Books

They show Curtis Woodwork as it will look in your home. In them, too, are pictures and floor-plans of ideal homes, the best we have found in 50 years. Write us on the coupon which one you want. "Better Built Homes" shows houses from \$800 to \$3000; "Homelike Homes"—\$3000 up; "Attractive Bungalows"—the best types.

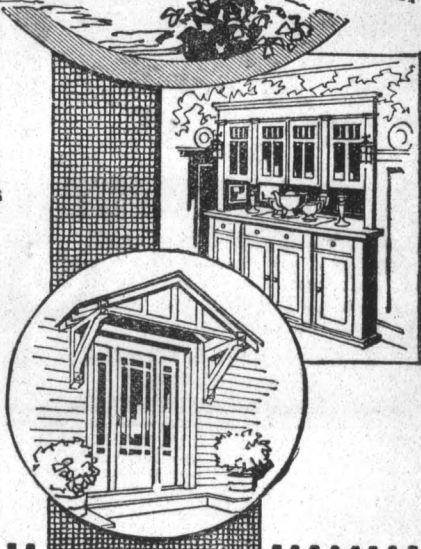
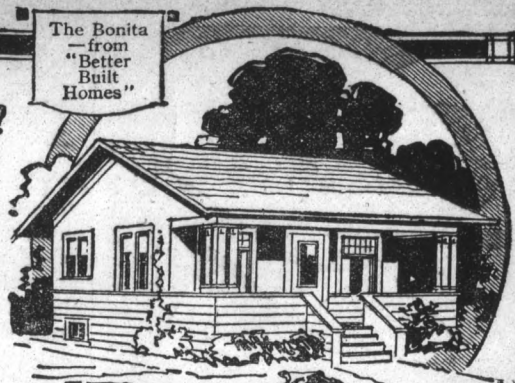
THE CURTIS COMPANIES SERVICE BUREAU

1284-1384 S. Second St., Clinton, Iowa

The Makers of CURTIS Woodwork Guarantee Complete Satisfaction to its Users.

"We're not satisfied unless you are."

The Bonita—
from
"Better
Built
Homes"



The Curtis Companies, Service Bureau
1284-1384 S. Second St., Clinton, Iowa

Without obligation,
please send me.....

Name.....

R.F.D.....Town.....

State.....

"BALL BAND"

Worn by nine million people and sold by 55,000 merchants. The Red Ball on the sole is the Trade Mark and identifies the genuine.

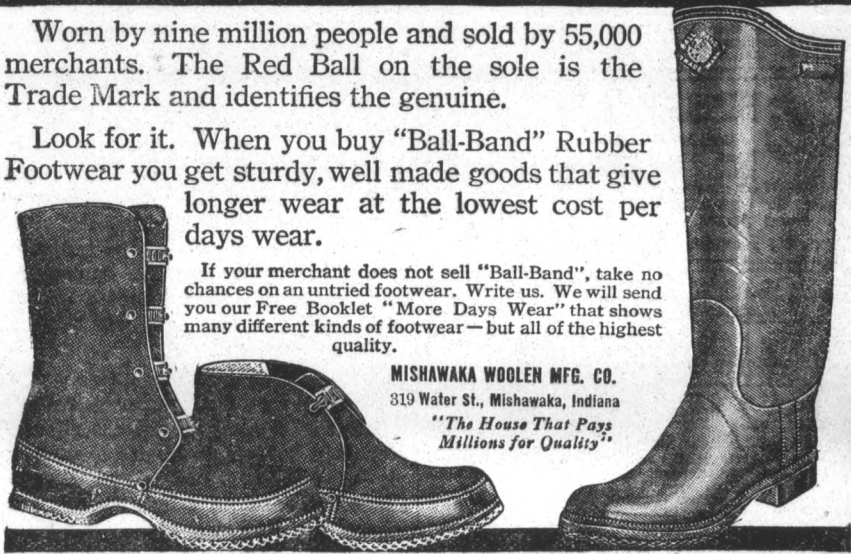
Look for it. When you buy "Ball-Band" Rubber Footwear you get sturdy, well made goods that give longer wear at the lowest cost per days wear.

If your merchant does not sell "Ball-Band", take no chances on an untried footwear. Write us. We will send you our Free Booklet "More Days Wear" that shows many different kinds of footwear—but all of the highest quality.

MISHAWAKA WOOLEN MFG. CO.

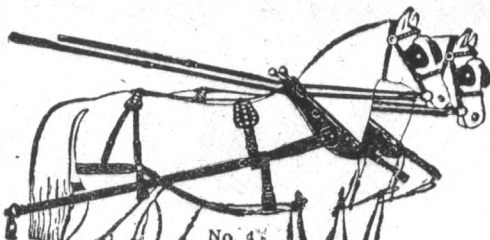
319 Water St., Mishawaka, Indiana

"The House That Pays Millions for Quality"



HARNESS HORSE COLLARS

Ask Your dealer for the Label



Made and Warranted by

ARMSTRONG & GRAHAM

WHOLESALE ONLY.

DETROIT.

ESTABLISHED 1880.



HOOSIER Stoves Ranges FREE

To try in your own home 30 days free, no matter where you live. Show your friends. Send it back at our expense if you do not want to keep it. Hundreds of thousands in daily use. Perfect bakers, efficient heaters, made of high grade material, beautifully finished, smooth design, guaranteed for years by our Two Million Dollar Bond.

Ask your dealer to show you "HOOSIER" Stoves and Ranges. Write for our big free book showing photographs describing large assortment of sizes and designs of cast and steel ranges, cast cooks, soft and hard coal heaters and base burners to select from, explaining our free trial offer. Send postal today. Write name and address plainly. No obligations.

HOOSIER STOVE COMPANY
131 State St.
MARION, INDIANA





MILWAUKEE
Mayer
HONORBILT

For style and comfort wear

Mayer

HONORBILT SHOES For all the Family
Ask your dealer for Mayer Shoes. Look for the trade-mark on the sole.

F. Mayer Boot & Shoe Co.
Milwaukee, Wis.

POULTRY JOURNAL
Practical, Snappy, Instructive—YOUR PAPER. For the breeders of Mich., Ind., Ill., Wis., only. You should read it. 60c a year, 3 mo. 10c. Agents wanted. Big 4 Poultry Journal, Desk 26, Chicago.

POULTRY.

Barred Rocks Parks 200 egg strain. Circular Free. Fred Astling, Constantine, Mich.

BREEDING COCKERELS White, Brown, Buff, Black Leghorns, R. I. Reds, Barred Rocks. **PULLETS**—White, Buff, Black. Prices reasonable. Sunnybrook Poultry Farms, Hillsdale, Michigan.

Barred Rock Cockerels, Cocks and Hens. Four pullets laid 930 eggs in one year. W. O. Coffman, R. 3, Benton Harbor, Michigan.

Bargains For a short time in White Rocks, Pekin Ducks, Toulouse Geese and White African Guineas. H. V. Hostetler, R. 1, St. Johns, Mich.

GET YOUR ORDER IN EARLY FOR Cockerels from Cousins Northern King Strain Barred Rocks. Write David W. Cousins, North Fort, Mich.

Buff Leghorns Exclusively. Now is the time to buy pure bred stock at a big reduction in price. Dr. William A. Smith, Petersburg, Michigan

JOHN'S Big Beautiful Barred Rocks are all hatched, developed quick, good layers, each \$3; pair \$5; sold on approval. Circulars, photos, John Northon, Clare, Mich.

FERRIS WHITE LEGHORNS
Best winter layers. 5000 pullets, hens and breeding males at low prices. Trapped to lay 200 eggs or more. Shipped C. O. D. and on approval. Chicks and Eggs. Catalog explains all. Send postal.
Geo. B. Ferris, 934 Union, Grand Rapids, Mich.

FOR SALE Pure bred S. C. Buff Leghorns and white Plymouth Rock cockerels. Kietzien & Webster, Bath, Mich.

Fowler's Buff Rocks Cockerels from \$2 to \$5; hens \$1.50 to \$5. White Holland Turkey, young toms \$5; hens \$3. R. B. FOWLER, Hartford, Mich. R. 3.

Pine Crest, S. C. White Orpingtons. Winners again at the State Fair. Young and old stock for sale. Buy the best. MRS. WILLIS ROUGH, Pine Crest Farm, Royal Oak, Michigan.

RHODE ISLAND REDS and PLYMOUTH ROCKS. Males 5 to 12 lbs., according to age \$2 to \$5; P. R. hens weight 5 to 10 lbs., eggs 15 for \$1.00, 100, \$5; 120, \$6. Main and Bronze Tom Turkeys, 6 to 8 lbs., according to age \$5 to \$25, 10 eggs \$3. A. E. Gramton, Vassar, Mich.

RED COCKERELS, Both Combs. Dark red will improve the color of your flock. Write for price list. Interlakes Farm, Box 39, Lawrence, Michigan.

Rose and Single Comb R. I. Red cockerels for sale. Fine stock, prices reasonable. O. E. Hawley, Ludington, Mich.

Rhode Island Whites. Cockerels for breeding purposes 2 1/2 egg strain, single comb. Prices reasonable. Mrs. Paul Heuschel, R. 4, Marion, Mich.

Single Comb Rhode Island Red Cockerels. Rich. Dark Red and Strong. JENNIE BUELL, Ann Arbor, R. 8, Michigan.

S. S. Hamburg Eggs reduced prices, balance of season. Free delivery. R. O. white Leghorn hens \$1.00, Belgian Haro Bucks \$5.00 with Pedigree. RIVERVIEW FARM, Vassar, Mich.

SILVER GOLDEN AND WHITE WYANDOTTES. Eggs from all matings, 150 per 15, \$2.50 per 30 until July 1st. O. W. Browning, R. 2, Portland, Mich.

White Wyandotte Cock & Cockerels. Eggs \$1, \$2, \$3, per 15, \$4 per 50, \$7 per 100. DAVID RAY, 202 Forest Ave., Ypsilanti, Michigan.

White Wyandotte Cockerels from fine stock and A1 layers. \$2 and \$3 each. Farm raised. A. FRANKLIN SMITH, Ann Arbor, Michigan.

White China Geese & M. Pekin Ducks CLAUDIA BETTS, Hillsdale, Mich.

Bourbon Red Turkeys For Sale Write Mrs. O. L. Magee, Boyne Falls, Michigan.

FERRETS

3000 FERRETS FOR SALE Price list free. C. J. DIMICK, Rochester, Ohio.

2000 Ferrets They hustle rats and rabbits. Price list and booklet mailed free. N. E. KNAPP, Rochester, Ohio.

Ferrets For Sale. Fine Stock. Catalog and price list free. Write at once. O. M. Sackett, Dent, M. Ashland, O.

White and Brown Ferrets For Sale. Price list free C. D. MURRAY, New London, Ohio.

Poultry House Sanitation

THE poultry flock on the farm should be a money maker in this year of high prices and the farmer who does not house all of his vigorous pullets to the best advantage will make a mistake. In preparing for winter the house should be thoroughly cleaned and disinfected. Whitewash gives the interior of the house a bright clean appearance but it is disliked by some poultrymen, due to the fact that it gathers dampness. The commercial disinfectants are very efficient. Kerosene oil is excellent for destroying mites and the roosts should be thoroughly saturated. If carbolic acid is added to the oil in a proportion as low as one to ten it will be even better, although I have had excellent success in keeping down mites this year by simply using kerosene. Lice paints used freely over the equipment of the house will prove a good investment in many instances.

Clean Out the Poultry House.

The largest part of the poultry house renovating will, however, be just plain work with the shovel and broom. If the house contains an earth floor the old dirt should be removed and replaced with clean garden soil. It is very nice to have gravel, but the cost of hauling will make the use of gravel too expensive in many localities. A cement floor should be thoroughly cleaned by removing the litter and giving it a good scrubbing. About two inches of good garden soil covered with a foot of fresh straw for litter will place the floor in good condition for the pullets. Wooden floors should also be scrubbed and patched where necessary. The walls and ceiling will soon become covered with dust and cobwebs and a thorough sweeping and dusting is in order.

Before placing the pullets in their winter quarters every bird should receive the blue ointment treatment for lice as this will prove satisfactory louse insurance until spring and it will save dusting with louse powders during the cold winter months, but on the other hand, the hen has less opportunity for dusting herself and lice will thrive even in the coldest months, especially on the hen that is slightly lacking in vigor. Use a smear of blue ointment beneath the vent and another under each wing and the pullet will be properly protected. As far as mites are concerned, if the roosts are free from the pests the birds will take care of themselves.

Furnish a Dusting Place.

In preparing for winter a sufficient amount of clean garden loam should be stored in barrels to insure a good supply of dusting material until spring. Place the earth in a large shallow box where the sun may strike it as much as possible and the dirt baths will help to keep up the vitality of the hens during the long winter months. It seems that life can hardly be worth living for a hen in the winter time unless she is given a lot of attention on the part of her owner. The attention costs money but as we have previously mentioned there is no reason that first-class pullets should have to neglect their board bill, considering the present price of eggs.

After the interior of the poultry house has been given a thorough cleaning the equipment should be given attention. Nests should be removed and placed in the sun, then disinfected and filled with clean straw, especially in the corners so that the pullets will learn to like the nests from the day their first egg is laid. Feed hoppers will need a thorough cleaning and the drinking utensils should receive the best scalding that they have had all season. When this work has been completed the poultry house will be ready for the pullets. It should be remembered that one of the greatest causes of poultry failures is a lack of sanitation in the houses, especially during the winter when the birds are confined.

Sanitation is rather a big sounding word but it simply means digging out dirt and keeping it out.

Ingham Co.

R. G. Kirby.

POULTRY FEEDING.

Will you tell me what grains to buy to make up a good ration for laying hens to make early winter layers, Also tell me how to feed same and in what quantities to obtain best results.

Chippewa Co.

C. H. H.

One of the most successful methods of feeding poultry is the one advocated by the Maine Experiment Station, which is briefly as follows: A grain mixture of equal parts by weight of wheat, oats and corn, and a dry mash of a mixture made up as follows: Bran 200 lbs; corn meal, 100 lbs; middlings, 100 lbs; gluten meal, 100 lbs; and beef scraps 100 lbs.

The usual method of feeding the grain is to scatter about four quarts of the grain mixture for each 100 hens in the litter at night after the chickens have gone to roost, or early in the morning. The litter should be deep enough to give the hens plenty of exercise. At noon another four quarts should be scattered in the litter.

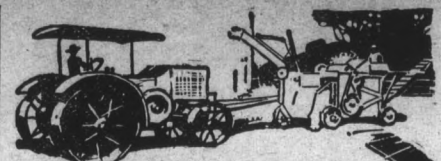
Aside from the grain and dry mash the chickens should have plenty of green food, which may be furnished either in the form of mangles, cabbage, sprouted oats or cut clover hay. Milk is also a very valuable poultry food, and if furnished daily the amount of beef scraps in the dry mash can be cut down to 50 pounds. It is preferable to feed sour milk, as sweet milk will often sour, and cause digestive troubles, and the change from sour milk to sweet, or vice versa will cause trouble.

One of the secrets of successful feeding is to have the chickens go to roost with their crops full and in the morning have them eager for grain. If the chickens are not anxious for the feed, it is an indication that they are getting it too easily or that they are getting too liberal amounts.

WATCH FOR BANDS ON WILD DUCKS.

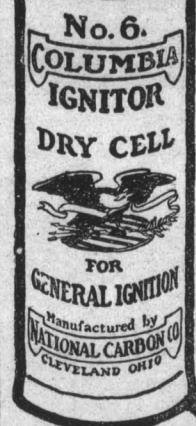
If you kill or capture a wild duck bearing an aluminum band around one leg, having a number on one side, and on the other a statement requesting that the U. S. Department of Agriculture, or the Biological Survey, be notified, you are requested to send this band at once to the Bureau of Biological Survey, U. S. Department of Agriculture, Washington, D. C. This band, if accompanied by a statement as to date, place and circumstances under which the bird was taken, will be of service to the Survey in its efforts to determine the longevity of individual ducks and the routes of migration of the species. The bands are being attached to considerable numbers of wild ducks of several species which have been cured of the duck sickness prevalent around Great Salt Lake, Utah, and there released. The department is particularly anxious to secure reports from these birds to determine their complete recovery from this malady.

A test was made recently by the Missouri Station of two flocks of 100 hens each, one under good farm conditions, the other under special management. This included a somewhat more varied ration and the use of artificial light in the houses early in the morning and late at night, thus lengthening the period of light by several hours. The total cost of feed for the five-week period for lot one was \$16.77 and for lot two, \$19.97, but the number of eggs laid by lot one was 652, as compared with 1,592 by lot two. The profit of lot one was but \$7.04 and that of lot two, \$38.05, thus indicating the effectiveness of the system of special management adopted.



Columbia Batteries

Keep Going!



No time to send for batteries in the middle of a job! Keep going with COLUMBIAS. The steady, sturdy battery built with 27 years of know-how. Buy Columbias by name for engines, autos, bells, phones, lanterns and blasting. Though they cost no more, they last longer!

National Carbon Co.
Cleveland, Ohio

Fahnestock spring-clip binding posts that won't come loose, no extra charge.

BREEDERS' DIRECTORY.

Change of Copy or Cancellations must reach us Ten Days before date of publication.

CATTLE.

We Offer a Few Special Bargains

In S. C. White Leghorn cockerels, Rambouillet rams, Hampshire pigs (either sex) and Holstein bulls. A good chance for a small investment to reap the benefit of a large expenditure of capital and years of expert breeding.

Flanders Farm, Orchard Lake, Mich.

ABERDEEN-ANGUS

HERD ESTABLISHED IN 1900. TROJAN-ERICAS and BLACKBIRDS only. Also breeders of Percheron, Hackney and Saddle Horses. WOODCOTE STOCK FARM, Ionia, Mich.

Aberdeen Angus Bulls For Sale

12 head of choice young bulls old enough for service. All sons of Black Monarch 3rd. Grand Champion Bull Michigan State Fair 1914, 1915 and 1916. Black Monarch 3rd has been sold to W. E. Scripps, Wildwood Farms, for the record price of the breed in Michigan, \$1200. U. L. Clark, Hunters Creek, Mich. Sidney Smith, Mgr.

AYRSHIRES—One of the foremost dairy breeds. The most economical milk producers. Calves for sale. White Leghorn cockerels; Duroc Jersey swine. Michigan School for the Deaf, Flint, Michigan.

Reg. Guernsey Bulls, serviceable age, great grand sons of Gov. Chene, also grade Guernsey and Jersey sires 6 wks old \$20 each. Avondale Stock Farm, Wayne, Mich.

Guernsey Bulls of service age and calves from choice. Adv. reg. breeding. T. V. HICKS, Route 1, Battle Creek, Mich.

MILO D. CAMPBELL CHAS. J. ANGEVINE

BEACH FARM GUERNSEYS

Average yearly production 422.3 lbs. of fat, three fourths of them making their records as two year olds. By the use of a pure bred sire, a big improvement can soon be attained if the right selection is made. The breeding of the Beach Farm Herd is as good as can be found, and we guarantee them to be free from contagious diseases and to be satisfactory in every way or money refunded. Write and let us tell you about them.

CAMPBELL & ANGEVINE,

Coldwater, Michigan.

GUERNSEYS—REGISTERED

Containing blood of world champions. HICKS' GUERNSEY FARM, Saginaw, W. S. Mich.

Guernseys—Yearling Gr. Son, Pauline Spotswood, 746 lbs. fat. Also May Rose Heifer just freshen, with heifer calf, you can own them both—cheap. J. M. Williams, North Adams, Mich.

FOR SALE Registered Guernsey Bull, 4 year old also 3 yearlings the best yet. Cheap. John Ebels, Holland, R. 10, Box 129, Michigan.

GUERNSEYS—Bred heifers, mature cows, bull calves from a long line of Adv. Reg. ancestors with large record. G. A. WIGENT, Watervliet, Michigan.

For Sale: Registered Guernsey Bulls old enough for service, and bull calves from advanced registered cows. L. J. Byers, Coldwater, Mich.

Reg. Guernsey Bulls two gr. sons of May Rose (the \$4000 bull) one 12 mo. old dam May Rose breeding one 6 mo. old, others of serviceable age. Satisfaction guaranteed. Alfred Anderson, Holton, Michigan.

Do You Want A Bull?

Ready For Service.

From a grand daughter of The King of the Pontiacs. Sired by a bull that is more than a half brother to the Champion Holstein Cow of the World, and whose dam is a 30 lb. 6 3/4 fat daughter of Pontiac Aggie Korndyke who has more 30 lb. daughters than any other living bull. If you do write for pedigree.

EDWIN S. LEWIS, Marshall, Mich.

30 lb. bull for sale, 2 years old, by a son of King of the Pontiacs. Dam sold for \$1000 in Detroit sale. Ferd. J. Lange, Sebawing, Mich.

CLUNY STOCK Farm Holsteins

JUST THREE yearling sons of Crown Pontiac Korndyke, No. 48,712, whose first ten tested daughters to freshen produced at an average age of 2 yrs 4 mos. 20 days. Butter, 21.215 lbs., Milk 398 lbs.

No. 1. Dam's 7 day record: Butter 29.521 lbs., Milk 667.9 lbs.

No. 2. Dam's 7 day record: Butter, 24.620 lbs., Milk, 50.43 lbs., at 4 yrs. 7 mos. 11 days.

No. 3. Dam's 7 day record: Butter, 25.386 lbs., Milk, 448.7 lbs. No. 3 is the granddam of No. 2.

These young sires combine heavy Milk and Butter production with size and quality. All are light in color and splendidly marked. Come and see them or write for pedigrees and prices.

R. B. McPherson, Howell, Michigan



Purebred Registered HOLSTEIN CATTLE

The world's champion advanced registry milk producer in the purebred registered Holstein-Friesian cow, Lutske Vale Cornucopia, owned in the state of Washington. In 365 days this wonderful cow produced 31,239.4 lbs. of milk over 15,000 quarts, exceeding the best previous milk producing record of 30,451 lbs. made by the Holstein Tilly Alcatraz. The big "Black and White" cattle, not only by individual performances, but by matchless qualities and achievements as a breed, are proving their superior worth all over the world.

Send for FREE Illustrated Descriptive Booklets

The Holstein-Friesian Association of America.

F. L. Houghton, Sec'y., Box 164, Brattleboro, Vt.

"TOP NOTCH" Holsteins

By careful retention, for many years, of largest producing females, and use of superior sires, a breeding herd of wonderful quality has been established. We are selling young bulls of this "TOP NOTCH" quality, of serviceable age, at moderate prices. Information, pedigrees, etc., on application. McPHERSON FARMS CO., Howell, Michigan.

HOLSTIENS

Herd No. 1. Five cows, one two year old bull.
Herd No. 2. Five yearling heifers, one yearling bull.
Herd No. 3. Five heifer calves and one bull.
Bulls ready for service and 6 to eight months old bulls. Prices will please you. If interested, write as soon as you read this. L. E. CONNELL, Fayette, Ohio.

REGISTERED Holstein cows, heifers and heifer calves priced to sell, also bulls ready for service. B. B. REAVEY, AKRON, MICHIGAN.

Reg. Holstein Bull Calf. 2 nearest dams average 90 lb milk per day Pontiac Korndyke and Hengerveld DeKol breeding Prices right. John A. Rinke, Warren, Mich.

Holstein Calves, 10 heifers, and 2 bulls 15-16ths pure, 5 weeks old, beautifully marked, \$20.00 each, crated for shipment anywhere. Edgewood Farm, Whitewater, Wis.

Holstein Friesian Cattle

A. R. O. herd tuberculin tested, headed by grandson of King Segis Pontiac. PEACELAND STOCK FARM, Three Rivers, Mich. Chas. Peters, Herdsman. C. L. Brody, Owner, Port Huron

Registered Holsteins. Young bull ready for service. 30 lb. breeding. Satisfaction guaranteed. W. B. Jones and J. F. Lutz, Cohoctah, Mich.

MICHIGAN HOLSTEINS

4 to 12 Mo. World record sire. High testing dams—from \$99 up to \$299. Let us send you one on trial. You should not buy until you get our book.

Long Beach Farm, AUGUSTA, (Kalamazoo Co.) MICH.

REG. HOLSTEINS: Herd headed by Albina Bonte Butter Boy No. 3124. Dam's record at 6 yrs. butter 28.53 lbs. milk 619.4. Yearly record at 24 yrs. butter 892 lbs. milk 18622 lbs. W. B. READER, Howell, Mich.

Bull Calves

From A. R. O. Dams, Sired by "Maplecrest Korndyke Hengerveld, whose Dam, Maplecrest Pontiac Flora Hartog," is one of the four 1200 pound daughters of "Pontiac Aggie Korndyke."

Write us about these Calves, and our Berkshires And we will quote prices that will move them. Swigartdale Farm, Petersburg, Mich.

FOR SALE. Two registered Holstein dams, the other dam not yet tested but a great individual, one bred to a 27 lb. double grandson of Johan Hengerveld Lad, also bull calf from same sire and 21 lb. dam. Chas. R. Paine, Durand, Mich.

Registered Holstein yearling heifer. Dam, a 25.80 lb. jr. four-year-old granddaughter of Pontiac Butter Boy. Sire, a grandson of Hengerveld DeKol out of 25.97 lb. dam. Nice individual, best of breeding, \$150 delivered, safe arrival guaranteed. Write for pedigree. Hobart W. Fay, Mason, Michigan.

Exceptional Opportunity: Two registered heifers by 25 lb. butter bull, out of excellent A. R. O. Cows \$150 each. Rougemont Farms, Detroit, Mich.

Reg. Holstein Bulls ready for service from 20 lb. four yr. old dams. \$75 each. Dewey C. Pierson, Hadley, Michigan.

FOR SALE Four Holstein calves sired by one of the best sons of King Segis Pontiac Alcatraz the \$50.000 bull. Fine individuals, 3 females, 1 male. Sindlinger Bros., Lake Odessa, Mich.

Little Farmstead Jersey Cattle. Bull calves from R. 1 of M. Cows, also heifer calves and several bred heifers for sale. Colon C. Lillie, Coopersville, Mich.

Jersey Bulls for Sale from high-producing dams, with testing Assoc. records, also on semi-official test. C. B. Wehner, R. 6, Allegan, Mich.

Maple Lane R. of M. JERSEY HERD offers for sale, tuberculin tested cows, heifers, bulls, and bull calves backed by several generations of R. of M. breeding. IRVIN FOX, Allegan, Michigan.

REGISTERED JERSEY BULLS FOR SALE 1 yearling, and Bull calves from 8 to 10 months old. Also 3 cows. Write your wants. SMITH-PARKER, R. D. No. 4, Howell, Michigan.

FEMALES---FOR SALE---FEMALES

25 Head Registered Holsteins

Many with A. R. O. records, some up to 23 lbs. Mostly 2 to 5 years old—a few yearlings. No better breeding anywhere. From Granddams of: King of the Pontiacs, DeKol 2nd., Butter Boy 3rd., and King Segis. Will be sold at auction prices. Send for list.

Bigelow's Holstein Farms

Breedsville, - - - Michigan.

28 Head Registered and High Grade Holstien Friesian Cattle

To be sold at

Public Auction, October 31, 1916

This herd of cattle consists of 28 pure bred and grade females, 1 yearling registered bull, a grandson of the "King of the Pontiacs" and one registered bull calf. The females are of good breeding and excellent milking qualities. All farm implements, including one 8 h. p. gasoline engine and one Wilder Whirlwind No. D Silo Filler. Sale starts at 10 a. m. Sale will be held at the farm, located 5 miles North of Monroe, Monroe Co., Mich., on Detroit, Monroe and Toledo Electric line. One mile East of Stoney Creek stop. This 102 acre Dairy Farm for sale. R. G. VIVIAN, R. R. No. 4, Monroe, Michigan.

Duroc Jersey Herd Boars

Special Offering of High Class Fall Boar Pigs. Breeding and Individuality good enough for breeders who appreciate the best.

Also some good farmer's boars. This is the best lot of fall pigs we have ever had to offer. A cordial invitation is extended to visit the farm and inspect the stock. If you wish one of the best young Jersey bulls in Michigan we have him for sale. For further particulars, address,

Brookwater Farm, Swine Dept., Ann Arbor, Mich.

Maple Hill Farm Registered Jersey Cattle for Sale

Both sexes. The kind that pay at the pail. J. R. Worthington, R. No. 7, Lansing, Michigan

The Wildwood Farm

Jersey Cattle, Majesty Blood. We have Bulls for sale from Register of Merit cows of good type. Write your wants. Alvin Balden, Capac, Michigan.

FOR SALE: Choice registered Jersey bull calf born Dec. 24th, 1915. Dam a 700 lb. a year butter cow, moderate price, easy terms. C. S. Bassett Kalamazoo, Mich.

A Few Choice Unregistered Jersey Cows this fall, good ages, prices for next thirty days \$75. Wm. E. Ansterburg, R. F. D. 3, Homer, Michigan.

BIDWELL SHORTHORNS

For "Beef and Milk" Registered bulls, Scotch-topped roans, reds and whites for sale. Farm at N.Y.C. Depot; also D. T. & L. R. Y. Address G. R. Schroder Mgr. BIDWELL STOCK FARM Box B, Tecumseh, Mich.

Shorthorn Cattle of both Sex for Sale

W. W. KNAPP, Howell, Michigan.

DAIRY BRED Shorthorns of best Bates strains, young bull 8 months old for sale, price \$150. J. B. HUMMELL, MASON, MICHIGAN.

Shorthorn AND POLLED DURHAMS FOR SALE. Have red roan and white. Have over 100 head in herd. C. Carlson, Leroy, Mich.

Shorthorns—Dairy or beef bred. Breeding stock all ages for sale at farmers prices. C. W. Drum Secy. Cent. Mich. Shorthorn Breeders' Assn. McBride, Mich.

Shorthorns, roan 3 year old, Bates bred herd bull \$250. Young bulls and heifers. DAVIDSON & HALL, TE CUMSEH, MICHIGAN.

HEREFORDS

12 Bull Calves 10 Heifer Calves PAW PAW, MICH.

SHORTHORNS FOR SALE

8 Bulls, also females. W. B. McQuillan, Howell, Mich

FOR Sale—Reg. Short Horn Bulls by Maxwalton Monarch 2nd, son of Avondale, from 11 to 13 mos. old John Schmidt, Reed City, R. No. 5, Michigan.

Shorthorns For Sale. Young bulls \$100. Bred cows, and heifers \$150 for quick sale. Write W. J. BELL, ROSE CITY, MICHIGAN.

Claradale Milking Shorthorns Two fine bulls ready for service at reduced prices for quick sale, finest pedigree, \$125.00 to \$150.00. F. W. Johnson and Sons, Custer, Mason Co., Mich.

For Sale—100 head Shorthorn feeder steers 2 years old, nearly all dehorned. All native cattle. George Hinchman, Hastings, Mich.

Of Interest to Feeders

For Sale—We have on our Ranch in Isoco Co., Mich., 300 head of steers, selected stock, purchased early in summer at Chicago. Angus, Herefords and Short Horns, for further information write or phone K. R. SMITH, IONIA, MICH.

Cattle For Sale

2 Loads feeders and two loads yearling steers. Also can show you any number 1, 2 and 3 years old from 600 to 1200 lbs. Isaac Shanstun, Fairfield, Iowa. R-8.

HOGS.

Berkshires of best breeding of various ages, either sex, all registered stock, no akin, special reduced price. Write your wants quick. Mitchell's Lakeside Farms, R. 2, Bloomingdale, Mich.

The Very Finest Berkshire Pigs Cheap C. S. BARTLETT, Propr. Pontiac, Michigan

Berkshires. Of various ages, either sex, open or bred, prolific strains, Registered, at moderate price. Elmhurst Stock Farm, Almont, Michigan.

Berkshire Boars and gilts. May farrowed, large growthy fellows. Also a litter just ready to wean. A. A. PATTULLO, R. 4, Deckerville, Mich.

ROYALTON Bred Berkshires: Fine lot of September R. pigs, both sexes. Will ship when 6 weeks old, with registry papers, for \$7. All sired by Paramount Lee. Satisfaction guaranteed. D. F. Valentine, Supt. Temperance, Mich.

DUROC JERSEYS

A choice lot of spring pigs, both sex, pairs and trios, not akin. Prices reasonable. Send for pedigrees. THE JENNING'S FARMS, R. F. D. 1, Bailey, Mich.

J. W. KEENEY, Erie, Mich. Males, good ones for Dec. Swine. D. M. & T. local from Monroe or Toledo, Keeney Stop.

DUROC Jersey Special. Pigs 8 wks. old \$12 each. Trio for \$35, no kin. Reg. and Del. anywhere in state for next 10 days. J. Robert Hicks, St. Johns, Michigan.

Duroc Jersey Boars Two June 1915; 12 April 1916. Write for description. I guarantee satisfaction. J. H. Banghart, East Lansing, Mich.

Duroc Jerseys. Some yearling & Spring boars good enough to head your herd. Will sell Eureka Cherry King \$745. Ask about him. W. C. Taylor, Milan, Mich.

For Sale, Duroc Jerseys, choice breeding spring pigs either sex. Prices right. John McNicoll, Station A, R. 4, Bay City, Mich

DUROC JERSEYS: A nice bunch of Spring Gilts, also good Spring Boars old enough for service. Wm. W. Kennedy, R. 3, Grass Lake, Mich.

Duroc Jersey Boars of the large, smooth big boned type. E. D. Heydenberk, Wayland, Michigan.

Duroc Jerseys Big Type Boars with breeding and individuality that is hard to beat, bred from prize winning stock, prices reasonable, satisfaction guaranteed. F. J. DRODT, R. 1, Monroe, Michigan

Duroc Stock hogs. Spring gilts, tried Sows, August Pigs. Percheron Stud Colts. E. J. ALDRICH, Tekonsha, Mich. R. 1, Bell Phone.

Dobson's Durocs Combined, size, quality, breeding. Herd boars, spring boars, spring sows for sale. Orlo L. Dobson, Quincy, Michigan.

DUROC Jerseys. Spring boars from the most noted sires of the breed. Jo Orion II, Perfect Top Col., Oakland Ohio Chief, Principle IV & Model Pal. Newton Barnhart, St. Johns, Mich.

Durocs Fall yearlings, boars and gilts, weight 200 lb. \$30 to \$35. Some good spring stuff at \$25, weight 175 lb. H. G. KEESLER, Cassopolis, Michigan.

Duroc Jerseys If you want fall pigs don't forget to write to Shepherd, Michigan. S. C. STAHLMAN.

Big Type Boars:

O. I. C's ready for service Bred Gilts—Fall Pigs. Registered in buyers name, shipped C. O. D. Prices very reasonable. J. Carl Jewett, Mason, Mich.

O. I. C. Swine—A nice lot of spring pigs. Write for your wants. Meadow View Stock Farm, Holland, Michigan. R. B. No. 5.

O. I. C. Serviceable Boars shipped C. O. D. Registered in purchaser's name. H. W. MANN, Dansville, Mich.

Raise Chester Whites

Like This
the original big producers

I HAVE started thousands of breeders on the road to success. I can help you. I want to place one hog from my great herd in every community where I am not already represented by these fine early developed—ready for market at any month old. Write for my plan—More Money from Hogs. G. S. BENJAMIN, R. F. D. 10, Portland, Michigan

CHESTER WHITE March pigs either sex. Booking orders for Sept. 1 pigs, 2 year old sow farrowed 9 pigs Sept. 5. Herd boar is 2 yr. old. Ship C. O. D. W. A. Sneyer, Mt. Pleasant, Mich. R. 4.

CHESTER WHITES Some splendid March boars for sale, also fall pigs. F. W. ALEXANDER, Vassar, Mich.

Registered O. I. C. Swine

Stock For Sale—All Ages

Correspondence Solicited, Visitors Always Welcome

Brightside Farm
Grand Lodge, Mich

O. I. C. Stock all Sold JULIAN P. CLAXTON, Swartz Creek, Mich.

O. I. C. SWINE: If you are interested in you with a choice pair or trio, not akin, let me start you farrow about September first. A. J. GORDEN, R. No. 2, Dorrr, Mich.

O. I. C. Choice Spring gilts not bred and spring boars. Out of Prize winning stock. Write for low prices. A. V. HATT, Grass Lake, Mich.

400 Big Type O. I. C. and Chester White Pigs From Feb. Mar. and Apr. farrow sired by the five best boars in the state. School Master 52707 who won more champions, defeated more champions than any boar show 1915. Abo 2nd, sire to our undefeated breeders young herd at 7 state fairs, Allen junior champion at Wis. State fair 1914, and Captain Jim \$3101, under 6 months boar and junior champion at every state fair show 1915. Then we have Le Doux model 25015, first in class at Sioux City, Iowa, 1914. Get our catalogue, its free. We Register Free; Guarantee satisfaction in every way. ROLLING VIEW STOCK FARM, Cass City, Mich.

O. I. C. Swine and Reg. Holsteins, few boar pigs of either sex, May farrow at a reasonable price, quality considered. ELMER E. SMITH, Redford, Michigan.

O. I. C. HOGS

Fine April Gilts and Males. Pairs no relation. At a bargain if taken at once. J. R. Way, Three Rivers, Mich.

O. I. C's. 4 last fall boars big growthy ones, also last spring pigs either sex, not akin. Farm 2 1/2 mile West of depot. Otto B. Schulze, Nashville, Michigan

O. I. C. & Chester White

Strictly Big Type. April boars large enough for service, also have May boars, that are good ones. Can furnish in pairs not akin. Have been breeding the big type for 15 years. The kind that fill the pork barrel. Newman's Stock Farm, Marlette, Mich. R. 1.

O. I. C's. 14 choice young boars ready for service. 2 sows to farrow in Oct. and open gilts. Cloverleaf Stock Farm, Monroe, Mich., R. No. 1.

O. I. C. Serviceable boars of the big type at reduced prices for the next thirty days. G. P. ANDREWS, Dansville, Michigan.

O. I. C. Year old boar 2nd prize winner at Grand Rapids Spring fair also spring gilts and boars ready for service. A. J. Barker, Belmont, Mich. R. 1.

FOR SALE. Thoroughbred O. I. C. Swine, sows bred, gilts and boars. O. D. Somerville, Grass Lake, Mich. R. 2.

O. I. C's Service boars and gilts. Price reasonable. Satisfaction guaranteed. Ship any day. A. R. GRAHAM, Flint, Michigan.

O. I. C. or Chester White Swine, both sex, not of kin. Write for catalog and prices. E. B. MILETT, Fowlerville, Michigan.

Francisco Farm Poland Chinas

Big Types With Quality Ten 200 lb. Spring Boars from prize winning stock. They're long, strong, big-boned, rugged fellows. Pictures, circular and price list on request. F. F. POPE, MOUNT PLEASANT, MICH.

Large Strain P. C.—Two nice fall boars left, a few Gilts to farrow in Aug., Sept. and Oct., get one of these sows with pigs by side. H. O. SWARTZ, Schoolcraft, Michigan.

AT HALF PRICE

Genuine big type Poland China Hogs, Bred Sows, Spring Pigs, Boars ready for service. Special, the best big type fall yearling boar in Michigan. Also registered Percheron Stallions and Mares. J. C. BUTLER, Portland, Mich., Bell Phone.

Big Type Poland Chinas Spring boars, at reasonable prices. Order soon to save express. A. A. WOOD & SON, Saline, Michigan.

FOR SALE: Poland China boars ready for service. A few high scoring Black Minorca cockerels, will make large birds. Satisfaction guaranteed. R. W. Mills, Saline, Mich.

Large Type P. C. Largest in Mich. Young boars ready for service. Of Mar. and April farrow, from large litters, weighing up to 25 lbs. Come and see, expenses paid if not as represented. W. E. Livingston, Parma, Mich.

BIG TYPE POLAND CHINAS

All ages. Our herd sire was Champion and Grand Champion at the State Fair last fall. Our sows are great big stretchy, splendid individuals with best breeding. Pigs from such matings will please you. HILLCREST FARM, Kalamazoo, Michigan.

For Sale Poland Chinas either sex, all ages. Something good at a low price. P. D. Long, R. F. D. No. 8, Grand Rapids, Mich.

Large type P. C. Sows and gilts all retained for my Feb. Sale. A few choice Spring boars ready to ship. W. J. HAGELSHAW, Augusta, Michigan.

BIG TYPE POLAND CHINA Spring boars that will please you, priced right. G. W. HOLTON, Route 11, Kalamazoo Michigan.

For Big Type P. C. Spring Boars and Gilts bred for Armstrong Bros., R. 3, Fowlerville, Mich

WALNUT Alley Herd. Big type Poland Chinas headed by Hadley Desmoins No. 216925 and Smothe Jumbo Jr. No. 248687. Sows represent blood of two wonders. Pigs of either sex ready. A. D. Gregory, Ionia, Mich.

Big Boned Poland China boars shipped C. O. D. call or write for photo, weights, pedigree and price. E. R. Leonard, St. Louis, Michigan.

BIG Type P. C. Three extra good yearling boars, good 1000 lb. prospect. Sired by Big Type King our 1000 lb. boar. Spring pigs either sex. Special three Mouw breed boar pigs. W. Brewbaker & Son, Elsie, Mich.

Large Stiled Poland China spring and fall pigs also Oxford sheep. Prices right to quick buyers. Robert Neve, Pierson, Mich.

Poland Chinas. Big and medium type from growthy stock and large litters. They have good bone and length, well quartered. L. W. Barnes and Son, Byron, Mich.

BIG Type Poland Chinas. The smooth, easy feeding kind that will grow big and get fat. Apr. pigs weighing up to 225 lbs. E. R. Moore, Ransom, Michigan.

Poland Chinas. As big and good as grow. You win if you buy from Robert Martin, R. 7, Hastings, Mich.

THE DISEASE PROLIFIC "MULEFOOT" HOG

GROWTHY PROFITABLE

DISEASE RESISTING

FOUNDATION STOCK FROM BEST BLOOD OF BREED

THE CAHILL FARMS

KALAMAZOO - - - MICHIGAN

Hampshire Swine. Bred Sows and gilts for August and sex both. FLOYD MYERS, R. No. 9, Decatur, Ind.

HAMPSHIRE Boars, sows, gilts and pigs. Choice stock. A. E. RACON & SON, Sheridan, Michigan.

HAMPSHIRE HOGS Only a few spring boars left. Taking orders for bred gilts. John W. Snyder, R. 4, St. Johns, Mich.

Halladays' Hampshire Swine Both sexes, all ages. Prices reasonable. O. H. Halladay & Son, Clinton, Mich.

Yorkshires For Sale Boars from large early farrowed litters. Waterman & Waterman, Meadowland Farm, Ann Arbor, Mich.

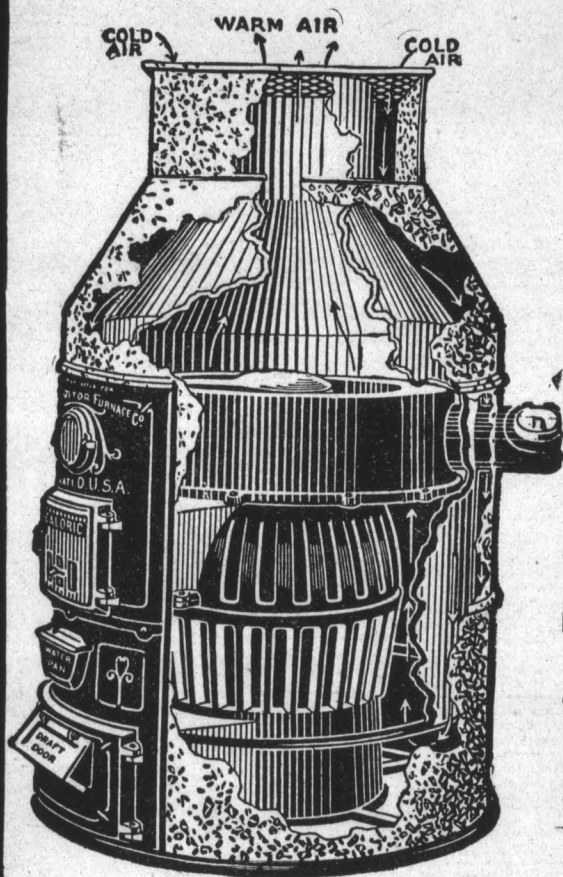
Breeders' Directory—Continued on page 414

Winter's Blasts Are Coming!

Are You Going to Stove It Through Again This Year?

You remember what a time you had last year. Building fires, carrying coal and emptying ashes. Hot near the stove and cold at the corners of the rooms. How you have envied the snug comfort of the furnaces in the homes of your city friends!

You can now have the pleasure, convenience and economy of a furnace. Even if your home is already built you can have the Caloric Pipeless Furnace because you do not have to cut holes for pipes or flues. The single register heats the house comfortably. We have hundreds of letters to prove it. If you have no furnace or if your present furnace is not giving you satisfaction, let us give you the complete facts about the



**PIPELESS
CALORIC
FURNACE**

The Original Patented Pipeless Furnace

The Patented Caloric Pipeless Furnace burns coal, coke or wood and is guaranteed to save 35% of your fuel. There are three reasons for this big saving. 1st, the warm air reaches your rooms by nature's direct method of circulation and there are no pipes to absorb or resist the heat. 2nd, our double ribbed firepot and specially patented combustion chamber produce perfect combustion, thus insuring thorough burning of the fuel and a much greater heating surface. 3rd, our specially patented triple casing, insulated with two air spaces, prevents any heat from radiating into the basement. This is the only successful patented one register furnace and no other furnace can claim these three big features.

Just One Register—No Pipes

The Caloric is the original patented and thoroughly successful pipeless furnace. No experiment. Its worth has been proven. Spend the winter in comfort. Don't think it is too late this season. **It is not too late.**

The Caloric can be installed in a day. Then you can laugh at winter's blasts.

Ask Your Dealer or Write for Free Book

If there is no dealer in your town who can demonstrate the Caloric, write us. We'll gladly give you the name of a dealer and send our book, together with a copy of our remarkably strong guarantee.

The Monitor Stove & Range Co., 2011 GEST STREET Cincinnati, O.



Last year we remodelled our home and installed a Caloric Pipeless Furnace. Our house is large and in the coldest weather we enjoy comfort, even in the bathroom. We did not have a single frozen pipe. Used less fuel than we would with any other make. —E. L. Sindel, Delta, Ohio.



I have been heating 11,323 cubic feet with your Caloric as my bungalow is all open, large living room, dining room and kitchen on first floor, three bedrooms and bath on second. I have plenty of registers but we have used heat on second floor. Have used six tons of coke where ten to twelve tons. —R. L. Colter, Elmira, N. Y.



We have a 10-room house and where, before, we used one hard coal burner, three gas heaters, and cooking range and never were comfortable in cold weather, now the Caloric completely heats the house. It also gives a continual change of air. I positively know the furnace will pay for itself in fuel money. —Louis Phillips, Tiffin, O.

