

MICHIGAN FARMER

AND LIVE STOCK JOURNAL
PUBLISHED WEEKLY ESTABLISHED 1843

VOL. CLVII No. 6
Whole Number 4160

DETROIT, MICH., SATURDAY, AUGUST 6, 1921

ONE YEAR \$1.00
FIVE YEARS \$3.00

Picking the Profit Producers

Eliminate Star Boarders from Your Poultry Flock by Culling.



The Head of a High Producer.

the best and most certain means of eliminating from poultry raising the enormous leaks which have stood in the way of success and profit.

Poultry culling may be well compared with the Babcock test of the dairyman. By the use of the Babcock test and the scales, the dairyman has been able to eliminate the star boarders from his herd. Before it came in use, it was difficult for the dairyman to determine which of his cows were producing a profit and which were causes of losses. In the same way the practice of poultry culling enables the poultryman to select the hens which are his best layers, those which have a fair capacity for laying and also those of which it might be said that it would be throwing money away to feed except for fattening purposes.

The business of poultry raising has often been a haphazard affair. The few hens that were kept would be thrown feed of indefinite quality and quantity and often provided unsuitable houses both from the standpoint of sanitation and protection from the weather. Such conditions would make it impossible to produce profit from even the best hens. At first we learned of proper housing and the use of egg-laying rations and through these we would obtain increased egg yields, but we never could get down to what may be called efficiency in poultry raising until the poultry culling method became thoroughly established.

This method of selecting hens that would produce profitable egg yields has been worked upon by many poultry experts. So the system we have now is the result of the work of several, rather than the discovery of one man. It may, however, be said that Mr. E. C. Foreman, of the M. A. C. Extension Department, has been as much responsible for the development of this method as any one man in the country. It goes with-

out saying that Mr. Foreman knows chickens. He knows them so well that it is practically impossible to fool him on them. His judgment has been tested when he has reclassified hens. Invariably it was always the same. This shows that when one has become thoroughly acquainted with the essentials of poultry culling, he can cull quite accurately. The method Mr. Foreman practices has also proven itself in egg yields. The hens he pronounced good layers were certain to show a high production with the proper care, while those he consigned to the market crate would invariably prove expensive propositions as producers of eggs. Mr. Foreman's method has been given wide publicity in this state through talks, demonstrations, and articles by him and other experts, but the method is of sufficient importance so that its main points will bear repetition here.

Poultry selection is based upon the conformation of the hen and her physical condition. One of the most important indications of the condition of the hen is the

which will put on flesh rather than to produce eggs. Preference should be given to the hen with an oval eye which shows considerable of the eye membrane directly in front of the eye-ball. The jaw should be refined, and not thick and heavy set. The beak should be short and strong and slightly curved, and the distance from the eye to the beak should be short.

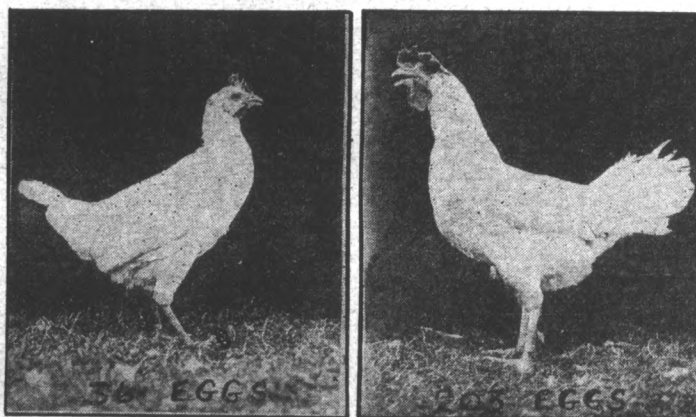
The comb should indicate a good healthy red and should be of good size for the breed. When a hen is laying or is ready to lay, her comb and wattles are plump and full of blood and should have a somewhat waxy feeling to the touch. When she is not laying, she has a shrunken comb which is pale in color and hard, and is usually covered with whitish scales. A very dark comb is usually an indication of disease. A hen that has a crow type of head will never be a producer and she might as well be consigned to the market crate right away.

On the yellow legged birds, the pigmentation test is also of value to determine the laying qualities of the hen, especially her past record. It is a proven fact that the yellow legged bird will "lay out" the yellow color in her legs, around the vent, the wattles, and in the ring around the eyes. The hen that has bright yellow legs has been a low producer, or to say the least, has been resting for a long time. The legs of a heavy laying bird become almost white, although a short rest may cause some of the yellow pigmentation to come back or to be restored. In the use of this test, one must guard against the freaks in the yellow-legged breeds which are sometimes born with light colored legs. The use of the pigmentation test is usually supplemental to the other methods used in determining the laying condition of the bird.

The condition of the egg sack is one of the most important things to take into consideration. A few years ago when poultry culling first became known, the flexibility of the pelvic bones was supposed to be the best indication (Continued on page 122).



The Head of a Non-productive Hen.



A Good Producer Shows Unmolted Plumage at End of Laying Season, Depth of Body and Alertness. These Qualities Are Not Evident in a Poor Layer.

head. A study of its conformation will show many valuable points that will be substantiated by other examinations. For instance, if you find a healthy, refined head, you will be quite certain to find a similar body back of it. A head which indicates femininity, intelligence and alertness is one which will be found on all of the heavy producers. The skull should be moderately narrow and the face lean and delicate. A wide skull with hanging eyebrows and an indication of fatty wrinkles is common to the kind of bird



Published Weekly Established 1843 Copyright 1921

The Lawrence Publishing Co.
Editors and Proprietors

1632 LaFayette Boulevard Detroit, Michigan
TELEPHONE CHERRY 3384

NEW YORK OFFICE-95 Madison Ave.
CHICAGO OFFICE-111 W. Washington St.
CLEVELAND OFFICE-101-1013 Oregon Ave., N. E.
PHILADELPHIA OFFICE-261-263 South Third St.

M. J. LAWRENCE President
PAUL LAWRENCE Vice-President
J. F. CUNNINGHAM Treasurer
F. H. NANCE Secretary

I. R. WATERBURY Associate Editors
BURT WERMUTH
ALTA LAWSON LITTELL
FRANK A. WILKEN

I. R. WATERBURY Business Manager

TERMS OF SUBSCRIPTION
One Year, 52 issues \$1.00
Three Years, 156 issues \$2.00
Five Years, 260 issues \$3.00
All sent postpaid
Canadian subscription 50c a year extra for postage

RATES OF ADVERTISING
55 cents per line agate type measurement, or \$7.70 per inch (14 agate lines per inch) per insertion. No advertisement inserted for less than \$1.65 each insertion. No objectionable advertisements inserted at any time.

Member Standard Farm Papers Association and Audit Bureau of Circulation.

Entered as Second Class Matter at the Post Office at Detroit, Michigan, Under the Act of March 3, 1879

VOLUME CLVII. NUMBER SIX

DETROIT, AUGUST 6, 1921

CURRENT COMMENT

The Grain Dealers' Case

ORGANIZED grain dealers of the country are apparently very much exercised over the prospect of a big farmers' cooperative organization for the purpose of marketing their own grain. Ostensibly they are afraid the grain growers may swindle themselves, so they have provided a "war chest" with which to save their grain grower patrons from this "menace." But actually it would appear that they are afraid they cannot successfully compete with an organization of this kind, hence the dissemination of propaganda calculated to arouse suspicion of the cooperative plan in the minds of individual grain growers, and the alleged attempt to link other trade organizations with their movement which, according to the American Farm Bureau Federation, those organizations have denied, as noted in another column of this issue.

The apparent failure of those in charge of the organized grain dealers' case to recognize the fact that the average farmer is possessed of intelligence, as well as "horse sense" will tend to make their propaganda harmless against, if not actually helpful to, the grain growers' organization. Tactics of intimidation are very much passe as effective instruments in staying the economic organization of farmers. The survival of the fittest, is the test which will decide this contest. Economic results are what grain growers are after and only straight, honest economic arguments will appeal to them in this connection.

Future Price Prospects

THE farmer who is a market student, as every farmer should be, will find much encouragement in the situation so far as future price prospects are concerned. While grain prices are low as compared with previous years, they have held up under the rush of harvest deliveries. This means that large users are disposed to accumulate stocks for future use, apparently in the belief that opportunities to buy at lower prices will not present themselves.

Somewhat lessened production in most lines will be a further source of market strength, with probable price increases which will more than compensate for lessened yields. Something, of course, depends upon domes-

tice consumption, which may be affected to some extent by industrial conditions. Yet the world's need for our food products is not shrinking. The government's proposal to finance exports of farm products on the same plan used in financing exports of manufactures will undoubtedly facilitate to a considerable extent, the export of an increased amount of food products to Europe, which will sorely need them on account of severe drought which has curtailed production in many sections.

The upward trend of values has become evident in dairy and poultry products, and in some classes of live stock, indicating that these industries are becoming stabilized, with the prospect that they will again be on a safe basis which will warrant normal operations. Credit conditions are gradually improving and will further improve with the marketing of the season's crops and the further increase of our gold reserves by large gold imports. Altogether, prospects are most encouraging for the return of a semblance of prosperity for farmers during succeeding months.

Apply the Object Lessons

OBJECT lessons are our greatest educators. They are more convincing than argument. They are practical demonstrations of facts which may have appeared to us as mere theories if we had not seen them worked out.

But the value of these demonstrations to us depends upon their application to our business and needs. Otherwise the knowledge so gained will be of little value to us.

One demonstration which is now to be seen in nearly every Michigan community is the superior value of alfalfa as a forage crop, where the conditions which make for its success are provid-

ed. Every farmer should seriously consider if it would not pay to provide them.

This is but one example of many which might be cited, as to how we may profit by our neighbor's experience. There are object lessons about us which we could apply with profit.

Living Up to a "Good Front"

AS a general proposition in driving through the country, the observing traveler will note that the farmers living on the main traveled and permanently improved roads are apparently spurred to greater efforts in keeping things up than are their neighbors living on less frequented highways. This is noticeable, in a general way, not only in the neatness and appearance of the farmstead, but as well in the tillage and care given to the crops growing in view of the road. There are, of course, many notable exceptions to this general observation, but by and large, it seems to hold good.

The apparent psychology of this observation is that the farmers living on the main traveled roads appreciate their audience, and take a natural and pardonable pride in putting up a "good front" for its observation. And this in turn gives them a greater pride in their business as a whole, which is finally reflected in the appearance of their crops as well as the neatness of their farms. Unconsciously, perhaps, they are living up to the "good front" which they have put up to the traveling public. And as a result they are reaping an economic dividend, as well as the satisfaction which a good appearance always affords.

We cannot all live on the main roads, nor can we all afford expensive improvements. Nor is either essential to putting up, or living up to, a "good front." There is a happy medium of

The Farmers' Diagnosis

What They Think is Wrong with Agriculture

ANALYSIS by the American Farm Bureau Federation of the reports of the hearings held by the County Farm Bureaus furnishes a picture of what the farmer thinks is wrong with agriculture, the causes of the malady and what he would prescribe as the cure.

1. The cause of the present condition of agriculture. The cause of the present condition of agriculture which stands out in the farmer's mind like a church steeple on the landscape is the low price of farm products, produced at excessively high cost, while freights, interest rates, taxes, and manufactured goods which farmers must buy, such as building materials and machinery, remain as high, or nearly as high, as before.

As causes of these low prices, the farm bureau mind assigns a multitude of factors. Chief among these are the restriction of credits and interest rates charged by banks, which forced liquidation; gambling and speculation in food products; artificial deflation by propaganda against high prices; reduced foreign buying power with low foreign exchange rates; high taxes; high freight rates and the fact that producers were not organized to bargain effectively in marketing their products. Some dairymen gave imports of foreign butter and vegetable oils as an important factor. Excessive commission charges by middlemen also received "honorable" mention in the list.

2. The cause of the difference between the prices of agricultural products paid to producer and paid by the consumer.

The major causes of the wide difference as they are registered in the farmer's mind are excessive profits

collected by dealers and manufacturers, high wages for inefficient labor, and exorbitant freight rates. The farmer thinks the methods of distribution are wrong, that there are too many men making a living as middlemen. Milk at twelve to sixteen cents a quart at the doorstep for which the producer received, only \$1.00 to \$2.50 per one hundred pounds, in the farmer's mind means excessive distributing charges. The farmer does not see why freights on such products as wool should be as large as, or larger, than the value of the wool itself at the farm, or why it should take a ton of hides to buy a set of harness.

3. The comparative condition of industries other than agriculture.

For the most part the farmer thinks that other industries are in a much better position than agriculture; that agriculture is at the bottom of the list. He believes that other industries have been able to protect themselves by reducing output or closing down and distributing their product in accordance with demand, while the farmer must plant in season and take his chances on the market or wait for twelve months. Last year losses were nearly universal among farmers. Only a few in special lines or favored localities managed to break even according to testimony given at the hearings. Losses will be numerous again this year, although production costs have been cut so that farmers are a little more hopeful as to the results from this year's crop.

4. The relation of prices of commodities other than agricultural products to prices of agricultural products.

That it takes much more wheat, corn, oats or live stock to pay for a

(Continued on page 108).

thrifty simplicity in keeping with a well conducted farm, which will pay dividends in cash as well as in personal satisfaction, and which every farmer may study with profit to himself and to his community, since the individual farmer's "front" is a powerful community, as well as personal, influence.

News of the Week

Wednesday, July 27.

JAPANESE cabinet accepts Harding's invitation to disarmament conference.—Dr. W. E. Stone, president of Purdue University, was killed by falling down a crevice while climbing Canadian Rockies.—Detroit closes parts of fifty streets each afternoon to provide play places for children.—Two members of British Parliament are in United States to investigate American prohibition.—Practically every city in Michigan of ten thousand population or below is under the commission form of government.—Over twenty-five thousand soldiers of Canada have become expert farmers.—Milk consumers of New York will pay a cent per quart more in August than they did in July.

Thursday, July 28.

AIRPLANE fare from New York to Atlantic City has been reduced from \$300 a round trip to \$85.—Kentucky boy, ill with sleeping sickness, breaks sleep record by sleeping one hundred and twenty-seven days.—Due to the success of the Greek army the Turkish nationalist government has moved the seat of government to Sivas.—Burial at sea with funeral service by wireless occurred on an ocean freighter when one of the firemen died.—J. A. Puffer, New York educator, thinks school eight hours a day and six days a week would help juvenile delinquency.—Purchases for the United States government will all be made through a central purchasing department hereafter.

Friday, July 29.

RUSSIA agrees to free American prisoners in order to get relief from this country for starving Russians.—Many soldiers' state bonus checks are returned because the ex-soldiers cannot be found.—Cloudburst in Wyoming wipes out town of Beula and drowns two people.—Kalamazoo celery growers are on strike because shippers offer too low a price.—Eddie Rickenbacker, war hero, forms automobile company in Detroit.—State of New Jersey will receive \$139,000 in taxes from proceeds of the Dempsey-Carpentier fight.

Saturday, July 30.

GERMAN bankers are limiting credits to hasten liquidation. This is done to increase the value of the mark on foreign exchange.—Western Union reduces price of cable rates to Germany.—Milwaukee sends an invitation to Secretary of State Hughes to hold world disarmament conference there.—Autoists are benefiting by the gasoline price war.—United States Shipping Board will sell three ex-German vessels.—Theater tickets are selling at pre-war prices in New York.—The American army of occupation on the Rhine in Germany is costing the government about \$1,000,000 a month.

Sunday, July 31.

STARVING hordes from Russia are invading Poland in search of food.—Exports to Europe during the fiscal year ending June 30, drop off a billion and a half dollars.—The Michigan State Medical Society may fix fees that doctors are to charge, in order to lower the high cost of sickness.—A Chicago club woman says it is absurd for congress to endeavor to stop women from smoking.—After trip through the west, Representative Cramton is strongly in favor of western reclamation products.—A Swiss air man successfully reaches the peak of the Alps by airplane.—Los Angeles jeweler was caught smuggling \$70,000 worth of diamonds sewed in his coat.—British feel that the outlook for Irish peace is very promising.—Other interests will compete with Ford in bidding for southern nitrate plant.

Monday, August 1.

CHICAGO opens the great Progress Pageant on Saturday.—Monticello, the home of Thomas Jefferson, author of the Declaration of Independence, is offered for private sale in Washington.—On the anniversary of the beginning of the war, thousands of pacifists and cripples in Berlin hold demonstrations favoring permanent peace.—More than \$6,000,000 has been stolen from the mails during month of April. About half of this amount has been recovered.—

To the Woodshed for These

Potato Seed Certification May Suffer from Methods of a Few Careless Enthusiasts

HERE is a manifestly growing interest in potato seed certification in Michigan. The fact that many of the growers who have had their fields inspected for the purpose of having the potatoes certified have been able to get prices considerably higher than the prices secured by their neighbors for table stock has been the chief inducement to interest others in this movement. Certification work with potatoes is not a new development although the Michigan growers have been interested only a comparatively short time. In Wisconsin certified seed has been on the market for a number of years. Minnesota and New York, as well as Maine, are handling large quantities of certified seed.

It is quite natural that the Michigan growers should feel that their state should be able to place their full share of certified seed on the market. There is no question but that if the work is properly handled that seed certification can be developed much beyond its present status in Michigan. On the other hand, those who are most enthusiastic along this line will do well to recognize the limitations and requirements of seed certification.

In the first place it should be recog-

nized that success in this line depends absolutely upon establishing and maintaining a high standard of seed stock. It is absolutely necessary that the seed potatoes which are sold under the certification plan must be superior to the seed secured from other sources or this plan will be shortlived. Admitting that this is an absolute requirement, the question naturally arises—how can this standard be attained and maintained?

A good many people have not recognized the fact that the field and bin inspection work is only one part of the development of the seed certification business. The field work is all right so far as it goes, but unless it is coupled with a satisfactory selling agency it does not go far enough. Different plans of selling have been tried out by different states. Some have formed special organizations for the purpose of selling certified seed potatoes. None of the states, I believe, as yet, are fully satisfied with their method of selling. If the Michigan potato growers expect to be able to sell certified seed in large quantity, it will be absolutely necessary for them to devise and work out some plan of selling which would give confidence to the buyers. There should be some

plan whereby the potatoes can be inspected by an uninterested party as they are sacked for shipment or to be sold to local parties. This requirement naturally necessitates a great deal of trouble and expense but I am firmly of the opinion that something of this kind must be done in the seed certification business if it proves to be what some hope to make it.

Largely because of a lack of some form of inspection at shipping time, there were at least one-half dozen cars of certified seed potatoes shipped into Ohio last season which did not prove satisfactory to those who purchased them. These cars were received from different states and were well distributed over Ohio. These disappointing cars have been advertised in this state more than the cars which were satisfactory. As a result, there will probably be less demand for certified seed in Ohio next year than there was this. This simply illustrates the importance of reducing to a minimum the possibilities of certified seed being sold which will not satisfy the purchasers. It will never be possible to eliminate every case where seed which is not up to standard is sold, but it will be possible to reduce the number very greatly

from what is being done at present.

It is not the purpose of this article to suggest even what form of organization should be developed in Michigan to sell certified seed potatoes. I do wish to state most emphatically, however, that those who are most interested in this movement should get together and work out and agree upon some plan which will take into consideration the things to which attention has been called in this article. It should be recognized that the certification is one thing and the selling of the certified seed an entirely different thing. The machinery has been developed and has proven adequate so far for the carrying on of the certification work but there has been no machinery which is satisfactory for the selling of the seed. The selling plan should be worked out before next fall's crop is placed on the market, otherwise the same thing is likely to happen that happened last fall. Some of the best seed will be sold as certified seed. It behooves those who are interested in the development of the potato seed certification work in Michigan to get busy and work out a plan at once for the selling of the seed if Michigan is to take the place it is entitled to along this line.—C. W. WARD.

Is the Egg Beater Practical?

Women Develop Novel Organization to Determine What Conveniences They Should Place in Their Homes

PEOPLE have grown a little tired of the story of the woman who had to go on beating eggs with a fork all her life, because her husband could not see any sense in spending a dime for one of those "new fangled egg beaters." In the first place, according to the reports of the state home demonstration agents cooperating with the United States Department of Agriculture, the average man, particularly the farmer, has shown himself more than eager to provide his home with any equipment which will render the work easier, and the time for the work shorter.

On the farm, as anywhere, the intelligent husband interprets the word "home" properly, as a place of peace which he and his family are to enjoy together after the day's work is done. Appliances which help to realize this ideal are sound common sense, whether they happen to be egg beaters or washing machines. The problems of supplying the best household equipment hangs not upon the spirit of either husband or wife toward the home but on the financial limitations of the family purse which makes it necessary to weigh the merits of one improvement against another, and often to choose one at a time because both can not be had at once.

There is another consideration applicable to the fork and egg beater controversy. Many persons could be found who would contend, even in this day of enlightenment that a fork beats eggs lighter than a beater, although it takes longer; that they prefer their meringues and egg whites for cake beaten with a fork and intend to go on using one. Perhaps this was the real explanation of the old man's apparent stinginess!

Much is heard to the effect that women have been very slow in revolutionizing the kitchen. Since most women lack mechanical instincts it is probably true that the majority of the labor-saving devices have been invented by men. At the same time it is

also true, that, not having much to do with the washing and care of household utensils, men have invented innumerable contraptions which make more work than they save. The practical woman wants every convenience possible in her home, especially if she is one of the ninety-six per cent who does all her own work. But she wants to be convinced of the utility of each tool she adds to her equipment, and, if she must be limited in her spending, to select only what will be of the greatest possible aid to her. The best housekeeper is seldom the one who has the largest collection of conveniences, but the one who has suitable devices for all the frequently recurring tasks.

The women in Cascade county, Montana, have worked out an admirable way of testing home conveniences before selecting them. During the winter the project leaders in the various communities met with the county home demonstration agent to discuss the best way of working out a "home convenience" project. It was evident that, owing to the distance of some of the communities from large stores with up-to-date stock, and to the general lack of time for individual shopping expeditions, some way should be devised by which articles on the market as labor-saving devices could be examined at home and given a trial before being actually purchased. The result was the organization of "testing circles" in several communities. Variations of this idea could be applied anywhere. This plan is also being tried out in several counties in the state of Washington.

In many cases the equipment for testing circles is purchased by the County Farm Bureau. The women who are interested suggest the articles they would like to test. When a member of the circle wishes to buy any article she may do so. The purchase price is immediately reinvested so that the set of equipment may be kept complete for as many communities as possible to benefit by.

Twelve groups of articles were chosen in Cascade county for two circles to work with over a two months' period. Each woman had the privilege of taking one article home at a time to test for a period of ten days. The articles then rotated in a previously arranged order. Thus, at Vaughn, it works something like this: While Mrs. Brown is trying out the value of the sewing screen, Mrs. Black is satisfying her doubts about the gasoline iron, and Mrs. White is using the fireless cooker. Mrs. Green has the kitchen grindstone for ten days, while Mrs. Gray decides whether she will give up dish towels and use the dish drainer exclusively. The slaw cutter, the double boiler, and the cream whip are tested simultaneously by Mrs. Smith, Mrs. Jones and Mrs. Robinson. At the end of the ten days the articles are sent on to the next person who is to try them.

Each member of the circle is asked to keep a record so as to be able to give a written report of her opinion of the articles tested. This report goes to the project leader, then to the home demonstration agent, and finally to the state and federal extension offices. The individual judgment de-

termines whether or not the tested articles will be purchased. It is hoped, of course, that the trial may result in the placement in the homes of Cascade county of a large number of worthwhile conveniences, all of which will have been given a thorough preliminary test.

Another Cascade county testing circle at Monarch, has on its list of equipment the kitchen jitney, the pressure cooker, and ironing board which clamps on the table, a pan lifter, a measuring cup, spatula, rubber plate scrape, kitchen clothes reel, long-handled dust pan, potato ricer, stepladder stool. An iceless refrigerator, and a vegetable dryer will be added to the equipment in summer time.

At the end of the two months' period there will be in each community a general demonstration of the articles tested at which each woman will talk about one article. Then the two groups will exchange, so that everyone has a chance to see and test for herself everything on the list. A little imagination can picture the competition to be first possessor of certain favored tools or the arguments for and against those of doubtful convenience; the counting of pennies or dollars by those who wish to purchase many, but must content themselves with a few new household helps; and the satisfaction in all the different homes because the mother has at last found a way to cut down the dishwashing or ironing drudgery, how to save her back, by means of a long-handled dust pan, or to make the "kitchen jitney" save steps for her.

For, after all, every minute saved on routine drudgery by the mother is squandered recklessly on the rest of the family in companionship, help, and the things of the spirit that only a mother can give—the things without which the home is a blank unmeaning place. Investment in mother-saving equipment, therefore, means attaining one of the fundamental goals for which the entire work of the home is carried on.



ACTIVITIES OF FARM BUREAUS

Latest News From Local, State and National Organizations

ASKS DECREASE IN FREIGHT RATES.

ON July 25, the president of the American Farm Bureau Federation, the representative of 1,122,882 farmers in forty-seven states, presented to the President of the United States, members of congress, and the Interstate Commerce Commission a memorial requesting that a substantial decrease in freight rates on basis commodities be brought about, and that the five and a half per cent minimum return guarantee section of the transportation act be repealed.

IRON COUNTY FARM BUREAU HIRES MANAGER.

AT a special meeting of the Iron County Farm Bureau executive committee held recently, Mr. Charles Neugebauer, of Crystal Falls, was hired as secretary-treasurer and manager.

CREST OF WHEAT MARKETING PASSES.

THE great rush of new wheat to market is about over in Michigan at least, in the opinion of the Michigan Elevator Exchange, which is affiliated with the State Farm Bureau. During the week of July 18 the exchange was handling for farmers an average of twenty-five carloads of new wheat daily. The week of July 25 saw the state movement of new wheat drop to around nine cars a day.

Great exporters and millers advise

that in the long run wheat is going to command a better price, says the Elevator Exchange. The exporters believe that the farmer who can carry his wheat until the holidays or thereabouts will be able to get a better price for it than he can now when the market is being filled with new wheat.

NATIONAL ORGANIZATIONS NOT SUPPORTING GRAIN EXCHANGES.

NATIONAL trade associations linked in with the organized grain trades' \$250,000 "war chest" in press reports of the action taken at Cincinnati to propagandize the U. S. Grain Growers, Inc., out of existence are now coming forward to deny any such affiliation with the grain dealers, the State Farm Bureau is advised.

Following the Cincinnati meeting secretaries of each association reported to be affiliated with the movement to direct propaganda against cooperative grain marketing organizations were asked for a statement on their respective attitudes. Associations which disavowed any connection with the grain exchanges' fight on farmers' cooperative marketing bodies, particularly the U. S. Grain Growers, Inc., were: The United States Chamber of Commerce, the American Wholesale Lumber Association, the National Wholesale Grocers, The American Seed Trade Association, the American Feed Manufacturers, The National Implement and Vehicle Association and the American Wholesale Coal Association.

Several of the secretaries declared that press reports linking them with the grain dealers' action was the first that they had even heard of the convention.

Organization work of the grain growers is proceeding rapidly. In Illinois, Indiana, Oklahoma, Nebraska and Missouri, where solicitors are just entering the field, one hundred and twenty-two elevators have been signed up. Solicitors are meeting with success in Minnesota and South Dakota. It is predicted that U. S. Grain Growers will market 35,000,000 bushels of grain this year through their Minneapolis Sales Agency.

THE FARMER'S DIAGNOSIS.

(Continued from page 106).

wagon, a binder, a manure spreader, a rod of fence, a suit of clothes, a sack of flour, or a ton of coal than in pre-war years was almost universally commented upon in the hearings.

Again the causes assigned were high freight rates going and coming, profiteering on the part of manufacturers and dealers, and high cost due to high wages and the failure of labor to give an honest day's manufacturing, transportation and distribution costs.

5. The banking and financial resources and credits of the country, especially as affecting agricultural credits.

Reports and opinions were divided as to the extent to which farmers have been cramped to credit facilities, but the majority vote seemed to be

that these facilities were limited and unsatisfactory. Nearly all who testified upon this point, including bankers, stated that bank credits at present were too exclusively of the short-term sort, whereas farmers needed credit to cover an entire crop, which would enable them to produce a crop and market it more uniformly through the year instead of dumping it at harvest time in order to pay loans. The same chance to borrow in accordance with their requirements as is now granted to industrial and commercial borrowers was asked.

6. The marketing and transportation facilities of the country.

Although objection to high freights appeared in the great majority of the hearings, car shortage was only occasionally mentioned. Besides reduced railroad rates, waterway developments, especially the Great Lakes-St. Lawrence project and the construction of farm-to-market roads first in any road building program was suggested and favored by an occasional farmer.

Apparently the farmer is quite thoroughly disgusted with the present system of marketing. He dislikes to see speculation in farm products. He objects when selling to taking what the other fellow offers, and at the same time when buying to paying what the other fellow asks.

Through organization and cooperation the farmer in these hearings sees the principal hope for agriculture in the future, as this was the most common remedy suggested, not only for unsatisfactory markets, but for all other farm ills.

LATE AGRICULTURAL NEWS

BUREAU OF MARKETS TO SUPERVISE WAREHOUSING.

ARRANGEMENTS have been made by which representatives of the bureau of markets will supervise for the war finance corporation the warehousing and classification of the cotton pledged as security in connection with the recent loan of \$5,000,000 to the Staple Cotton Cooperative Association."

FURTHER IMPROVEMENT IN ROSEN RYE.

ALTHOUGH Rosen rye in the last few years has shown distinct superiority over the common variety, even Rosen given promise of further striking development through head selection of seed.

A number of farmers of the state have reported marked increases in the yield from seed selected in this manner, and on one farm, that of George Starr, in Jackson county, the yield from head selected rye was forty-six bushels per acre as compared with thirty bushels from the ordinary variety. L. H. Sedgwick, of Parma, and Roland Morrill, of Benton Harbor, former president of the State Farm Bureau, are other lower peninsula growers unusually successful in this work.

On South Manitou Island, in Lake Michigan, ten miles off the Leelanau shore, Rosen rye is being developed as a purified strain through cooperative arrangements entered into by M. A. C., the Michigan Crop Improvement Association, the Michigan State Farm Bureau and local farmers. Cross pollenization is eliminated, due to the distance of the island from the shore

and each one of the dozen farmers on the island has agreed to raise no other variety of rye. All volunteer rye that may appear is rogued out. About one hundred acres in all is being grown and only head selection of seed is being practiced this year.

Prof. J. F. Cox, head of the farm crops department at M. A. C.; A. L. Bibbins, secretary of the crop improvement association, and other members of the department have recently visited the island for inspection and selection purposes. Announcement that all members of the crop improvement association who desire their rye certified next year must plant from head selected seed is made by Sec'y Bibbins.

U. S. EXPERTS STUDY MICHIGAN FACTORY CONDITIONS.

THREE members of the United States Forest Service, Raphael Zon, W. N. Sparhawk and W. D. Brush have arrived in Michigan to carry on investigations of the forest situation in this state. Much valuable information is expected to be assembled as a result of their studies, which will extend over several months. Following a conference with Prof. A. K. Chittenden, of M. A. C., the three men have begun operations in the north woods.

Mr. Zon is investigating the hardwood forests of the lake states with a view to determining what method of logging and brush disposal would be best adapted to keep these forests continually productive. The history of cut-over lands and towns which once were the centers of the lumber industry is being studied by Mr. Sparhawk, while Mr. Brush is looking into the wood-using industries.

The forestry department of M. A. C. will complete next fall a two-year study of second-growth hardwoods on cut-over lands. Rate of growth is being noted and probable returns that may be expected from such forests will be computed. During the last month the department has been active in Antrim county and now has a large amount of data showing the rate of growth, and composition of the forest which comes up on hardwood after logging.

Forest fires present the greatest obstacle to reforestation, in the opinion of Professor Chittenden. If forest fires can be kept out after logging, reproduction of the forest will usually take place naturally from advanced growth of young trees already on the ground. However, if the land has been burned over after logging, the only way in which a new forest may be obtained is usually by planting.

INCREASES PROPOSED TARIFF ON BEANS.

ACCORDING to the terms of the permanent tariff, which has passed the house in congress, beans are to be protected by a duty of one and three-fourths cents per pound instead of one and a quarter cents a pound as first proposed. The announcement came shortly after the State Farm Bureau executive committee, in behalf of 100,000 Michigan farmers, appealed to Hon. Joseph Fordney and the house ways and means committee to retain the present emergency tariff of two cents per pound, declaring that one and a quarter cents a pound was not sufficient to protect Michigan and other states against Oriental competition.

TO STIMULATE EXPORT SELLING OF FARM PRODUCTS.

THE Norris bill creating a \$100,000,000 corporation for the purpose of buying farm products and selling the same to foreign countries, has been effectually sidetracked in the senate by the administration substitute drafted by Secretary Herbert Hoover, of the Department of Commerce, and Chairman Eugene Meyer, of the War Finance Corporation, and introduced in the senate by Senator Kellogg, of Minnesota. The Kellogg bill extends the power of the war finance corporation to agricultural export financing, and increases the corporation's revolving fund from five hundred million to one billion dollars.

This substitute bill was introduced immediately after President Harding had delivered a special message to congress asking congress to extend the authority of the war finance corporation to increase credit for financing agricultural exports and to purchase securities up to \$500,000,000 now in the hands of the railroad administration, so that the proceeds may be used for settlements with the railroads.

In asking congress to extend this relief, President Harding says: "The after-war distresses of two great and fundamental activities have been riveting the anxious attention of the country. One is the readjustment and restoration of agriculture, the other is the distress of our railway transportation system."

Michigan soil's crying need—lime and phosphorus.

Is your farm losing its fertility?

"In Farmers We Trust"

The United Grain Growers of Canada, World's Greatest Union

By Earle W. Gage

A SIX-THOUSAND mile tour of Canada convinces me that the country to the north not only has the world's greatest farmers' cooperative organization, but that it has attained man-size proportions. It is past experimental uncertainty, and is a "trust with teeth in it," as a middleman testified to me who had been put out of business by it.

The United Grain Growers, Limited, includes sixty thousand active members and twenty thousand associate members, a total of eighty thousand producers and consumers. This membership includes one in three of farm owners and tenants of Manitoba, Saskatchewan and Alberta. The company has a paid-up capitalization of about \$3,000,000, with reserve funds of another \$2,000,000, while the assets are more than \$12,000,000, and pay their owners a dividend of from eight to ten per cent on the stock investment, beside setting aside a reserve fund at the close of each season.

Nearly seven hundred country elevators are operated by the combine in the three provinces of Western Canada, two large private elevators at the head of the Great Lakes. The Dominion government has a series of elevators, government-owned, so that these farmers are able to store each season, without speculative aid, a major portion of their crop. They are not at mercy of gamblers of the grain pit.

The United Grain Growers operates a grain exporting business, with headquarters at New York City, which prior to the war was one of the largest grain exporting concerns on the continent, and during the war was considered so good as to be called over by the allied governments. It is now a leader in the grain world.

This gigantic structure of team-work has been erected in the short period of a few years, amid a field strewn with the wrecks of cooperative failures among farmers. It will transact a business of more than \$100,000,000 this season, since it will handle Canada's greatest grain crop from farm to most remote export point, conserving profit to the individual grower.

This is the great combination which is being used as a pattern by the American Farm Bureau Federation in their present organization scheme in the middle west, a committee visiting Canada and studying at first hand the plan. It is estimated that it will save \$35,000,000 a year in commissions alone to farmers of six central states, to say nothing of the former speculative profits, where farmers are under the domination of grain pit barrons.

One of the most remarkable developments in Western Canada within the past decade has been the development of cooperative effort among the farmers. Although this has expressed itself most notably in the success which has attended the farmers' own elevator companies, yet the success has been equally as pronounced regarding creameries, live stock selling, wool and sheep associations, cheese factories and stores.

"The farmers' movement has now reached a stage when it is definitely recognized as one of the most important factors in the national life of Canada," advised Hon. Thomas A. Crerar, late minister of agriculture and president of the United Grain Growers. "It began in an effort at economic organization in 1905 to combat what many

western farmers thought were oppressive monopolies and special vested privileges on the part of the railways, manufacturers, elevator companies, and other interests who between them had a large control over the markets, transportation and finance.

"In 1901 the first Grain Growers' Association was formed at Indian Head, Saskatchewan, and in 1905 the Grain Growers' Company was founded with headquarters in Winnipeg. Its early trials were many and severe; the Winnipeg exchange closed its doors against the farmers, the banks and business community viewed it

with a suspicious eye, and its supporters among the farmers were all too few. Adventures in the same direction had had a bad record in Canada. But the initial difficulties were overcome, success brought friends, and the company gradually established a firm foothold. Parallel organizations were started in Saskatchewan and Alberta and met with equal success. The Saskatchewan company still maintains its special identity, but the Manitoba and Alberta institutions were amalgamated in 1916 into what is now United Grain Growers, Limited."

The cooperative movement is no

longer confined to the prairie provinces. It is firmly established in Ontario, where the United Farmers' Cooperative Company of Ontario, organized but a few years ago, increased its turnover by five hundred per cent last year. The United Farmers of New Brunswick and of British Columbia are extending their cooperative activities. The dairy industry of Quebec is well organized on cooperative lines, the movement has a strong foothold in Prince Edward Island, and a start has been made in Nova Scotia. So the cooperative spirit has caught all Canada.

"These organizations," continued Mr. Crerar, "created, developed, and directed by farmers, have demonstrated that they can safely enter the world of commerce and distribution

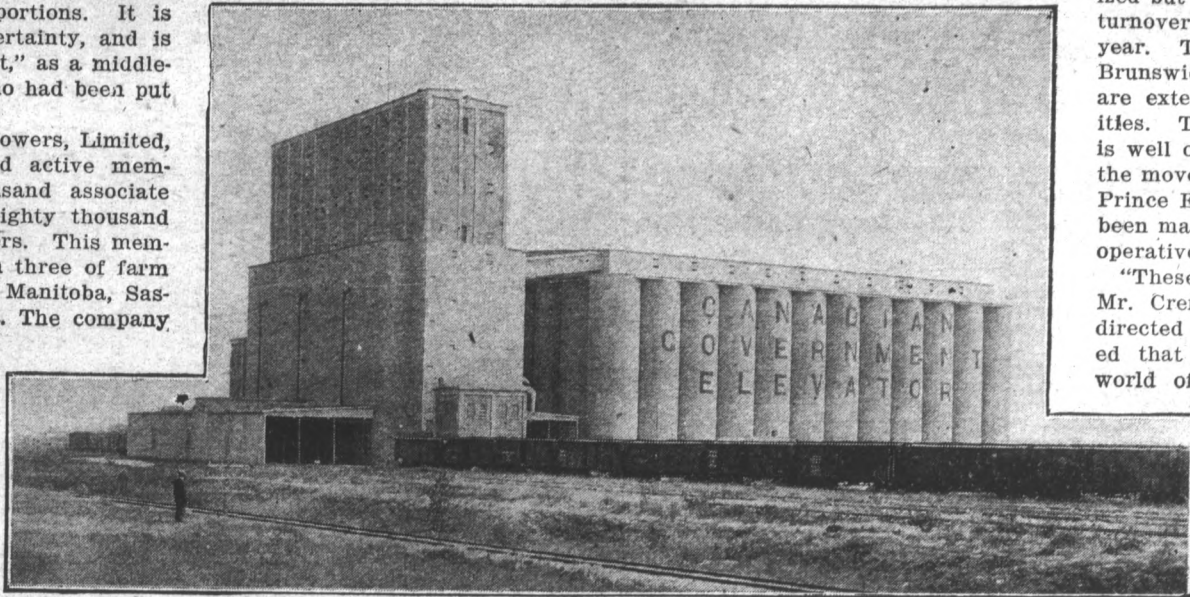
and compete successfully with old-established business institutions. Slowly but surely the cooperative idea is making headway against the old capitalist system in Canada, and it has at last aroused a promising interest in urban communities and business centers.

"Much remains to be done in the way of coordination and consolidation, but there is no reason why within one or two decades the whole agricultural population of Canada should not be linked up in vast cooperative organizations which will undertake all its selling, buying and distributing activities."

The economic aspect of the Canadian farmers' movement is but one aspect of the new era. Today the farmers' political activities bulk even more largely in the public eye. The transition from economic organization to political action was both inevitable and simple. The organized farmers found that as long as paramount financial and manufacturing interests largely controlled and influenced the legislatures of Canada, especially the federal government at Ottawa, there must be a definite limit to their cooperative schemes. When people have learned to cooperate in business it is an easy transition to work together in governmental affairs.

"The ultimate aim of the farmers' movement is the improvement of civilization," advises Mr. Crerar, "through an improved economic order and the establishment of good citizenship as an ordinary practice of life, and their organization is planned to run parallel with the popular and representative institutions of the country, the municipal council, the provincial legislature, and the Dominion parliament. The local organizations and clubs form an invaluable social nexus for a scattered rural population. They hold regular meetings and educative debates; propaganda is carried on to aid the movement, and efforts made to elect good candidates for local offices. In the provincial field, farmers, through a working alliance with labor which may be developed and extended, have gained control of the government of Ontario, the largest province in Canada, and in the prairie provinces their political influence is such that they can secure favorable consideration for any reasonable legislation which they ask for."

Thus, the slogan of modern Canada is, "In farmers we trust," and the sane and satisfactory government of distribution, including the elimination of unnecessary middlemen and increased profits to producers, testified to the desirability of this type of organization.



An Evidence of the Canadian Grain Growers' Accomplishment.

You Should Plan to Attend

IT matters not whether you have registered for the great farmers' automobile tour through Ohio and Pennsylvania, you are invited to attend the sessions to be held Sunday and Monday, August 7-8, on the expansive lawns of the George B. Horton Homestead at Fruit Ridge near Adrian. It is expected that the number of visitors at the Horton Farm who will not be able to go on the tour will exceed those who do go. Thousands can be accommodated and it is hoped that the excellent program planned for the occasion will be listened to by all farmers who can possibly arrange to attend.

Following the address of welcome by the host, Hon. George B. Horton, and the community singing led by G. Roscoe Swift, of Adrian, there will be informative addresses on "Community Welfare," "The Church and the Community," and "God as Reflected in Nature," by Rev. Edward Hockin, Rev. Harry Kellogg and Dr. F. A. Perry.

The following morning at ten o'clock Professor Filbert Roth, of the University of Michigan, will preside over a program having for its general theme, "Farm Forestry," and designed to answer the important question as to whether a farmer can afford to devote land worth from \$100 to \$150 per acre to forestry. Among those who will

discuss the general theme will be the Hon. Orlando F. Barnes, Hon. Charles W. Garfield, Prof. A. K. Chittenden, W. R. Mooton and Dr. Freeman. This program will be held under the trees in one of Mr. Horton's splendid woodlots where a careful survey has been made by the department of forestry of the M. A. C. to determine the annual growth and income accruing to the owner of such a plantation.

Monday afternoon the chief addresses are intended to convey to the listeners information concerning taxation, our new state government, the economic and social trend, the maintenance of public highways, etc. Among the speakers will be Hon. A. B. Cook, Master of the Michigan State Grange, M. E. Dillon, the Hon. W. H. Moore, A. E. Illenden, Tom Kennedy and Judge Barton Hart. Music will be rendered by the Imperial Band of Adrian, and by Michigan's own Harry Lauder—Mark Cutler.

It is to be a general basket picnic day on Monday, although lunches will be served at the Grange Hall. While the majority of the visitors will return to their homes on Monday night, the tourists will camp until Tuesday and then begin their eventful trip to Norwalk, Ohio, where they will build camp Tuesday evening. Wednesday night the tourists will camp in Cleveland.



Mr. Horton.

U S

MUTUAL
AUTOMOBILE
INSURANCE COMPANY

The Farmer's Own Company

Going Misfortune One Better

An Illinois farmer recently drove his family to a resort for the day. Selecting a remote parking place, he significantly remarked: "We surely won't be molested in this secluded spot."

After enjoying the many activities of the amusement center, the tired family decided to motor home. All baskets packed, and each one in the car ready for departure, the farmer turned his key and started the motor, anticipating a hurried journey homeward. But fate was to be reckoned with. The machine backed successfully for about 10 feet and stopped—all lights out. Instantly, the farmer sensed ground wire or loose connection trouble. And, naturally, proceeded to fix it himself. Impatiently and nervously he tinkered—but to no avail. Finally, his wife prevailed upon him to seek assistance, so others tried their hand. Again, no success.

To Make a Long Story Short—

the family all took the last trolley, and spent the night in town.

Bright and early next morning, however, the farmer and a mechanic motored to the parking place of the abandoned machine. But, lo and behold—the car was gone. Evidently a better mechanic had sensed the predicament and was, perhaps, a hundred miles away by this time of discovery. A discovery that would make many a car owner sick at heart. Strange, however, the farmer just ironically remarked—half to himself—"Why worry; the damn thing is insured anyway."

What U. S. Protection Means

U. S. FIVE POINT FULL COVERAGE NON-DEDUCTABLE POLICIES will faithfully protect you and your car against:

- | | | |
|--------------------|--------------|--------------|
| 1--Fire | 2--Theft | 3--Collision |
| 4--Property Damage | 5--Liability | |

And—for the nominal cost of \$1.00 per Horse Power plus the small annual \$1.00 membership fee. The insurance that will guard you vigilantly. The insurance that is backed by men who dependably practice satisfactory settlement of all just claims.

Perhaps you, like the above farmer, have wisely fortified yourself against lurking hazard. If not—you are playing with fate. A fate that knows no favorites, but which can be coped with economically, by simply summoning U. S. Positive Protection to your aid.

A postal to Col. A. H. Gansser, Bay City, Michigan, will promptly bring you interesting U. S. FIVE POINT POLICY FACTS. Facts about PROTECTION that has already spared many a farmer from nerve-racking remorse.

U S Mutual Automobile Insurance Company

Executive Office

Grand Rapids, Michigan
Colon C. Lillie, Pres.

Home Office

Bay City, Michigan

F. F. McGinnis, Sec. and Treas.

Col. A. H. Gansser, Director and Gen. Mgr.

Horticulture

SPRAY AGAIN FOR CODLING MOTH.

A SECOND spray against the second brood of codling moth, to be applied about the third week in August, has been recommended by Prof. R. H. Pettit, of the M. A. C. Entomology Department. "Owing to the extremely early season," says Professor Pettit, "the spray that normally would be applied during the first week in August has been set ahead two or three weeks and this leaves an especially long period for the one spray to afford protection against the codling moth. To be exact, this spray has to protect the growing apples against codling moth from the middle of July until picking time.

"I am not worrying very much about a third generation of codling moths this year, but belated moths of the second generation work up to about picking time as the sideworms usually show. I am of the opinion that an extra spray put on this year along about the third week in August will pay for itself and am so advising, not as general practice, but an emergency spray for 1921."—H.

EASY WAY TO MIX BORDEAUX.

A CONVENIENT modification of the safe way to make Bordeaux mixtures, assuring the most effective spray solution, is now recommended by several experiment stations.

The old method, long followed by careful and progressive growers, was to make the standard 5-5-50 Bordeaux by mixing five pounds of copper sulphate with twenty-five gallons of water in one container; by mixing five pounds of copper sulphate with twenty-five gallons of burned lime with another twenty-five gallons of water in another container; and by pouring the two dilutions together.

The modified method, said to be just as safe and more convenient, is described as follows:

Suppose you have a fifty-gallon tank to fill with 5-5-50 Bordeaux. Place in this tank five gallons of the stock copper sulphate solution, equivalent to five pounds of crystals, and then add thirty-five gallons of water.

Next, take five gallons of the stock lime, equivalent to five pounds of stone lime, dilute it with five gallons of water, pour it into the copper sulphate solution, and stir the two together. Remember always to dilute the copper sulphate before mixing. Never add concentrated copper sulphate either to weak or strong lime solution.

PICKING APPLES.

ONE of the most important operations performed on the fruit farm is the picking of the fruit, because in many cases the next year's crop of apples depends on the way the apples are picked. By all means do not allow the apple picker to pick two years' crop of apples during one season, which is often done if the apple picker is not careful in picking the fruit.

The ladder should never be leaned into a tree, if it is possible to avoid it. Fruit spurs often cover the ground under such conditions, and not only is the crop for the succeeding year damaged, but openings for disease are left in the tree itself. The act of picking is a very simple one if correctly done. A simple twisting movement up and down on the fruit removes it from the spur without loss of stem, and this easy removal is usually a fair in-

dications of the maturity of the fruit. The stem may be broken without hurting the salability of the fruit but should never puncture the skin or be pulled out of its socket.

The receptacle selected for picking should prevent all bruising, as far as possible, and should give ease in handling. Theoretically, it would seem that bags or canvas bottom pails would be the best for picking, but practically such is not the case. There is a bad tendency among pickers to let the fruit fall into the receptacle, and this is one of the many ways by which a great deal of fruit is injured during the picking operations. Bags allow the fruit to be damaged by not protecting it against bruising when coming in contact with the ladder or tree. When bottomless bags are used the pickers will often let the fruit shoot into the barrel with a great deal of force, thus causing a great deal of damage to the fruit.

A. M. PORTER.

PEACH BORER CONTROL.

Can you tell me how to use the acid which forms a gas for killing the peach borer? I have tried digging them, but I have a great many trees and it is hard to get men to do the work thoroughly.

Allegan Co. E. E. P.
The gas method for controlling the peach borer has been tried out with great success.

The material used for this purpose is the tongue twister called Paradichlorobenzene. This is whiteish crystalline powder which does not dissolve in water but turns to gas slowly under ordinary temperature. The gas is heavier than air and while deadly to insects it is harmless to men.

The most successful way to use this powder is to break up the crust of earth around the base of the peach tree and remove part of it from the surface. Then apply from three-quarters to one ounce of the Paradichlorobenzene per tree, sprinkling it around the base of the tree in a strip about an inch wide. This strip should be covered with the earth which was previously removed, and packed down.

The recommendations regarding the time of application vary, some say two applications per year should be made, one in June or early July, and the other in September. Others say that the September application is all that is necessary. The later method has given over ninety per cent control in tests made in this state.

When the autumn application is made late it is advisable to unpack the earth over the powder in about five weeks. This gives the air a chance at the powder and will tend to eliminate any damage to the tree by the gas being too strong.

The dose referred to above is for trees from six to fifteen years old, for younger trees the dose should be cut down to one-half ounce and for older trees the maximum amount mentioned above should be used. The most effective results with Paradichlorobenzene are obtained when the soil is apparently dry.

This powder is made by several chemical manufacturing concerns and can be bought from prices ranging from fifteen to thirty cents per pound. The total cost of treating will range from three to four cents per tree including labor.

While this method of controlling borers is apparently new and is considered by some to still be in the experimental stage it will undoubtedly quickly replace digging of borers, as it is easier, more effective and more economical to use.

Our Service Department

USURY AND BONUS ON LOANS.

Some time ago I purchased a farm, giving a first and second mortgage to the same party, the first of which is registered. The second mortgage is overdue and the party claims a bonus of \$150 for holding it another year. Have they any legal right to collect that bonus? What can they do if I fail to pay it?—E. A.

The statutes provide that except in the case of negotiable instruments in the hands of an innocent purchaser for value in due course, if more than seven per cent interest is demanded and agreed on, the creditor can collect by suit, no interest at all.—J. R. R.

GETTING RID OF RATS.

Please tell me the most effective way of disposing of rats.—F. F.

Sometimes a good cat or a rat terrier is all that is necessary. There are various rat poisons on the market which have proven very successful. The following home-made poisons, are probably similar to some commercial ones, and equally effective.

One-quarter of a pound of carbonate of baryta, six ounces each of sugar and oatmeal or wheat flour, and enough oil of aniseed to give the mixture a strong odor makes a very good poison. The advantage of this poison is that it works so slowly that the victims generally leave the premises in search of water. Barym carbonate and oatmeal is also a good remedy. One part poison to eight of the oatmeal, made into a stiff dough by the use of water is all that is necessary to have the poison ready for use. This is also a slow-acting poison. What is called French Paste is also used to rid the premises of rats. This is made of three pounds of oatmeal or wheat flour, one-half ounce of powdered indigo, four ounces of finely powdered white arsenic, and one-quarter gram of oil of aniseed. These ingredients should be mixed and then worked into a paste with two and one-quarter pounds of melted beef suet or mutton tallow.

To get the best results from any of these poisons, they should be put in places in which the rats are likely to frequent. Care should also be taken to keep them from other animals and poultry.

USE OF HIGHWAYS TO ADVERTISE.

What right has anyone nailing signs or advertisements on my farm along the roadside or on the trees along the road? How near the center of the road may such signs be put up? If such signs are put up on road property without permission, who has the right to take them down, the highway commissioner or the man who owns the adjoining land? What are the laws in short, relating to the rights of anyone putting up such signs?—G. G. R.

Signs erected on the highway, even by the adjoining owner, may be removed by the highway commissioner if they obstruct or endanger public travel. But the erection of signs in the highway by anyone other than the owner of the adjoining land or his agent or licensee is a trespass for which an action lies for damages by the adjoining owner against such trespasser; or the owner may remove the signs without liability; or he may make complaint against the persons erecting the signs for nuisance.—J. R.

NEGOTIABLE INSTRUMENTS.

A has an auction sale and represents a farm tool to be in good condition and ready for service; B buys, giving note; A sells note to C. When

B comes to use the tool, he finds that it is not as represented and must have repairs before it can be used. Can C collect note, or has B any comeback?—A. B.

A promissory note fair on its face and passed by the payee before maturity in the regular course of business to one without notice of defenses to it is not subject in the hands of such indorsee to secret defenses existing between the original parties. The maker of the note has his recourse against the payee on the warranty.—J. R. R.

CATTLE RUNNING AT LARGE.

At the annual town meeting our township voted to allow cattle to run on the highway. I understand the state-law is that cattle shall not run at large. If this is so, why do the townships vote on allowing them to run or not?

(b) Where the township votes to allow cattle to run on the highway are farmers barred from shutting up cattle which trespass on their farms?

(c) What are the steps necessary in shutting up such cattle? What compensation is the farmer entitled to and how does he procure it?

(d) What steps must the owner of cattle take to procure his cattle? One man says if a farmer shuts up his cow he, the owner, can replevin the animal and take her home without paying any damages. In that case how would the farmer secure damages?

(e) A man in the township owns a large tract of cut-over land. It is unfenced and is in process of clearing but no crops are growing on it. He has notified people having cattle at large that they may pay him seventy-five cents per head per month and he will not shut up their cattle if they stray on his land. A number of his neighbors have done as he demanded. These same people voted to let the cattle run at large. Why then must they pay pasturage to someone in the same township? Can the landowner demand pay for the cattle at large?

The general opinion among farmers is that when they vote to let the cattle run each farmer must fence against all cattle running on the road and that he has no right to shut up trespassing cattle. A number of people would like to see this question discussed fully.

M. H.

A. The town has no power by law to appropriate private property to public use without compensation, and therefore no vote that the town can make can authorize anyone to allow his cattle to trespass on the property of another. The extent of the right conferred by the vote that cattle may run at large is that the cattle cannot be taken as strays while they are in the highway.

B. If any of the cattle turned upon the highway after such a vote strayed upon the property of private persons, whether fenced or unfenced, they may be taken up and advertised as strays and put in the pound, and the owner of the cattle is liable to the owner of the land for the damage they have done and the costs.

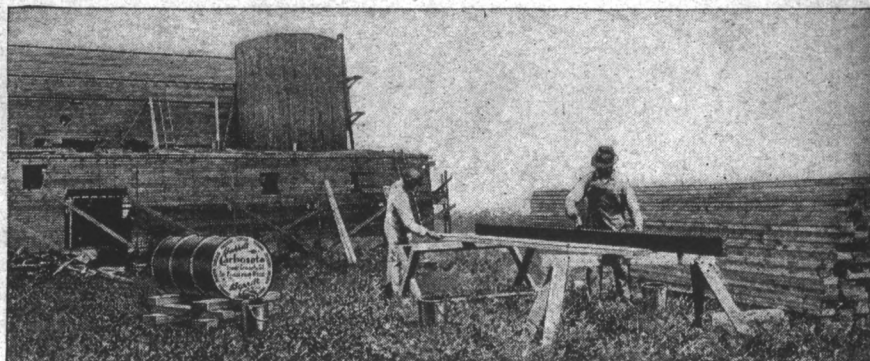
C. Compiled Laws 1915, Section 7448, and the following sections, provide for advertising and selling of animals taken as strays. The owner is to be notified within ten days if known, and if not known the animals are advertised, and the owner is entitled to redeem by paying costs and damage at any time within six months, and if not redeemed the animals are sold at auction and the proceeds deposited with the town treasurer, minus charges and expenses, for the owner.

D. The owner desiring to recover the cattle must appear within six months after the notice, prove his right to them, and is entitled to possession upon paying the lawful charges and expenses.

E. This question is answered in paragraph A above.—J. R. R.

WOOD PRESERVATION

A timely talk in the interests of timber conservation on the farm



Why let lumber rot when it is so simple to preserve it?

Rot-Proof, Sanitary Buildings—

DECAYED wood not only costs you money for repairs, but harbors vermin and is unsanitary.

Permanent farm buildings, as well as colony chicken houses and hog houses, are much more economical and better suited to their uses when constructed of durable, sanitary, carbosoted lumber. For thorough Carbosota treatment not only doubles the life of such buildings, but it also prevents the nesting and breeding of vermin in, or on, the wood.

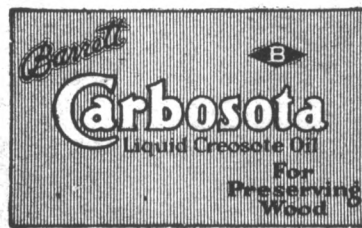
The treatment colors the wood a pleasing dark-brown shade, which is especially attractive when combined with untreated trim and

sash, painted white or some bright color. Carbosoted wood cannot be painted. It doesn't need to be.

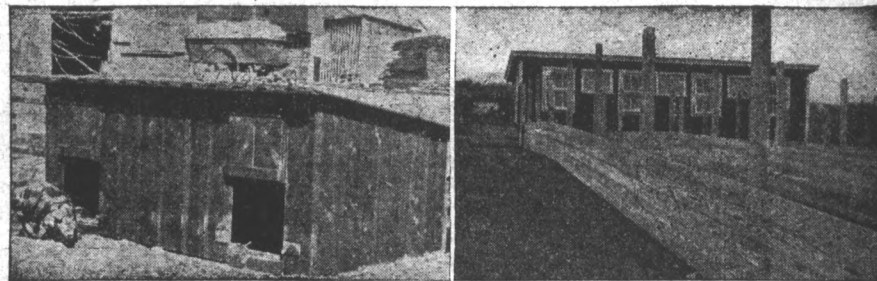
All posts, sills, flooring, framing and siding should be treated *after* they are cut to fit, but *before* they are placed.

Our booklet, "Long Life for Wood" (sent free on request), describes the simple methods of applying Carbosota, and contains other information of interest to all lumber users. It should be carefully read and instructions followed in treating timber.

Carbosota is carried in stock by dealers throughout the country. If you have any difficulty in obtaining it, write to our nearest office.



See issues of May 7th, 21st, June 4th and July 2nd for previous "Talks" on Wood Preservation.



Chicken and hog houses may be "home-made" from almost any kind of lumber if protected against decay with Carbosota. All lumber, including fencing, should be carbosoted.

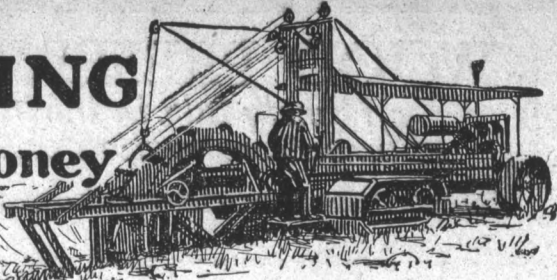
The Barrett Company

New York	Chicago	Philadelphia	Boston	St. Louis	Cleveland	Cincinnati
Pittsburgh	Detroit	New Orleans	Birmingham	Kansas City	Minneapolis	Dallas
Nashville	Syracuse	Seattle	Peoria	Atlanta	Duluth	Salt Lake City
Bangor	Washington	Johnstown	Lebanon	Youngstown	Milwaukee	Toledo
Columbus	Richmond	Lafayette	Bethlehem	Elizabeth	Buffalo	Baltimore
Omaha	Houston	Denver	Jacksonville			

THE BARRETT COMPANY, Limited

Montreal	Toronto	Winnipeg	Vancouver	St. John, N. B.	Halifax, N. S.
----------	---------	----------	-----------	-----------------	----------------

DITCHING -the Big Money Business



YOUR Chance for Independence

YOUR own boss; pleasant work; a live business--and a clean profit of forty, fifty, seventy-five or even a hundred dollars for every day's work! That is what you get when you become the owner of a Buckeye Traction Ditcher.

Plenty of business -- drainage work is always in demand. You need no experience. We teach you everything. If you have the ambition, don't worry about results. Buckeye Traction Ditchers pay for themselves in a few months. Hundreds of others have accepted this highly-profitable field as a permanent business. Why not you?

Grasp this opportunity for independence. Fill out the coupon below and mail it TODAY.

See Our Exhibit at the Michigan State Fair

**The Buckeye Traction Ditcher
Company**
361 Crystal Ave., Findlay, Ohio



BUCKEYE TRACTION DITCHER COMPANY,
361 Crystal Ave., Findlay, Ohio.

You may send me particulars about the money-making opportunities of the machine ditching business.

Name.....
Address.....

"We have cut as high as 36 rods per hour, for which we received \$1.50 per rod, 12-inch tile, 3 feet deep."
RAYBURN BROS.

"Our two machines are surely a success. * * * We earned enough to pay off machines and a fair profit, besides, during one season."
HEINZ BROS.

"I have operated my new Ditcher since the 1st of August (four months) and the last month I haven't worked with it very much, but in all I have made \$2600.00, with no factory bills and just the expense to run it."
F. G. DALRYMPLE.

"The Buckeye Traction Ditcher is one of the best machines on the market as a money maker. * * * I surveyed, set my own targets and cut 3400 feet ranging from 30 to 36 inches in depth in eight hours. I received \$105.72 for the day's work."
C. O. AKEN.

"We have farms of our own and do not operate continually through the season, but our net earnings for last year were enough to get back the price of the machine and about \$800.00 besides. There were days that earned us over \$100."
MCKAY & HUGHES.

News From Cloverland

By L. A. Chase

HIGHWAY CONSTRUCTION PROGRESSING.

THE Daily Mining Gazette, Houghton, under date of July 22, publishes a statement by Mr. H. I. Davies, district engineer for the state highway department, relative to the status of road work on some of the principal routes in the upper peninsula. On the Roosevelt Highway, passing from Sault Ste. Marie to Ironwood, via Munising, Marquette, and the copper country, federal aid road No. 3, through Baraga county, between Nestoria and L'Anse, will be completed this year so that it possibly will be in use before the end of the season. Twenty miles of construction are under contract on Route 26 between Painesdale, Houghton county, and the Houghton-Ontonagon county line. This work is to be completed next year. Several jobs on Route 26 are under construction in Ontonagon county. Detour signs are being put in. The construction of Route 28 B, between Wakefield and Tula, has made this road impassable, it is stated. Route 15 is largely completed from Menominee to a point just west of Baron Mine, which is the junction of Routes 15 and 45. Route 45 from Segola to Baron Mine is complete. Route 69, the next in line, will be completed from the state line south of Stager to Amasa.

cerned, except perhaps the wanderer in the happy hunting grounds.

The papers to be read at the meeting of the historical society will include a discussion of the Michigan-Wisconsin boundary dispute, by Mr. A. L. Sawyer, of Menominee—one of the commissioners who recently have been engaged in preparing the case for Michigan; the "O. and B. Land Grant," by Thomas Conlin, of Crystal Falls; Modes of Travel in the Upper Peninsula in the Early Days," by Miss Ethel Robinson, of Houghton, and several others dealing with various sections of the district. Mr. J. T. Reeder, of Houghton, will show colored lantern slide views of the copper country prepared by the Lumiere method, which show remarkably well the beautiful natural coloring that can be seen in this region—in sky, in lake, in vegetation and in its rocks and minerals. The people of L'Anse have made a very considerable effort to make this an occasion of great interest and pleasure to those who attend. There will be a basket picnic at Pequaming, where may be seen some real virgin pine forest surrounding an old Indian campground, still in use, coming down right to the sandstone cliffs edging the shore of the bay. There will be auto trips to points of interest.

AN AGRICULTURAL SPECIAL.

THE Menominee County Journal of Stephenson, announces a special agricultural edition to appear late in August in connection with the Menominee County Fair. The paper promises a detailed and elaborate account of the agricultural situation and possibilities of Menominee county, and that Mr. Henry A. Perry, formerly editor of the Cloverland Magazine, has been engaged to put in some two months' time in obtaining and preparing the information for publication. It expects to boost the land-clearing work which will be taken up in Menominee county about August 1, under the direction of Mr. Larry Livingston, recently engaged by the State Board of Agriculture for this work in the cut-over sections of the state.

CLOVERLAND SELDOM HAS DROUGHTS.

IN an article recently published, relating to agriculture on the northern cut-over lands, Dean H. L. Russell, of the College of Agriculture of the University of Wisconsin, points out that the heavy tree growth in this area was due primarily to abundant rainfall, in contradistinction to the scanty rainfall of the dry prairies of the west; and that while it causes much backache to get rid of the stumps, the assurance of this annual rainfall of from thirty to thirty-six inches, should encourage farmers to make the effort which will insure them eventually against crop failures through drought. Dean Russell's observations tally with those of Mr. C. F. Schneider, meteorologist of the United States Weather Bureau at Grand Rapids, who long ago pointed out that this region had a very important advantage in its assured rainfall. It is true that occasional local droughts occur, but these are never as persistent or widespread as those which are liable to afflict more southerly latitudes.

HISTORICAL SOCIETY WILL HOLD PICNIC.

ON August 10, the Marquette County Historical Society will hold its annual out-door meeting at Champion Beach, Lake Michigamme, where a picnic dinner will be enjoyed and where papers will be read by Dr. T. A. Felch, of Ishpeming, on "Pioneers of the County," and by Mr. George Newett, of Ishpeming, on the old Ropes gold mine near that place, which yielded in the eighties and nineties over \$650,000 in gold, and much silver also. Dr. Felch is a son of Alpheus Felch, governor of Michigan seventy-five years ago, and instrumental in getting the land-grant with which St. Mary's ship canal was built. Michigan people who do not know their own state—and there are several millions of them—will find great pleasure in taking in these events. From personal acquaintance with the scenes here described, I can state most positively that they afford a rare treat to the lover of our summer out-of-doors. Lake Michigamme, studded with many islands, is one of the loveliest inland lakes in Michigan. A general welcome is extended to both events here referred to.

CLOVERLAND PIONEER MEETING.

THE Michigan Pioneer and Historical Society will hold its annual upper peninsula meeting at L'Anse on August 11-12. The occasion will also be a home-coming for former residents of L'Anse. It is anticipated that visitors in considerable numbers will be present from both peninsulas. Visitors will want to see the old Indian cemeteries, where the dead are still interred with some suggestion of heathen customs, including the practice of erecting a small house over the grave in which are placed articles presumably of service of the deceased in the happy hunting grounds. While at the place, last summer, I was informed that drinkables exceeding "two and a half per cent," thus placed in these little houses for the dead, were sometimes surreptitiously seized upon by the whites and consumed, with results that were pleasing to everybody con-

Ontonagon looks for twenty miles of additional good roads this season, but the Herald, of Ontonagon, is not satisfied with this showing and wants still other projects undertaken to put Ontonagon county alongside of the other upper peninsula counties.

Mental butterflying at 2 a. m. A great indoor sport for thoughtless people

One of the surest ways to become physically incapable of doing your best work is to get only snatches of sleep—broken by disturbing dreams.

If your sleep is being disturbed by drinking tea or coffee, you may be sowing the seeds of a nervous breakdown.

Do not wait until your nerves are affected by the drugs, then and caffeine, in tea or coffee. Protect your strength, vitality and endurance.

Have sound, restful sleep, and wake refreshed and fit for any task.

Postum, the delicious cereal beverage, with its golden-brown richness and coffee-like taste, will

let Nature restore your coffee-irritated nerves, and bring you sound, refreshing sleep.

Postum is wholesome and acts in a normal way. It possesses the advantages of a hot drink, without the ill effects of tea or coffee.

Drink Postum for a week or two. See what a difference it will make in you!

"There's a Reason."

Postum comes in two forms: Instant Postum (in tins) made instantly in the cup by the addition of boiling water. Postum Cereal (in packages of larger bulk, for those who prefer to make the drink while the meal is being prepared) made by boiling for 20 minutes.

At all grocers.



MACHINES MUST RUN AT PROPER SPEED.

A MACHINE is designed to be operated at a certain speed or with only a limited variation, either above or below this speed. It will do its best work when operated at this speed and if it is operated at any other speed, the best results will not be secured and often serious failure will result. For instance, the gas engine may be designed to operate at a maximum speed of five hundred revolutions per minute. It may be uneconomical and perhaps dangerous to run it at a speed faster than this. The lubrication, the reciprocating parts, the flywheel and the bearings have all been designed for pressure and strains resulting from this speed, and if it be exceeded, something is likely to break.

With power units and power driven machines fast coming into wide use, it is necessary to give careful consideration to the matter of speeds. Tractors are made with different size pulleys, running at different speeds. The same is true of power driven machines of the same class. For instance, one ensilage cutter may have a ten-inch pulley, supposed to run at 700 revolutions per minute, while another one may have an eight-inch pulley, supposed to run at 900 revolutions per minute. It is clear that confusion is sure to result if the machines are connected up without looking to see what size pulleys they possess.

Manufacturers, engineering societies and users are all interested in the proposals which are being made to standardize belt speeds and final action is very close on the adoption of the following speeds: 1,500, 2,600, 3,000, 3,250 and 3,500 feet per minute.

It means that manufacturers will have to carry fewer pulley sizes in stock and buyers of machines will obtain not only the direct advantage resulting from this, but the great advantage of not having to change pulleys when it is desired to use certain machines.

EXTERMINATING QUACK GRASS.

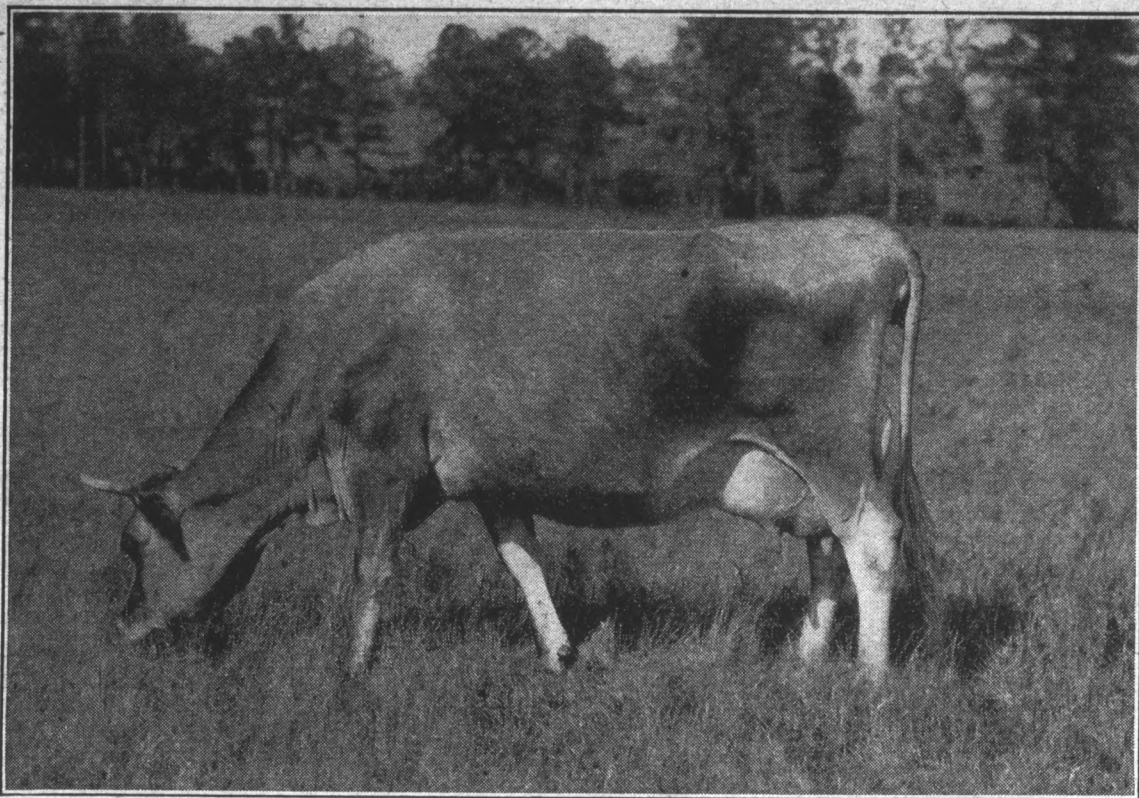
I HAVE never seen published in any paper a method I have used successfully for exterminating quack grass quite cheaply. I plow the ground just deep enough to get all the roots and when dry go over it with the potato digger, shaking all the soil off the roots. In a clear hot day the roots will be dry and dead in an hour. If not they can be raked together and hauled off.

The extra work with the digger was well repaid in the crop of potatoes as the yield was double what it was when the digger was not used. There was not a spear of the quack left in the potatoes or in the oats the following season.—M. C.

"GRASS WIDOWS."

EVERY year during July, August and September a lot of sows which produced spring litters of pigs are sent to market. Some of them are well fattened before shipment. Others are simply allowed to round out on grass and sent to market only partly finished, where they are known as "grass widows."

The carcasses of such hogs are suitable for the production of mess pork and lard rather than for sale as fresh meat. They sell at a big discount below well finished barrows and smooth young sows. "Butcher hogs" usually advance in price during the latter part of the summer but grassy sows advance but little after early July.



FROM A KODAK NEGATIVE

Kodak on the Farm

Kodak serves a double purpose on the farm. The pictures of the children and of the home, the Kodak story of the picnic, even the snap-shots of the pets go to make the Kodak album the most thought of book in all the house.

But there's another side to picture-making on the farm—the business side. Pictures of live stock help in making sales; pictures of the orchard and of growing crops help in keeping worth while records; pictures of the line fence and the "party ditch" prevent or settle arguments—oftentimes can prevent arguments from growing into lawsuits.

To the up-to-date farmer a camera is no longer a luxury. It's a necessity. And picture-taking by the Kodak system is simpler and less expensive than you think.

Ask your dealer or write us for catalogue of Kodaks and Brownies. It's free.

EASTMAN KODAK COMPANY, Rochester, N. Y., *The Kodak City*

Wheat and Clover



Some farmers continue to raise wheat at little or no profit, because a stand of clover can be secured in it if it is rightly fertilized. No crop responds better to POTASH FERTILIZATION than clover. For wheat to be seeded to clover insist on haying a fertilizer containing

6 to 8% POTASH

and you will have a profitable clover crop, as well as a better wheat crop. In this as well as in other ways

Potash Pays

SOIL AND CROP SERVICE, POTASH SYNDICATE, H. A. HUSTON, Mgr.
42 Broadway New York

OTTAWA

1 1/2 H-P ENGINE IS NOW ONLY \$35.50
Other sizes 2 to 22 H.P. at low prices. Good engines sold direct to you, 30 days' trial, 10 Year Guarantee. Write for Free Book before you purchase any engine. OTTAWA MFG. CO. 1361A King Street Ottawa, Kansas

KITSELMAN FENCE

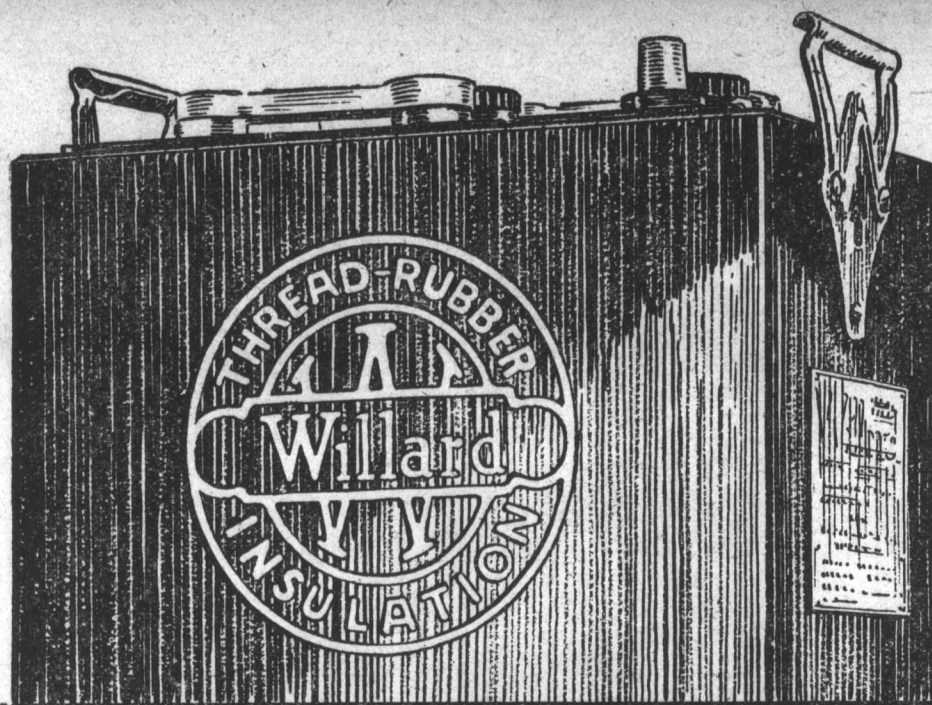
Get It From the Factory Direct PRICES REDUCED June 1st. We Pay the Freight and save you money. Direct from Factory to Farm. Mr. O. F. Holmdoo Lyons, Ind., writes: "My fence arrived O.K. Like it fine. Saved 24c a rod by buying of you." You can't afford to buy fence until you get our Big Free Catalog showing 100 styles and heights of farm and lawn fence, gate, etc. Write today. KITSELMAN BROS. Dept. 278 Muncie, Indiana.

We Pay \$6 a Day

taking orders for Insyde Tyres—inner armor for automobile tires. Positively prevent punctures and blowouts. Guaranteed to give double tire mileage. Work Spare Time or Full Time Every auto owner buys on account of low price. Enormous demand. Write quick for territory and special terms to County Representatives. AMERICAN ACCESSORIES CO., B-1459 CINCINNATI, O.

Trained American Fox Hounds Rabbit and Skunk dogs all ages. Send stamp. W. R. LECKY, Holmesville, Ohio

Please Mention The Michigan Farmer When Writing to Advertisers



The Thread-Rubber trade-mark tells you that the plates in your battery are insulated—not merely separated. Willard Threaded Rubber Batteries are selected by the best brains in the automobile business as standard equipment for 185 makes of cars and trucks.

Manufacturers of 185 cars and trucks have paid the additional price for Threaded Rubber Insulation to assure the users of their product the lowest battery cost per mile of uninterrupted service.

You can buy the Willard Threaded Rubber Battery of any of the dealers in your territory listed below. They all give authorized Willard Service:

MICHIGAN

- | | | |
|---|---|--|
| Adrian..... Union Garage | Eaton Rapids..... Smith Tire & Batt. Service | Marquette..... Battery Serv. Sta. |
| Albion..... Central Sto. Batt. Co. | Escanaba..... Home Electric Co. | Menominee, Johnson Tire and Repair Works |
| Alma..... Alma Elect. & Batt. Co. | Flint..... Flint Sto. Batt. Co. | Midland.... Kaufman & Revenaugh |
| Alpena.... Alpena Batt. Serv. Corp. | Fremont..... John J. Hansel & Co. | Monroe.... Monroe Sto. Batt. Co. |
| Ann Arbor..... A. P. Sriver | Grand Haven..... Kooiman Tire & Batt. Serv. Co. | Morenci..... Green & Rorick |
| Battle Creek..... Central Storage Battery Co. | Grand Rapids, Wolverine Sto. Batt. Co. | Mt. Clemens, Mt. Clemens Sto. Batt. Co. |
| Bay City..... Thorne Elect. Co. | Greenville..... E. H. Sharpe | Muskegon..... Electric Serv. Co. |
| Benton Harbor.. H. L. Draper & Co. | Hamtramck..... David Berger | Niles..... Niles Batt. Serv. |
| Big Rapids... Automotive Elect. Co. | Hastings..... Universal Garage Co. | Owosso..... Blair & Gaylord |
| Blissfield..... H. D. Bailey | Highland Park, Dewar Sto. Batt. Co. | Petoskey... Petoskey Sto. Batt. Co. |
| Cadillac..... Cadillac Batt. Co. | Hillsdale..... Simpson & Simpson | Plymouth..... Plymouth Storage Battery Co. |
| Calumet... Calumet Sto. Batt. Co. | Holland..... Lievens Batt. Co. | Pontiac... Storage Batt. Serv. Co. |
| Charlotte.. Charlotte Sto. Batt. Co. | Houghton, Superior Sto. Batt. Co. | Port Huron..... Storage Battery Service Co. |
| Cheboygan..... J. A. Garrow | Howell..... Donald Maycock | Saginaw... The Trombley Elect. Co. |
| Chesaning..... Perrot & Stuart Co. | Ionia..... E. W. Thomas | St. Johns..... F. H. McClintock |
| Coldwater.... Coldwater Garage Inc. | Iron Mountain, Iron Mt. Batt. Co. | Sandusky.... Davidson & Mossey |
| Dearborn..... Lindsay Batt. Serv. | Iron River, Mitchell's Service Station | Sault Ste. Marie... Northern El. Co. |
| Detroit.. Willard Storage Battery Co. | Ironwood, Julius Bentzen Elect. Co. | Sebewaing..... Howell Bros. |
| Mrs. M. W. Carpenter | Jackson... Jackson Sto. Batt. Co. | South Haven..... H. A. Parker |
| Clements Batt. Service | Kalamazoo, Thompson's Storage Batt. Co. | Sturgis..... Battery & Elect. Co. |
| Duncan Bros. | Lansing..... H. F. Heath | Three Rivers..... Batt. & El. Co. |
| Fred's Tire & Batt. Service | Lapeer..... Lapeer Sto. Batt. Co. | Traverse City..... Traverse City Battery Co. |
| J. Hergenroeder & Sons, Inc. | Ludington..... Harry Trepanier | Wyandotte..... J. T. McWade Batt. Service |
| Long Batt. Service Co. (2sta's) | Manistee..... Lloyd & Smith | Ypsilanti..... A. P. Sriver |
| Mart. J. Schneider | Manistique.... Manistique Batt. Sta. | |
| Western Batt. Service | | |
| Dowagiac..... Walworth Batt. Serv. | | |

WILLARD STORAGE BATTERY COMPANY, Cleveland, Ohio

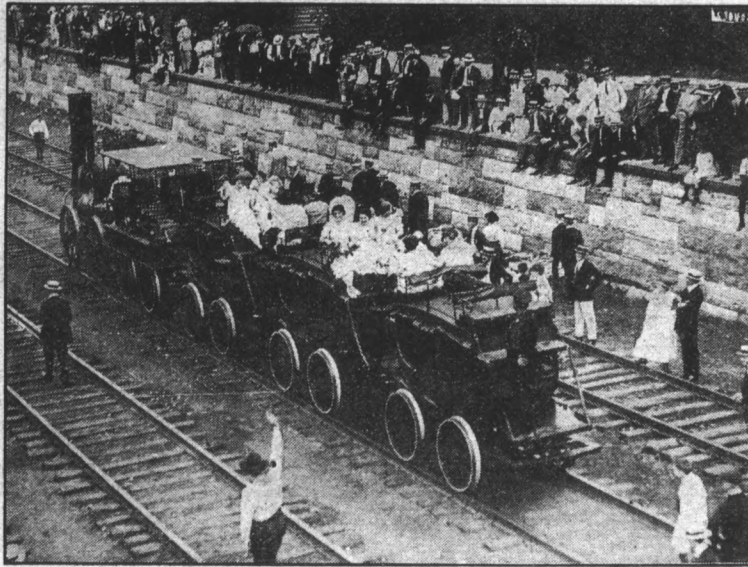
Made in Canada by the Willard Storage Battery Company of Canada, Limited, Toronto, Ontario

Willard THREADED RUBBER BATTERY

WORLD EVENTS IN PICTURES



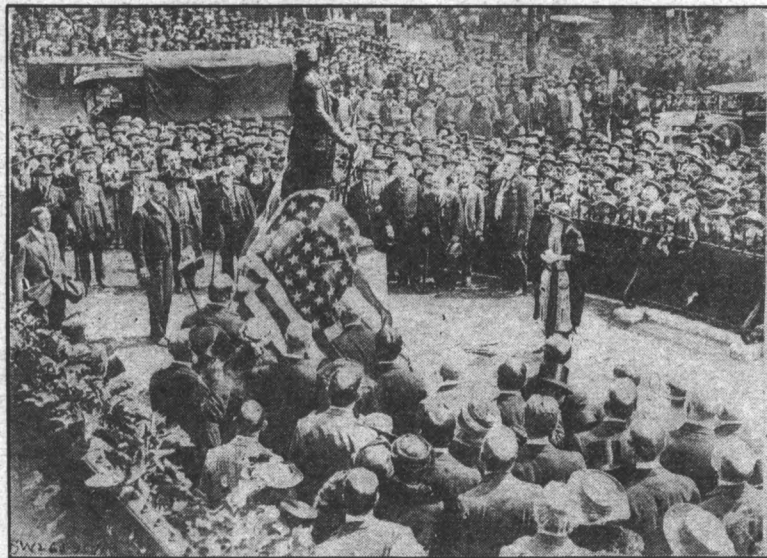
They build snow men now on the mountain tops in Yellowstone.



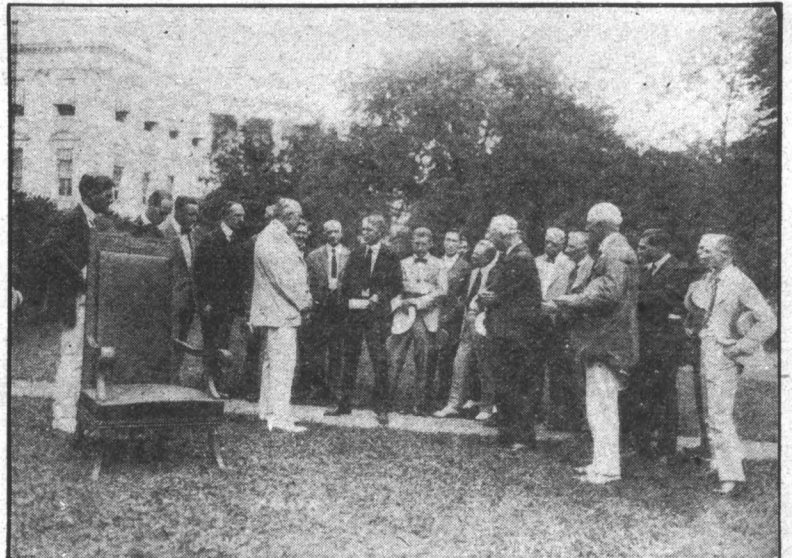
The "Dewitt Clinton," New York's first locomotive, travels under its own power on its way to Progress Pageant in Chicago.



Mrs. Martin Johnson, noted explorer, likes apes for pets.



State of Virginia gives statue of George Washington to London, England, recently unveiled in Trafalgar Square.



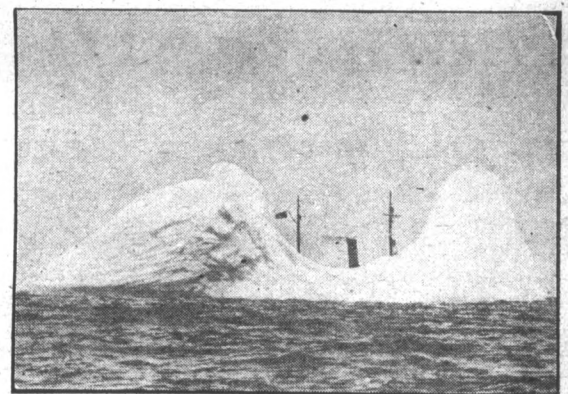
Newspaper men of U. S. present resident Harding with a chair made from wood of Revolutionary schooner Revenge.



Owen Moore, film star, marries Katharine Perry, his leading lady.



This is a shoe, not a hat. It comes from Paris.



U. S. coast guard cutter finds iceberg in northern Atlantic ocean.



German U-boats surrendered at end of war, are consigned to the junk heap at Cherbourg, France.



A Chicago musician entertains Lincoln Park canoeists with his boat-piano. It is more effective than the ukulele.

THE CLAN CALL

By HAPSBURG LIEBE Copyright 1920, Doubleday, Page & Co.

CHAPTER XIX. Confession.

IF the impulsive, fighting Bill Dale could have heard across the intervening miles the conversation that took place in his old home the next evening, he would probably have followed Ben Littleford's daughter by the next train if he had had to hold it up at the point of an honest blue gun in order to get aboard it.

John K. Dale and his wife had gone into the library with Elizabeth at her request. The three sat down facing each other. The younger woman was ill at ease; she was glad that the lights were subdued and soft. When the silence had become heavy, she straightened in her chair and blurted falteringly:

"Bill asked me to m-marry him, and I wouldn't do it. I—I thought maybe I—I ought to tell you."

The Dales exchanged glances; then they looked back at Elizabeth Littleford. Mrs. Dale was in a manner relieved, for, had the choosing been left to her, she never would have chosen this girl from the backwoods—her good traits and undeniable beauty notwithstanding.

Dale smiled a fatherly smile. Mrs. Dale's eyes narrowed. The old stiffness rose within her and began to make stubborn war against her more recently acquired commonsense.

"Have you quarreled?" she asked.

"No."

"Well, then," old Dale said bluntly, "what's wrong?"

"It isn't his fault," Elizabeth told them. "I'm a savage," she went on desperately—"and he isn't my kind."

"But you'll stay here with me for a while, won't you?" Mrs. Dale asked—for the mountain girl seemed now the only hold they had on the son they wanted back with so much deep longing.

"Ye-es," said Elizabeth.

John K. Dale retired very early that night. When the sound of his footsteps had died away, his wife bent toward Elizabeth and said curiously:

"Why did you call yourself a savage?"

Elizabeth realized that there would be some comfort in unburdening her mind to ears that she did not doubt were sympathetic, and she believed she could trust Mrs. Dale.

She told of her early life in the hills, of the feud between her people and the Morelands and of how she had hated the bloodshed. She told of the coming of Major Bradley, of her burning thirst for education, of the old trainman who had thrown her a news-

paper each day, and of the coming of Bill Dale.

"I was lonesome," she continued, "and nobody ever seemed to understand how I felt. That is, until Bill Dale came. After I met him, I couldn't see anything but him; he seemed to me like somethin' I'd had and lost."

"Then," said Mrs. Dale, "why did you refuse to marry—"

"Wait—you don't know it all," Elizabeth interrupted her. "There was the killin' o' that heathen, Adam Ball. I went to 'tend the trial because I knew I could clear your son if Major Bradley couldn't. You see, Mrs. Dale, I happened to know who did kill Adam

"I looked toward the river and saw Bill Dale a'walkin' up the nearest bank, and I saw Black Adam slip behind a tree not far away. Bill saw Adam, and he slipped behind a tree, too. Adam shot at Bill's hat, and teased Bill. Bill shot at Adam's hat—and then Adam Ball jumped up groanin' like he was done for, and fell, all a-twistin', to the ground. But he was not hit. He put his gun out by the tree to kill Bill as soon as he showed himself. It was one o' his old tricks."

Elizabeth Littleford raised her head slowly and went on in a voice that was much shaken:

"Sam Heck had nearly got a hair-

rifle from him, and killed Adam Ball myself."

CHAPTER XX. Bill Dale Laughs.

THE twentieth of December came with winter in dead earnest. It was a blue and desolate day. A bleak, howling north wind, as sharp as a sword, swept the mountain-crests clean and whipped the branches of the trees furiously. Powdery snow lay in little drifts wherever there was shelter for it. Sparkling Doe River was edged with jagged crusts of ice as white as the gaunt, bare sycamores that lined its banks.

Bill Dale sat thinking of what he had done there in the Big Pine country. His gaze wandered soberly out at the office window and went down the wind-swept valley. From the stone-and-clay chimneys of the cabins of the Littlefords on the other side of the river the howling wind snatched sprays of blue wood-smoke. The cabins of the Morelands were all vacant save for one, and in that one lived the moonshiner, By Heck, and his mother, the fortune-teller. The Morelands had gone to farms lying around Cartersville in the lowland, on each of which a fair-sized first payment had been made; the borrowed capital was to remain borrowed for another year. The Morelands were already losing their outlandishness and growing into universal respect. David Moreland's dream was at last being realized.

Then Dale frowned heavily. If only he could do as much for Babe's people! But he couldn't. The men of the Littlefords still worked the coal mine. They received almost twice the customary wages, but even that would not buy them farms and educate their children.

Bill Dale shook his head and began to think of the young woman who, less than three months before, had refused to marry him. That she had married nobody else was no great comfort. But after a moment he resolutely put thoughts of Babe Littleford out of his mind, just as he had done a thousand times before during those long and lonesome weeks that had passed since he had seen her, and turned back to his desk.

There under his eyes lay two unanswered letters from his parents. He found little pleasure in answering their letters, for he was still somewhat bitter toward them—toward his father because of his father's ill treatment of David Moreland and David Moreland's people; toward his mother because she had let him go hungry for mother-love as a baby, as a child,

The Lawn Social

By L. W. Snell

When our church has a social,
In the summer, on the lawn,
They move the tables 'neath the trees
And draw white covers on.

With vases filled with posies
And with bunting, red and white
And lanterns swung up overhead,
It is a glorious sight.

Like fairyland atwinkle,
And beneath the rosy glow
Of lanterns, all the pretty girls
Like fairies come and go.

Oh, if 'twasn't for the moths
That drop in one's ice cream,
Or ants that crawl in one's cake,
Things might be as they seem.

Ball, and I meant to tell if it was necessary.

"On the mornin' of the killin', Bill had started up the river by himself. He had said he didn't want comp'ny. It was dangerous for him to go off like that, on account o' them Balls and Torreys. My father said it was dangerous, and John Moreland said it was. Back in the Big Pine country there is a tall, thin man named Sam Heck. He's a big eater, an awful liar, and a worshipper of Bill Dale. Sam heard my father say it was dangerous and he whispered: 'I'll jest sneak through the laurels and gyard Bill from ahind him.' I heard him say it, Mrs. Dale.

"So he went sneakin' along the foot o' the north end o' David Moreland's Mountain, with his rifle in his hand, to guard your son. Bill didn't know he was bein' followed, because Heck is as crafty as a cat. I got nervous about Bill, so I went into the laurels and followed Sam Heck. When I overtook him, he was standin' behind a clump o' sheepl Laurel and lokin' toward the river.

"I whispered, 'Where's Bill?'
"He said, 'Be still, Babe!' And then he thumbed his rifle's hammer back without a sound.

fine aim at Ball. Sam is a good shot, but he's awful slow. I whispered to him:

"Shoot, for God's sake, shoot! Shoot—you fool!"

"I had always talked against killin', and yet I stood there and begged Sam Heck to finish him. The rest happened in no time. Ball was already a-lookin' along his sights. Bill Dale was was nearly out in the open. I—" she faltered, and then came a rush of words: "I wouldn't marry him without tellin' him, because it wouldn't be fair to him; and if I told him, he—he wouldn't have me. The woman he marries mustn't be a—a s-savage."

She stopped and stared at Mrs. Dale almost defiantly. Her head was high, and her hands were clasped in her lap so hard that they trembled.

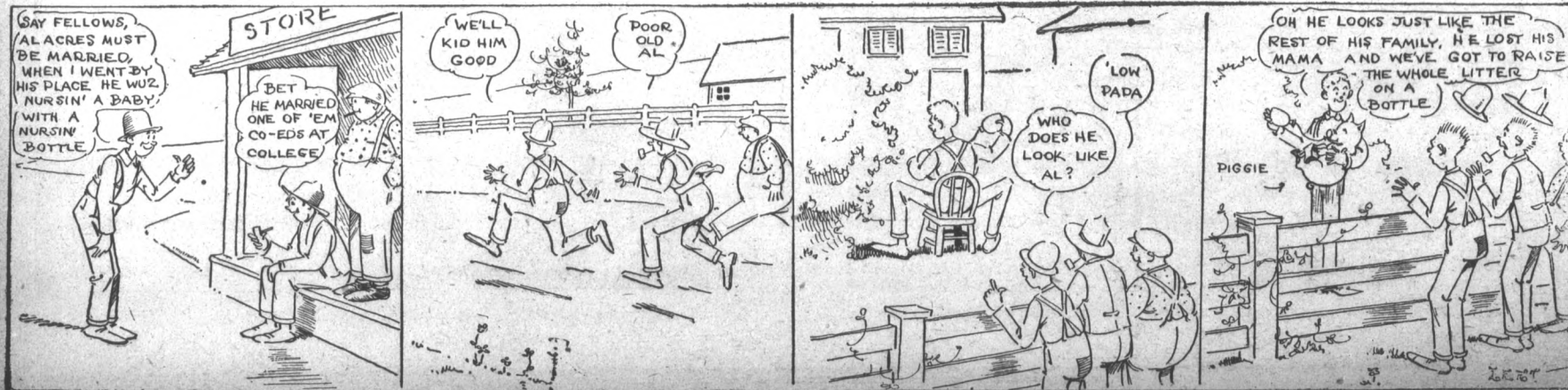
"I think you have made a mountain out of a molehill, my dear," the older woman said gently. "What you did was right, not wrong; any good woman would have done just what you did, Elizabeth, I am sure."

Elizabeth Littleford faced Mrs. John K. Dale squarely. There was a strange glow in her eyes.

"But I haven't told you everything," she murmured—"I took Sam Heck's

AL ACRES—Al's Friends Went to Kid But the Outcome Got Their Goat.

—By Frank R. Leet



as a boy, and as a man; toward them both because he had been reared a do-nothing.

And then—it is a little like the post-script to a flapper schoolgirl's letter, one may think—he believed that his mother had been largely instrumental in bringing about that which he supposed to be a love affair between Babe Littleford and Jimmy Fayne.

The door opened suddenly, and By Heck came stamping in with a gust of cold air at his back. He carried in one hand the mail satchel; in the other was his ever-present rifle. After throwing the satchel to the floor at Dale's feet, he turned to the glowing wood stove.

"I'm darn nigh friz, Bill," he chattered. "My gosh, I couldn't be no colder'n what I em ef I'd ha' clim the nawth pole neck-ed. Say, Bill, why'n't ye burn coal 'stid o' wood? Igod, it's hotter."

"Coal is worth money. Wood isn't."

Dale ran through the mail hastily. He threw aside a letter from the Alexander Crayfield Coal Corporation, which took the entire output of the mine at an extraordinary figure, and picked up a letter which bore the post-mark of his home city.

It was from Babe Littleford. Since he paid so little attention to the letters of his parents, they had requested her to write to him—they wanted him to come home for his Christmas dinner. Wouldn't he come?

He arose and paced the office floor for two or three minutes, then he sat down at his desk and dashed off a letter that contained only two sentences.

By Heck sat beside the stove and watched his god with thoughtful eyes. He understood, he believed. How any woman on earth could turn down a man like Bill Dale was utterly beyond him. By Heck was a great deal like a good-natured dog.

If Bill would only laugh, it would be good for him. It had been so long since he had heard Bill laugh. By Heck decided that he would make Bill Dale laugh.

"Old boy?"

"Well?"

"Do ye want me to tell ye a funny tale?" drawled Heck. He barely heard the answer:

"I guess I don't mind, By."

Heck's sympathy made him gulp. But he swallowed the lump that came up in his throat and began bravely:

"One time the' was a feller named Smith. Odd name, Bill ain't it? 'Hossfly' Smith, they called him, 'cause it was said 'at he could easy shoot a hossfly offen a hoss's ear and never break hide on the animile. He was a hellion, too. He was a politics man, never done nothin' else, and he rode a dun-colored hoss—and ef ye don't know what color that is, it ain't no color at all. One time Hossfly, he was a-tryin' to git app'inted the chairman o' some sort o' politics doin's, and on that same day he was a-drinkin' sort o' tol'able heavy. They agreed to make him the temp'rary chairman, but Hossfly, he didn't want that. So he hops right up in the middle o' the meetin', and he hollers out and says:

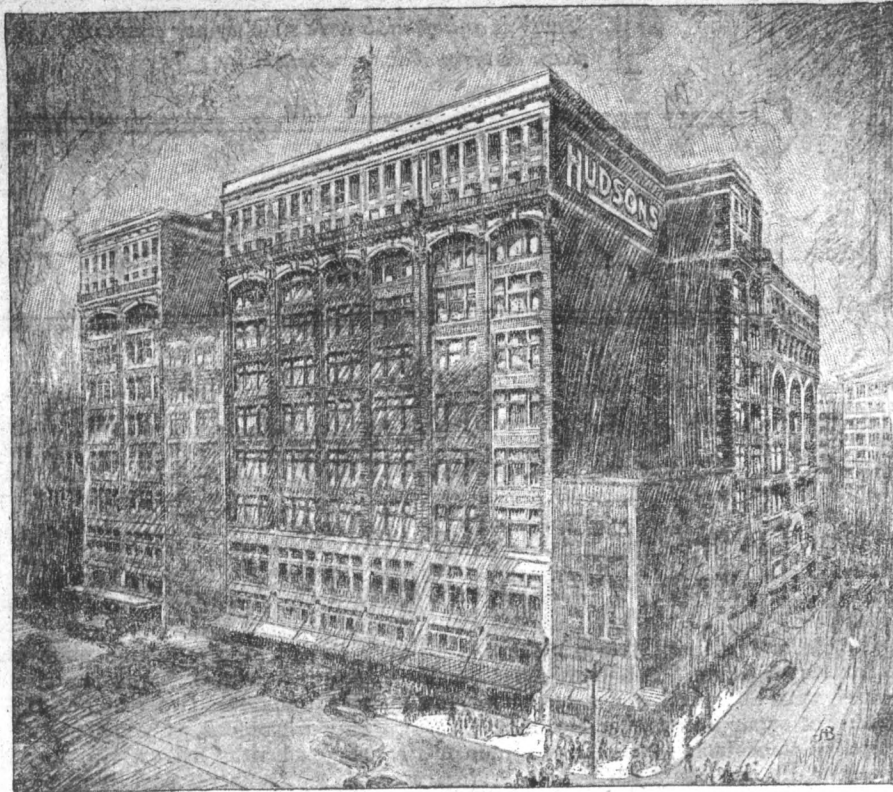
"'Feller citizens,' he says, 'I want to be the permanent chairman! I ain't a-goin' to act in the capacity of a durned temp'rary chairman; I absolutely ain't!'

"His old inemy, Eb Wright, he yells back and says smart-like: 'Set down thar, Hossfly,' says Eb—'you're drunk, and you don't know the difference atween temp'rary and permanent!'

"Well, they knowed Eb had it a-comin' to him right then, and they listened fo' it. Hossfly, he addresses the whole meetin', and this here is what Hossfly says:

(Continued next week).

By trying, we can easily learn to endure adversity—another man's, I mean.—Mark Twain.



*Your Name
on Our
Mailing List*

Will keep you in touch with all that is interesting in the store—special sales, the arrival of new merchandise and all important events.

Michigan's Greatest Retail Store Hudson's—Detroit

A store founded upon service to the public; truly representative of the growing city of Detroit. First and foremost in the producing of quality merchandise all the year 'round at prices as low as can be made consistent with good store-keeping.

Our Personal Service Department

will buy for you when it is not convenient for you to come to the store. Expert shoppers will carefully select the best values and your purchases will be sent with all dispatch.

Write the Personal Service Department or 'phone Cherry 5100 and whatever you require—our best endeavor will be made to obtain it for you.

The J. L. Hudson Co., Detroit

How Did They Do It?

DO you ever wonder how the ancient folk got along without the comforts and conveniences of today?

Without window-glass, without tooth brushes, without automobiles, without soap, without telephones, breakfast foods, stoves, and virtually all the items we consider bare necessities of life.

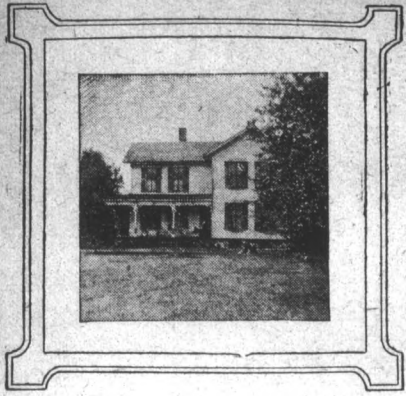
And have you ever wondered at the part advertising has played in the world's development? It has made and is making the world better housed, better fed, better dressed. It has increased the world's capacity for things that elevate, improve and idealize the important business of living. It is a big, vital force in fostering convenient and comfortable life.

Home! Can you imagine your own empty of advertised products?

Advertising is an authentic and essential guide to the markets of the world. Without its direction you lose much, and overlook much.

Don't fail to read the advertisements you find in this publication. Follow their guidance.

They will prove invaluable to you.



Truth is as impossible to be soiled by any outward touch as the sunbeam.—Milton.

Woman's Interests



Some August Canning Suggestions

Easy and Efficient Canning Methods Turn Surplus Products Into Winter-Time Table Delights.

DEVOTEES of the cold pack method of canning are firmly convinced that this is the only successful method of preserving fruit and vegetables. But housekeepers who for years have canned by the open kettle method and had their fruit keep without spoilage are hard to convince. From my own experience, I must say I side with the housekeepers. During the war when we all did everything as suggested with the idea that we'd help win the fight that way, I tried the cold pack method, but with no better success with fruit, so far as keeping properties was concerned, than when I followed the old-fashioned method of canning. For vegetables, however, I am firmly convinced the cold pack method is the best and only reliable way.

The general directions for cold pack canning are simple. Cans, tops and rubbers must be sterilized, that is, boiled, at least five minutes. Put in cold water and bring to boil; keep in the hot water on back of range until used. Vegetables should be blanched—parboiled—then dipped in cold water, then packed in the sterilized cans, the rubbers put on, tops screwed down until they just touch the rubbers, and the can plunged into a boiler of water as hot as the product in the can, and deep enough to come over the top two inches. Water in the boiler must be kept boiling the length of time given for each vegetable or fruit. If vegetables are to be canned, hot water and salt are poured in to fill the can to within one-half inch of top; if fruit is used hot syrup is put in, though it can be canned with hot water, and sugar added when opened.

After boiling, the technical word is processing, the required time, remove from water and tighten tops, invert to see they do not leak, and when cool store in a dark place. For blanching vegetables a square of cheesecloth or a wire basket is a necessity. Place the vegetable in the cheesecloth, twist the four corners together, and lay over the side of the kettle in which you are to blanch. You then have them ready to pick the product out as soon as the blanching is finished.

Corn.—Corn should be canned as soon as it is picked. Government experts claim that corn loses half of its sugar if allowed to stand only over night. Select between milk and dough stage; remove husks and silk; blanch on cob five minutes; plunge in cold water ten seconds; cut from cob, pack into sterilized jars to within one inch of top; add one teaspoon of salt and one of sugar; screw on top, and process four hours. Cans must be put immediately in the boiler of water. If allowed to cool they are apt to crack when plunged into the hot water. Corn on the cob is done in the same way, packing the blanched ears in wide-mouthed cans instead of cutting from cob.

Peas should be blanched five minutes, plunged ten seconds, and processed two and one-half hours if fresh.

If not strictly fresh picked, process three hours. The cans must be filled with hot water and a teaspoonful each of sugar and salt added.

Succotash.—Blanch and plunge the corn and cut from cob as if for canning separately. Mix with equal measure of shelled lima beans, which need not be blanched, and process for three hours.

Peppers are much prized for winter use by housewives looking for a change in diet. Sweet green, or bull-nose, peppers are best. Cut in halves and remove seeds; pack in jars; cover with boiling water; add two teaspoons of salt and process two hours. They need not be blanched and dipped. A government bulletin advises baking in the oven until skin will come off easily, packing in jars and processing one and a half hours.

The average housekeeper has her own favorite recipes for relishes but here are three from Everywoman's Canning Book which sound interesting.

Celery Pickle.—Three pints chopped green tomatoes, three pints chopped ripe tomatoes, two and one-half pints chopped onions, two bunches of celery chopped with leaves, two medium-sized red peppers, seeded and chopped. Do not peel tomatoes. Mix all together, add one-half cup salt, let stand over night. Drain, and add two quarts of vinegar, one quart sugar, one-half teaspoon cinnamon, one-half teaspoon of cloves, one-half cup mustard seed. Cook twenty minutes and seal in jars.

Governor Sauce.—One peck of green tomatoes, three onions, two red peppers. Slice tomatoes, sprinkle with one cup salt, and let stand over night. In the morning, drain well and rinse off salt. Seed peppers, chop fine; add tomatoes, onion sliced thin, one and one-half cups brown sugar, spice bag containing twelve whole cloves, one-fourth cup celery seed, one teaspoon of black pepper, and a bay leaf; cover with vinegar and boil gently for three hours. Seal in jars while hot. This recipe comes from Jamaica.

Tomato Ketchup.—One-half bushel ripe tomatoes, one quart onions, three red peppers, one-fourth pound allspice buds, one-fourth pound whole cloves, one quart sugar, one cup of salt, one quart of vinegar, one-fourth teaspoon cayenne. Put tomatoes, skins and all, in kettle and mash with wooden masher. Remove seeds from peppers and add peppers and onions chopped fine. Then add whole spices and cook until tomatoes are well done. Strain through a sieve to remove skins and seeds. To this strained liquid add the sugar, salt, vinegar and cayenne. Boil rapidly until reduced one-third. Cool, bottle in sterilized bottle, dip corks in melted paraffin and seal.

SALADS.

BY CHARLOTTE BURD.

IT is said that no one can make a good salad who does not love to cook. In any case, the woman betrays her skill in cookery by the quality of salads which she serves.

Though no modern dinner is complete without a salad, only fruit and vegetable salads should ever appear on the dinner table. The reason is that the heavier salads are too hearty with a meat course. But for the lighter meals, where no meat appears, fish or meat salads will furnish what the lighter meal would otherwise lack. So meat and fish salads are desirable for luncheon or supper or high tea dishes.

The salad experts deny to our so-called potato salad the name of salad; they grant that the potato dish in its different salad varieties is a very good dish, yet—it is not a salad. And, equally, the boiled dressing is excluded from the realm of "salad" dressings. The real salad, the experts claim, cannot be made without oil and, further, the oil must be the product of the olive. However this may be, we shall probably go on talking about our "potato salad" and calling many dishes salads which are served with corn or cottonseed oils, or even those compounded with cooked dressings. And we shall not allow ourselves to be unduly disturbed by the technical names of such creations.

Every cook should know that pure olive oil is of the palest green color, is very clear, and that it has a faint, nutty, and appetizing scent. A very good quality is made in California and is not as expensive as the imported olive oil, nor as difficult to get.

Tarragon vinegar can easily be made by steeping the fresh herb in some good vinegar. Celery vinegar made from celery seed and vinegar, and cucumber vinegar are easily made, and suggest the fresh things of the summer garden.

If a French dressing is to be used, it is better to prepare it at the table, because such a salad must be eaten as soon as it is mixed. There should be just enough dressing so that none will be left in the bottom of the dish. One should guard against getting a salad too sour. With the exception of



Are You Keeping Up?

WHAT would you think of a doctor, a lawyer, a preacher or a teacher who laid aside all his books when he quit school and announced to the world that he was through studying? You'd say right away, "Here's a party who is headed straight for failure. I'll give him two years to keep his first job, and in five years he'll be a day laborer. Why doesn't he know the world moves? These are stirring times, and if he isn't going to read and study, how does he expect to keep up with the times?"

Yet how many housekeepers adopt the attitude they condemn in other professional folks? How many housekeepers make it a business to study and keep in step with the progress that is being made in their profession? Did you even know that housework is now dignified by that name?

In no science have greater strides been made in the past decade than in the science of nutrition. Just the matter of eating vegetables alone. Ten years ago we thought vegetables and fruits were the cause of bowel disturbances in summer time. We were told not to give green vegetables to children under three years of age. Now

we cut out animal foods in cases of "cholera morbus," and we calmly feed the three-months-old baby spinach and other vegetables. We'd have had a fit, if anyone had suggested tomato juice for ten-year-old John when he was a baby, but we give it to his six-months-old sister if the oranges are not handy.

This is only one instance of the many changes which have taken place in our ideas about feeding the human family in the light of the experiments of the past ten years. Do you know about them? Don't you think you should? Certainly if you want to keep your family in trim the only way to do it is by feeding them right.

Don't say you have no time to read and study. Take it. Take fifteen minutes right after the folks get out in the morning. Or in the middle of the day when you are tired to the point of dropping, why just drop and spend a quarter of an hour studying up in your profession. It is the most important thing you can do; far more so than pulling threads out of a piece of muslin and sewing up the holes, or crocheting miles of edging for the parlor curtains. It means health for your family.—DEBORAH.

onion, garlic, and parsley, the ingredients of a salad are cut and not chopped. Lettuce must be dry, cold, and crisp. Tomatoes must be drained in a colander to avoid the superfluous fluid.

The different kinds of salads require several different kinds of dressings. Some of the most important of these follow:

Mayonnaise Dressing.

Into a cold bowl break two fresh eggs, add a pinch each of salt and paprika, and half a teaspoonful or more of mustard and mix thoroughly. Then add oil, at first, drop by drop. A clear spot forming upon the egg is the test of the right quantity. Use a silver spoon for mixing and beat constantly. If the mayonnaise should curdle, add a few drops of lemon juice. Later the oil may be put in faster. When a cupful of the oil has been used, and the dressing is stiff enough to cut with a knife, add the juice of half a lemon or more, according to taste. Cover with waxed paper and keep on ice till ready to serve.

French Dressing.

If desired, rub the inside of the salad bowl with a freshly cut clove of garlic. Rub in a pinch each of salt and paprika. Add three tablespoonfuls of best olive or other salad oil and stir until the salt is dissolved. Add a tablespoonful of cider vinegar and beat till no globules of oil are to be seen. This dressing may be varied indefinitely by the addition of different kinds of flavoring materials.

French dressing for fruit salads is made as above except, that lemon juice should be substituted for the vinegar and the paprika should be omitted. This French dressing for fruit salads also may be varied by the addition of different fruit juices or even of spices, like powdered cinnamon, nutmeg, or ginger, or chopped candied fruit.

Boiled Dressing.

One egg, one tablespoonful each of sugar and cornstarch, a piece of butter or butter substitute the size of an egg, one teaspoonful each of salt and mustard. Mix sugar, cornstarch, salt, mustard and butter together. Thoroughly beat the egg and add a third cup of water and with this mix the dry ingredients. Then while it cooks over boiling water, slowly add one-third cup of good vinegar and stir constantly, till it thickens. This dressing is good for eggs, meat, vegetables, etc. If sealed and kept in a cool place, it will keep indefinitely.

Sour Cream Dressing.

Mix two or more tablespoonfuls of good vinegar with a cupful of good sour cream, add a tablespoonful of sugar, a teaspoonful each of mustard and salt and pepper to taste. This dressing is especially nice for potatoes or cabbage.

Cottage Cheese Salad.

To one cup of cottage cheese use one-third cup of chopped nuts and soften with sweet cream. Mold into little balls and place on lettuce leaves on the salad plates. Sprinkle over them a dash of paprika. Or instead of the paprika, finely cut red sweet peppers, add Mayonnaise dressing and put dressing on each cheese ball.

Chicken Salad.

Chop cooked chicken and mix with chopped celery in the proportion of about one-third celery to two-thirds chicken. Then add one-fourth the whole quantity of chopped or broken nut-meats. Mix with Mayonnaise dressing. This recipe may be used with other meats.

Egg Salad.

Cut hard boiled eggs in halves and place on lettuce leaves. Put a spoonful of either Mayonnaise or cooked dressing on each and serve. Garnish with pickled beets cut in fancy shapes.



Pour in some Texaco Tractoil

YOUR tractor is ready to be put to work. You bought it because you were convinced that it would prove a profitable investment—and it will.

But don't forget that your tractor is a piece of equipment rather more complicated than most other farm machinery. It requires regular attention. It requires thorough lubrication.

Above all it *must* have the right oil. That is most important.

Texaco Tractoil was made for tractors, and has been used on tractors for many years. It has been tested by experience under all sorts of conditions.

Texaco Tractoil has just the right body, and withstands high engine temperatures in the cylinders—there's the vital point.

Other Texaco tractor lubricants include Texaco Crater Compound for the exposed gears, and Texaco Thuban for all enclosed gearing.

Ask your dealer for Texaco Tractoil. It comes in 33- or 55-gallon steel drums, wooden barrels and half barrels, or in 5-gallon sealed cans. Get the grade for your machine—"B", "C" or "D", the dealer will advise you.

THE TEXAS COMPANY

Petroleum and its Products

General Offices: Houston, Texas

Offices in Principal Cities

TEXACO TRACTOIL



TEXACO Motor Oil

The uniform oil that keeps your motor active. It is a fine, lasting oil that completely retains its lubricating properties despite engine heat. It so perfectly seals the clearance between piston and cylinder that no gasoline can leak into the crankcase. Thus full compression is secured, and every last ounce of power used that the gas has to give. Be certain to get the can with the red Star and green T.



Universal Electric Irons
Hot Iron—No Fire—Cool Room

Sounds good these trying summer days, doesn't it? You can have it—you need it. Why wait longer?

Get all the good possible out of your electrical wiring. Let it save your time and temper; lighten your household duties. The cost is so little—the comfort so great.

"Universal" appliances were home and farm favorites long before electric devices were available. They are the recognized leaders now.

Write today for full information about "Universal" electric home needs—Irons, Toasters, Percolators, Grills, Heating Pads, etc. Don't endure another hot, exhausting ironing day without a "Universal". It means better work and comfort, too.

The F. Bissell Co., Toledo, O.

Farms and Farm Lands FOR SALE

One of the best stock farms in Michigan of 154 acres, with a fine 10 room house. New 36x60 ft. basement barn, granary and all other necessary buildings in good condition. Located 2 miles from Stockbridge, Mich. For immediate sale, on easy terms, at \$80 per acre. **W. H. S. CASKEY, Stockbridge, Mich.**

"SAFETY FIRST" With Investments:

It is well established and supported by conservative financiers, that there is no class of Investment Securities that equal State, County, and City Bonds (Termed Municipals) for absolute safety, as the whole taxable property of the issuing organization is pledged for the payment of both principal and interest.

We specialize in MUNICIPAL BONDS of highest class, that yield to the investor from 5 1/2 to 6 1/2 annual interest, that is Exempt from all Government Income taxes; more yielding and safer than Savings Banks. Denominations from \$500 up. Full descriptions sent free.

PRUDDEN & COMPANY
Nasby Bldg. TOLEDO, OHIO.

References: Any bank or business firm in Toledo

120-Acre Lakeside Farm With Horses, Crops, 9 Cows and

Heifers, 3 calves, 7 swine, flock poultry, gas engine, buzz saw, feed mill, vehicles, cream separator, all tools, implements, up-to-date equipment, 2 rowboats, included; splendid farming section, on county road 2 1/2 miles hustling city, advantages; 50 acres dark loam tillage, 25-cow lake-watered pasture, estimated 500 cords wood, timber; 50 apple, cherry trees; grapes, berries; good 8-room house, beautiful elm shade, delightful view overlooking lake bordering farm; big barn, cement floor store house; crops consist 6 acres wheat, 15 acres rye, 6 acres oats, 7 acres corn, 5 acres potatoes, 7 acres clover, 1/2 acre berries, good garden. He who gets this is fortunate. All goes \$6800, less than half cash, easy terms. **H. F. LUNSTED, Big Rapids, Mich.**

147-Acre Mid-West Farm 3 Horses, 13 Cows and

Heifers, bull, 15 shoats, 3 brood sows, 150 chickens, vehicles, cream separator, gas engine, machinery, etc.; prosperous section close RR town, convenient big city, advantages; fertile grain, alfalfa, clover, potato, tillage; 40-cow pasture; variety fruit; good 2-story house, delightful shade; 30-cow barn, poultry house, etc. Owner called away, \$7000 gets all, easy terms. See page 58 Spring Catalog 1100 Bargains, FREE. **STROUT FARM AGENCY, 814 BO Ford Bldg., Detroit, Mich.**

For Sale a first class farm 3 miles from Lansing, good buildings, all newly painted, 122 acres for \$18,500. **S. W. HEMPEY, R. 7, Lansing, Mich.**

DELICIOUS AND REFRESHING
AS the dance brings thirst
Coca-Cola brings refreshment.
THE COCA-COLA COMPANY
Atlanta, Ga.

WESTERN MICHIGAN FARMS

Improved and unimproved: ranches, grazing areas, colonization tracts: Noted fruit region, general farming, dairying, etc. Exceptional marketing, social and transportation facilities. Illustrated booklets free. **WESTERN MICHIGAN DEVELOPMENT BUREAU, Dept. 56, Grand Rapids, Mich.**

Large Farms Wanted We want several large, well improved Michigan farms, in exchange for Detroit and Chicago Apartments. Give particulars first letter. **ELMER HOLMAN, Realtor, Lapeer, Mich**

For Sale 80 acres one and one-half mile from Court House and University, good building. **JOHN BAUMGARDNER, Ann Arbor, Mich.**

WANTED To hear from owner of land for sale. **O. K. HAWLEY, Baldwin, Wis.**

Our Boys' and Girls' Department

State Handicraft Champion's Story

By Russell Mackey, of Marquette County

YOU were elected president last Friday," was the information given me when I got to school Monday morning.

"Of what?" I asked.

"The Diorite Handicraft Club."

This was a real shock to me. I had every year during the existence of the Diorite Handicraft Club held the position of president and previous to this had wished that one of the others would hold that position. I was also informed that the assistant state club leader had visited the school the Friday before. Unluckily I had remained at home on that day so undoubtedly I had missed a lot of information on club affairs.

Ever since the commencement of the school year in September I had made arrangements for my handicraft work for the coming year. I made one resolution for the year 1921. It was: I shall complete the number of exercises that are required of senior members before the exhibit takes place. I believe I have lived up to this resolution this time. This was a very great accomplishment. In fact, it was the greatest deed that I have done during my entire high school career. In former years I did not enjoy the work with tools at all, but somehow this year it resembled play to me.

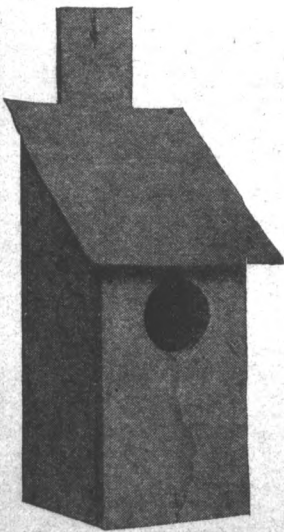
Now that the club was organized, I was ready to fulfill my resolution. I looked over the various plans and sought material for my first exercise. After carefully looking over the list I finally decided to make a dairy barn desk. This article was found in the list of exercises that could be made by senior members.

In former years I took very little pains in constructing the various articles. Such was not the case this year. In constructing the dairy barn desk, I took great pains in sawing the boards square. I cut all my boards into the required shape and size and after planing same I began to assemble them. Due to the fact that the boards were badly warped I could not get them to fit perfectly.

On the eleventh of March, Mr. Kettunen visited our school. He examined my dairy barn desk and gave me a few hints on improving it. I later did what he told me to do and much to my satisfaction completed my first exercise.

My brother and I are building a camp of our own. I thought this dairy barn desk would be a good piece of furniture for same. It will serve as a writing desk and to store writing material and other things.

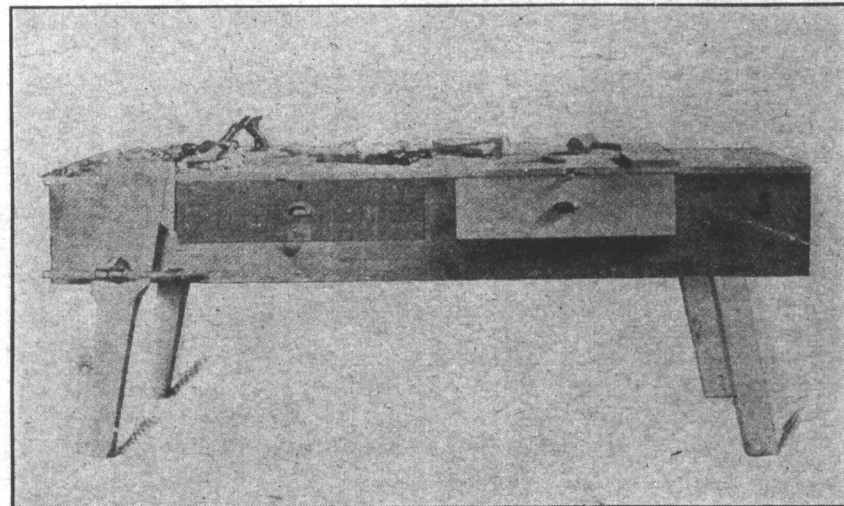
My second exercise was a pedestal.



What Bird-loving Handicrafters Make.

The completed pedestal of my teacher, and one of my brother members attracted me and I decided to make one although I knew beforehand what a task I had before me. Through good luck I was given an oak upright piece. I had no material whatever for the other parts so I went to the city and purchased a board. It contained four board feet and the cost was but fifty cents. After these were cut into the required size I began to assemble them. It was while doing so that I began to realize what a task I had before me. The lower part was assembled with very little trouble. The trouble was realized while attaching the bottom piece of the top to the top board of the pedestal. This board was warped so that it would not fit perfectly. And besides, while screwing it to the bottom piece I cracked it a little.

I could waste no more time on this



A Good Handicraft Work Bench.

pedestal so I set to work on a book rack. I had the material for this so I did not need to buy any. The boards were one inch thick and I had to plane them one-fourth inch thinner. This was the beginning of my hard work. I then cut the pieces that were called for. The illustration also called for tenons for the end pieces. This was a very hard task. At last I completed the pieces and began to assemble them. The book rack was not very hard to assemble, so after working but one more evening on it I completed it, and began to paint it. After I had it all stained and filled I again resumed work on my pedestal.

Mr. McDonald purchased the top piece for my pedestal. It was a very good piece, too. Some time ago I began to lose hope on my pedestal, but through the purchase of this piece I took up the task of completing it. I tried a new method in attaching it. The new method proved more favorable than the previous one. The pedestal was soon completed and ready for a coat of stain. I stained it one afternoon because Mr. McDonald suggested that I do so. A few evenings ago I took up the task of filling it with filler. This was the hardest task that I had ever encountered in my handicraft work. I would have never been able to do it if Mr. McDonald and "Bud" Ryan had not helped me. I shall varnish it in a few days and that will be my second exercise.

During spare hours at home I have made a sleeve holder. It was not a difficult exercise and because of this

had very little trouble in making it. I have also started to work on a necktie holder and expect to finish it before the exhibit takes place.

Now that I have completed my talk on the completed exercises I shall endeavor to relate some topics that are almost as important. They might interest the boys more than the topics just related.

At his second visit to our school Mr. Kettunen told us that Diorite is to play West Ishpeming at the Annual Round-up which is to be held at Marquette. This seemed to interest the boys more at the time than anything else. They were all anxious to see the snow disappear so that they could begin to play ball. As soon as the snow did disappear we began to play ball. Shortly after we met at the school and organized our team. It was a fine (?) evening for a meeting, believe me. I was about halfway from the school

sample of the same kind of wood, and he said, "This is white pine though, is it not?"

My last topic will serve as a farewell to the boys. This is my last year in school and for that reason I will be unable to become a member of another Handicraft Club. I very much regret that I cannot work with the boys any longer. I can no longer help the younger boys in their work as I had formerly done. I shall, however, bear the Diorite Handicraft Club in mind. It has helped me, not only in the handling of tools but also in keeping accurate reports and in the writing of stories. I have spent many a happy evening in the work shop by joking with my brother members. No boy is doing a wrong in joining a club. He will never regret it. At least, I didn't.

Articles made: Dairy barn desk; pedestal; book rack; sleeve board and necktie rack.

Total time spent, thirty-one hours and ten minutes.

Value\$8.50
Cost 2.42

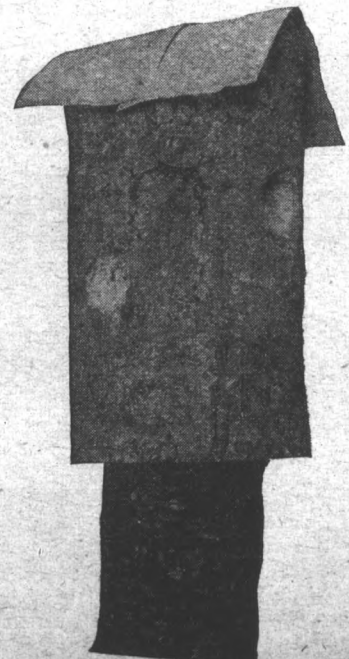
Profit\$6.08

ALGER COUNTY CLUB CAMP.

MR. A. G. KETTUNEN has announced the dates of the second club members' camp to be held at Chatham, Alger county, as August 8-11, in connection with the annual farmers' round-up. The boys and girls will be housed in tents and fed in mess tents, the food being prepared by a special cook employed for the announced to be the live stock and poultry judging contest, the parade, the athletic contests, weenie roast and stunt night. The live stock judging contest is open to members of organized pig, calf and sheep clubs. The winners of the first prize to get a free trip to the state fair at Detroit. Liberal prizes are also provided for others who ranke high in the contests. Menominee county is going to give their club members free transportation to Chatham, it is stated, and Mr. R. N. Kebler, principal of the Menominee County Agricultural School, has charge of making up the party.

Pearl—"Even a policeman cannot arrest the flight of time."

Earl—"Sure he can. Yesterday I saw one go in a store and stop a few minutes."



A Useful and Artistic Bird House.

Every night when the members are active on their exercises some strange jokes are heard. I shall give one that I consider pretty good.

One of the members approached me. He held a sample of Norway pine in his hand. He thought he was prouder than the other fellow, so he said, "Mr. President, isn't this white pine?" I examined the sample and replied, "No, that is a sample of Norway pine." This pleased the other fellow and he said, "There, now, didn't I tell you it wasn't white pine?" This fellow as victor had his turn. He came to me with a

Does the World Grow Better?

Our Weekly Sermon—By N. A. McCune

IT depends on who is asking the question. To some people the world continually improves. To some it forever, grows worse. Probably we will never all agree on it. The same facts and forces that seem to certain folks to be tokens of a brighter day, to others appear to be the forerunners of blackest night. The fact is, progress is a rather modern idea. The ancients had no such thought. In fact, they considered the world as gradually worsening. They looked back to the golden age of the fathers. The Greeks said the golden age was past. The day of glory was when Homer lived. Yet Homer said that the race had degenerated, until it required two men to lift the stone that Ajax threw. In Virgil's day it took eight men. Yet it is very apparent that there has been a long slow climb from the savage man who lived in a cave to the artist or the scientist or the poet of the present.

Material progress cannot be disputed. For instance, if one looks back ten years, there was no airship. Fifteen years ago there was no wireless. Twenty-five years, and there was no automobile. Forty years, no telephone; sixty years, no sewing machine and no photograph; seventy-five years, no telegraph; one hundred years, no railroad; one hundred twenty-five years, no steam engine; two hundred, no post office; three hundred, no newspaper; five hundred, no printing press; one thousand, no compass and sailors dared not go out of sight of land; two thousand, no writing paper and man had to write on clay tablets or the skins of animals; still farther back, there was no cloth, and men at nuts and roots and went naked. Those who love the good old days, as they lovingly style them, are very ambiguous. What were the good old days? Were they the times when there was continual war between tribes and one had to take his spear when he went to the spring for a jar of water?

IN the days of the American Revolution news from Europe was two months old before it arrived in America. In the War of 1812 the battle of New Orleans was fought after peace had been declared, because the combatants knew nothing of it. A recent writer says that the time was when the world was a vast creation whose forces no man understood and whose distances were terrifying. Now it has been reduced to a handy little planet, and people are talking around it.

Intellectual progress, however, is not an unalloyed good, according to some writers. They declare that the modern has become proud of his intellectuality, and that science is but a tool for increasing the sweep and power of brutality. They point to the war as indisputable proof of this. "Was it not all our boasted modern science that invented all the terrible and diabolical engines of war that ripped up the earth and mined the sea and poisoned the air with new forms of destruction and terror?" To which science must plead guilty. But that is only another instance in which a good thing has been used for evil ends. The purest and most valuable instruments may be abused and perverted. A beautiful woman may become a gracious wife and mother, or she may become a harlot.

BUT has there been moral progress? That is the question that many people want to have answered. And it can be answered in a direct and positive way. Yes! There has been moral progress. Take liberty. The ancient world was built on slavery.

Slaves did all the manual toil. A Roman citizen once crucified two thousand slaves, setting up their crosses along the public highway. Formerly, tribes and nations kept to themselves and thought of all others as barbarians. Today there is a sense of oneness and solidarity among the nations that never existed before. Under the microscope a drop of white man's blood cannot be distinguished from the blood of a negro or Chinaman. Woman was in past times but a chattel. Not until the eighteenth century did she have the right to own property, not until the nineteenth was she allowed the guardianship of children, and not until the twentieth has she been permitted, to any great extent, the use of the ballot.

WHEN one turns to the criminal, he sees a transformation of methods. Two hundred years back, prisoners were subjected to the rack and thumbscrew, and the most fiendish modes of execution were practiced, such as breaking on the wheel, disemboweling and burying alive. The death penalty was imposed in England for more than a hundred offenses. Even in Pennsylvania, at the time of the Revolution, twenty crimes were punished with death. When one turns to the social conscience he sees a marked advance. Politics and business are conducted on a higher plane than was true a generation ago. Practices that were common then are now resorted to only under the cover of secrecy. It is now seen and admitted that wrong is wrong, whether committed by an Italian immigrant, or an American manufacturer who has made his "pile." Public opinion is, if anything, purer and more powerful. Railroad rebates, the hours of labor, child labor, protection from dangerous machinery, have all been the subject of legislation. Prohibition as a national measure has shown that there is a strongly developed conscience on a subject that was once laughed out of court.

WHEN we look at religious progress, there is equal cause for encouragement. Religious progress, it has often been said, is the only true progress. Inventions, modes of travel, are but the surface of life. The soul is the true index of the man. The man who rides behind a yoke of oxen and reads with a candle may be a happier man than the occupant of a private car, whose secretary is reading to him the jokes in the daily paper. For one thing, sectarian bigotry and jealousy are slowly giving way to a wider brotherhood and a broader view of truth.

Doctrine has not been consigned to limbo, but it has been translated into duty and service. The fact that the ministry now boldly challenges the right of capital to exploit labor, is something new under the modern sun. The spirit of the ancient prophets is alive once more. The fact, too, that the church has taken for itself the social creed of the broadest and most comprehensive nature, is a milestone of religious progress. As regards numbers, there are five hundred and sixty millions of nominal Christians, as against two hundred millions a hundred and twenty years ago. Voltaire's sneer that "Ere the beginning of the nineteenth century Christianity will have disappeared from the earth," may well give us cause to sneer at Voltaire. Not that the church has attained perfection, or that the world is sa yet a paradise. But the church is better and the world is better, and that is the answer to the question we asked. (Continued next week).



Bring to life the drowned profits of swamp land rich in plant food insuring abundant crops.



Drain Your Swamp Land the Modern Way with



NITROGLYCERIN DYNAMITE

MILLIONS of dollars of profits due to the farmers of this state are being drowned by a few inches of water. Start NOW to improve your idle and unproductive swamp lands. Drain off the water and make their wonderfully rich soil ready to produce crops. It's not a big job if it is done the right way.

Ditching with dynamite is the simplest, fastest and, in most cases, the cheapest method.

And to be sure of satisfactory results always use DuPont Nitroglycerin Dynamite. The careful supervision under which it is manufactured insures uniformity and maximum efficiency from each stick.

The "Farmers' Handbook of Explosives" gives complete instructions how to use DuPont Dynamite for blasting ditches, stumps, boulders and holes for tree-planting. For a FREE copy, write to us.

E. I. DU PONT DE NEMOURS & CO., INC.

Chicago, Ill.,
Arcade Bldg.

Duluth, Minn.,
Hartley Bldg.

GLOBE AUTO CUSHIONS

\$7.00 per pair divided




The Globe has been a well-known manufacturing company here for 45 years and its products are widely distributed. Goods Guaranteed. If not satisfactory your money refunded quickly.



For Ford Touring Car. Easy, durable. Prices: Divided, \$7 pair; Full for front or rear, \$6 each. Shipped by express upon receipt of price.

GLOBE FURNITURE COMPANY, Northville, Mich.

No. 1, Plymouth Ave.




COLONIAL SPECIAL FARMERS SALT

THE COLONIAL SALT COMPANY
Chicago, Ill. Buffalo, N. Y. Boston, Mass. AKRON, OHIO
Atlanta, Ga.

FOR STOCK SALT - USE COLONIAL BLOCK SALT

Don't be satisfied with ordinary salt in curing meats. Salt must dissolve to do its work.

Colonial Special Farmers Salt is soft, porous flakes that dissolve instantly and every flake cures. Penetrates quickly. Leaves no crust on the outside. Try it once. You will see the difference.





Most powerful stamp machine in the world. Capacity 480 tons, low easy draft or team, pulls vertical or horizontal on hills or valleys. Full facts. Send for catalog today.

Pontiac Industrial Works, Inc.
Pontiac, Mich.

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

Barn Paint \$1.35 Per Gallon
Get factory prices on all paints. We guarantee quality. We pay the freight.
FRANKLIN COLOR WORK, Dept. M, Franklin, Ind

POULTRY

Pullets Pullets

Good April hatched pullets. Will lay next winter when eggs are high and your hens are taking a rest.

It surely does not pay to keep poor quality old hens when they can be replaced at practically the same price, with our American English strain of bred to lay Single Comb White Leghorn pullets.

These pullets are produced from our own stock and are fully guaranteed.

Choice breeding cockerels and yearling hens. Price on application.

Macatawa White Leghorn Co.
R. 1, Ho'land, Mich.

Barred Rocks 8 to 12 week pullets, cockerels, hens and cock birds. Leading pen at M. A. C. for December averaging 22 eggs each. 1 pullet laid 27 eggs in both Dec. and January. 1 pullet laid 80 eggs in 91 days, winners at largest shows in state. Write for price list. G. Caball, R. 4, Hudsonville, Mich.

PULLETS

If you want some good Eight Weeks Old Pullets, write us for description of White and Brown Leghorns and also yearling hens.

Also we have a limited number of three months old pullets—White and Silver Laced Wyandottes, White and Barred Rocks, S. C. Reds and Buff Leghorns. Also Cockerels.

Let us make you a price on what you want.
STATE FARMS ASSOCIATION,
Desk 1, Kalamazoo, Mich.

CHICKS

Send your order in early for 1922 delivery. Our prices are always reasonable. We give you a square deal.

ROYAL HATCHERY,
R. 2, Zeeland, Mich.

APRIL COCKERELS
Winter Laying Pullets

Now three months old. White Leghorns in two grades, Brown Leghorns, Black Leghorns, Buff Leghorns, Rocks, Reds, Wyandottes and Black Minorcas. Write for prices.

Crescent Egg Company, Allegan, Mich.

DAY-OLD CHICKS

\$16.00 per 100 and up. Hatching eggs, \$2.00 to \$15.00 per setting and \$9.00 to \$15.00 per 100, from 25 varieties of pure bred, farm raised fowls: Chickens, Geese, Ducks, Turkeys and Guineas. Price list and circular free. Plenty of nice breeding stock. Book now for early spring delivery.
WILMINGTON HATCHERY & POULTRY CO. Wilmington, Ohio.

Barron White Leghorn Pullets. The greatest egg producers known. Large free range birds from 75c up. Robt. Christophel, R. 4, Holland, Mich.

Barred Rocks egg contest winners, eggs from strain with records to 290 a year. \$2.00 per setting prepaid by P. P. Circular free.
FRED ASTLING, Constantine, Mich.

Barred Rocks Hatching eggs from Parks 200-egg strain. Rich in the blood of Parks best pedigreed pens. \$2 per 15, \$6 per 50, \$12 per 100. Prepaid by parcel post in nonbreakable containers.
R. G. KIRBY, Route 1, East Lansing, Mich.

Quality Chicks Black Minorca, Light Brahma, 25c each. Barred Rock, R. 1, Red, 18c each.
Tyrone Poultry Farm, Fenton, Mich.

USEFUL ANCONAS June and lay before cold weather. Eggs half price July chicks \$3.50 per fifty, Hogan tested, beauty and utility combined. Specialty breeder S. C. Mottled Anconas. Send for booklet. (Useful facts about Useful Anconas). It is free. College View Farm, R. 3, Hillsdale, Mich.

Whittaker's R. I. Reds

Michigan's Greatest Color and Egg Strain. Chicks all sold. 50 good cock birds, either comb, at bargain prices for quick sale. Catalog free.
INTERLAKES FARM, Box 39, Lawrence, Mich.

HEASLEY S. C. Buff Leghorns, eight-week-old pullets and cockerels and breeding hens at bargain prices. Bred from officially certified egg bred winners, original Dr. Heasley flock. Chicks at special prices.
Henry DePree, R. 8, Box 137, Holland, Michigan

ING. and American W. Leg. \$8 per 100; Brown Leg. \$8 per 100; Mottled Anconas \$10 per 100; Barred Rocks \$12 per 100; Broilers \$7 per 100. All Single Comb. Safe arrival guar. Order direct from ad or send for catalog. Knoll's Hatchery, R. 3, Holland, Mich.

RHODE ISLAND WHITES win over all breeds at the egg laying contest. 30 eggs \$5; 50 \$8; 100 \$15 order from this ad. Some chicks.
H. H. JUMP, R. 5, Jackson, Mich.

S. C. Black Minorcas Eggs from No. 1 pen will be \$1.50 per setting of 15, for the bal. of the season.
R. W. Mills, Saline, Mich.

Single Comb Buff Leghorn hens and early hatched pullets and cockerels. Good laying strain.
Willard Webster, Bath, Mich.

Pullets and Breeding Stock 8 varieties, also ducks and geese. Send for prices.
BECKMAN, 26 E. Lyon, Grand Rapids, Mich.

White Leghorns English and American strains. Choice cockerels, hens and 8-week pullets \$1.40 each for 10 or more; special prices in 100 lots. Will ship O. O. D.
FRANK HEINZ, Box 6, Comstock Park, Mich.

WHITE WYANDOTTES 207 egg average; cockerels \$5 each, 3 for \$14, 6 for \$25.
FRANK DeLONG, R. 3, Three Rivers, Mich.

White Wyandotte and Barred Rock eggs, half price balance of season.
HOWARD GRANT, Marshall, Mich.

Please Mention The Michigan Farmer when writing to advertisers

Picking Profit Producers

(Continued from first page).

of laying, however, since then it has been found that the capacity of the hen is best determined by the distance between the keel bone and the pelvic bone, and the flexibility of the egg sack. Hens which are non-producers often have the keel bone and the pelvic bone so close together that it is hardly possible to get more than one finger between them. Good layers show plenty of room for four fingers. This space between the keel and pelvic bones indicates capacity for good digestion and it helps in the egg production. Depth from the back to the keel bone is also desired. The bird that is lacking there and is high on legs does not usually show capacity.

The quality of the egg sack is determined by examining that portion between the pelvic bones and the keel bone. On a good layer, this should be flexible and mellow to the touch and should feel full, warm and lifelike. On hens of the beefy type, this part of the anatomy, while developed, is hard and lifeless to the touch.

To properly determine the capacity and quality of the egg sack, the bird must be properly handled. Unless she is properly balanced in handling, incorrect conclusions might be derived. Hold her firmly in the right hand, balancing and supporting her weight by the fingers, while the thumb grasps the left thigh. Held in this way, the hen makes no effort to escape and the measurements for capacity and quality can easily be made with the left hand. The right leg should be free as otherwise a cramped condition of the abdomen may result and a proper determination could not be made. Mr. Foreman says that "capacity indicates the rate of yolk elaboration on the cycle of production, but the quality of the egg sack determines the rythm or the number of months the hen will be productive."

General observations will help much in selecting a productive hen. A busy, happy, singing hen is usually a productive one, and one which moults late is one which will usually fill the egg

respect we can fitly recall the expression, "Fine feathers do not always make fine birds."

There is every reason why the farmer who raises hens, and the most of them do, should become acquainted with this method of poultry selection. In practicing it he has everything to gain and nothing to lose. Whereas, by the old method he is virtually throwing money to the winds when he is feeding a lot of hens that produce losses instead of profits.

The method is not difficult to learn and after a little practice one can easily select from his flock the hens that will produce a profit for him. It is advisable for every one to avail him-



Culling Methods Apply to Males Also.

self of the opportunity to attend the numerous poultry culling demonstrations which are being held throughout the state. At these he can gain a knowledge of culling by actually doing it. During the coming years the cost of production will have to be seriously considered in all phases of farming as well as in other industries. This is an added reason why farmers should be anxious to become well acquainted with this method of poultry selection.

It is understood, of course, that poultry culling will not take the place of proper housing and good care. It only eliminates the waste of time and money in giving proper housing and good care to hens that will never produce a profit. On the other hand, it stands to reason that a hen which fills all of the good-laying requirements, unless she is given the food with which to produce eggs and a house in which to live that is sanitary and protects her from the elements, cannot do her full duty.

During the summer when the hens have opportunity to pick their living, care should be taken to give them sufficient extra feed to keep them in good shape. Egg production very frequently falls off during the summer, because the hens are not getting sufficient feed to maintain their bodies and produce eggs. An examination of many farm flocks would show that the hens are too thin to even be called normal.

A hen properly selected and properly cared for will produce as much for the time and trouble involved as anything on the farm.

EGG EATING HABIT.

My hens are eating their eggs. Is there any way of stopping them without killing them?
T. L. C.

Egg eating is very frequently found among hens that are idle. For want of something to do they start the habit. Improper feeding, or the accidental breaking of an egg in the nest may also start the habit.

To stop the habit, keep the hens busy; feed them plenty of egg-making material including oyster shell and

grit, and put their nests in dark places. A busy, well-fed hen rarely forms bad habits.

Some advocate the blowing out of an egg and the filling of the shell with red pepper. When the hen picks an egg thus fixed, it sometimes gets sufficient surprise and disagreeable effects to cure it.

If only one or two hens have the habit, it is advisable to kill them and then give the others good care.

MICHIGAN FAIR DATES 1921.

- Allegan Co., Allegan, Aug. 30-Sep. 3.
- Alpena Co., Alpena, Sept. 20-23.
- Antrim Co., Bellaire, Sept. 27-30.
- Arenac Co., Standish, Sept. 20-23.
- Armada, Armada, Oct. 11-14.
- Baraga Co., Baraga, Sept. 22-24.
- Calhoun Co., Marshall, Sept. 20-23.
- Caro Fair and Night Carnival, Caro, Aug. 22-27.
- Charlevoix Co., East Jordan, Sept. 12-17.
- Cheboygan Co., Wolverine, Sept. 27-30.
- Chippewa Co., Sault Ste. Marie, Sept. 27-30.
- Chippewa & Mackinac Dist. Agril. Society, Pickford, Oct. 3-5.
- Clare Co., Harrison, Sept. 20-23.
- Clinton Co., St. Johns, Sept. 6-9.
- Cloverland Farmers' Fair, Stephenson, Sept. 13-16.
- Copper Co., Houghton, Sept. 27-Oct. 1.
- Croswell, Croswell, Sept. 13-16.
- Delta Co., Escanaba, Sept. 13-16.
- Dickinson County Menominee Range Agril. Society, Norway, Sept. 2-5.
- Eaton Co., Charlotte, Sept. 27-30.
- Emmet Co., Petoskey, Sept. 6-9.
- Flint River Valley, Burt, Sept. 5-8.
- Fowlerville, Fowlerville, Oct. 4-7.
- Genesee Co., Davison, Aug. 29-Sept. 3.
- Gladwin Co., Gladwin, Sept. 13-16.
- Gogebic Co., Ironwood, Sept. 14-16.
- Grange Fair of St. Joseph County, Centreville, Sept. 19-24.
- Grangers', Gleaners', and Farmers' Fair, Big Rapids, Sept. 27-30.
- Gratiot Co., Ithaca, Aug. 30-Sept. 2.
- Greenville, Greenville, Aug. 23-26.
- Hillsdale Co., Hillsdale, Sept. 26-Oct. 1.
- Huron Co., Bad Axe, Aug. 30-Sept. 2.
- Imlay City, Imlay City, Oct. 4-7.
- Ionia Free Fair, Ionia, Aug. 16-19.
- Iosco Co., Tawas City, Sept. 29-Oct. 1.
- Iron Co., Iron River, Sept. 20-23.
- Isabella Co., Mt. Pleasant, Sept. 12-17.
- Jackson Co., Jackson, Sept. 12-17.
- Lenawee Co., Adrian, Sept. 19-23.
- Livingston Co., Howell, Aug. 30-Sept. 2.
- Luce Co., Newberry, Sept. 13-15.
- Mackinac Co., Allenville, Oct. 10-12.
- Manistee Co., Bear Lake, Sept. 27-30.
- Marquette Co., Marquette, Aug. 30-Sept. 2.
- Mason County Central Fair Association, Ludington, Sept. 15-17.
- Michigan State Fair, Detroit, Sept. 2-11.
- Midland Co., Midland, Sept. 20-23.
- Missaukee Co., Lake City, Sept. 7-10.
- North Branch, North Branch, Sept. 20-23.
- Northwestern Michigan Fair Association, Traverse City, Sept. 19-23.
- Northern District Fair, Cadillac, Sept. 13-16.
- Northeastern Michigan, Bay City, Sept. 12-16.
- Oakland Co., Milford, Sept. 14-17.
- Oceana Co., Hart, Sept. 20-23.
- Ogemaw Co., West Branch, Sept. 7-9.
- Otla, Otla, Sept. 16-18.
- Otsego Co., Gaylord, Sept. 6-9.
- Ottawa and West Kent, Berlin, Sept. 27-30.
- Presque Isle, Millersburg, Sept. 14-16.
- Saginaw Co., Saginaw, Sept. 12-17.
- Sanilac Co., Sandusky, Sept. 6-9.
- Schoolcraft Co., Manistique, Sept. 6-9.
- Shiawassee Co., Owosso, Aug. 23-26.
- South Ottawa & West Allegan, Holland, Sept. 13-16.
- Stalwart, Stalwart, Oct. 6-7.
- Tri-County Fair, Buckley, Sept. 6-9.
- Tuscola, Huron and Sanilac District Fair, Cass City, Aug. 15-19.
- Van Buren Co., Hartford, Sept. 27-Oct. 1.
- Washtenaw Co., Ann Arbor, Sept. 21-25.
- Wayne Co., Northville, Sept. 28-Oct. 1.
- West Michigan Fair, Grand Rapids, Sept. 19-23.

Stock Farming

WHAT DR. McCOLLUM SAYS.

MR. McCOLLUM makes the point that although vegetable fats may be wholesome they do not have the vitamins which are essential to animal growth. He cites the history of the human family to show that the survival of civilization and the dominance of great races has been due more largely than we have supposed to the influence of outstanding food habits. He said that consumption of large quantities of dairy products has been characteristic of the most successful peoples of ancient and modern times. Experiments which he has conducted for more than fifteen years, he said, have shown conclusively that the vegetable oils do not have the growth producing elements and that the substitution of vegetable fat for butter-fat in the preparation of bogus milks is harmful to the extent which the vegetable fat displaces the butter-fat. The harm done is through lack of an essential element in animal growth rather than to the products being unwholesome.

MICHIGAN COW BREAKS RECORD.

THE Jersey cow, Jacoba's Golden Melia Ann, produced 12,197 pounds of milk, yielding 730 pounds of butter-fat; starting official year's test at four years and eleven months. During this test she carried a living calf 259 days, qualifying her for a gold medal given by the American Jersey Cattle Club. At two years and ten months she produced 9,339 pounds of milk and 554 pounds of butter-fat. She is owned by C. E. George, Union City, Michigan.

THE GOOD LOSER IN THE SHOW RING.

IN any given class of cattle, only one man can win first place. When there are many entries, and the competition is close, it is an honor to win first, but by no means a disgrace to get second or third, or elsewhere in the money.

In the ten years or so that I have followed the great fair circuits I have seen many reputations made and some unmade, because of the possession, or else the lack of, that American quality known as sportsmanship.

Everybody respects the hard, conscientious worker in the show ring, and everybody wishes him well, but nobody likes the poor loser; his competitors will have none of him, while even the onlookers who know nothing about the fine points of the game have an instinctive dislike of the man who is always "beefing" with the judge about something.

There is the man who kicks on general principles. I know a showman of national reputation, for he is an A-1 live stock man—who never concedes defeats, but will "razz" the judge on almost every decision. Judges have told me it is pretty hard, sometimes, to see the good points of that man's stock, merely because the owner is so disagreeable.

Practically all of the big live stock judges are scrupulously honest, or they would soon fade from the scene. Yet I have seen showmen of experience who ought to have known better, constantly question the good faith of the judges before whom they showed.

"I've got a fine string this year," I have heard them say, "but with M—as judge, what chance have I got? He will throw everything to Z—."

Judges hear of these things, and everything else even, will throw the breaks to the other man.

One of the best known showmen of my acquaintance has been very successful in competition with the crack herds of his breed in the country. He has one song, however, which annoys fellow breeders and judge very much, and that is, the rich showmen get all the best of it. Judges just naturally favor the man with money.

Now it is my impression that the average judge cares more for his reputation than he does for the money in the game, and honestly tries to pin the ribbons on the best animals. Sometimes he makes a mistake, and no one regrets this more than the judge himself.

I have also found the showman who tries to "work" the judge in every possible way, from asking newspaper friends to put in a good word privately to "seeing" the judge before the animals are let into the ring. Direct bribery is seldom resorted to, but most judges are affronted almost as much by the gently insinuating kind of showmen as by the bolder type of wire puller.

The fieldmen and breeders are quick to notice the little "tricks" of any showman, and if these border on the unsportsmanlike, a lot of unfavorable underground advertising is sure to result. The man who does his level best, who can take a really bad decision with a smile, is winner in the end. The man who builds up a reputation for trickiness, in the long run will be left holding the sack. The American public still appreciates the true sport.

W. A. FREEHOFF.

GETTING RID OF RATS.

I HAVE finally gotten rid of rats. This is what did the work: Three cups of corn meal, three teaspoons of plaster paris. Stir together and then put away in a dark place in a pan. Place pan underneath a box with a hole in it just large enough for a rat to enter. Have the box with boards on all sides as though you did not want the rats to get in and you'll find that they will get the corn meal. Be careful that no chick or animal can get the corn meal prepared this way, as it will bake in their stomachs and kill them as it does rats.—H. J. HART.

PROFESSOR WARREN TO SERVE AS SPECIAL ADVISOR TO CHIEF OF BUREAU OF MARKETS.

PROF. G. F. WARREN, of Cornell University, has been especially requested by Secretary Wallace to serve as consulting specialist to the chief of the bureau of markets and crop estimates during the reorganization and consolidation of the bureau. Professor Warren has accepted the position and has been granted leave of absence from Cornell until February 1, 1922. He will enter upon his duties at an early date. In studying the reorganization he will give special attention to the division of the bureau which will deal with the agricultural competition and demand in foreign countries. Professor Warren, who is one of the leading agricultural economists in the United States, is the author of a number of books on agricultural subjects. He has been connected with Cornell University for a number of years, and has served as professor of agricultural economics and farm management since the year 1911.

A dairy farm should have a silo, and a farm that can afford a silo can afford a bathroom.

Did you do it? What? Let your son in as a partner in the farm business.



Buy a pipe — and some P. A. Get the joy that's due you!

We print it right here that if you don't know the "feel" and the friendship of a joy'us jimmy pipe —GO GET ONE! And—get some Prince Albert and bang a howdy-do on the big smoke-gong!

For Prince Albert's quality—flavor—coolness—fragrance—is in a class of its own! You never tasted such tobacco! You never dreamed such smoke joy could be yours! Why—figure out what it alone means to your tongue and temper when we tell you that Prince Albert can't bite, can't parch! Our exclusive patented process fixes that!

Prince Albert is sold in tippy red bags, tidy red tins, handsome pound and half pound tin humidors and in the pound crystal glass humidor with sponge moistener top.



Copyright 1921 by R. J. Reynolds Tobacco Co. Winston-Salem, N. C.

PRINCE ALBERT
the national joy smoke

3 Record Holders
Wood Silos - Tile Silos - Silo Fillers

The Kalamazoo is the only wood silo made that holds record of 30 years service without a flaw. We make both wood and tile. Special construction keeps silage in most nutritious condition; no waste. Kalamazoo Cutters are the world's standard. None better in any way.

Kalamazoo
Facts FREE. Write TODAY
Send for these silo and cutter books. They are an education in such matters. Don't buy a silo or cutter until you have read them. Read about the matchless Center Shear cut on Kalamazoo Ensilage Cutters. It's all in the free books. Write today.

KALAMAZOO TANK & SILO CO.
Dept. 323 Kalamazoo, Mich.

Send Name for These Silo and Ensilage Cutter Guides

(Accent on the "pay")

\$170 PAPEC
SILAGE CUTTER

A PAPEC for \$170!—because it's best-liked and biggest-selling. Hence big production—low manufacturing cost to us, low buying price to you. Regular R-10; latest model; 10" throat; capacity 2 to 5 tons per hour; 3/4, 3/8, 3/4 and 1" cut; operated by 3 to 6 h. p. gas engine; complete on legs with self-feed table, indestructible cutting wheel, 30 feet of blower pipe with malleable collars, curved elbow for top, extra set of knives—only \$170 (\$185 on 2-wheel truck, \$200 on 4-wheel truck) f. o. b. Toledo, Ohio, or Grand Rapids, Michigan. Read this—

"We guarantee any Papec Cutter to throw and blow ensilage perpendicularly to the height of any silo, with any power, provided the speed of the cutting wheel does not fall below 600 r.p.m. We also guarantee that any Papec Cutter will cut and elevate more ensilage with the same power than any other blower cutter."

Banting Mfg. Co., Toledo, Ohio, Distributors
If you need a larger cutter than R-10, write today for catalog, prices and terms. Big reductions on all sizes.
Papec Machine Co., Mfrs., 150 Main St., Shortsville, N. Y.

supreme with men who know

BREEDERS' DIRECTORY

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

THE HOME OF

Imp. Edgar of Dalmeny
Probably
The World's Greatest Breeding Bull

Blue Bell, Supreme Champion at the Smithfield Show 1919, and the Birmingham Show 1920, is a daughter of Edgar of Dalmeny.

The Junior Champion Bull, Junior Champion Female, Champion Calf Herd and First Prize Junior Heifer Calf, Michigan State Fair, 1920, were also the get of Edgar of Dalmeny.

A very choice lot of young bulls—sired by Edgar of Dalmeny are, at this time, offered for sale.

Send for Illustrated Catalogue.

WILDWOOD FARMS
ORION, MICHIGAN

W. E. SCRIPPS, Prop. Sidney Smith, Supt.

CLOVERLY ANGUS

Cows and Heifers Bred to Blackcap Brandon of Woodcote 2nd For Sale

GEO. HATHAWAY & SON, Ovid, Mich.

REGISTERED Aberdeen-Angus. Ten heifers, six bulls from eight to fourteen months. Best of breeding, the growthy kind that make good. Reasonable. Inquire F. J. WILBER, Ohio, Mich.

Reg. Aberdeen Angus

bulls and heifers of the very best of breeding, from 12 to 15 months of age. For next 30 days will price bulls at \$100.00. Real bargains. Inspection invited. RUSSELL BROS., Merrill, Mich.

Registered Guernseys—\$100 buys the last bull we have, old enough for light service—it will pay you to find out more about this fellow. No reactors—no abortion—a clean herd. J. M. WILLIAMS, No. Adams, Mich.

GUERNSEYS—REGISTERED BULL CALVES Containing blood of world champions. HICKS' GUERNSEY FARM, Saginaw, W.S. Mich.

Guernsey bulls, grandsons of Carrie of Hillhurst 3rd A. A. Class Leader, and out of cows on test. Also a 2 yr. old out of a 3 1/2 yr. old with a 500 lb. record. Priced to sell. Federal tested. Satisfaction guaranteed. G. W. and H. G. RAY, Albion, Mich.

For Sale Two reg. Guernsey cows four years old, just fresh. Two Reg. heifers, one yearling, and one two months old. PERCY ANDERSON, R. 3, Fremont, Mich.

Guernsey Females of superior breeding, at reduced prices. Tuberculin tested. Send for sale list to day. G. A. WIGENT, Watervliet, Mich.

For sale. Five Guernsey heifers. 3 registered, 2 eligible. Ages 3 to 15 months. One bull calf eligible to register. W. D. KAHLER, Jones, Mich.

WinnWood Herd

Registered

Holstein-Friesian Cattle

We breed them to sell. If you are looking for seed stock, we have it.

John H. Winn, [Inc.]
Rochester, Mich.

Holstein Friesian heifer and bull calves, purebred registered and high-grade. Price \$20 up. Splendid individuals and breeding. Write us your requirements. Browncroft Farms, McGraw, N. Y.

Reg. Holsteins for sale at all times either sex. Bulls or heifers, prices reasonable. Write or come and see them. HENRY S. ROHLFS, R. 1, Akron, Mich.

"Top Notch" Holsteins

Buy a "milk" Bull of Quality from the Breeders of the world's only cow to produce 800 lbs. milk in 7 days, having an 800 lb. daughter. Our herd is rich in the blood of Colantha 4ths Johanna, the only cow that ever held all world's records in every division from one day to one year at the same time. She produced 661.70 lbs. milk in 7 days. We are offering for sale a bull, whose dam exceeds this record by over 7 1/2 lbs. in 7 days.

His dam's records are: Milk 1 Day 100.1 lbs. Milk 7 Days 659.3 lbs. Butter 7 Days 26.31 lbs.

His name is KING VALE CORNUCOPIA WAYNE, No. 312599 Born February 6, 1920

His dam and sire's two nearest dams average Butter 7 Days 33.02 lbs. Milk 7 Days 607.3 lbs.

Handsomely marked about one third white. \$250.00 f. o. b. Howell.

McPHERSON FARMS CO., Howell, Mich. All herds under U. S. Supervision.

A Good Note accepted in payment of finely bred registered Holstein bull calves. Quality of the best, and at prices within reach of all. Write. GEO. D. CLARKE, Vassar, Mich.

A Proven Blood Line

KING SEGIS transmitted to his sons the power to transmit to their daughters the greatest of production over long periods. It is his offspring that has recently made the greatest yearly production ever dreamed of, 37,881.4 pounds of milk in a year. We have for sale at moderate prices. Beautiful individuals of show type KING SEGIS BULLS.

GRAND RIVER STOCK FARM, 315 N. East Ave., Jackson, Mich. C. J. Spencer, Owner, Under State and Federal Supervision

THURSDAY, AUG. 18, 1921
Big Type Poland Chinas

40—Double Immune—40
20 bred sows 15 fall and spring boars

A few open sows with breeding privilege to the 1100 lb. Big Bone Defender, and Great Monster, a great yearling prospect. Parties coming by New York Central will be met at Sturgis, on the G. R. and I. at Nottawa. Sale at Farm beginning 1 P. M.

Some great attractions.

Write for Catalogue.

E. J. MATHEWSON, Burr Oak, Mich.
Auc. Ed. Bowers, Wm. Waffle

O. I. C. HOGS

all ages sired by Callaway Edd 1918 world's grand champ. boar and C. C. Schoolmaster 1919 world's grand champion also Wonder Big Type and Giant Buster. Write your wants, all stock shipped on approval.

CRANDELL'S PRIZE HOGS, Cass City, Mich.

The Traverse Herd

We have what you want in BULL CALVES, the large, fine growthy type, guaranteed right in every way. They are from high producing A. R. O. ancestors. Dam's records up to 30 lbs. Write for pedigrees and quotations, stating about age desired.

TRAVERSE CITY STATE HOSPITAL
Traverse City, Mich.

7 Yearling Bull Bargains

Sired by Segis Korndyke De Nijlander a 32 lb. son of a twice Michigan ribbon winner, her dam, 29 1/2 lbs. Dams are daughters of King Segis Pontiac, a 37 lb. son of King Segis. Records 16 lbs. to 20 lbs. Priced at half value, \$100 up. Federally tested June 10. Write for list. ALBERT G. WADE, White Pigeon, Mich.

Reg. Holsteins and Berkshires, most any age, either sex, priced according to other commodities. Write or come. B. B. REAVEY, Akron, Mich.

Herefords

20 Cows of extra quality and breeding, 12 of them bred to our \$5200.00 son of Old Repeater, also bulls not related.

Allen Bros. Paw Paw, Mich.
or 616 So. Westnadge Ave., Kalamazoo, Michigan

Registered Jersey bulls, some ready for service, sired by Oxford's Champion Fox 168881, out of Oxford Daisy's Princess. Register of Merit record 831 lbs. milk; 466 lbs. butter with first calf, milked 50 lbs. per day with second calf. Sister to Sadies Crown Princess 16578 lbs milk, 1081 lbs. butter in one year. The dams of these bulls are high producers, many of them are prize winners. Prices very low, quality considered. C. S. BASSETT, Kalamazoo, Mich.

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

The Wildwood Farm

Jersey Cattle, Majesty strain, Herd on State accredited list, R. of M. testing constantly done. Bulls for sale. ALVIN BALDEN, Phone 143-5, Capac, Mich.

Thorobred Jersey Bull Calves Hood Farm breeding, State and Federal accredited list, \$25.00 each. Also one yearling bull ready for service. Pedigrees on request. I. W. JAYNE & BEN BRAWT, Fenton, Mich.

Lillie Farmstead Jerseys Bull calves from R. of M. cows. COLON C. LILLIE, Coopersville, Mich.

Jersey Bulls For Sale ready for service from R. of M. dams. T. B. tested. Will give time. SMITH & PARKER, R. 4, Howell, Mich.

Registered tuberculin tested, Jersey bull, one year old. Show animal, best of breeding. Mrs. Claudia Betts, Hillsdale, Mich.

BIDWELL SHORTHORNS BUY A BULL

that will put weight on your dairy calves—the difference will soon pay for the bull. Now selling good Scotch and Scotch-topped yearlings, reasonably priced. We guarantee every animal to be a breeder. Federal Test. One hour from Toledo, Ohio, N. Y. C. R. E.

BIDWELL STOCK FARM, Box D, Tecumseh, Michigan

Richland Shorthorns

We offer a few choice Scotch heifers with calves at foot. This is good foundation stock and the calves are all from top sires. Prices reasonable. Write your wants and see the cattle.

C. H. PRESCOTT & SONS, Office at Tawas City, Mich., Herd at Prescott, Mich.

The Maple's Shorthorns

Kirklevington Lad, by Imp. Hartford Welfare, in service. Stock for sale.

J. V. WISE, Gobleville, Mich.

Shorthorns. Bull calves for sale from the best milking blood obtainable. ROSEMARY FARMS, Williamston, Mich.

BUY SHORTHORNS of Central Michigan Breeder's Association at farmers' prices. Write for sale list to M. E. Miller, Sec'y, Greenville, Mich.

Shorthorn cow 3 yrs. old white due in Nov. to IMP. ROYAL PIONEER. J. A. BARNUM, Union City, Mich.

Shorthorn Bull For sale. Fames Pride 24732. Two yrs. old nice roan with star in forehead. Very gentle and a fine specimen of the breed. Price \$225.00. W. E. BARTLEY, Alma, Mich.

We now have **FIVE BRED HEIFERS** that we will sell cheap if taken at once. Inquire about them or better come and see them. CARR BROS. & CO., Bad Axe, Mich.

Francisco Farm Shorthorns

and BIG TYPE POLAND CHINAS. Now offering 3 heifers, 2 bulls, all Scotch. Sows to farrow in Aug. and Sept. Spring pigs, 60 head to choose from. FOPE BROS. CO., Mt. Pleasant, Mich.

Reg. Red Polled cattle, herd headed by Famous RCharmar 75 same blood as Charmar 1919 Int. Gd. Champion. Herd State and Fed. tested. No cattle for sale at present. Westbrook Bros., Ionia, Mich.

HOGS

Place Orders NOW

for BERKSHIRE boars or sows 6 to 8 weeks old Reg. and Trans. and delivered any where in Mich. for \$15. or a fine large bred sow at \$40.00. I also have an exceptionally fine 400 lb. boar for sale at \$40.00. He is a dandy and anybody in the market for him should never pass this up. He is a good one. O. H. WHITNEY, Merrill, Mich.

Berkshire spring pigs, either sex, \$10, \$12 and \$15 according to age. Also fall gilts and yearling sows. CHASE STOCK FARM, Marlette, Mich.

Brookwater Duroc Jerseys
FALL BOARS OPEN GILTS

All of the right type and the best of breeding. Prices reasonable. Mail orders a Specialty. Satisfaction guaranteed. BROOKWATER FARM, Ann Arbor, Mich. H. W. Mumford, Owner J. B. Andrews, Mgr.

DUROC JERSEYS: A few choice bred gilts for sale. CAREY U. EDMONDS, Hastings, Mich.

Duroc Jerseys

Gilts bred for fall farrow at reasonable prices. RUSH BROS., Oakwood Farm, Romeo, Mich.

Write Me at once I have just what you want heavy bone registered Duroc Jersey boars ready for service. W. H. MAYES, L. B. 505, Durand, Mich.



Spring pigs by Walt's Orion, First Sr. Yearling Detroit, Jackson, Gd. Rapids and Saginaw 1919
Phillips Bros, Riga, Mich.

Collinsdale Duroc Jerseys
Lyons, Mich. R. 1, L. A. Burhans, Owner

Herd Boars Wolverine Pathfinder by Pathfinder Wolverine Sensation by Great Orion Sensation. Wolverine Renown Wonder by Great Wonder IAM Fall boar and gilts by the Sensation boar. 100 spring pigs from these boars. Herd Sows breeding O. C. K., Pathfinder and Big Bone Giant.

Duroc Bred Gilts

for Sept. farrow from prize winning stock, at \$25 and \$35. Spring boar and sow pigs of Orion Cherry King, Col., and Pathfinder breeding. W. C. TAYLOR, Milan, Mich.

DUROCS A few choice, ready for service, boars for sale. HARRY FOWLER, Sturgis, Mich.

Woodlawn Farm Duroc hogs are from select breeding stock, well mated for size, type and color. Herd boars, sows and pigs, will ship C.O.D. and furnish Reg. certificate. W. E. Bartley, Alma, Mich.

Duroc Jerseys Am booking orders for spring pigs. Few fall gilts. E. D. HEYDENBERG, Wayland, Mich.

DUROC SOWS and gilts bred to Orion King No. 169259 Son of the \$10,000 boar owned by Longview Farm, Le Summit, Mo. also young boars ready for service out of good sows. Apply THE JENNINGS FARM, Bailey, Mich.

Sows Bred to Michigan Orion Sensation (a great son of Great Orion's Sensation) and Michigan Demonstrator (one of largest and best boars in Michigan) for sale at conservative prices. Also growthy strong boars and gilts. Michigan Farm, Pavilion Mich., Kalamazoo, Co.

Cooling Milk Pays

BECAUSE of the present high prices of raw material, labor and foodstuffs, every farmer is striving to make the most from his farm by economical production and increased efficiency in farm management. This is especially necessary because the margin of profit is an extremely narrow one. We know of no way whereby the selling price can be increased more in proportion to the cost than by raising the quality of the product.

The quality of milk depends greatly upon the method of production or handling. No matter how carefully the milk is drawn from the cow there are always some bacteria in it; and these at ordinary temperatures develop very rapidly. These minute one-celled forms are so small that a drop of milk may contain millions. They grow very rapidly at a temperature of sixty to ninety degrees Fahrenheit, and require food and moisture like higher forms of plant life. Milk furnishes an ideal medium for bacterial growth and unless controlled by some means they will grow or multiply with great rapidity.

There are several methods of keeping down bacterial growth in milk. Cooling is a very economical and practical way which all farmers can practice with successful results, making a more desirable product for the consumer, as well as making one that is more profitable for themselves.

Cooling or even freezing the milk does not kill bacteria, but retards their growth. If milk that has been kept sweet or at the desired degree of acidity is allowed to become warmed, the bacteria which have been kept dormant will at once resume their growth. This explains why milk and cream should be kept thoroughly chilled, and never allowed to warm up until used. The process of cooling milk or cream checks the bacterial growth, and but few organisms thrive at a temperature below fifty degrees F. However, it is very important that the milk immediately after it has been drawn be cooled to fifty degrees F., or as much lower as circumstances permit. The importance of immediate cooling was shown by Dr. Conn in his experiments. He demonstrated that at a temperature of fifty degrees F. bacteria in milk multiply five times in twenty-four hours, while at seventy degrees they multiply 750 times in twenty-four hours. Milk may be kept sweet for quite a while at forty to forty-five degrees F. because the lactic acid bacteria or the principal bacteria that cause the souring of milk, practically stop growing at these temperatures. But dependence cannot be placed on these temperatures, as there are many other classes of bacteria that can grow at these temperatures and produce undesirable effects.

Shortly after the warm milk is drawn from the cow bacteria start their rapid progress of development, and many times the milk is allowed to remain in the cow barn until milking has been completed. This may require an hour or more, depending upon the number of cows to be milked and the efficiency of the milking system. A few hours' delay in cooling reduces the keeping quality of the milk to a far greater extent than many people suppose. Not only the bacteria are very undesirable, but the butter-fat in the warm milk has the power of absorbing outside odors which impair the value of the milk to such an extent that it is not desirable to be put on the market. Many gases and odors can be removed by aeration or exposing the milk in thin films to the atmosphere. Fortunately, the construction of modern coolers is such as to make it possible to do the cooling and aerating in one operation. Dairymen



ROYSTER'S FERTILIZERS FSR

Will Help You Lower Your Costs

The wheat-grower who wants more profit will find it by better methods of farming, making his land and his labor produce more. How to get the big yields that make for lower costs is interestingly told in "Wheat Growing for Profit" a book you may have by writing for it. Everything clearly and plainly described from preparing the land to the threshing. Scientific but practical.

---MAIL COUPON TODAY---

F. S. ROYSTER GUANO CO.
Dept. B-15 Toledo, O.
Please send me your free Wheat Book.

Name
Address

Do Your Own Shredding



with a **ROSENTHAL Corn Husker and Shredder**

Most economical and satisfactory way of handling your corn crop. No delay, no extra help. Do it in your own spare time. Two sizes for individual use, 8 to 15 h. p. Also make two larger sizes for custom work. Over 25 years in the field. Write for catalog and prices, also useful Souvenir **FREE**. State H. P. of your engine.

Sold on trial. You take no risk.

ROSENTHAL CORN HUSKER CO.
Box 2 Milwaukee, Wis.
Also Makers of Ensilage Cutters and Silo Fillers

\$54.00 PUTS THIS NEW MILL ON YOUR OLD TOWER

ALBION

Albion steel and wood mills are quiet and powerful. One-third the working parts of any other mill. Only main Pitman bearing subject to wear. This is oilless, and easily replaceable. Governed by dependable weight without springs. Fits any 4-post steel tower. Why not shorten your chore hours now with a good Windmill? This is your chance—an Albion direct from the manufacturer, fully guaranteed. Write today for catalog.

Union Steel Products Co. Ltd.
No. 523 N. Berrien Street,
ALBION, MICHIGAN, U. S. A.

MOST POWER-LEAST COST

2 H.P. WITTE

PULLS 2 1/2 INCHES

For H.P.—Price Quality—the best buy of all. Costs less than smaller engines—more power. All sizes or Terms. Lifetime Guarantee. (From Pittsburgh, Pa. 36 More)

\$39.95 F.O.B. K.C.

WITTE ENGINE WORKS,
2195 Oakland Ave., Kansas City, Mo.
2195 Empire Bldg., Pittsburgh, Pa.

Best Wire Fence On the Market

Lowest Price—Direct to User

Not hundreds of styles Nor millions of miles, But satisfied smiles From every customer.

Bond Steel Post Co.
16 Maumee Street Adrian, Michigan

would do well to consider what they expect to accomplish by aeration and cooling. Odors will be removed by aeration, but the milk must be aerated while it is yet warm. The so-called cow odors are removed in the best and quickest way by keeping manure out of milk. Cooling and aerating should always be conducted in a clean cool room which is free from all dirt and contamination.

There are several types of coolers on the market but not all of these could be used economically by the farmer; many farmers who retail their milk cool it with a cone-shaped cooler, the inner part being filled with ice water and the tank or milk receiver at the top has small openings at the bottom near the outside through which the milk discharges in fine streams directly upon the cone below, which is cooled by the ice water. The milk is then drawn off at the bottom of the cone and stored in a cool place until needed.

Another economical and practical way of cooling milk and cream is to place the containers into a tank where cold water is pumped into it in such a way as to enter the bottom, forcing the warm water out at the top. Water should be pumped into the tank at frequent intervals in order to keep the containers of milk and cream at as low a temperature as is possible.

Lowering the temperature of milk and cream tends to keep down the bacterial count, keeping the milk sweet and avoiding the great loss by souring, as sour milk or milk high in bacteria will not be as valuable to the producer or sell on the market for as high a price as the low-count milk produced under favorable conditions.

C. R. STULL.

Veterinary.

CONDUCTED BY DR. W. C. FAIR.

Advice through this column is given free to our subscribers. Letters should state fully the history and symptoms of each case and give name and address of the writer. Initials only are published. When a reply by mail is requested the service becomes private practice and \$1 must be enclosed.

Gargety Milk.—I have a cow that gives a great flow of milk, but I find matter-like substance in separator. Tell me what it is and if fit for use. F. J. W. Saranac, Mich.—Give cow a tablespoonful of fluid extract of phyto-lacca in feed or in drinking water two or three times a day. Give her a teaspoonful of hyposulphite of soda in feed daily, until she is well. No particular risk in using her milk. I suggest a change of feed.

Laminitis.—We have cow that came fresh five weeks ago. Since then she has been sore and lame in both fore feet, or shoulders. When standing she stretches some, placing fore feet well in front of body. She is with calf. E. H., New Haven, Mich.—Stand her in wet clay, or poultice fore feet with clay, is about all you can do for her.

Cows Eat Wood.—Can you tell me why my cows chew and eat wood? R. M., Romeo, Mich.—You have failed to feed them a balanced ration. Grass is the best food for them. If you feed them ground grain, mix with it plenty of powdered wood charcoal and baking soda.

Infected Joint.—I have a colt that sprained her ankle some two years ago. This is what our local veterinary tells me happened to her. Every few weeks leg swells and opens above the knee. Before the bunch opens, she is lame; bloody-looking stuff runs from the wound for a few days, then leg heals and may not open for two or three months. S. R. B., Gobleville, Mich.—You will obtain best results by painting bunch with tincture of iodine three times a week.

Slavering.—I have a ten-year-old mare that is inclined to slaver. Our veterinary examined her teeth, he says they are all right. C. R., St. Louis, Mich.—Wash her mouth with salt and water, a teaspoonful to each pint three times a day. It is very likely caused by the food she eats, therefore I would suggest a change.



GET YOUR DE LAVAL NOW

There was never before as good a time to buy a De Laval Cream Separator as right now.

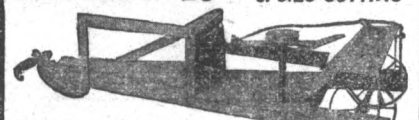
The "Dog Days" are at hand when dairying is most difficult without a separator and when the increase in quantity and improvement in quality of cream and butter are greatest through the use of a good separator.

A De Laval Cream Separator bought now will easily save its cost before the end of the year, and it may be bought for cash or on such liberal terms as to actually pay for itself.

The De Laval Separator Co.
NEW YORK CHICAGO
165 Broadway 29 E. Madison St.

The PERFECT CORN HARVESTER

Sold Direct \$23.50 JUST THE THING FOR SHOCK or SILO CUTTING



Works in any kind of soil. Cuts stalks, doesn't pull like other cutters. Absolutely no danger. Cuts Four to Seven Acres a Day with one man and one horse. Here is what one farmer says: WORKS IN ANY KIND OF CORN IN ANY SOIL.

Gentlemen:—The Corn Harvester worked fine in medium corn on sandy land. Although I am an old man 65 years old, I cared for ten cows and cut 150 shocks a day. I recommend your machine for work in any kind of corn in any soil. Yours truly, SILAS SHALLENBARGER Colon, Mich.

SOLD DIRECT TO THE FARMER
Send for booklet and circulars telling all about this labor-saving machine; also testimonials of many users. LOVE MANUFACTURING COMPANY Dept. 1 Lincoln, Illinois

ABSORBINE

TRADE MARK REG. U.S. PAT. OFF.

Will reduce Inflamed, Strained, Swollen Tendons, Ligaments, or Muscles. Stops the lameness and pain from a Splint, Side Bone or Bone Spavin. No blister, no hair gone and horse can be used. \$2.50 a bottle at druggists or delivered. Describe your case for special instructions and interesting horse Book 2 R Free.

ABSORBINE, JR., the antiseptic liniment for mankind, reduces Strained, Torn Ligaments, Swollen Glands, Veins or Muscles; Heals Cuts, Sores, Ulcers. Allays pain. Price \$1.25 a bottle at dealers or delivered. Book "Evidence" free. W. F. YOUNG, INC., 268 Temple Street, Springfield, Mass.

HOGS Auction Sale of Duroc-Jersey Hogs AUGUST 18, 1921

consisting of 35 Bred Sows and Gilts and 15 Boars. Send for catalogue at Chaslen Farms, Northville, or Thos. Underhill & Son, Salem, Mich. Sale at 1 o'clock at Fair Ground, Northville, Mich.

Duroc Jerseys A few extra good fall boars, and a choice lot of spring boars of the heavy boned type popular blood lines at reasonable prices. DROTT & BERNS, Monroe, Mich.

Chester Whites Choice March boars; new blood for old customers; cholera immuned; price right. F. W. Alexander, Vassar, Mich.

Chester Whites A few choice spring gilts and boars left. GEORGE D. SPRINGER, R. 6, Grand Rapids, 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 those fine early developers—ready for market at six months old. Write for my plan—More Money from Hogs. G. S. BENJAMIN, R. F. D. 10, Portland, Michigan

O. I. C's. Last fall gilts bred to farrow in Aug. boars for service, also spring pigs for sale. MILO H. PETERSON, Ionia, R. 2, Mich., Elmhurst Farm.

O. I. C's Choice gilts for April and May farrow, also fall pigs. Booking orders for spring pigs. A. J. BARKER & SON, Belmont, Mich.

O. I. C. Swine Strictly Big Type with quality. A few gilts bred for last of April, and May farrow. A few Sept. and Oct. fall pigs either sex. Extra good ones. Of our State Fair prize winning blood lines. Will ship C. O. D. and record them free. NEWMAN'S STOCK FARM, R. 1, Marlette, Mich.

O. I. C's. one yearling boar, last fall gilts bred for next fall farrow; this spring pigs not akin, big growthy stock, reg. free. City's phone. 3/4 mile west of Depot. OTTO B. SCHULZE, Nashville, Mich.

O. I. C's. Special prices on spring pigs from prize winning stock. Must be sold to make room. WEBER BROS. Phone R. O. 48, 10 mile Rd. W., Royal Oak, Mich.

Central Mich. O. I. C. Swine Breeders Ass'n.

Hogs of all ages of popular blood lines. Every sale guaranteed by association.

DR. H. W. NOBLES, Coral, Mich. Sales Mgr.

O. I. C's. Special prices on choice pigs of March and May farrow by C. C. Big Callaway. O. J. Thompson, Rockford, Mich.

O. I. C's choice boars and spring pigs at farmers prices. CLOVER LEAF STOCK FARM, Monroe, Mich.

O. I. C. GILTS Bred for June and July farrow. H. W. MANN, Dansville, Mich.

L.T.P.C. \$15, \$20 & \$25

Our top notch stretchy boar pigs are weaned and ready to ship. They are sired by such boars as Hart, Block Price Cline's Big Bob, Right Kind Clan and Leonard's Big Bob. HART, FULCHER AND CLINE, Address F. T. Hart, St. Louis, Mich.

Spotted Poland Chinas

The hog with more outcrosses than any other breed. Which insures vitality and prolificacy. Why breed and feed grade hogs when you can buy registered hogs at special low prices. Write me your wants in bred gilts, boars or spring pigs. Cholera immuned. Satisfaction guaranteed.

SAMUEL GERBER R. 4, Bluffton, Ind.

Big Type Poland Chinas, Choice spring boar pigs \$15 each when 8 weeks, bred by Clansmen Buster and their dam being a prize winner at the State Fair. Also gilts bred for Sept. Farrow for \$40 and up. Guarantee Satisfaction. DORUS HOVER, Akron, Mich.

L. S. P. C. a few choice boars bred gilts all sold. Also a grandson of The Clansman and Harrison Big Bob. H. O. SWARTZ, Schoolcraft, Mich.

Big Type P. C. some very choice boars double immune, out 1100 lb. sire and mammoth sows from Iowa's greatest herds. E. J. Mathewson, Burr Oak, Mich.

Big Type Poland Chinas. A great litter by Checkers; dam a grand-daughter of Giant Buster, are for sale now. They were farrowed Mar. 11, and were purchased of Jim Bloemendal, Alton, Ia, in dam. Do you want the best the breed produces? Come over and see them. Wesley Hile, Ionia, Mich.

Leonard Farm BIG TYPE P. C. boar pigs at weaning time, \$25 from Mich. Champion herd. Satisfaction guaranteed. Call or write. E. R. LEONARD, R. 3, St. Louis, Mich.

Big Type Poland Chinas at lowest prices. Both sex, all ages, and bred sows and gilts. G. A. BAUMGARDNER, R. 2, Middleville, Mich.

Cows bred for spring litters all sold. Have some choice gilts bred for Aug. litters, also some Sept. boars for sale. Clyde Fisher, R. 3, St. Louis, Mich.

L. T. P. C. few choice bred gilts sired by T's Clansman L. Mich's 1920 Gd. Cham. bred to Smooth Buster 1st Jr. yearling 1920. A. A. Feldkamp, Manchester, Mich.

L. T. P. C. Nothing for sale at present. Thanks to my customers. W. J. HAGELSHAW, Augusta, Mich.

Hampshire bred gilts now ready for Aug and Sept. farrow; spring and fall boar pigs at a bargain. JOHN W. SNYDER, R. 4, St. Johns, Mich.

Pine Grove Hampshires

Bred sows all sold. We are offering 100 spring pigs of excellent breeding and quality. Either sex, order early. GEO. COUPAR & SONS, Marlette, Mich.

FOR SALE YORKSHIRE GILTS bred for Sept. farrowing. WATERMAN & WATERMAN, Ann Arbor, Mich.

SHEEP

INGLESIDE SHROPSHIRE

During the past 30 years Ingleside Farm has produced over a 1000 Shropshires of sustained excellence, but never before have we been able to present to our ever-widening circle of satisfied customers such an attractive offering of Shropshires of all ages.

In rams we have a strong assortment of lambs, yearlings and aged rams—splendid individuals of the choicest breeding obtainable. We have young ewes of quality for exhibition or foundation stock. We can supply 2 or 3 fitted flocks for show at county fairs. Write your wants—or better yet, come and inspect this stock personally. H. E. POWELL & SON, IONIA, MICH

LATEST MARKET REPORTS

GRAIN QUOTATIONS

Tuesday, August 2.

Wheat.

Detroit.—Cash No. 2 red \$1.26; September \$1.28; No. 2 mixed and No. 2 white \$1.21.

Chicago.—No. 1 red \$1.24½@1.24¾; No. 2 hard \$1.24@1.25; September at \$1.25.

Toledo.—Cash No. 2 red \$1.28; September \$1.29; December \$1.36.

Corn.

Detroit.—Cash No. 2 yellow 70c; No. 3 yellow 69c; No. 4 66c.

Chicago.—No. 2 mixed 60@61½c; No. 2 yellow 60½@61¼c.

Oats.

Detroit.—Cash No. 2 white 37c; No. 3 white 34½c.

Chicago.—No. 2 white 35½@36¾c; No. 3 white 33¼@34c.

Beans.

Detroit.—Immediate and prompt shipment \$3.50 per cwt.

Chicago.—Market is strong at the late advance. Hand-picked Michigan beans choice to fancy \$4.60@4.75; red kidney beans \$9@9.25.

New York.—The market is steady without much change in prices. Choice pea \$4.60@4.70; do medium \$4.75; red kidney \$4.70.

Rye.

Detroit.—Cash No. 2 rye \$1.15.

Toledo.—Cash \$1.17.

Chicago.—No. 2 \$1.10.

Seeds.

Detroit.—Prime red clover, cash and October \$13.75; alsike \$10.75; timothy \$2.75.

Toledo.—Prime red clover \$14.05; alsike \$11.10; timothy \$2.65.

Hay.

Detroit.—No. 1 timothy \$22@22.50; standard and light mixed \$21@21.50; No. 2 timothy \$19@20.50; No. 1 clover mixed \$16@18; No. 1 clover \$14@15; rye straw \$13.50@14; wheat and oat straw \$12@12.50 per ton in carlots at Detroit.

Feeds.

Detroit.—Bran \$22.50; standard middlings \$21.50; fine middlings \$26; cracked corn \$31.50; coarse cornmeal \$30; chop \$25@26 per ton in 100-lb. sacks.

WHEAT

The movement of new wheat during the last two weeks has been on an enormous scale and the final count on last week's market supply set a new record of 21,544,000 bushels, exceeding the former high figure of 20,597,000 bushels reached in August, 1918. Receipts are about two and one-half times as large as at this time last year but the movement is earlier than usual, and it is believed that the run of winter wheat has reached its climax. Reports from country elevators indicate that their purchases are falling off and country offerings in the last few days have declined materially. This does not mean, however, that markets will not be liberally supplied for some time to come. Until the last few days demand both for export and on milling account has been large as mills appear to be building up reserve supplies and foreign buyers found our wheat the cheapest obtainable. Broomhall again estimated the European crop outside of Russia as 120,000,000 bushels larger than last year. It is almost universally believed that Europe will want all of the North American surplus. An interesting contrast is afforded by the long distance comments of grain firms catering to the speculative trade. Most of them call attention to the prospect of considerably higher prices later in the season. A year ago many of these same firms took the opposite view of the market outlook. On the other hand farmers are selling wheat at a record rate this year. Last year there were well defined wheat "holding" movements among farmers in certain sections.

CORN

Damage to corn has occurred at last. Ohio, Indiana, Illinois, Kentucky and Tennessee are the states most severely affected but Iowa and Nebraska also have been injured to some extent. Moderate rains have occurred

in the last day or two but it is too early to determine how much of the damage has been or can be corrected. Private reports point to a yield of 3,000,000,000 bushels after taking account of the reduction in condition since July 1. Market receipts have been gradually declining but prices have not responded and demand is somewhat limited.

OATS

All reports point to a big reduction in the yield of oats below the early estimates. A private statistician places the condition of the crop at 63.7 per cent, the lowest on record. In addition the quality is inferior and weights are extremely light. Export demand and a desire for old grain for seed purposes appear likely to maintain old heavy weight grain at a high premium. As in the wheat market producers are selling freely, primary receipts being the largest in years and more than twice as large as at this time a year ago when prices were much more attractive.

SEEDS

Clover seed prices again advanced during the past week due primarily to speculative buying as a result of crop damage reports. The yield in Ohio, Wisconsin and Illinois has greatly reduced. Timothy seed prices are a shade lower with the prospective output affected much less than clover.

FEEDS

Both cottonseed meal and linseed oil meal are sharply higher than a short time ago, due primarily to foreign purchases resulting from drought in Europe. The small crops of cotton and flax forecasted also place these two feeds in a strong statistical position. Wheat feeds have declined again and are now only about one to two dollars higher than the low point of the season.

HAY

The prospect for the hay market during the coming year is gradually strengthening although prices have made very little response as yet. The drought in certain sections of the east, middlewest, northwest and Canada is certain to increase the total demand and decrease the supply at the same time. Dry-lot feeding has become necessary in some of the big dairy sections. The official Kansas report indicates that much prairie hay will not buy cut, due to the fact that market prices are too low to defray harvesting and marketing expenses.

POULTRY AND EGGS

Prices for both poultry and eggs show but slight changes during the past week. Holdings of eggs are gradually losing their lead over last year as they are now being drawn upon to a slight degree to supply immediate consumptive requirements. Receipts of dressed poultry at the four leading cities are running higher than a year ago.

Detroit.—Eggs fresh candled at 33c. Live poultry, spring chickens at 30c; hens 25@26c; light hens 22c; roosters 14c; geese 15c; ducks 20c; turkeys 25c.

BUTTER

The trend of the butter market is still toward high prices. Production has been reduced by hot dry weather in the important producing sections and new additions to storage stocks are very moderate in size. A year ago pastures were still in splendid condition and large quantities of Danish butter were being imported so that storage stocks were accumulating much more rapidly than at the present time. Reports to the American Butter Manufacturers' Association indicate that the output of 82 plants is

running five to ten per cent below the same week last year. Undergrades have been abundant at eastern points particularly, but such goods were cleared without difficulty. Prices for 92-score fresh butter on August 2 were as follows: Chicago 43c; New York 45@45½c. At Detroit fresh creamery in tubs is quoted at 38½c.

CHEESE

Country cheese markets again advanced sharply during the past week. Distributors were unable to sell freely on the new basis and instead sold their stocks of storage cheese at prices badly out of line with country market quotations except upon longhorns which are extremely scarce. Offerings of ohrt styles, especially twins, single daisies and double daisies were abundant. Production has been materially reduced by hot dry weather and a strong demand for milk and cream for other purposes. Lower prices in the immediate future are not anticipated.

Prices for No. 1 American cheese as quoted by the bureau of markets were as follows:

Chicago.—Flats 21@21½c; twins at 19½@19¾c; single daisies at 19½@19¾c; double daisies at 19¼@19½c; longhorns 22@22½c; square prints at 22½c.

New York.—Flats 23c; twins 20½@21½c; single daisies at 21½c; double daisies 20½@21c.

POTATOES

Potato crop prospects have been decidedly reduced by dry weather in some of the important producing sections. Private reports point to the smallest crop in the last thirteen years. Prices again advanced during the past week. Eastern markets are quoted at \$4.50@5 per barrel for No. 1 East Shore Virginia cobbles. The Chicago market on Kaw Valley, Missouri, Illinois, and Nebraska, No. 1 early Ohios ranges from \$1.40@2.50 per hundred pounds sacked.

WOOL

Demand for light weight goods at the opening held by the leading manufacturers resulted in active bidding and a large volume of orders so that some lines were quickly oversold. Prices were about the same as quotations which prevailed previously. Demand for raw wool has not increased decidedly as a result of this event but it is expected to lead to steady buying for immediate manufacture during the next few months. Foreign auctions are firm, especially upon the finer grades. Germany continues to be one of the leading buyers. The quantity of wool manufactured in June was 52,384,000 pounds compared with 40,681,000 pounds in June last year. The total shows a modest increase over May of this year. Boston reports firmness on the finer grades of wool with medium grades barely steady.

COMING LIVE STOCK SALES.

Poland-Chinas.—August 18, E. J. Mathewson, Burr Oak, Michigan.

Duroc-Jersey.—August 18, Thomas Underhill & Son, Chaslen Farms at Northville Fair Grounds.

Guernseys.—October 19, Michigan State Sale, Lansing, Mich. F. E. Fox, Waukesha, Wis., Sales Manager.

Aberdeen-Angus.—September 23, Eastern Aberdeen-Angus Breeders' Association Sale, Eastern States Exposition, Springfield, Mass. F. W. Burnham, Greenfield, Mass., Secretary.

Aberdeen-Angus.—October 12, Indiana Aberdeen-Angus Breeders' Association Sale, Indianapolis, Ind. Prof. C. F. Gobble, Lafayette, Indiana.

Holsteins.—October 21, Howell Sales Co., Eighth Annual Sale at Howell, Mich. Wm. Griffin, Secretary.

SUMMER GRANGE RALLIES.

The following Grange Rallies will be held during the coming week:
August 8, Fruit Ridge.
August 9, Centerville.
August 10, Berrien Springs.
August 11, Battle Creek, (Willard's Park).
August 12, Wall Lake.
August 13, Lowell.

Live Stock Market Service

Wednesday, August 3.

DETROIT

Cattle.

Receipts 305. Market steady.
Best heavy steers \$ 7.00@ 7.90
Best handy wt bu steers 7.50@ 8.00
Mixed steers and heifers 6.50@ 6.75
Handy light butchers.... 5.50@ 6.25
Light butchers 4.50@ 5.25
Best cows 4.50@ 6.00
Butcher cows 4.00@ 4.25
Common cows 2.00@ 2.50
Canners 1.25@ 2.00
Best light weight bulls... 5.25@ 6.00
Bologna bulls 4.75@ 5.25
Stock bulls 3.50@ 4.50
Feeders 5.00@ 6.00
Stockers 3.00@ 5.00
Milkers and springers... \$ 35@ 75

Veal Calves.

Receipts 343. Market 50c@1 higher.
Best \$11.00@12.00
Others 4.00@ 9.00

Hogs.

Receipts 833. Pigs 25c higher; others 10@15c lower.
Mixed hogs \$ 11.60
Pigs 12.25
Heavies 10.25@10.50

Sheep and Lambs.

Receipts 491. Market slow.
Fair lambs 8.00@ 8.75
Light to common lambs.. 5.00@ 6.00
Fair to good sheep..... 4.00@ 4.50
Culls and common 1.00@ 2.00

CHICAGO

Hogs.

Estimated receipts today are 18,000; holdover 12,914. Market steady to 15c lower, mostly 10@15c lower. Bulk of sales \$9.60@11.40; tops \$11.55; heavy 250 lbs up medium, good and choice \$10.45@11.10; medium 200 to 250 lbs medium, good and choice \$11@11.40; light 150 to 200 lbs common, medium, good and choice \$11.15@11.50; light lights 130 to 150 lbs common, medium, good and choice at \$11@11.40; heavy packing sows 250 lbs up smooth \$9.45@10.10; packing sows 200 lbs up rough \$9.10@9.45; pigs 130 lbs down medium, good and choice at \$10.50@11.25.

Cattle.

Estimated receipts today are 8,000. Market steady to strong. Beef steers medium and heavy weight 1100 lbs up choice and prime \$9.35@10; do medium and good \$7.50@9.35; do common \$6.25@7.50; light weight 1100 lbs down good and choice \$8.25@10.25; do common and medium \$5.50@8.75; butcher cattle heifers common, medium, good and choice \$4.25@8.75; cows common, medium, good and choice at \$3.75@7; bulls, bologna and beef \$4@6.50; canners and cutters cows and heifers at \$2.25@3.75; do canner steers \$2.75@4; veal calves light and handyweight medium, good and choice \$8.25@10; feeder steers common, medium, good and choice \$4.75@7.25; stocker steers common, medium, good and choice at 3.75@6.75; stocker cows and heifers common, medium, good and choice at 2.50@5.50.

Sheep and Lambs.

Estimated receipts today are 10,000. Lambs strong to 25c higher; sheep weak to lower. Lambs 84 lbs down medium, good, choice and prime \$8.75@10.75; do culls and common at \$5@8.50; spring lambs medium, good and choice and prime \$6@8.25; ewes, medium, good and choice at \$3.25@5.25; ewes cull and common at \$1.50@3; breeding ewes full mouths to yearlings at \$3@6.50; yearling wethers medium, good and choice \$6.50@7.75.

BUFFALO

Cattle.

Receipts 500; market steady.

Calves.

Receipts 150; market steady at \$5@12.50.

Hogs.

Receipts 1,800; market 25@40c higher; heavy \$11.25@12; mixed at \$12@12.50; yorkers, light yorkers and pigs \$12.50@12.75; roughs \$9; stags \$4.50@6.

Sheep and Lambs.

Receipts 1000; market is active and unchanged.

MICHIGAN'S DAIRY EXPOSITION

THE Michigan Allied Dairy Association, which numbers among its affiliations all branches of the dairy industry in Michigan, will hold its 1922 Annual Convention and Dairy Show in Saginaw, February 14-17, inclusive, according to Mr. H. D. Wendt, general secretary of the association, which has headquarters at Lansing. Mr. Wendt is manager of the show.

The Saginaw municipal auditorium has been turned over to the association for the occasion by the Saginaw Board of Commerce. Plans being developed by the several dairy show committees are designed to fully mirror the importance and diversification of the dairy industry in Michigan. The dairy department of the State Farm Bureau is actively cooperating with the State Dairy Association to make the Michigan Dairy Show second only to that of the National which this year is to be held at the Minnesota State Fair Grounds, St. Paul, Minnesota, on October 8-15.

Dairymen in Ohio and Indiana will be invited to take part in the Michigan Dairy Exposition which will be built along the lines of progress which have been made in the production, manufacturing and marketing of milk and milk products in recent years.

BIG DAY AT M. A. C.

THE Michigan Agricultural College played the host to some of the people it serves when several thousand farmer folk came from widely fourth annual summer farmers' day, held on the college grounds last Friday. Estimates as to the number varied from 4,500 to 7,000.

As early as Thursday they began to filter in and when Friday dawned a perfect midsummer day, the campus became a huge parking place for automobiles. It was a whole-family affair. Wives, sons, daughters, babies, aunts and uncles were there. They found plenty to interest them in the splendid specimens of beef and dairy animals, horses, sheep, hogs and poultry. They were eager to observe the results in the newest developments of crop varieties and compared notes on alfalfa, rye, corn and other crop production.

The human contact was there, too. The thousands of visitors had just as good a time rubbing shoulders with each other—making new acquaintances and renewing old ones—as they did looking over the work of the college. Jackson county became absorbed in discussion with Montcalm county and St. Joseph was delighted to shake hands with Gladwin.

After spending the morning in viewing various features of the college, from the gymnasium and museum to the classrooms of Agricultural Hall, they convened in groups wherever cars happened to be, and opened up the baskets of good things that "ma" had prepared before they left home. In many cases the meals were topped off with ice cream cones and soft drinks purchased at a special booth where East Lansing alumnae of the college held forth. Proceeds from this sale will go toward furnishing the new home economics practice house to be opened in the fall.

Then when the picnic dinner had been allowed sufficient time to settle, the visitors gathered along the campus drive and watched the live stock parade in which were shown M. A. C.'s blooded horses and cattle. Music by the Reo Band of Lansing began the afternoon program in the open air in the "Forest of Arden," as that portion of the campus is called.

The opening welcome was given by President Frank S. Kedzie, of the M. A. C. Dean R. S. Shaw, of the division of agriculture, and Dean Mary E. Sweeney, of the home economics division followed. Dean Shaw reviewed

the work of the college along lines of research, education and extension and pointed out the value of such occasions in bringing the investigating scientist and the actual farmer together.

Significance of the nutrition and textile activities of the home economics division was discussed by Miss Sweeney. "You men are studying farm management," she said. "Won't you let your wife study home management?" The ideal of the women specialists employed by the college, she declared, is to "energize every man and woman so that living in the last analysis becomes a fine art."

H. H. Halladay, commissioner of the new state department of agriculture, outlined some of the aims of his department. The state should be willing to spend more money for the development of agriculture, he asserted, and called attention to the fact that in California seven per cent of the total tax goes for this purpose, as compared with one per cent in Michigan.

Michigan was termed the land of opportunity by J. A. Doelle, of Marquette, secretary-manager of the upper Peninsula Development Bureau who has recently been appointed to a similar position for the entire state and who will take office next January as a member of the State Board of Agriculture. "You can point your boy and girl to the state of Michigan," said Mr. Doelle. "The opportunities are here. In the future I hope that some of the country boys and girls, instead of wanting merely to spend and loaf, will desire to do something, to achieve something."

F. W. HENSHAW.

MECCA FOR DAIRYMEN.

LEADING dairymen the country over are looking to the great gathering at the Minnesota State Fair Grounds at St. Paul, October 8-15, as the big event of the year in dairy exhibits. This will be the annual meeting of the National Dairy Show. Better feeding and more economical production will be emphasized by demonstration throughout the exhibit. Dairy farm equipment will be worthy of the most earnest study. Manufacturing machinery can be carefully inspected and manufactured dairy products will be shown in prodigal ways. Large displays of the best specimens of the various breeds of dairy cattle will grip the interest of every live cow man who attends. In fact, this will be the model dairy exhibition of the season.

Notwithstanding the remarkable advance in the hog market which is now fifty per cent above the range during the low period in May, receipts have been gradually decreasing instead of increasing as is usual after an upward shot of prices.

MEN WANTED

Sweeney

Mechanically Inclined — to send for my big illustrated **72-PAGE FREE BOOK**— It tells how in a few weeks you can earn from \$150 to \$400 a month in the Auto and Tractor business.

IPAY Will rebate railroad fare from any point in the United States to Kansas City.

JOBS OPEN. Sweeney trained men in demand. See list of jobs. Learn 7 good trades in 8 weeks. No previous experience necessary. Use tools not books. Simply send name and address today, a post card will do. For Free book and 27 photographic reproductions of machine shop work, etc. in world's largest and finest trade school, Let's Go—Write Now!

LEARN A TRADE

Sweeney

SCHOOL OF AUTO-TRACTOR-AVIATION
67 SWEENEY BLDG. KANSAS CITY, MO.

Death to Heaves or refund

Newton's for Heaves, Coughs, Distemper, Indigestion, Cough, Worm Expeller, Three large cans guaranteed for Heaves. 65c and \$1.30 per can, at dealers or by mail.

Newton Remedy Co., Toledo, O.

FertilEarth
Agricultural Gypsum
(LAND PLASTER)
"Makes Crops Grow"

Increases Alfalfa 100% to 500%

Agricultural gypsum on alfalfa has increased yields from 100% to 500% when applied at rate of 200 pounds to the acre.

This startling statement not only indicates how great and immediate profits result from use of **FertilEarth**, but what a wonderful factor **FertilEarth** is in the fixing of nitrogen in the soil; for any increase in the yield of a leguminous crop means a corresponding increase in the amount of nitrogen fixed in the soil.

FertilEarth supplies sulphur, calcium and nitrogen food to plants—keeps soil neutral, does not burn crops or land—and increases crops immediately. Costs little and restores worn-out farms to full productivity. Try it on a small plot.

Write for booklet. **FertilEarth** is sold everywhere.

GRAND RAPIDS PLASTER COMPANY
Established in 1856 Manufacturers of

FertilEarth Agricultural Gypsum "Makes Crops Grow"	Climax Wood Mortar "For Plastering Fine Homes"	Hercules Wall Plaster "For Plastering Larger Buildings"
---	--	---


2 SILK FINISH PONGEE SHIRTS FOR \$2.85



Six dollar value at today's reduced prices. 2 elegant, snappy, specially finely woven Silk Finish Pongee Shirts. Only \$2.85 for both. Smart button-down attached collar. 5 button coat-front. Soft turned-back double cuffs. Double yoke and collar. Flap button pocket, handily sewn extra fine stitches. Masterpiece of one of the biggest Philadelphia shirt manufacturers—with \$100,000 to \$150,000 Bradstreet rating. Guaranteed by thirty years of shirt making for leading stores of East. Send order today. Pay C. O. D. or if you want shirts quickly, send P. O. Order. Give collar size. **YOUR MONEY BACK IF YOU DON'T LIKE THEM.** We won't even ask why. We pay postage. Light tan or all white. Collar sizes 14 to 18 inches. You can have same shirt, with laundered neckband, without pocket. Send for big lot of FREE SAMPLES. Newest stylish colors, patterns and materials in gentlemen's shirts from \$1 up. Also Pajamas and Night Shirts.

TUTELMAN BROS.
749 Spring Garden St., Philadelphia, Pa.

THE SURE STOP POKE
SAVES THE FENCE—\$25 DEALER OR DIRECT IF NOT O.K. AFTER TWO WEEKS RETURN C.O.D. BY PARCEL POST AND GET MONEY BACK. CATALOG FREE.



FRANK J. GRADY, 2119 CORY ST., MADISON, WIS.

Improved ROSEN RYE by HEAD SELECTION

From a few fine selected heads taken from a fine stand from one of the first fields of ROSEN RYE planted in Michigan several years ago and following further careful HEAD SELECTION have developed a fine strain of IMPROVED ROSEN RYE and for the first time an offering a limited amount of this high quality seed to those desiring to raise the PUREST ROSEN RYE.

L. A. SEDGWICK, Parma, Mich.

McCaffrey's Hay Manager
Now With
Geo. E. Rogers & Co.

We solicit your consignments. Liberal advances on all shipments.

Geo. E. Rogers & Co., 601 Wabash Bldg., Pittsburgh, Pa.

Eggs

Our trade on fancy poultry farm eggs is increasing daily. Therefore we are in a position to pay liberal premiums above the Chicago market for fine new laid stock.

We solicit your shipments. Ship via Express.

AMERICAN BUTTER & CHEESE COMPANY,
2034 Howard St., Detroit, Mich.

Agricultural Limestone
BOAT AND RAIL DELIVERY
LEATHEN D. SMITH STONE CO.,
Home office and Quarries, Sturgeon Bay, Wis.
Docks—Muskegon and South Haven, Mich.
Michigan Representative
John Walsma, Grand Haven, Mich.

LIGHTNING RODS

Exclusive agency and quick sales to Live Dealers selling "DIDDIE-BLITZEN RODS". Our copper tests 99.96% PURE. Write for agency. Prices are right.

L. D. DIDDIE CO., Marshfield, Wis.

Agricultural Lime High calcium hydrated lime in 50 lb. paper bags, in car lots of 20 tons or more. Delivered, price promptly mailed on request.

Northern Lime & Stone Co., Petoskey, Mich.

For Sale Finest White Clover Extracted honey. One 60 lb. can \$9.60, two 60 lb. cans \$15. F. O. B. Holgate, Ohio. 5 lb. pail \$1.25, 10 lb. pail \$2.25 delivered to 4th postal zone.

NOAH BORDNER, Holgate, Ohio

Saw Mill Machinery Portable Mills for Farm or use. Make your own lumber. Send for new Catalog. **HILL-CURTIS CO.,** 1506 No. Pitcher St., Kalamazoo, Mich.

For Sale Case farm tractor 9x18 used one season, good working order, farm too rolling for practical tractor work. Excellent belt power.

B. B. SMITH, Howell, Mich.

BUY FENCE POSTS direct from forester your station. M. M. care of Michigan Farmer est. Prices delivered.

1000 Ferrets they hustle RATS and rabbits, price list free.

N. A. KNAPP & SON, R. 2, New London, Ohio

Buy Your cigars direct. Box fifty LaColumnas prepaid \$1.75. Mild smoker—best tobacco. Address, Havana Smoke House, Homeland, Ga.

Hardwood Ashes applied to meadows after haying pay big

GEORGE STEVENS, Peterborough, Ontario

FARM HELP

Y. M. C. A. Detroit Farmers! We can supply you with clean-cut experienced farm hands if you are within one hundred miles of Detroit. Place your order with us—hold the job for our man. Y. M. C. A. Employment Dept.

Wanted reliable married man for Herdsman to milk and care for herd of Holstein cattle, advise references.

H. H. DRIGGS, Palmyra, Mich.

World's Best Roofing
At Factory Prices

"Reo" Cluster Metal Shingles, V-Crimp, Corrugated, Standing Seam, Painted or Galvanized Roofings, Sidings, Wallboard, Paints, etc., direct to you at Rock-Bottom Factory Prices. Positively greatest offer ever made.

Edwards "Reo" Metal Shingles
cost less; outlast three ordinary roofs. No painting or repairs. Guaranteed rot, fire, rust, lightning proof.

Free Roofing Book
Get our wonderfully low prices and free samples. We sell direct to you and save you money. Ask for Book No. 187.

LOW PRICED GARAGES
Lowest prices on Ready-Made Fire-Proof Steel Garages. 8' x 12' and 10' x 12'. Send postal for Garage Book, showing prices.

THE EDWARDS MFG. CO.,
817-867 Pike St., Cincinnati, O.

FREE Samples & Roofing Book

CORN HARVESTER Self Gathering for cutting Corn, Cane and Kaffir Corn. Cuts and throws in piles on harvester. Man and horse cuts and shocks equal to a Corn Binder. Sold in every state. Price only \$28 with fodder binder. The only self gathering corn harvester on the market, that is giving universal satisfaction.—Dexter L. Woodward, Sandy Creek, N. Y.; writes: "3 years ago I purchased a Corn Harvester. Would not take 4 times the price of the machine if I could not get another one." Clarence F. Higgins, Spearmore, Okla.; "Works 5 times better than I expected. Saved \$40 dollars in labor this fall." Roy Apple, Farmersville, Ohio.; "I have used a corn shucker, corn them all and takes less twine of any machine I have ever used." John F. Haag, Mayfield, Oklahoma.; "Your harvester gave good satisfaction while using filling our Silo." K. F. Kneznitz, Otis, Colo.; "Just received a letter from my father saying he received the corn binder and he is cutting corn and cane now. Says it works fine and that I can sell lots of them next year." Write for free catalog showing picture of harvester at work and testimonials.

PROCESS MFG. CO., Salina, Kansas

THE GUNN BEAN HARVESTER
AS STANDARD AS A HOE
1 MAN - 1 "GUNN" - 1 DAY can readily harvest 2 1/2 acres of beans. Wet weather need not stop the bean harvest if you have a "GUNN". ROOTS are really left in the field. Beans dry much faster - threshing is cleaner. NO EASIER CHEAPER way to HARVEST BEANS.

F. D. BULLOCK, Sales Agent
1716 Palmer Avenue, KALAMAZOO, MICHIGAN

DEALERS WRITE FOR TERMS

Montgomery Ward & Co.

New Fall Catalogue

One Copy is YOURS **FREE**

TODAY, one must compare prices. YOU must learn what you should pay before you buy. You need to make sure that you are really getting the full benefit of the big break in prices.

Montgomery Ward & Co., the Original Mail Order House, has for over forty-nine years been dealing fairly with the public—been telling the truth about its merchandise and its prices.

Today, every page in this big book tells the truth about present-day prices, and puts before the public the prices that should be paid for everything you buy.

WARD'S—
The Oldest Mail Order House
is Today the most progressive

Ward's today is filled with the spirit of Youth, of Aggressiveness—alert, progressive, forward looking—and is marching forward in giving even better service, even better merchandise, and always lower prices.

Every page in this book breathes the Spirit of Ward's—that of progress in Service and Saving—for YOU.

FOR WOMEN: What can we say that will give you an idea of the Beauty, of the Charm, of Ward's New York Styles in everything for Women's Wear?—New York's newest and best styles, selected in New York by Ward's own Fashion Experts. And the prices—

Ward's Genuine Silk Plush Coats: Last year's prices from \$33.95 to \$69.50. The very newest styles in the same or better quality plush are now from \$15.98 to \$35.

Guaranteed All-Wool Coats: Last year's prices from \$25 to \$32.75. The very best New York Styles are now from \$13.59 to \$22.75. And waists, hats, shoes, suits, all the daintiest underwear—everything for women's needs, all the most beautiful and the newest styles—at prices about one-half.

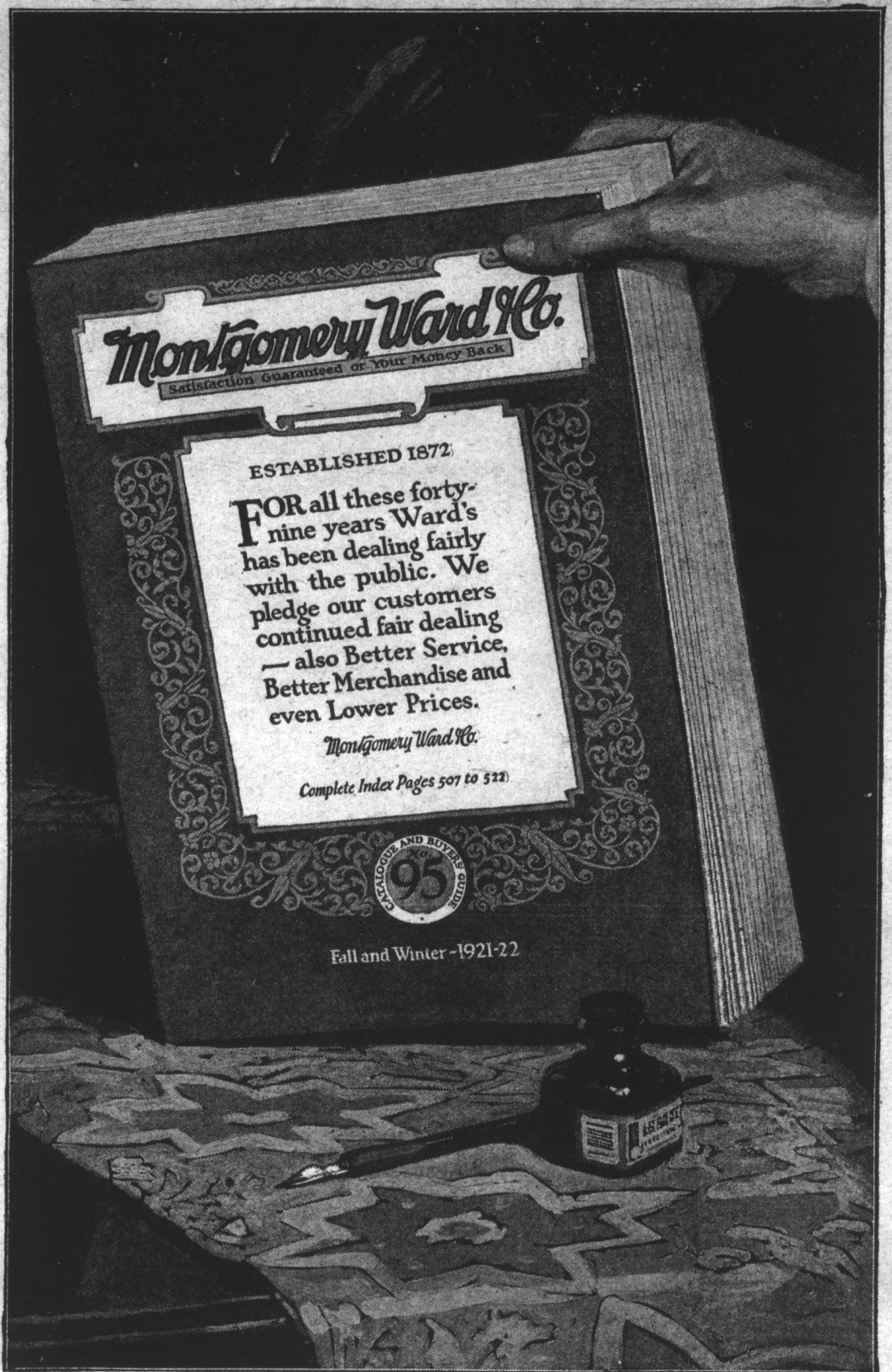
FOR MEN: New Worsted Serge Suits are down at Ward's from \$28.75 to \$15.75. Men's Reversible Mackinaws are down from \$16.95 to \$9.95. Boys' Corduroy Suits from \$11.95 to \$6.95. Men's Chambray Work Shirts are down from \$1.73 to 69c. And so the price story runs on page after page of Ward's New Catalogue and Buyers' Guide.

FOR THE HOME AND FARM: Blue denim is down from 52c to 19c. Iron Beds that last Fall were \$15.95 are now \$9.50. Mattresses are down from \$24.75 to \$11.75. Team Harness from \$112.50 to \$73.50, 100 feet Canvas Belting, from \$75 to \$27.90.

These are but examples of the Saving Your Copy of Ward's New Catalogue offers you. Every page is filled with similar big savings. And remember, all prices are for standard goods, merchandise of Ward Quality—all sold under our 49-year-old guarantee—Satisfaction or your Money Back.

MONTGOMERY WARD & CO.

CHICAGO FORT WORTH KANSAS CITY ST. PAUL PORTLAND, ORE.



Write for your copy of this book.
See for yourself the New Low Prices.

This great new-old institution of Montgomery Ward & Co. today marches in the lead among the alert, progressive, low-price-making business houses of America. It is a house of experts, searching the markets with ready cash, buying at today's lowest prices for YOU.

\$30,000,000 Worth of New Merchandise Now Being Bought

These are new stocks of goods, manufactured at the new low costs of production, and our customers will get the benefit of these new money-saving prices.

Ward's today is buying new goods—will buy \$30,000,000 worth of new goods at the lowest market prices—offering you an opportunity to save money on your everyday needs.

To have this new Catalogue and Buyers'

Guide book in your home is to know what is new, and to know the new price, the right price to pay.

This page is published to tell you the story of Ward's New Fall and Winter Catalogue and Buyers' Guide.

And to print for YOU the coupon below for your convenience in writing for Your copy of this new and complete Guide to today's correct prices.

To:
MONTGOMERY WARD & CO.
Chicago, Fort Worth,
Kansas City, St. Paul,
Portland, Ore.

(Mail coupon to the house nearest you.)

Please mail me my **FREE** copy of Ward's New Catalogue and Buyers' Guide No. H-37.

Name.....

Address.....