

MICHIGAN FARMER

AND LIVE STOCK JOURNAL.
PUBLISHED WEEKLY. ESTABLISHED 1843.

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

VOL. CXLV. No. 18
Whole Number 3860

DETROIT, MICH., SATURDAY, OCTOBER 30, 1915.

50 CENTS A YEAR.
\$2 FOR 5 YEARS.

The Christmas Bird In the Making

By E. I. FARRINGTON

GOOSE farming is a bigger business than most people realize and geese are marketed in a different way from other fowls. For the most part the geese are raised on general farms, a few here and a few there. In the fall they are picked up by buyers and shipped to special fattening farms, where they are fed heavily and prepared for market. By a curious coincidence the leading goose plant of the east is at Mansfield, Mass., while the most important goose farm of the west is at Mansfield, Ill. Most of the geese which reach the Bay State farm come from Canada and Rhode Island. The Rhode Island geese are collected in wagons, but those from Canada are received by train. Many of these northern birds are raised by the farmers of Prince Edward's Island, where they are allowed to pick up their living along the marshes and are fed but little grain. They are thin but well developed when sold, and fatten easily. The cost of raising them is very little and the mortality is always small. Accordingly the farmers find it profitable to carry a small flock every year.

When a sufficient number have been gathered in one flock by the buyers, they are driven to the nearest railroad station and put on the cars, which are divided into several decks, one above the other. Corn and raw potatoes are strewn over these decks, the potatoes providing moisture enough to keep the throats of the birds from becoming dry on the long trip, which sometimes lasts three days. Water is also given in pails at the start, but is soon gone. As many as 1,500 geese may be crowded into one car, but the loss ordinarily is very small. On one occasion the men at one station along the way thought to do a kindly deed by using the hose on the birds, as the weather was very warm, with the result that several hundred of the geese died.

After Mansfield is reached the geese

are driven over the road three miles to the farm and when they arrive they are very dirty and bedraggled looking birds, but there is a pond into which they are at once driven and where they soon make themselves clean. Then they are driven to the fattening pens, which are simply open-air enclosures surrounded by low fences, and there stuffed for four

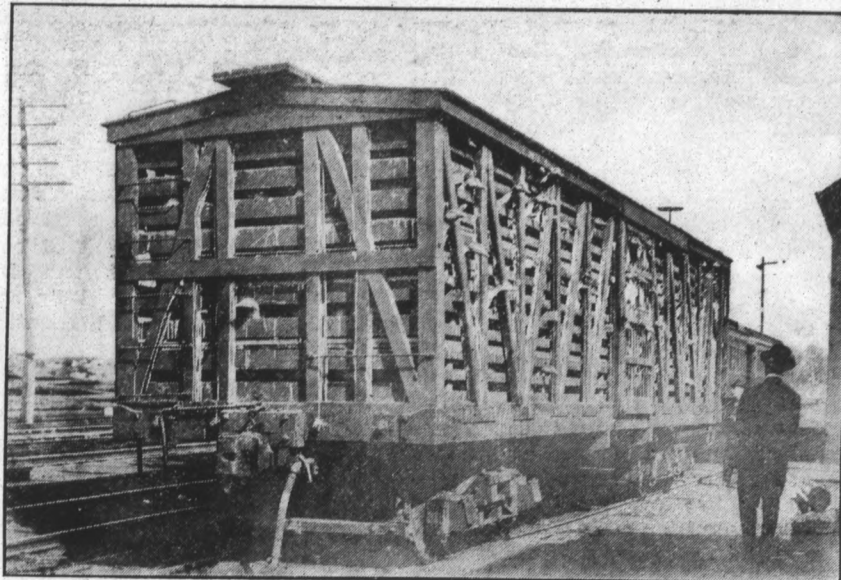
on the part of dealers who want stock for cold storage, and several thousand geese are sold each year to be frozen and held for the middle and late winter trade, after the supply of fresh-killed birds has been exhausted. Then comes the big Christmas rush, for in the eastern states many people consider that the goose is the typical Christmas bird, just as the turkey is accept-

the goose farm, but 40 is considered a good average. All the feathers are carefully saved and thrown in a box, for they constitute an important by-product. If white, they sell for 50 cents a pound or more and all goose feathers bring a good price.

Most of the geese from the Massachusetts farm are sold in the Boston market. When we jump to New York we find that the geese used there are brought from the west, the choicest coming from the farm at Mansfield, Illinois. The western season is a little later, lasting from October to the end of January, and instead of killing and dressing the geese they are shipped alive in carload lots, buyers coming from New York to bid for them. They are shipped alive because they are sold largely to Jews and must be killed in the kosher market. From 1,000 to 1,200 are loaded into a car and when they are driven to the railroad yards, which are not far from the farm, the roadway is covered with straw in order to keep them from getting muddy or soiled. For the rest, the geese are handled in much the same fashion as on the eastern farm, except that they are fattened in large sheds instead of in the open air.

For many years thousands of southern geese were fattened on this farm and then shipped to New York, an amusing fact to people who know that the New York market refuses to buy geese from the south. If they come by way of Illinois there seems to be no complaint. Oftentimes it was necessary to drive the birds over the roads for many miles, from a dozen to 50 being picked up at various farms along the way. The roads were rough and there was danger that the geese would become too footsore to continue the journey, for which reason they were shod in a most ingenious manner. Beds of soft tar or pitch were made and the geese driven over them. Then, while this gummy substance

(Continued on page 393).



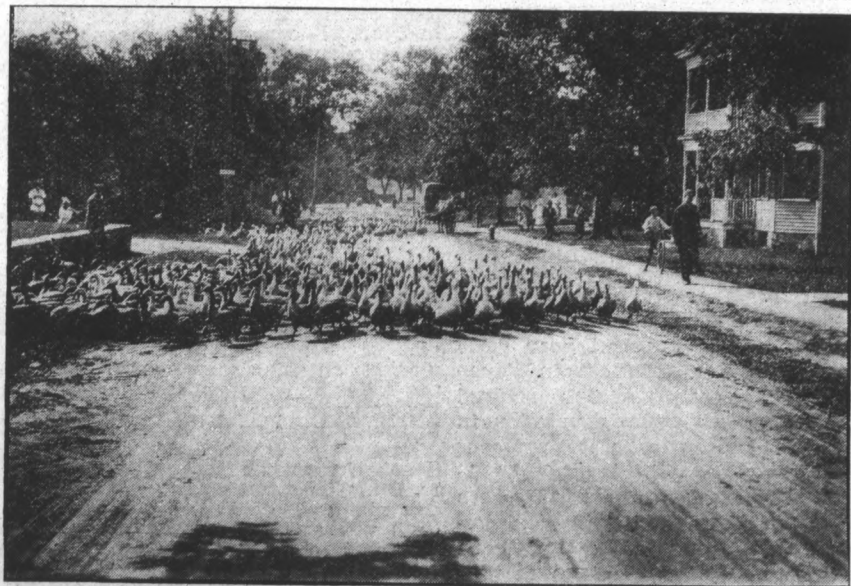
A Carload of Farm Raised Geese En Route to the Fattening Plant.

weeks. These pens are 30 feet square and 50 geese are allotted to each. The geese weigh from six to eight pounds when they arrive and are expected to weigh ten pounds and upwards with the feathers off when they are ready for market. They are fed three times a day, twice on a soft mash made of corn meal and beef scraps, and once on corn, the feed being carted about in a low, one-horse truck and shoveled into the long V troughs.

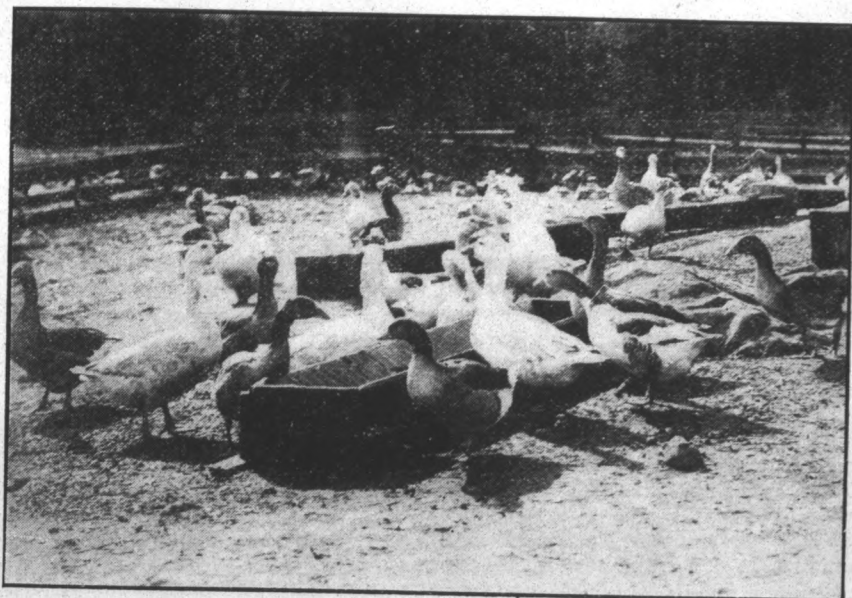
Killing and picking begins early, for in September there is a heavy demand

ed as the Thanksgiving Day bird. As a rule, practically no geese are left at the fattening plant after the first of the year.

Dry picking is the invariable rule in the east and the pin feathers are shaved off with a sharp shoemaker's knife, a long row of which is placed in front of each operator when the day's work begins. Ten to 18 pickers are employed in the busy season, and they work nine and a half hours a day. A record of 67 geese killed and picked in a day has been made by one man at



Driving the Geese to the Cars to be Loaded for Shipment.



The Fattening Pens where the Geese are Finished for Market.

The Michigan Farmer

Established 1843.

Copyright 1915.

The Lawrence Publishing Co.

Editors and Proprietors.

39 to 45 Congress St. West, Detroit, Michigan
TELEPHONE MAIN 4525.NEW YORK OFFICE—41 Park Row.
CHICAGO OFFICE—604 Advertising Building.
CLEVELAND OFFICE—1011-1015 Oregon Ave., N. E.
PHILADELPHIA OFFICE—214-218 Twelfth St.M. J. LAWRENCE.....President
M. L. LAWRENCE.....Vice-President
E. H. HOUGHTON.....Sec.-Treas.L. R. WATERBURY.....Associate Editor
BURT WERMUTH.....Associate Editor
FRANK A. WILKEN.....Associate Editor
ALTA LAWSON LITTELL.....Associate Editor

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

TERMS OF SUBSCRIPTION:

One year, 52 issues.....50 cents
Two years, 104 issues.....1.00
Three years, 156 issues.....\$1.25
Five years, 260 issues.....2.00

All sent postpaid.

Canadian subscriptions 50c a year extra for postage.

RATES OF ADVERTISING:

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

Mem Standard Farm Papers Association and Audit Bureau of Circulation.

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

DETROIT, OCTOBER 30, 1915

CURRENT COMMENT.

Progress in Road Building.

The increased interest which is being shown in the good roads movement throughout the country is reflected in the building of permanent roads, as shown by a recent federal report. This report shows the total expenditure for highways throughout the country in 1914 to have been \$250,797,911, of which sum \$174,935,083 consisted of local funds expended in road work by road districts, townships and counties. The total mileage of public roads in the country is given at 2,273,131 miles, of which 247,000 miles, or 10.9 per cent, were surfaced on January 1, 1915.

A study of these statistics brings to light some interesting facts, among which we note the following: Nearly one-third of the mileage of surfaced roads in the United States has been built in the states of Ohio, Indiana and New York, which have 28,312 miles, 26,831 miles and 22,398 miles, respectively. Of these states Indiana leads in percentage of road mileage which has been improved by surface ing, that percentage being 42.3, as compared with 33.8 for Ohio and 27.9 for New York. Only two states are ahead of Indiana in the percentage of total road mileage which has been resurfaced, viz. Rhode Island with 58.8 per cent and Massachusetts with 51.7 per cent, yet Indiana is one of but four states in the Union having no law providing for state aid in road building. The public spirit of her citizens, coupled with the fact that nature provided the material close at hand by the general distribution of deposits of excellent gravel throughout the state has accomplished this notable result.

Michigan's showing in a comparison of this data is fairly creditable. With a total of public roads reaching 68,906 miles, she has 8,859 miles of surfaced roads, or 12.8 per cent. Of this total 2,437 miles were built with state aid, 694 miles of this total being built in 1914. In 1914, Michigan stood seventh among the states in the total of local funds expended in the highways, and sixth in the total of all moneys expended for highway purposes, although on January 1, 1915, she was fifteenth among the states in percentage of resurfaced road mileage. With the greatly increased general interest in the good roads movement which has occurred in Michigan during the present year, with increased activity in building county and township roads there is no doubt that the state will move up in the column showing progress along this line during the present year.

It is perhaps a matter for congratulation

that Michigan is just awakening to general activity along this line, since the mistakes made in pioneer road improvement in other states can be avoided and the people of Michigan will thus get more in road service as well as road mileage than would have been the case had her period of greatest road development come earlier in the history of the good roads movement.

Plans for greater activity in this line during the coming year than ever before are being laid in counties, townships and districts throughout the state, aside from several large independent projects for which public and private subscriptions are being solicited. Public sentiment on this question is, we believe, accurately reflected in these plans and will be united in their support, promising much for the general improvement of the public roads of the state during the coming year.

The National Top Notch Farmers' Club is, as its name implies, a national organization composed of men, boys and girls who have well authenticated records of growing 100 or more bushels of corn or oats per acre, 50 or more bushels of wheat per acre, 400 or more bushels of potatoes per acre or six or more tons of alfalfa per acre. The annual convention and corn show of this organization was recently held in connection with the Panama-Pacific International Exposition at San Francisco.

In this connection Co. Charles F. Mills, of Illinois, who is secretary of this organization, writes that Michigan has 40 members of the club with records as follows: Thirty-seven with records of growing 100 or more bushels of corn per acre, one with a record of growing 100 or more bushels of oats per acre, one with a record of 400 or more bushels of potatoes per acre, and one with a record of growing 50 or more bushels of wheat per acre.

The medal of merit of the World's Fair at San Francisco was awarded to Homer Fletcher, of Ionia county, as the champion corn grower of Michigan and will soon be formally presented to him by Governor Ferris, who has already written the winner of this prize a letter of congratulation informing him of the honor won. The making of a record of 175 bu. per acre by a club boy in Michigan should prove an inspiration to the older farmers of the state in the matter of living up to their present opportunities.

In his letter of congratulation to this young man, Governor Ferris has well said: "Your example ought to influence other boys to work along the same line, in fact, your achievement ought to influence the fathers of the boys to get the most in the shortest possible time out of Mother Earth. We are all hoping to realize some of the joys of life. In order to have these joys we must live, and in order to live we must work, and a very large number of those who work must till the soil. Mother Earth is generous to those who are willing to study her ways and meet her demands."

The bankers of the country have in recent years very generally recognized their vital interest in the country's agriculture and have sought to promote its prosperity in numerous ways. Their activities have included a wide range of effort, mostly with a view of disseminating up-to-date information regarding the best agricultural practices. These efforts have been well intended and have, in very many instances, been productive of much good, particularly when the efforts have been made in co-operation with the progressive people of the communities in which they have operated by promoting the location of county agricultural agents, demonstra-

tions by field men from the agricultural colleges, etc. Some good has also undoubtedly been done in a more personal way by bringing about closer relations between individual farmers and the local bank, outside of the broader educational field.

In this connection some ideas advanced by Dean Mumford, of Missouri, before the Banker-Farmer conference held in Chicago last summer are of interest. Among other things he suggested to the bankers present that they could definitely encourage better farm practice by loaning money at a lower rate of interest for investment in phosphorous or lime, or building silos, or seeding alfalfa, or the purchase of pure-bred sires and for all similar enterprises in the interest of a permanently prosperous agriculture.

Alive to their interest in maintaining the prosperity of the agriculture in their communities, sectional meetings of Michigan bankers have been held in localities where unfavorable weather conditions have caused local crop damage in which the participants have carefully considered the seasonal requirements of their patrons. If the bankers of the entire state would go a step further and encourage by the granting of favorable terms, the loaning of money by their responsible patrons for such purposes as are above noted, the benefit to the state's agriculture would be very great, and the loans would not only be quickly repaid from the increased profits of the farms, but bank deposits would be greatly increased from the same cause. The proper financing of the farm business is of quite as much importance as is its proper conduct when properly financed. This is the special field in which the bankers are best qualified to give the most efficient aid for the betterment of our agriculture. A more definite and concerted campaign to this end by the bankers of the state and country would forestall the need of a better system of rural credits and aid the bankers as well as the farmers in the building of a more prosperous business.

Educating Prospective Citizens.

The Bureau of Naturalization of the U. S. Department of Labor is at present conducting a campaign for the Americanization of foreign born candidates for citizenship throughout the country. As a result of this campaign the public schools of more than 250 cities and towns in the United States have co-operated with the Bureau of Naturalization in instructing the candidates for citizenship. Through Assistant Superintendent of Schools Cody, the public schools of Detroit under his supervision have been opened for such instruction to foreigners, night schools being held in which English, arithmetic, spelling, writing and civics are offered to foreign born candidates for citizenship. According to a recent report, about 7,000 pupils have been enrolled for this work. The plan under which this work is carried on contemplates the furnishing of names and addresses of aliens residing within the jurisdiction of these schools to the superintendent each month, thus enabling the school authorities to get into touch with the applicants and give them valuable assistance in preparing for citizenship.

The importance of this work in the large centers of population is indicated by the fact that last year 6,686 aliens applied for citizenship in Wayne county. The census of 1910 showed the foreign born white population in the city of Detroit to be 33.6 per cent of its population. Of this total of 156,565 foreign born whites 75,323 were males who had attained their majority, of which only 32,891 had been naturalized. The percentage of illiteracy in foreign born whites was at that time 12.4 per cent of the total number, showing a marked increase

of illiteracy since the census figures of 1900 were collected.

This is, of course, a greater problem in the large centers of population than in the open country, yet there are localities in the state having a very considerable foreign born rural population where provision might properly be made for similar instruction of such of this class as may from time to time apply for citizenship. Wherever this problem is met public spirited citizens would do well to consult the Bureau of Naturalization for practical suggestions regarding the best means to secure this desirable end.

HAPPENINGS OF THE WEEK.

Foreign.

The European War.—The shifting of forces in and about Serbia for advantageous positions has been given much attention this past week. In the north the Austro-German armies are pushing the Serbians back slowly but are paying heavily for the gains; French forces engaged the Bulgarians to the south of Strumitsa where the village of Rabrovo was captured and held, while the Bulgarians, on the other hand, are reported to have taken Uskub on the only railroad communicating between northern and southern Serbia and are thereby preventing the Allies from sending additional troops to the aid of the armies opposing the advance of the Austro-Germans in the north. The Bulgarian coast is being bombarded by both the Allied fleet of the French and English on the Aegean Sea and the Russian ships on the Black Sea. It is intimated that the Allies intend to make a landing on the southern coast which is now protected by Turkish troops. The Italians have captured Goritz which commands the advance upon Trieste at the head of the Adriatic Sea, one of the chief objective points of the Italian armies. Along the Russian front the main fighting has been to the north where the Germans continue to push their campaign for the capture of Dvinsk and Riga. Some advance has been made but the Russian opposition seems stronger than was thought a fortnight ago. To the south the Russians are either maintaining their positions or making slight advances, particularly in Galicia. Quiet reigns over a large portion of the western front except for artillery duels and aviator combats. The French are crowding the Germans at Souchez but no important advances are reported. Political changes in the British cabinet and the resignation of the French minister of foreign affairs have resulted from protests against the policy followed in the Balkan states. The people in the large cities of Germany are reported to be undergoing much suffering because of the prevailing high prices for necessities.

Clashes between Mexican bandits and United States soldiers continue to feature activities along the Mexican border. Permission has been given Carranza's forces at Eagle Pass and Laredo to entrain for shipment through United States territory to aid the Agua Prieta garrison which is in danger of attack from Gen. Villa's troops. Reports indicate that the following of the latter general is weakening, he having abandoned the city of Chihuahua and is marching westward toward Sonora.

National.

The Department of the Interior has announced the production of potash from alunite mined from a vein found in Utah. Because of the cheapness of the production of potash from this mineral and the large quantities to be found in Utah, Colorado, Nevada, California and Arizona, the discovery assures the country of an adequate supply of potash for agricultural and manufacturing purposes and will relieve us of the necessity of importing these sales from Germany after the war.

On Sunday two Germans were arrested in a secluded wood outside New York City, who were testing explosives and, from previous information and confessions made by the men, it is believed that they were back of the plot which resulted in the recent explosions on ships carrying cargoes for the Allies and in munition plants making materials for the armies of Great Britain, France and Russia.

Ex-Senator Smith, dean of the state Senate for twelve years died at Lake Linden, Houghton county, Mich., Sunday night. He was a veteran of the Civil war and for many years prominent in Michigan politics.

The M. A. C. football team outclassed the University of Michigan eleven in a game on Ferry Field at Ann Arbor last Saturday with the final score 24 to 0 in favor of the visitors.

The Farm Labor Problem

IN its general aspects, doubtless the various phases of the labor problem are similar throughout all the farming districts of Michigan. As with all problems of any magnitude, however, local conditions must necessarily enter in, and give peculiar features to the situation, in different localities. It is the purpose of this article to set forth briefly, some of the elements that enter into the situation, in the writer's section. It is also the purpose to summarize some of the views held by the two human factors in the problem, namely, the farmer and the man who offers his labor for sale.

In an investigation into the farm labor situation here, the first thing that impresses the observer is the scarcity of day laborers and help of this class, as compared to the number of day hands of 15 or 20 years ago. This falling off seems due to two causes: First there are not so many large families with farmers' sons who have time to do day work for their neighbors. Second, the type of day hand whose home was on an acre of ground and who sold his labor by the day, to his neighbors, during a large part of the year, has almost entirely disappeared. For these two reasons, help on the farms is much scarcer than formerly. Other minor factors enter into the situation: The factory and the shop and the office draw more farmer boys than formerly, and the opportunity for steady work through the winter in the country, has largely disappeared with the disappearance of the timbered lands.

In the midst of conditions such as these, the farmer finds the labor problem a perplexing one. The high cost of living and the advance in the price of labor, have added to the perplexities of the case. The farmer gets much of his living first hand, from the soil, and it is hard for him to realize just what it means in these days, to the laborer who pays cash for all he has to eat and wear.

Briefly, many farmers view the matter something like this: We cannot afford to pay two dollars per day for labor on our farms. For a laborer to ask two dollars per acre for cutting corn, or four cents per bushel for husking, is unreasonable and preposterous. We have work on our farms for those who want it, but men who have worked in the factory and the shop do not want to get out and work on the farm and undergo the inconveniences we ourselves undergo every day. While our crops are wasting for want of laborers, idle men in towns and cities are looking for soft jobs and pass us by. Most men, these days, are not willing to put in the hours per day on the farm, that the farmer himself puts in.

In opposition to these views, stand the views of the laborer, something like this: The farmer does not want to pay us a living wage. On the farm, we must get up earlier and work later than in the shop or factory, and we must deny ourselves many of the conveniences and comforts afforded in the city. Most of the work on the farm is heavy work, and we earn all we get. Some farmers expect us to work for a dollar and a half a day during the busy season, and to live without working during the slack time.

These are some of the views the writer has heard expressed by farmers and laborers of his locality. Of course, there are marked exceptions to the general rule, both in the case of the farmer and the man he hires. In part, the contention grows out of a mutual misunderstanding. The farmer who, when a youth, husked corn for his neighbor for two cents and a half or three cents per bushel, and boarded himself, finds it hard to grasp the idea that he must now pay four or four and one-half cents for the same

kind of work. The laborer who has been away to the city, does not immediately grasp the fact that the contention and strife he has experienced there, between laborer and employe, is largely unnecessary and of no avail on the farm.

In summing up the situation, it must immediately become apparent to the unprejudiced reader, that both the farmer and the laborer are in a degree at fault. The trouble comes largely through inability to adjust present needs to rapidly changing conditions. It is these new conditions that have produced the labor problem and made it a pressing one. New inventions in the line of machinery, have aided the farmer not a little, in solving his part of the question. But human hands and muscle are still in demand.

In conclusion, it may be said with truth, that many a laborer who is merely existing in the city, would be better off working for wages on a farm. On the other hand, many a farmer who will not hire because he considers the price unreasonable, would do better to pay what is asked and get his crops cared for in season. The farmer who hangs off about paying the prevailing price for corn husking, till winter sets in, is certainly not a gainer by the performance. He must pay the price at last, and lose something because the crop was not harvested in time.

Hillsdale Co. J. A. KAISER.

DRYING SEED CORN.

Corn that is intended for seed must be thoroughly dried. Professor Moore, of the University of Wisconsin, recommends that it be kiln dried. There can be no doubt but that corn should be so free from moisture that it will not be harmed by freezing. More than fourteen per cent of moisture is too damp.

A good place to put the corn to dry out is in the garret, in the barn, or in the furnace room. Corn is badly injured by alternate freezing and thawing. Where it contains a rather high percentage of moisture the freezes and thaws of the winter affect the vitality of the germ and such corn is less likely to grow than that which has not been allowed to thaw and rethaw.

Of all the places on the farm where corn may be kept, hanging on the windmill derrick is the least desirable. Some growers follow the plan of stringing up their seed corn and hanging it on the windmill. Such drying, however, as corn can get from such a practice is not sufficient mainly for the reason that as long as the weather is dry the corn stays dry, but as soon as damp weather comes on the corn absorbs the moisture and a subsequent freeze means a lowering of its vitality.

In view of the fact that there is so little mature corn in the country this fall, it will be worth while to take added precautions with seed corn this year. This is more true than of any year for a long time back. The seed corn may well be placed in a vacant room or in a garret where it may be kept constantly dry. In this way the germ is kept dormant all winter and in spring it is ready to grow and produce a profitable plant.

Ingham Co. I. J. MATHEWS.

LIME-SULPHUR VS. BORDEAUX.

Tests made by the New York Station show that lime-sulphur is harmful rather than beneficial to potatoes. Bordeaux mixture prevented tipburn to a considerable extent, made the foliage darker green, prolonged the period of growth, and increased the yield. Lime-sulphur, on the contrary, aggravated tipburn, dwarfed the plants, shortened the period of growth, and reduced the yield.

LAMBERTVILLE RUBBER FOOTWEAR

Unequaled for Remarkable Wearing Qualities and Comfort

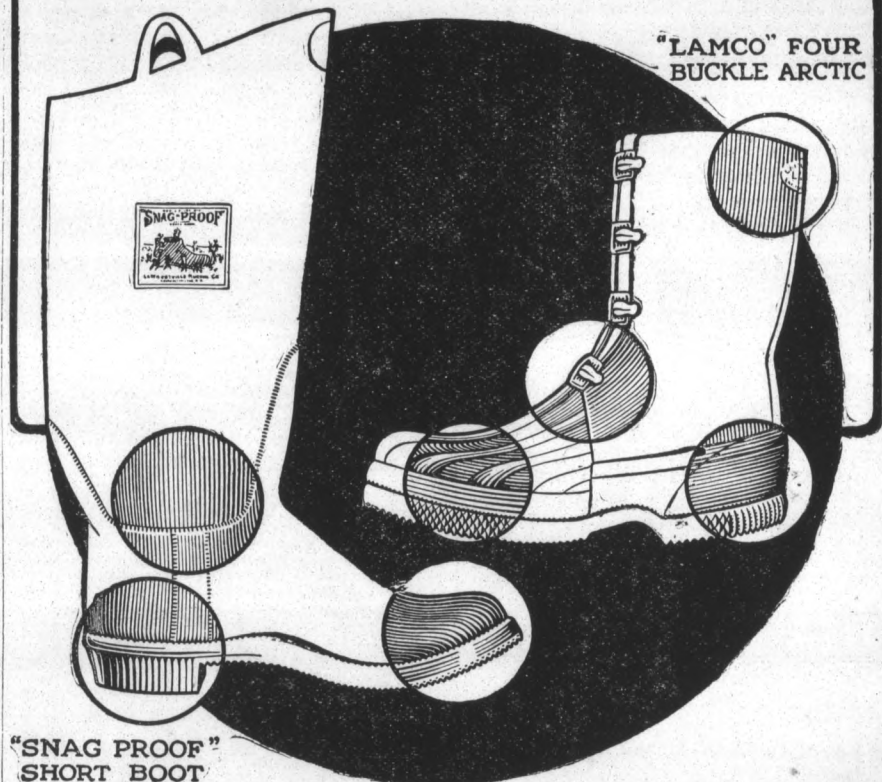
"Snag-Proof" boots and shoes are water-tight—made of heavy sail duck with seven thicknesses of pure Para rubber ground in.

The "Lamco" brand is made of pure Para rubber with seven heavy ribs to add extra strength and wear. You couldn't buy rubber footwear that gives greater wear and service than Lambertville.

Your dealer pays more for Lambertville Rubber Footwear, simply because he values your satisfaction more than the extra profit he could make on an inferior line.

Best dealers in almost every locality sell Lambertville Rubber Footwear. If your dealer should not carry this famous line, write us and we'll quickly see that you are supplied.

LAMBERTVILLE RUBBER COMPANY, Lambertville, New Jersey



COLD WEATHER WILL SOON BE HERE!

Have you a FUR COAT or ROBE that needs a NEW LINING, FASTENERS, or the FUR repaired? THE BLISSFIELD ROBE & TANNING CO., will gladly pay the CHARGES if sent to them, and by return mail will give you a low estimate on putting your FUR GOODS in condition as good as new. If the price is not satisfactory, goods are returned FREE OF CHARGE.

THE BLISSFIELD ROBE & TANNING COMPANY, Lock Box M. F., Blissfield, Michigan

RAW

A Square Deal, Liberal Assortment, Top Prices. Write for price list. GEO. I. FOX, 279B Seventh Ave., N.Y.

FURS

LET US TAN YOUR HIDE.

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

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

FURS

TRAPPERS

We can put many dollars in your pocket this season. Ship your furs direct to us and save commission and other charges. We have \$1,000,000 to pay out in cash for furs. We are the largest direct buyers of furs in the world and will pay you the most money at all times. Drop us a postal today and we will show you how and why we can make you more money. Most traps at factory prices. Bait and other supplies. Write us today.

I. ABRAHAM, 248 N. Main St., St. Louis, Mo., U.S.A.

FURS and SKINS

Send us your Raw Furs and Hides and let us tan and make them into nice coats or fur sets (for men and women) robes, rugs or gloves. We guarantee best workmanship at lowest prices. Write for catalog. References: any bank.

JOHN W. MERCKEL & CO., Mfg. Furriers, Breitmeyer Bldg., Detroit, Mich.

WOULD YOU show this standard high grade fully visible typewriter to your friends and let them see wherein it excels any other \$100 typewriter. By doing this and rendering other small assistance, you could easily earn one to keep as your own. Then by post card or letter to us simply say "Mail Particulars."

WOODSTOCK TYPEWRITER CO., Box 9-168, Woodstock, Ill.

Funsten Pays Cash for FURS

Prices Higher This Year Big Money in Trapping skunk, coon, mink, muskrat, fox, etc. You can trap furs—we teach you how. Funsten Animal Bait guaranteed to increase your catch. \$1.00 a can postpaid. The Funsten Perfect Smoker "smokes 'em out." Price \$1.50; parcel post 30 cents extra. Both guaranteed satisfactory or money back. Traps at factory prices. FREE 3 books in one (trapper's guide—how, when, where to trap, how to remove, prepare and ship skins. Will send you fur market reports, shipping tags and big book FREE—Write today. We tan hides and furs for coats, robes and garments.

FUNSTEN BROS. & CO., 653 Funsten Bldg., ST. LOUIS, MO.



Good Seed

One of the surest ways of getting better grain is careful seed selection.

And the principle applies to clothes-making as well as farming.

We have Clothcraft Clothes for men and young men in our store because the makers have selected the one best way to perform every little operation in making a suit or overcoat.

Naturally you get more style, fit and long wear for your money—and a binding guaranty of service value.

Come in and look over the many handsome fabrics in suits and overcoats at \$10 to \$25. You'll surely want to try on one of the Clothcraft Blue Serge Specials "4130" at \$18.50, and "5130" at \$15.

The Clothcraft Store

(IN YOUR TOWN)

CLOTHCRAFT ALL WOOL CLOTHES
\$10 to \$25 Ready to Wear

Made by The Joseph & Feiss Company, Cleveland



The Business Farmer Is The Drainage Farmer

The modern farmer is a business man—using business methods—securing business results. Hence he buys drain tile on a "quality" basis, the same as he does other tools and material. That's the basis on which our Vitrified, Salt Glazed, Frost Proof Tile is made and sold. "Once laid, always working". Sizes 3 in. to 27 ins. Write for car-load prices.

AMERICAN SEWER PIPE CO.
200 St. James St. Jackson, Mich.

Maple Syrup Makers

You get best Results with our Champion Evaporator

Quick work, fuel saving, durability and BEST QUALITY OF SYRUP. Write us for CATALOGUE.

Champion Evaporator Company, Makers, Hudson, Ohio



Farm Notes

The Eradication of Weevil from Farm Seeds.

What can I best use to keep weevil out of all kinds of seeds, such as cowpeas, wheat and clovers? When such seeds are treated, how long can one keep them to plant, and would the weevil get in after once treated? I have used carbon bisulphide on cowpeas, but can I keep them a couple of years with one treatment? I would be pleased if you, through your paper, would give all the information you can on treatment of seeds, etc.

Maryland.

R. L.

There are many species of small beetles which infest stored grains, seeds and other products. The greater part of the injury to the stored grains or seeds is done by the larvae of these beetles, although as these insects work in concealment, the injury may be ascribed to the beetle itself. The granary weevil which infests stored grains, particularly wheat, corn and barley, is but one of the half dozen species which may be found infesting grains. For this entire class of pests the surest treatment is fumigation with carbon bisulphide.

The seeds of legumes as beans, cowpeas, soy beans, etc., are injured by the common bean weevil, the cowpea weevil, the four-spotted bean weevil, the pea weevil, etc. The first named of these will also yield to treatment with the carbon bisulphide, since they continue to breed in the stored grain, although some of them are also propagated in the field before the seeds are matured.

The pea weevil, however, is a more difficult pest to combat, since the eggs of this weevil are laid on the pods early in the season by the adult, and the minute grub penetrates the pea and remains in the seed when it is gathered. While the same treatment will also prove beneficial, it is not as essential for the eradication of this kind of weevil, because when the mature insect appears, another generation will not be produced in the stored seed. If the treatment of seeds is sufficiently thorough to eradicate the weevil completely, they can be held over for another season by storing them in some manner which will prevent the matured insects from again reaching them, as in paper sacks, covered cans, etc.

LILLIE FARMSTEAD NOTES.

Specialized vs. Diversified Farming.

I wish to express my opinion about the subject of a recent editorial entitled, "In Diversity Lies Wealth." I criticize the use of the term wealth in this connection. It is practically impossible to gain wealth, as we understand the meaning today, by devoting one's energies to agriculture. A fortune can not be made by actual farming. There is too much competition. It can not be successfully handled on a large enough scale to buy wealth, but we can gain, a home, competence and contentment, which is as valuable, perhaps, as mere wealth. Certainly more so if wealth does not bring these things.

But what I want to bring out and make prominent is that wealth is more apt to come from special farming than from general farming. The risk is greater, one is more apt to fail, as is pointed out in the editorial. Diversified farming is safer. A flat failure is rarely known, but where one tries to do so many things he can not do them as well, and can not work to so great an advantage as where confined to one thing. The old saying is that a Jack-of-all-trades is master of none, and this applies to farming as well as anything else. If one confines himself to special farming where all conditions are favorable he can make big profits, but when his energies are scattered, as in diversified farming, he can not have enough of any one thing to make much money.

If a man could grow 1,000 acres of beans in a very favorable year he

could clean up a big profit, or if he had 1,000 acres of peaches, or celery, or pears, or any special crop, when competition was not too great, he might make large profits, and with a succession of favorable years he might accumulate wealth. If conditions were unfavorable, however, he would go broke. On the other hand, diversified farming assures him against total loss but it prevents him from making as much money. The man who dares not take a great risk rarely makes a big stake. Diversified farming is safe but slow. I am not arguing that a farmer should take such risks. I never argued this, but I want to point out that a safe living never leads to wealth. It may, and is more apt to, lead to comfort and happiness than large risks. The great majority of people work on the safe side. That is what causes so much competition and such low profits. The daring man tries to do what the majority hesitate to do. If he wins he has his reward. If everybody did as he does and they all won, the reward would not be forthcoming because of this competition.

The Work and the Weather.

Just two weeks to almost a day, without any rain to prevent work. And then another rain that makes the creeks dance merrily. Not so heavy as we had in September. This time we were in a way lucky, for the sweet corn was practically all harvested and delivered on good dry roads. Only three loads to deliver Monday morning in the mud. But the silos are not filled and the corn fields are wet. Another big rain will delay us very much.

With so much work to do this rain was unwelcome and yet it is a good thing for the wheat. In fact, wheat needed a good shower. It got it. If it had not been for the frost we would have come out very well.

THE CONSERVATION OF MANURE.

I am a careful reader of several farm papers and follow the Michigan Farmer discussions carefully.

How many times I have read good articles on different branches and methods of farming, telling what mistakes we make and yet giving us no remedy.

In your October 2 issue of the Michigan Farmer I note a certain article on "Wastes In Stable Manure."

This man tells us about value of the manures and their natures, but he does not tell the average farmer how to preserve it.

For the last year we have hauled the manure direct from the barn, spreading it as we hauled it all winter. During this summer we had no place to spread it as we wished to put it on a field we were pasturing. This ground is quite rolling and has a good sod which I cannot get to break before spring.

I have hauled the manure on this piece and piled it up. Would it have been better to spread it right away and taken chances on the washing?

Gd. Traverse Co. M. B. RANNEY.

In a case of this kind where manure is to be applied to rolling field in grass and the same can be drawn and spread during the summer or at any time when the ground is not frozen, it would, in the writer's opinion, be better to spread it at once when drawn. This will encourage a more rapid growth of the grass, and the grass roots will quickly absorb and hold available plant food which may be washed from the manure by rains. In ordinary weather very little of the plant food will be washed from the hillside under these conditions. In addition to the value of the manure itself when so used, there will be a larger growth of grass encouraged which will provide a better cover for the ground, thus encouraging bacterial action which will make more of the inert plant food in the soil available, as well as providing more vegetable matter to be plowed down for the formation of needed humus.—Eds.

DON'T GO OUT IN THE COLD

Don't go out in the snow and nasty weather this winter to an out-door closet. Protect the members of your family this coming summer against the fly-breeding, disease spreading privy. Every rural home, school and church should have the convenience and comfort of the

★ WOLVERINE ★ Chemical Closet

Low cost, sanitary, odorless, convenient; no water-pipes to freeze; no sewer; nothing to get out of order. Only part in sight is a pure-white bowl.

"No longer the dread of winter," writes one owner. Installed by any man handy with tools, or by local carpenter, in a few hours. Instructions, plans and suggestions gladly furnished. Send for illustrated booklet today, showing some of the many homes using the Wolverine Chemical Closet, and telling of the comfort, sanitation, and satisfaction secured; also our Money Back Guarantee.

DALL STEEL PRODUCTS CO.
605 Main Street
Lansing, Michigan

RATS Can't Steal Your CORN

—If you store it in a MARSHALL IRON CRIB. Absolutely guaranteed to keep out rats, mice, birds, and petty thieves. Made of heavy gauge, perforated galvanized iron. Cost no more than ordinary wood cribs—last a lifetime.

Marshall Iron Corn Cribs come in sections—easy to put on, cure corn better than wood—keep it drier—free from mould—don't lose germination. Saves every kernel. Fire and Weather-Proof won't burn, rust, rot, decay. Easy to fill from wagon or with elevator. Surprisingly low in cost. Freight paid. Round or Shed styles in many sizes—\$47.50 and up. Catalog Free. IRON CRIB & BIN CO., Box 100, Wooster, Ohio

Prompt Shipment Guaranteed

Mighty Monarch Stump Pullers—Guaranteed 5 Yrs.

YOU WANT the stump puller with the most power and speed—made of steel—having double and triple power equipment—simple and easy to operate—at a price any farmer can afford. In fact, you want a ZIMMERMAN MIGHTY MONARCH STEEL STUMP PULLER. Our free complete catalog describes latest stump-clearing method and our new improved stump puller. Write for it today. Zimmerman Steel Co., Dept. MF Bettendorf, Iowa



Grinds Corn, Cob, Husks All At One Time

Only feed mill that successfully grinds snap corn at one operation. Also grinds alfalfa, clover, all kinds of grain. Silent running—bush self-sharpening and self-aligning. Uses less gas—grinds 1000-3000 bu. one set hours. 10 days free trial to convince you that in fine grinding, capacity and light running the Letz is 100% efficient.

LETZ FEED MILL Self Sharpening Silent Drive. Write today—give h. p. of your engine—we'll send you valuable 68-page book "Efficiency and Economy in Feeding Farm Animals". Letz Manufacturing Co., 210 East Road, Crown Point, Ind.



SUPERIOR DUPLEX MILL

(WITH BACER ATTACHMENT) does the work with less power because of the Double Grinding Rings. Grinds mixed feed, corn on cob or in shucks, sheaf oats, Kaffir corn, clover, hay, grains and Cotton Seed. Will grind coarse or fine. Easily operated. Force feed never chokes. For gasoline or steam engine. 9 sizes, 2 to 25 H. P. Fully guaranteed. Catalog FREE. Write today. SUPERIOR MFG. & MILL CO., 75 East Street, Springfield, Ohio



As low as \$7.90

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

Buy Husking Gloves Now? DOZEN CANVAS GLOVES FOR \$1 We Pay The Postage. Largest and heaviest gloves on the market. Buy direct and save money. Lay in your husking supply now. Save this ad as this is the only issue it will appear in. Enclose \$1 bill or money order with order for 24 gloves. The Union Glove Co., Dept. 70, Marion, Ind.

Orchard Observations

Apple Tree Canker.

DURING the last four years I have made it a point, whenever I was inspecting orchards, to determine if possible, the presence of cankers on the trees. When I started I had no conception of the extent of infection or the prevalence of the canker disease. Of the hundreds of orchards visited in the fruit belt of Michigan and in southern Wisconsin, a large per cent showed canker-infected trees. One orchard, about 200 trees which were comparatively sound eight years ago, has been so depleted that now only about 75 trees remain which are still vigorous growing trees. The grower in this particular case failed to recognize the disease, though he often wondered why the trees which had always had such a peculiar condition of the limbs, one side of a limb for several feet, being entirely dead, black in color; a dead area which the living wood vainly tried to cover.

Cankered Conditions Not Generally Recognized.

This is but one case; there are many others similar to it. The grower sees his trees dying off, or at least the large limbs dying back, and, not knowing the nature of the disease, is powerless to combat it.

A few years ago I passed through the orchard of a prominent fruit grower in the central part of the state. He showed me several trees that were dying back, and the leaves that had not died or fallen off were yellow and small. The fruit was small on the branches still living, and ripened prematurely. It was also more highly colored than the fruit of healthy trees of the same variety. He maintained that lightning had struck the tree. A year later I passed through again and found several more trees in the vicinity affected the same way. Evidently the lightning theory did not work and the grower was willing to admit that lightning would not be likely to strike trees in one vicinity continually. He also began to notice that trees in the orchard across the road were dying, apparently in a manner similar to his.

Canker Spread by Pruning.

Examination of the trees showed that cankered areas extended in some cases sufficiently to girdle the limbs. Not having regarded the cankers when he pruned the trees, he had spread it from limb to limb, often where he had sawed off a small limb. When picking fruit, limbs had been broken off and winds had snapped some of the limbs and in nearly every case the cankers had spread from such places. As the canker slowly girdled the limb the outer branches began to weaken and in time the whole limb was dead.

Another grower in the western part of the state whose orchards I often visited told me of his experience. He purchased a young orchard when the trees were about 20 years of age. It was in a deplorable condition, having been neglected for many years. He noticed the cankered areas on the branches of many trees, especially on the Northern Spy and Baldwin. He did not know what they were and as he observed that the cankers were so often on the lower limbs he decided they were due to cattle which had been kept in the orchard or to the teams passing under the trees while plowing. Later when he trimmed the trees he noted that the cankers occurred on the tops as well. Later in the year he attended an extension lecture and the speaker explained to him the real nature of the cankers.

Methods of Treatment.

It was a big fight and it required many years to get the orchard cleaned up. At present I doubt if one could find a diseased limb in the orchard. A good system of cover cropping is employed. The orchard is plowed early

in spring and the cover crop is soon as early as the season permits in autumn, or rather the latter part of the summer. Clover mixed with vetch and oats is used as a cover crop. The wood thus goes into winter mature and very little frost or injury or sun scald results.

The method employed for the elimination of the canker is quite simple. The cankered limbs were carefully cut out and burned in winter. Large limbs, if their loss would unbalance the tree, were treated. The canker was chiseled out, the wound sterilized with formalin and then whitewashed. The limbs which were sun-scalded were also sterilized and whitewashed. On the more susceptible varieties the large limbs and trunk were whitewashed in late autumn.

Several times during the season strong Bordeaux washes were sprayed on the limbs of the trees which had the cankers. This treatment combined with careful pruning and thorough summer spraying as recommended by the Department of Horticulture at the M. A. C. in their spray bulletin has cleaned up the orchard. It is now one of the finest orchards in the state.



The Keiffer pear, though much abused, is of value. It is a good canning pear and gives good eating quality after the other pears are gone, if properly ripened.

Adjacent to this orchard is another owned by a man who sprays once or twice a year. The trees are of the same age and the soil is as rich, but dead limbs, the brushy aspect of the tree, and the few scale-infested apples speak too eloquently of neglect. No one need be asked to make comparison.

Kent Co. C. N. FREY.

ANNUAL STATE HORTICULTURAL SOCIETY MEETING.

The annual meeting of the State Horticultural Society will be held in the Coliseum at Grand Rapids, December 7-8-9. Preparations are being made for an unusually good program. Senator and Mrs. Dunlap, of Illinois, will each give several talks. Senator Dunlap is famous as an extensive orchardist and one of his talks on his orchard operations will be illustrated with moving pictures. Mrs. Dunlap is a recognized domestic expert, and will therefore give talks of special value to the ladies. Mr. Bush, an expert from New York, will also address the meeting. The program promises to be one of the best the state society has ever had. The marketing problem will be given special attention. The exhibits of fruits and machinery will be especially good. It will be to your advantage to keep the dates in mind and let nothing hinder you from attending.



The Guarantee

that saves
you money!

Styleplus \$17 Clothes

"The same price the world over."

Buying clothes is generally like buying horses—you can't tell whether they have "the goods" until after you've put them to work. But with Styleplus you know before you buy! Our Guarantee protects you. You are safe. For every Styleplus suit and overcoat is positively guaranteed to give you satisfaction or you get new clothes. Go to the Styleplus Store, pick out the clothes you like the best, look for the Label in the coat, find our Guarantee in the pocket, and go home sure that the clothes are right!

Style plus all-wool fabrics (strong as iron)
Style plus perfect fit (for every man of every build)
Style plus economy (you save at least \$3 to \$8 on each suit)
Style plus guaranteed wear (a written guarantee with every Styleplus)

You know the price before you go into the store—\$17 always, everywhere. Watch your local newspapers for advertisements of the nearest Styleplus Store. Look for Styleplus in the Store Window. If you don't know this Store write us and we will tell you where it is.

Write us [Dept. H] for free copy of "The Styleplus Book."

HENRY SONNEBORN & CO., Inc.
 Founded 1849 Baltimore, Md.



Trade
Mark
Reg.

Look for the Red Ball

When you see it you can feel sure of the quality. On "Ball-Band" Rubber Footwear the Red Ball stands for many years of sustained quality. It means a comfortable fit and long, steady, rugged wear. We know this is so. We take pains to make it so.

BALL BAND



boots are vacuum cured; during the vulcanizing this process causes a tremendous pressure on the fabric and rubber, and makes the boot one solid piece. Its cost per days wear is lower than that of any other rubber footwear. Over 50,000 merchants sell and recommend it. "Ball-Band" Arctics are made in sizes for men, women and children.

Write for Free Booklet, "More Days Wear"

It tells you how to take care of your rubber footwear and make it last longer. If no store in your neighborhood sells "Ball-Band," write us and mention your dealer's name.

MISHAWAKA WOOLEN MFG. CO.
 319 Water St., Mishawaka, Ind.
"The House That Pays Millions for Quality"



PULL OUT THE STUMPS!

The HERCULES

All Steel Triple Power Stump Puller pulls an acre of stumps a day—increases the value of your land 100%. Makes room for money crops. Guaranteed for 3 years against breakage from any cause. Send name for fine free book, 30 days free trial offer and special low-price proposition.

HERCULES MFG. CO.
 937 24th St.
 Centerville, Ia., U.S.A.

KITSELMAN FENCE

Got It From the Factory Direct

Made of KITSELMAN Open Hearth wire, heavily galvanized—a rust resisting fence—HORSE-HIGH, BULL-STRONG, PIC-TIGHT

Sold direct to the Farmer at

25 CENTS A ROD

Our big Free Catalog of fence bargains shows 100 styles and heights of Farm, Poultry and Lawn Fence at money saving prices. It tells how we make wire, why it's better, why it lasts longer and why Kitseلمان Fence is the most economical fence to buy. Let us convince you of these facts. Write today.

KITSELMAN BROS. Box 278 Muncie, Ind.

Can You Sell Fertilizer?

Local representatives or traveling men familiar with the fertilizer trade in Michigan offered exceptional opportunity to act as representatives of long established company making a complete line of high-grade fertilizers. Write SALES MANAGER, Box 102, care MICHIGAN FARMER, Detroit, Mich.

I Want Men

Like YOU, Who Want To Make \$3,000 A Year, or More

We need a good, live man right now in your territory to handle real estate deals for us. No experience or capital necessary. We teach you the Real Estate Business and appoint you our agent in your locality. Easy work; large profits. We operate everywhere. Write for Free Book.

MORDEN REAL ESTATE SCHOOL
 315 Palace Bldg., Minneapolis, Minn.

LIME

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

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

LIME

You should get the highest grade of limestone manufactured. Buy it upon the basis of analysis. We manufacture the highest grade pulverized limestone sold in Michigan. Let us prove it. Ask for sample and analysis.

CAMPBELL STONE CO., Indian River, Mich.

WINTER VETCH

NEW CROP MICHIGAN GROWN

YOUNG-RANDOLPH SEED CO., Owosso, Michigan

Hairy Vetch Seed For Sale

15c pound, \$8.00 bushel. -Sacks free.

DORR D. BUELL, Elmira, Michigan.

WANTED—RYE AND VETCH MIXTURE

SEND SAMPLES FOR BID TO

YOUNG-RANDOLPH SEED CO., Owosso, Mich.

Bean-Pickers

Try one of our \$4.00 bean-pickers which automatically turns the anthers out so the operator can see it. Save big money by hand picking your unmarketable beans. Address

JUDSON MICHIGAN CO. Durand, Michigan.

When writing to advertisers please mention the Michigan Farmer.



SCARF PROTECTOR PATENTED

This is the Patented Tie - protecting Shield that SAVES your good neckwear.

Ties can't catch or tear on that back collar button, if you wear

SLIDEWELL COLLARS

The Make now preferred in Fashion Centers

Stop your collar troubles - Ask your dealer or send for our complete booklet of SLIDEWELL Styles.

HALL, HARTWELL & CO., Troy, N. Y.
Makers of "HALLMARK" - the better shirt



A Good Story

—worth telling and well told, is our free book, "The Story of the Jersey." You'll be interested. We have nothing to sell. It is our business to tell you the merits of the "Giant of the Dairy"—the marvellously productive and beautiful Jersey.

The story begins with the origin of the breed, follows its careful nurture on the Island of Jersey, and brings you right up to the present development of this strong, hardy, 48 lb.-of-butter-average breed of cattle.

Write for this story now—before you forget.

The American Jersey Cattle Club
346 West 23rd St. - New York City



ACORN UNI-LITE

Turns night into day. 300 candle power. Carry as a lantern; use anywhere as a lamp. Weather proof. For house, barn, garage, camp and around the farm. Write for big free offer. Special opportunity to farmers, stockmen and motorists. Agents make big money. Write tonight.

ACORN BRASS MFG. CO., 706 Acorn Bldg., Chicago

CULL BEANS FOR FEED. Write if you can use a car or less. **YOUNG-RANDOLPH SEED CO., Owosso, Mich.**

Auction of 40 Cows and heifers. Mostly Holsteins 20 New Milks. Nov. 2. **PRATT & READING, Brooklyn, Mich.**



NO MATTER WHERE YOU LIVE YOU CAN ENJOY THE GENUINE EDISON ELECTRIC LIGHT AND POWER

the same as in the heart of the city. These advantages are given you by the

Thomas A. Edison

ELECTRIC LIGHT PLANT

Clean, safe, odorless light and power for many utensils and utilities. Write for Catalog X.

EDISON STORAGE BATTERY CO.
237 Lakeside Ave., Orange, N. J.

Distributors Everywhere:
San Francisco, Chicago, New York, Boston, etc.

Detach and Mail To-Day

EDISON STORAGE BATTERY CO., 237 Lakeside Ave., Orange, N. J.
Send Catalog to
My Name.....
My Address.....
(If you have a Gas Engine, Check Here ☐)

Feeding Dairy Cows for Results

It has become apparent that in balancing a ration great care should be taken to determine the exact amount of dry matter and digestible nutrients needed to produce the greatest profit with least possible cost. To be precise, feed should be subjected to chemical analysis, and each feed weighed daily for each cow, and each milking weighed and tested with the Babcock milk test. A ration properly formulated for one cow, seldom answers for the one standing next to her.

Not only must we have a definite knowledge of the feeding value of our home-grown grains, commercial feeding stuff, and their different analysis, but must also understand the cow in question.

First consideration is body maintenance. This will depend largely on surroundings, size and disposition of the cow. The larger the cow the more nutrients needed, one easily frightened or irritated needs more, and one compelled to stand in draughts or other uncomfortable quarters consequently needs more.

The Maintenance Ration.

It matters not if a cow is in full flow of milk or otherwise, she demands just so much nutriment for maintenance. Maintenance may be divided into three nutrients: protein, carbohydrates, ether extract or fat. Protein is generally a muscle builder, but can also be converted into energy, heat or fat. Carbohydrates acts in the same capacity as coal does to a boiler, provides heat, and ether extract or fat, so named because ether

tible nutrients. By using the term, digestible nutrients, is meant that if a cow fed 100 pounds of protein and 20 pounds appear in the solid excrement, then 80 pounds must have been taken up by the blood. Such food we say contains 80 per cent of digestible nutrients.

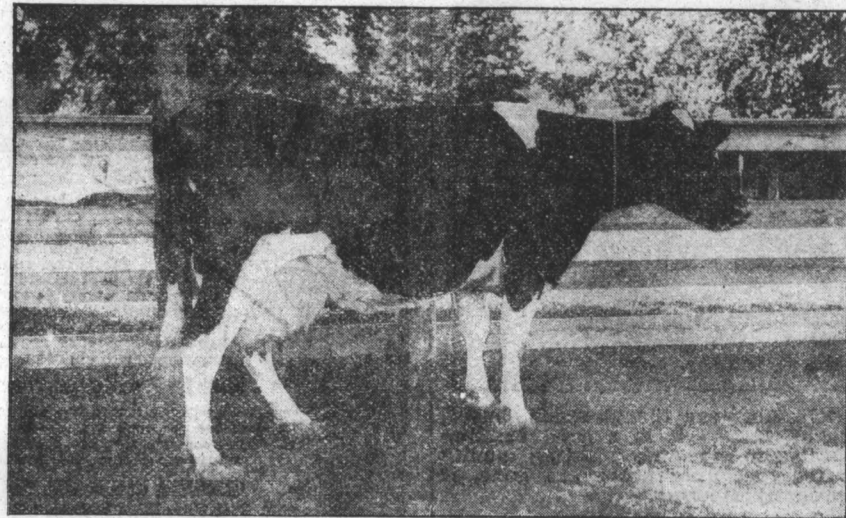
Before we can work with any degree of accuracy, we must know how much of each nutrient is required for maintenance. A good rule is to use .07 pounds protein, .7 pounds of carbohydrates and .01 pound of fat per cwt. of cow, thus, the average dairy cow, which will weigh about 1,000 pounds, requires .7 pounds of protein, 7 pounds carbohydrates and .1 pound of fat. This is a safe rule to follow.

Now having the figures for maintenance, we must next know the amount of each kind of food required to produce one pound of milk. Experience has proven that .05 pounds of protein, .22 pounds of carbohydrates, .017 pounds of fat is sufficient for one pound of milk. A cow giving, say 30 pounds requires 30 times as much required for one pound plus body maintenance. Thus we have:

	Pro.	Carbo.	Fat.
For 1 lb. of milk...	.05	.22	.017
For 30 lbs. milk...	1.50	6.60	.510
For maintenance...	.70	7.00	.10

Nutrients needed in ration 2.20 13.60 .610

The grains common on most Michigan farms are corn and oats. Corn silage, mixed hay and corn stover are generally provided for roughage. In formulating a ration from the feeds given, it is well to remember that oats



Feed and Breed for Results. Irma Gilt Edge Queen 2nd, with a Year's Butter Record of 498.6 pounds.

is used to separate the fat from the different feeds, serves the same purpose as carbohydrates.

In formulating rations and in making calculations, it is well to remember that the average cow can handle about 18 pounds of hay, and eight pounds of grain daily, and for every pound of protein 5.4 pounds of carbohydrates should be provided. This proportion of roughage to concentrates is a very important item.

A ration composed of one-third concentrates and two-thirds roughage should be provided for a cow doing light work, and for a cow doing heavy steady work one-half the ration should be provided by concentrates. Where one wishes his cows to produce to their utmost for one or two years, and then replace them with cows fresh in milk, two-thirds of the ration may be provided by concentrates.

Getting the Balance Between Protein and Carbohydrates.

Very frequently we are confronted with great difficulty to get a proper balance between the protein and carbohydrates. In such cases the experienced dairy man turns to corn and its by-products. Corn meal is high in carbohydrates, and gluten feed and gluten meal being by-products of corn are high in protein. All three concentrates carry a high per cent of diges-

at any time can be exchanged for bran, pound for pound.

Now, referring to the feeding standards, we find that the following contains:

	Pro.	Carbo.	Fat.
30 lbs. silage	.270	3.390	.210
8 lbs. mixed hay	.232	3.320	.096
2 lbs. corn	.158	1.334	.086
4 lbs. oats	.368	1.892	.168
10 lbs. bran	1.290	4.010	.340

Total 2.318 13.946 .900

This ration is a little in excess in all three nutrients, but will maintain a cow yielding 30 pounds of 4.5 per cent milk, 36 pounds of 3.5 per cent milk, or 42 pounds of 2.5 per cent milk. If corn stover is fed, 10 pounds may be substituted for the eight pounds of hay.

The Cost of Feeding.

Now that we have the cow in a class by herself, and have compounded a ration for her individual need, the main point to be observed and not carelessly passed by, is to know if the cow is paying a dividend. Thirty pounds of milk testing 4.5 per cent is equal to 1.35 pounds of butter-fat and at the price of 34 cents is equal to 45.9 cents. Her feed would cost as follows: 30 lbs. of silage at \$3 per ton is 4.50c; 8 lbs. of hay at \$12 per ton is 4.80c; 10 lbs. of bran at \$30 per ton is 15.00c; 4 lbs. of oats at 50c per

bushe! is 6.24c; 2 lbs. of corn at 70c per bushel is 2.50c, or a daily cost of 33.04c.

Computing the figures we have a daily gain of 12.86c, 39c profit for every dollar's worth of feed consumed. Figuring skim-milk at 15c per cwt. would add 11c to her credit, and supposing her dollar's worth of feed to be 50 per cent digestible would add 2c more in excrement, or a total of 52c for every dollar's worth of feed consumed.

Where shall we deposit the dollar, in the cow, or in the bank? The cow pays 17½ cents daily, and the bank pays four cents every 365 days.

Van Buren Co. VAN V. RYNO.

COW-TESTING ASSOCIATION IS PROSPERING.

The Grand Rapids Cow-testing Association has completed six months of this year's work. Although our number of cows on test is not large, being only 250 at present, we are gaining in number and expect to add three herds to our list in October. Several of the cows have been dry the past two months, as a large majority of the cows freshen this fall. Pasture has been poor, especially low ground, and flies have been bad, as well as the weather. In spite of all these conditions there are 72 cows in the association that produced over one pound of butter-fat per day for the past six months; 38 cows producing between 30 and 35 pounds per month; 28 cows producing between 35 and 40 pounds, and six cows producing over 40 pounds per month. The scales and Babcock test have caused 23 boarder cows to be sold to the butcher; this makes room for 23 good producers. Why not raise heifers from high producing dams and eliminate the 200 and 250-pound cows? This can only be done by careful selection, keeping a record of each cow's product and using sires from high producing dams; the best is none too good. I find that it costs very little more to feed a cow that produces 300 or more pounds of butter-fat per year, than it does to feed a cow that produces 200 pounds. At the present price of butter-fat and dairy feed, there is not much profit in the low-producing cow. I believe this is the reason why dairy cows are not in a greater demand at the present time. Am glad to say that all of the herds in our cow-testing association are with pure-bred sires.

Kent Co. D. R. EDGERLY.

THE FORMATION OF GAS IN SILO.

Silage always goes through a process of fermentation during which it throws off carbon dioxide. This fermentation starts shortly after the silage is put in, so often considerable fermentation takes place over night.

In several instances the formation of this gas has been the cause of loss of life. The gas is heavier than air and will settle just above the top of the silage, and then when men climb in they will be affected by gas suffocation unless proper precautions are taken.

Leaving the door open at the surface of the silage will permit the gas to pass off, or running the blower for a few minutes, if one is used, will blow the gas out. If this is not done one should test the air above the silage before entering the silo. This can be easily done by lowering a lighted lantern into the silo. If it goes out carbon dioxide is present, if it stays lighted the air is safe.

In pit silos the above precaution is especially necessary, as there is no means of escape for the gas. If a test indicates that gas is present it can be bailed out like water with an opened umbrella inverted. After the silage has stopped fermenting there will be no danger from gas.

Questions to Ask the Herd Boar

THEN, after you have asked them remember that he is not responsible for being at the head of your herd.

1. Would you make, or have you ever seen the time when you would have made a creditable barrow or stag?

If not, it is probable that the get of such a boar will not contribute to more and better hogs on the farm. At first thought it may seem a bit overdrawn to ask such a question, but think it over and you will come to the conclusion that there are too many herd boars that rightfully belong in this class. Some of these, too, I am sorry to say, are well connected—that is, they have excellent pedigrees. Time enough to examine the pedigree after a choice individual is found. Do not let a small scrap of paper obscure a multitude of defects.

2. Is your breeding such that it contributes its share to the value of your offspring, or is it negative, (that is, it neither adds nor subtracts from the value of the offspring), or, lastly, is it such that it actually depreciates its value?

All these possibilities are open, and it is surprising how few breeders appreciate these values and how long it takes others to learn. If, for instance, anyone tells you that the pedigree of any good individual Duroc-Jersey is good enough to head any Duroc herd set him down as inexperienced, a false prophet, or a bigot. Pretty safe to follow the lead of the most successful of our constructive breeders in this

you may well ask your herd boar, 4. Did you cost too much?

It is true that the matter of price, both up and down, is partly a matter of education. The beginner, if left to form his own judgment, is inclined to be conservative and as a rule he is quite right in so doing. The paying of unusually strong prices if ever justified, and it is sometimes, should be indulged in only by the constructive breeder of long experience, who should know the value of what he is buying, and the wealthy fancier who wishes to gratify his desire to own the highest priced animal of the breed.

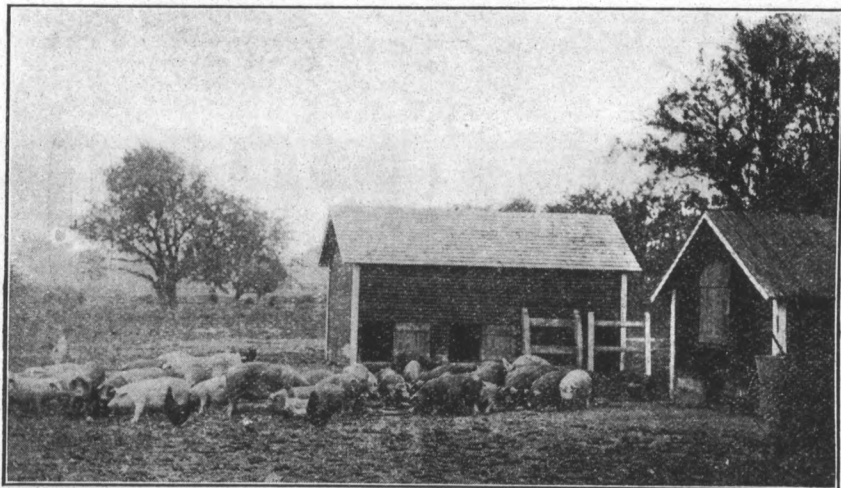
If these random ideas inspire a closer study of the importance of the selection of breeding stock, and particularly the sire, the writer will feel well repaid.

Illinois.

H. W. MUMFORD.

CORN SILAGE AND MILL PRODUCTS FOR STEERS.

The South Dakota Station reports a test made in which three lots of yearling steers of four head each were fed during a 146-day feeding period, each lot receiving all the silage the steers would eat and 12 pounds of by-product, this being for lot one, oil meal, lot two cottonseed meal, and lot three dried distillers' grains. The average daily gains per head were 2.45, 1.95, and 2.17 pounds, respectively; and during the first 90 days 2.69, 2.08, and 2.49 pounds. The estimated cost per pound of gain was 5.86, 6.64, and 5.5 cents. In two other lots grain was substi-



The Quality and Thrift of the Pigs is the Final Test of the Sire.

respect. It will be found that almost without exception the more experienced and successful the breeder, the more careful about the blood lines introduced into his herd.

3. Did you come from a well-established herd where no question is ever raised as to the straightforwardness of the owner and the quality of the stock he distributes?

It is no secret that breeding stock costs more from such an establishment. Unquestionably, it is worth more. The standing of the breeder of a herd or header of foundation stock is an asset or a liability. See to it that it is an asset. Here is where the breeder has need for all the discretion and judgment of the veteran. As in all branches of trade there are plenty of clever counterfeits, plenty of wolves about in sheep's clothing. Frequently the imitation of a real breeder has more lieutenants and helpers than the stock of the constructive breeder who knows full well the limitations of his stock and is not willing to be responsible for making extravagant claims. When the fattening of steers for the market was a pretty safe enterprise, I can very well remember a quite common expression, viz: "You can not buy the good ones too high." While it is true that the choice ones with satisfactory blood lines and from herds of good standing are worth considerable more money than just hogs, it is possible to buy them too high. And

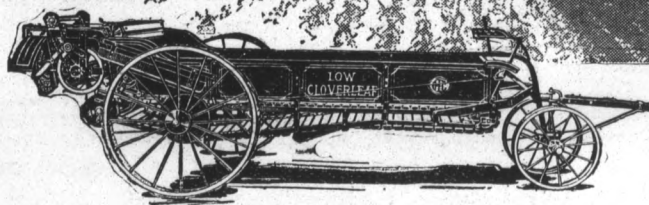
tuted for one-half by weight of the silage fed in the former lots, lot four receiving oats and lot five corn. The former lot made average daily gains of 2.18 pounds per head, the latter 2.09, and during the first 90 days 2.3 and 2.01 pounds, respectively, costing 6.88 and 8.22 cents per pound of gain. The average amount of feed required to produce a pound of gain for the 146-day feeding period was as follows: Lot 1, 19.7 pounds of silage and 1.2 pounds of oil meal; lot two, 21.2 pounds of silage and 1.5 pounds of cottonseed meal; lot three, 20.3 pounds of silage and 1.3 pounds of dried distilled grains; lot four, 10.9 pounds of silage and 4.7 pounds of oats; and lot 5, 11.6 pounds of silage and 5.9 pounds of shelled corn.

A very common cause of sterility in stallions is excessive service. Dr. Carlson reports a study of 545 stallions that had gone wrong. Fully one-half had become impotent as a result of over service. One service per day will leave more mares in foal at the end of the season than will two or more.

A Good Advertising Medium.

You may continue my seven-line ad. of Jersey cattle for another year as I find the Michigan Farmer is a good advertising medium. My last year's advertising brought good results in getting buyers for my surplus stock and I found it to be a profitable investment.—Alvin Balden, Capac, Mich.

GRAND PRIZE
WINNER
AT
SAN FRANCISCO
EXPOSITION



International Harvester Manure Spreaders

"**M**OST machines handle crops—the manure spreader produces crops." There is a lot of food for thought in that sentence. When you have crops ready, you need machines for the harvesting, but before you can have crops you must have fertile soil. Your yields depend on how well you fertilize the soil.

In the choice of a spreader—your crop producer—you cannot be too careful. Avoid all chance of going wrong by choosing an International Harvester spreader—Low Corn King, Low Cloverleaf, or Low 20th Century.

IHC spreaders are built from careful designs based on rigorous field tests; strength in every part makes them last for years; they can be had with an attachment spreading 8 feet wide or more; they are low for easy loading; narrow for easy handling in yard, stable and field.

If your local dealer can't show you an IHC spreader, write us for our booklet "Why You Should Use a Manure Spreader," and when we send it we will tell you where you can see the machine. Don't buy until you have seen an IHC spreader.

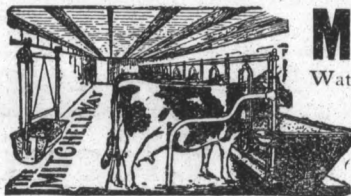
International Harvester Company of America

(Incorporated)

CHICAGO

USA

Champion Deering McCormick Milwaukee Osborne Plano

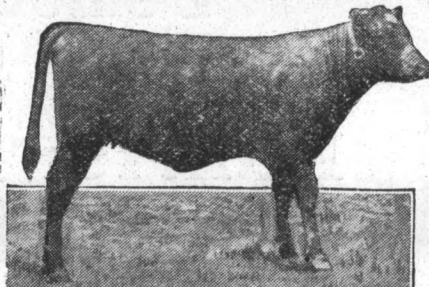


MITCHELL CARRIERS

Water Bowls, Cow, Calf and Bull Pens, Steel Horse Stalls

Stanchions and Steel Stalls

You get the best and save money by getting Mitchell Barn Equipment. Don't buy before getting full description of our New Model Big 4 Carrier—26 styles to select from. Write for free catalogue and prices. Mitchell Mfg. Co., 3100 Forest Home Ave., Milwaukee, Wis.



Raised Without Milk!

Her name is "Daisy" and her owner, W. A. Riddle, of Chapin, Iowa, raised her on Blatchford's Calf Meal, which costs less than half as much as milk.

Blatchford's Calf Meal

A useful preventive of scouring. Calves raised "The Blatchford's Way" are heavier, bigger-boned and healthier. Known as the complete milk substitute since the year 1875. Sold by your dealer or direct from the manufacturer.

Blatchford's Pig Meal insures rapid, sturdy growth of young pigs at weaning time. Prevents se-back.

See Actual Figures—based on results—that show you how to increase your calf profits. Write today. Blatchford Calf Meal Factory, Dept. 4387 Waukegan, Illinois



Get More Money From Your Work

Get more milk and more eggs, make the pigs grow faster—save time, work and feed in 100 ways with a

"Farmers' Favorite" Feed Cooker and Boiler

Pays for itself many times every few weeks. 30 days free trial proves it. Satisfaction guaranteed. Burns any fuel. 25 to 100-gal. capacity. Four sizes between. Our free literature will tell you how to save money every day in the year.

LEWIS MFG. CO.,

64-78 Owego St. Cortland, N.Y.

OVERLAND ALUMINUM SHOES

Sizes 1 to 13. Save Money and Prevent Sickness. Water-Proof, Rust-Proof, Rot-Proof. Warm in winter, cool in summer. Weight about the same as an all-leather work shoe. Will outwear several pairs of leather, rubber or wood soled shoes. No metal touches you. Thick felt insole. Comfortable to wear. Keep the feet in good condition. Best bytest for all work in any weather. MONEY BACK if shoes do not meet with your approval. Write for FREE catalog which shows styles, gives prices and tells how to order. A postal brings it. OVERLAND SHOE CO. Dept. 45 Racine, Wis.

Remit \$1.25 for Sample



Acorn Water Bowl

on trial for horses or cattle, if no desirable after 30 days use, return it at our expense and money refunded connect direct to any watersystem no float valve, only water in bowl under hinged disc, fitted for wood or steel stalls, ask for Catalog and price list.

METAL SHINGLE CO.

122 Oregon Ave., Detroit, Mich

9 1/2 CORDS IN 10 HOURS

RUNS EASY. No Backache. Weighs only 41 lbs. Easily Carried. SAVES DOWN TREES. BY ONE MAN. It's KING OF THE WOODS. Saves money and backache. Send for FREE catalog No. B-44 showing low price and LATEST IMPROVEMENTS. First order gets agency. Folding Sawing Mach. Co., 161 W. Harrison St., Chicago, Ill.

MINERAL HEAVE COMPOUND

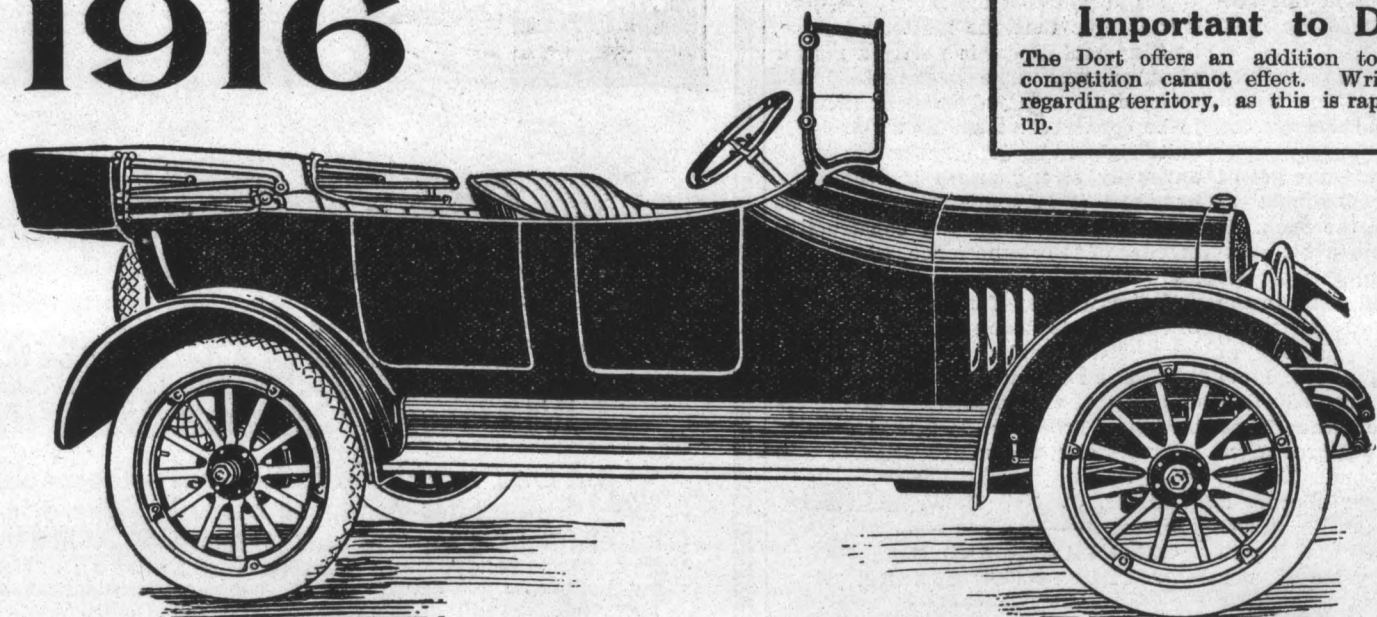
in use over 50 years. Booklet Free. \$3 Package guaranteed to give satisfaction or money back. \$1 Package sufficient for ordinary cases. MINERAL HEAVE REMEDY CO. 463 Fourth Ave., Pittsburgh, Pa.

BOWSER SWEEP MILLS

Different from all others. 4 or 2 horses. Grind Corn with shucks and all small grains. (Also make 10 sizes of bolt mills) FREE—Folder on "Feeds and Manures" D. N. P. Bowser Co., South Bend, Ind.

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

1916

**Important to Dealers**

The Dord offers an addition to your line that competition cannot effect. Write or wire us regarding territory, as this is rapidly being taken up.



DORD

**Electric Starting
Electric Lighting
Demountable Rims
Fully Equipped**

\$650
F.O.B. Flint

Built for the Business Farmer

The Model Five Dord was built for the business farmer. For 29 years Dord had been handling farm vehicles. He knew what the farmer wanted for vehicles and what he needed in an automobile.

If an automobile is going to be a business asset to the farmer he must be able to use it every day in the year; when the roads are deep with snow; when the temperature is far below zero; and again in the spring when the frost is coming out of the ground and the mud is so deep and thick that the average car will sink to the hubs and be hopelessly mired.

The Dord is built for these conditions—for year round service. It is a real farmer's automobile.

The approval that the business farmer has set upon the Dord has made possible a greatly increased production. This increased production enables us to sell the new Model Five Dord Touring Car for \$93 less than we sold this car a year ago—and to add complete electric starting and lighting equipment and demountable rims. The Dord passed all of its experimental stages more than a year ago. Those who saw the Dord at the New York and Chicago Shows admitted it to be a wonderful value at \$743 it is a better value today at \$650.

Read the specifications and compare the Dord with other cars in its class.

Service and constant motoring satisfaction are the standards upon which the Dord Motor Car is measured—not competing price—although that is amazingly low. The Dord Motor Car is built fundamentally for use, and it has never failed to make good.

Investigate the Dord before you buy a car. Write for the Dord Booklet I.

Dord Motor Car Co., Flint, Michigan.

Specifications**Model Five
Touring Car**

Five-passenger; left-hand drive; center control; four cylinder motor cast en bloc; circulating splash lubricating system; thermo-syphon cooling system; Connecticut ignition; gravity feed gasoline system in cowl; selective type transmission; 3 speeds forward and reverse; three-quarter floating rear axle; internal expanding and external contracting brakes; demountable rims; 30x3½-inch tires; Good-year all weather tread on rear; 50-inch full cantilever springs in rear; front semi-elliptic; stream line with ample leg room in both compartments; 105-inch wheelbase; standard equipment, including electric starter, electric generator, electric lights throughout, one-man mohair top, speedometer, gasoline gauge, electric horn and complete tool equipment.

Magazine Section

LITERATURE
POETRY
HISTORY and
INFORMATION

MICHIGAN FARMER
AND LIVE STOCK
PUBLISHED WEEKLY
JOURNAL
ESTABLISHED 1843.

The FARM BOY
and GIRL
SCIENTIFIC and
MECHANICAL

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

IT was early March, and all the broad country of sage and aspen was filled with the bleatings of the sheep, as through alternate mud and dust and snow and shine they trailed on and on, bound from winter quarters to the shearing-pens and the lambing-range.

Hombre, the Mexican from the Big B. outfit, sat with me in the tent that evening, and sampled my concoction of chile con carne—poor stuff it must have been to him, the artist—while we exchanged herders' gossip. Nellie, John the Swede's sheepdog, lay at ease, dreaming behind the warm camp stove.

Outside there uplifted plaintively

NELLIE

the mutterings of four thousand Circle K woollies—the band over which John and I were in charge—bunched for the night upon the bedding-ground near-by. The wind blew gustily, and a half-moon shone from amid scudding clouds. The air was keen with the breath from league upon league of hill and peak, still snow-clad, surrounding; but in the creaking tent upon the desolate plateau Hombre and I were very comfortable.

"Leesten!" bade Hombre.

Above the gusts and the bleating

By EDWIN L. SABIN

and the creaking arose the long, yapping howl of a coyote—a curious eery outburst of yelps and barks and whimperings, like a mad jackal or a foolish puppy. Behind the stove Nellie growled.

"I t'ink you have ol' fiend, too," spoke Hombre. "We had ol' fiend coyote follow us t'ree days. But I get up very early, one morning, an' peek, 'fore sunrise, when it gettin' light, an' I see him on little hill near, lookin' down on beddin'-ground. I poke out my gun, an' I settle dat coyote. He

beeg she coyote. Four sheep he keeled—si!"

The challenge had ceased. But another sound broke in—the sound of horse's hoofs, betokening the return from town of John. Nellie knew. She crawled backward from her retreat behind the stove, and passed through the closed tent-flaps to greet her master.

Throwing aside one of the flaps we let the lantern-light shine forth, as our welcome; but we said naught, for the sheep-range is a lonely range, and a herder soon grows tongue-tied, accustomed to repression.

John dismounted rather laboriously and started to unsaddle. It was plain

WORLD EVENTS IN PICTURES



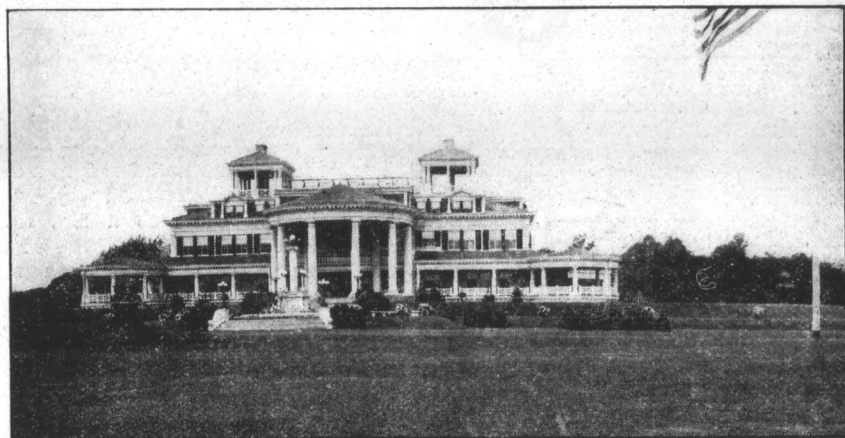
The Girls of England are Being Organized into Companies of Girl Scouts with Activities as Varied as those of the Boys' Organizations.



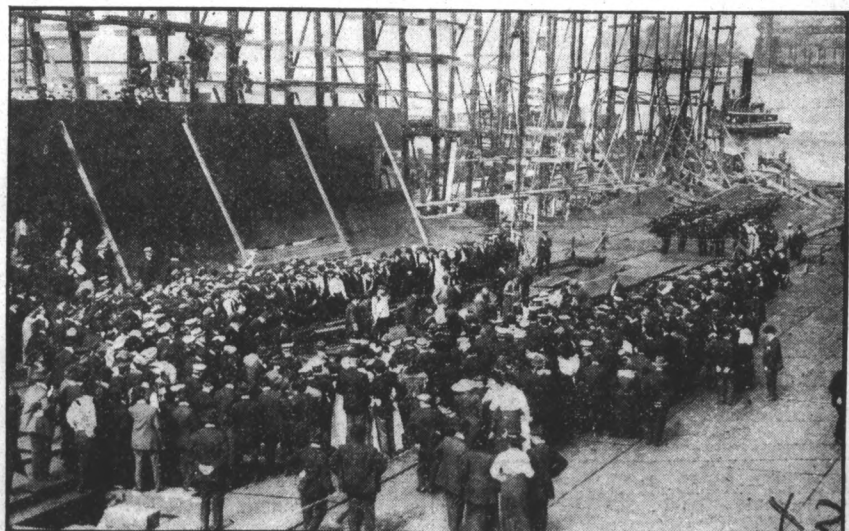
Idaho Celebrates Dedication of the Arrowrock Dam—Highest in the World, which will Store Water for 243,000 Acres of Land.



Thousands of Automobiles Carried Spectators to Sheepshead Bay, New York to Witness the Great Auto Races.



Shadow Lawn, a Magnificent Estate that President Wilson has Arranged to Occupy as his Summer Home in 1916.



Laying the Keel of Uncle Sam's Most Formidable Fighter, the California,

Wonderful New Kerosene Light

Burns Vapor
Saves Oil

Beats Electric
or Gasoline



Awarded
GOLD MEDAL
at World's
Exposition
San
Francisco

Scientists
say its
White Light
is nearest
to day-
light in
color

10-Days FREE TRIAL

Send No Money, We Prepay Charges

We don't ask you to pay us a cent until you have used this wonderful modern light in your own home ten days—we even prepay transportation charges. You may return it at our expense if not perfectly satisfied after putting it to every possible test for 10 nights. You can't possibly lose a cent. We want to prove to you that it makes an ordinary oil lamp look like a candle; beats electric, gasoline or acetylene. Lights and is put out like old oil lamp. Tests at 33 leading Universities and Government Bureau of Standards show that it

Burns 50 Hours on 1 Gallon

common coal oil, (kerosene) and gives more than twice as much light as the best round wick open flame lamps. No odor, smoke or noise, simple, clean, no pressure, won't explode. Children run it. Several million people already enjoying this powerful, white, steady light, nearest to sunlight. Guaranteed.

\$1000.00 Will Be Given

to the person who shows us an oil lamp equal to the new **Aladdin** (details of offer given in our circular.) Would we dare make such a challenge if there were the slightest doubt as to the merits of the **Aladdin**?

Men Make \$50 to \$300.00 per

Month With Rigs or Autos Delivering the **ALADDIN** on our easy plan. No previous experience necessary. Practically every farm home and small town home will buy after trying. One farmer who had never sold anything in his life before writes: "I sold 51 lamps the first seven days." Another says: "I disposed of 34 lamps out of 31 calls." Thousands who are coining money endorse the **ALADDIN** just as strongly.

No Money Required

We furnish capital to reliable men to get started. Ask for our distributor's plan, and learn how to make big money in unoccupied territory. Sample Lamp sent for 10 days **FREE TRIAL**.

We want one user in each locality to whom we can refer customers. Be the first and get our special introductory offer, under which you get your own lamp **free** for showing it to a few neighbors and sending in their orders. Write quick for our **10-Day Advance Free Trial**. Send coupon to nearest office.

MANTLE LAMP CO., 154 Aladdin Building
Largest Kerosene (Coal Oil) Mantle Lamp House in the World
Chicago, New York City, Portland, Ore., Montreal or Winnipeg, Can.

10-Day FREE TRIAL Coupon

I would like to know more about the **Aladdin** and your Easy Delivery Plan, under which inexperienced men with no money can make big money without capital. This in no way obligates me.

Name.....
P. O.
Address.....State.....

THE COLEMAN AIR-O-LITE



Gives 300 candle power of good, strong, steady light. Can't blow out, or jar out. Made of heavily nickled brass. Burns 50 hours from one gal. of gasoline.

Fill It Only Once A Week

Clean it only once a year. No chimneys. No smoke. No soot. No smell. No danger even if tipped over. Can't spill. Can't explode. Guaranteed for five years. If not on sale in your town yet, write us for catalog of 20 different kinds of Coleman Gasoline Table Lamps, Lanterns, etc. Dealers or Agents wanted in every locality.

THE COLEMAN LAMP CO.
236 So. St. Paul, Minn. 1008 Summit St., Toledo, O.
281 E. Sixth, St. Paul, Minn. 422 Akard, Dallas, Texas.
40 South Clinton Ave., Chicago, Ill.

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

Mention Michigan Farmer when writing to advertisers

that his trip into town had done him no good. Liquor was in him. As he stepped back, he stumbled upon Nellie, who was sniffing, dumb dog fashion, at his overalls, waiting to be recognized. For this John, this great, flaxen, viking John, Swede sheep-herder, was her one acknowledged friend, her one partner, her one captain, and her god. Between them was only love, and for love she obeyed him; but, stumbling, with an oath he kicked at her. His heavy brogan grazed her silky black side, and with a yelp of astonishment and alarm she sprang aside.

In silence John finished unbuckling the girths, ripped off the saddle, blankets, and bridle, and turned his horse loose to join mine, grazing, hobbled, near. Then he entered the tent. Nellie stayed outside.

"Dat dog, she spoilt now," remarked Hombre solemnly. "She no good!" John, his broad face red and his thin yellow mustache untidy, snarled at him surlily, even contemptuously. "Bes' sheep dog in dis coountry," he said. "Five hoonder dollars not buy my dog!"

"Buono," answered Hombre the imperturbable, through his black beard. "You see, meester. You keek her, she never forget!"

John had squatted before the supper, but he stood again and stuck his head out of the open doorway. He whistled.

"Here, Nellie!" he called. "Coom here!"

Nellie did not come. Looking out we could see her, a vague, black, low shape in the dusk—could see her eyes, faintly aglint, as she gazed at us from her vantage a dozen yards off among the sage.

"By t'under," growled John, "you stay out, den! You coom in here, you get anodder kick. I kick you head off. Why don't you mind, hey? Coom here, I say."

But as if well advised by these contradictory suggestions, Nellie budged not; and after casting about a moment for a chunk to throw at her, John vengefully closed the flaps, and in further foolish bravado buttoned them tight.

"She stay out, now!" he threatened; and settled again to the chile con carne, eating noisily.

"Five hundred dollar, huh!" commented Hombre. "Not five hundred cent!" And he was still calmly insistent when he left to ride to his own camp eight miles across country.

I watched John, and tried to read his mind, as we washed and wiped the supper dishes. He was a big, tow-headed, blue-eyed Swede, who had worn overalls and brogans on the range for ten years. I saw that he was uneasy; Hombre's words had struck through to his sense.

As every sheepman knows—yes, as every dog-man knows—you cannot treat a collie as you may treat the common run of dogs. A collie is like an Indian—he never forgets a blow, and rarely forgives it; and of all collies the trained sheep-dog is the most sensitive. Perhaps the long, close companionship, alone with the herder upon the vast open, has mingled, with his superhuman instincts, instincts too human.

John lighted his pipe. His head was clearer after eating. We talked of many things in the news that he had gathered in the little town. We spoke of the sheep to be shorn at the Petersen pens this season—sixty thousand, he had heard; of the prospect of grass; of the new dead-line established by the ever inimical cowmen; of the death of Long Mike in the blizzard last month, when two thousand of the Three Bar sheep perished with him, stoutly though he fought to save them. This and other talk he retailed, and I discussed.

But he was uneasy. Like me, who had no voice in the matter—Nellie being his own jealous property—he miss-

ed her behind the warm stove where, her day's faithful work done, she was entitled to take her rest. Several times he stood at the flaps, peeping out through a crack—ostensibly to spy upon the sheep. Once he clucked with his lips. No Nellie came; and without mentioning her we turned in to bed, and doused the lantern.

Before I went to sleep I heard the coyote barking again, but I did not hear Nellie answer.

I woke up about midnight; herders get this habit. John was snoring hard. The wind was still gusty, shaking the tent; the air within was dense and chill. My ear caught a babbling little murmur—this may have been what prompted me—querulous, interrogative, rising from the bedding-ground, and I heard also a whimpering, eager and puppyish, just outside the tent. A moving body even brushed it. There came a soft patter of padded feet, and more whimpering.

"Nellie!" I spoke. "Oh, Nellie!" Instant silence, except for the wind and the sheep-notes, followed, but John aroused.

"What's the matter?" he demanded, thickly.

"I thought the dog was trying to get in."

He murmured in Swedish, and snored again. For a few minutes I lay, disliking to get up in the cold and investigate. The whimpering was renewed, so was the patter of light feet; then, as it seemed to me, they receded. The complainings of the sheep gradually died, only the wind and John's snores were left; and soon I, too, was sleeping, probably snoring.

The morning dawned raw and bleak. No Nellie was behind the sheet-iron stove, and no Nellie was curled, out of the wind, against the tent. As we moved about, to the bedding-ground, and for water and wood, no Nellie emerged from the brush at sight of us, nor did the sizzling of breakfast fetch her.

We trailed seven miles that day, and camped at night without her.

"By t'under, I t'ink she roon off!" declared John; and with the unreasonableness of the brutish man who knows that he is in the wrong, and holds that by keeping in it he denies it, he began to hate her.

Yet I was sure that deep down was remorse; thus I interpreted those furtive glances with which he scanned the rolling brush before and on either flank, and which he cast back into our wide wake.

We made good time to the shearing-pens, and three weeks brought us there, but still without Nellie. I know that John, like myself, rather anticipated finding her attached to some other camp; but all of her that we encountered, in our casual visiting around where six outfits and twenty thousand sheep were collected within a radius of ten miles, was the report by a Double Circle herder that he had twice sighted a black wolf while he was crossing between the Big and the Little Blue. The Blues were twenty miles south of our own trail.

From the shearing we pushed for the lambing-range. Travel was slow, for the babies, born and unborn, made us let the toiling ewes set their pace as suited them. But one late afternoon of the first week of May, the shaggy, panting columns of the Circle K poured down upon the well-remembered lambing-range, to halt and stay a while.

The coyotes had not bothered us much, save in a desultory way. However, when we had been in camp two or three days, word came from the Double Circle, our neighbors, denoting the presence upon that section of the range of an old fiend.

Now, coyotes all love mutton as a bear loves pork and a cat loves fish. But occasionally a particularly vicious coyote, possessed of the killing mania, pesters the sheep-range—usually a bachelor; sometimes, however, a very

bold female. The lambing-range is its delight, but it will stick by a band upon the trail, and everywhere will take its daily toll with the most exasperating regularity. It will kill at midday as at sunset; and of fat ewes it will eat perhaps only the udder, for a tit-bit, and leave the rest.

Such a coyote is called an "old fiend." When day after day it wantonly destroys its two and three sheep—ewes, wethers, lambs, always the best—the herder watches, waits, thirsting to catch it with a meat-buried hook, or to shoot it through the body and gibe at its whirlings.

The old fiend haunting the Double Circle had been sighted several times. He was a large dog coyote; and again the Double Circle herders stoutly insisted that they had glimpsed a black wolf in company. That must be Nellie, who had never returned, nor joined another camp. It explained the whimperings about the tent, weeks ago, when in the night, disregarding the frightened muttering of the sheep, the coyote had come courting.

John bitterly cursed her. To him she was a traitress of the worst type. He sent out word to have her shot on sight. A sheep-killing sheep-dog is deemed lower than even an old fiend coyote. But I found it difficult to believe in Nellie's blood-guilt. Rather, it was natural to believe that the thin bletherings of the new lambs—sweetest music in the world to a sheep-dog of the range—had drawn her to the lambing-grounds as the homing pigeon is drawn to its nesting-cote. And from reports Nellie herself had tender cares impending.

Soon after this, I met her. It was at twilight, and I was trudging through a copse of pleasant aspens, driving forth the unwilling sheep. As I descended into an open little hollow, warm and fragrant, Nellie loped out opposite, as if disturbed from the other side, where John was working and shouting.

Her formerly sleek, silk coat was rough and full of burrs, her flanks were now gaunt. I whistled.

"Nellie, girl!" I called.

At the summons she halted short. One moment she stared, wistful, hesitant, ears pricked; then, with a lowering of her brush, she wheeled, and sprang, and was gone. I was glad that I had spoken, rather than shot; and I did not tell John.

That night the coyote barked. The Double Circle had made it too hot for him; twice had herders creased him with a bullet; and here he was, on our range, to pester John and me.

The next day I again saw Nellie, upon a little hill. She was gazing down and across the sheep, quietly surveying that lush, comfortable domain where the wethers busily cropped and mothers baaed and babies bleated and gambled; and where she herself had been accustomed to rule so wisely and so well with John.

When she found that I was noticing her, she trotted back into the timber.

At the evening round-up and drive, we discovered a dead lamb and a dead ewe, both mangled and wasted. John went to sleep, vowing vengeance on coyote and dog alike. It was too much that Nellie should be party to mutilating her own former charges.

Remembering the gentle art with which she would hold even the smallest of lambs, using her forefeet and mouthing with utmost care, I scarcely yet would admit, though I could not understand.

The twain—if twain it was that worked—had grown very bold and vindictive. Nothing, so far as we could ascertain, was killed in our band the next day; but the following morning just as the sheep had left the bedding-ground, there arose a great commotion.

Sheep start off the bedding-ground with the first ray of the rising sun. Old and young, they straggle into the brush to graze. The herder's business

now is to be up and alert, so that he may shape their foolish steps aright, and direct them toward the pasture selected for the day. Then, with the sheep headed as they should head, he may return to his tent for breakfast.

This John and I had done; and we were sitting down to coffee, spuds, and mutton, when sharp and high sounded an unmistakable but confused volley of sheep cries. Out we tumbled, John grabbing on the way his ready rifle.

Along the hill-slope beyond the bedding-ground, and above, the sheep were running wildly hither and thither through the sage; bursting like quail from a central spot in which three figures, white, brown, and black, were struggling together, rolling upon the ground, bleating, whining, growling. The air was clear and still, the sun was up, we could hear and see.

John dropped to his knee. The distance was a bit over two hundred

yards, air-line. The three figures were in the same violent agitation, wrestling and tumbling amid the brush, when he fired. The bullet smacked instantly with a round thud. He fired again, quick. The figures writhed but stayed; their movements ceased.

"Got dem both!" he exclaimed jubilantly.

Across we hastened, John with rifle cocked; but there was no need of caution. As we approached, the white figure staggered up, and a lucky wether with the Circle K—our brand, Nellie's brand—stamped plain upon his rump, and upon his shoulder a red stain where fangs had struck and grazed, went galloping off.

The brown and the black objects remained there, prone, motionless, body upon body. One bullet had pierced each—but Nellie, Circle K sheep-dog in the end as in the beginning, still had the coyote fast gripped by the throat!

Land O' Nod Stories.

By HOWARD T. KNAPP.

Ants Are Expert Road Builders.

FOR several minutes Billy Be By Bo Bum and Tinker Teedle Tee trudged through the grass forest, scrambling over the trunks of fallen trees, which, you know, were really only twigs, and walking around big boulders, which, a minute before, Billy would have called pebbles. But after he drank Tinker's magic brew, Billy shrank and shrank until now he was no larger than the merry little elf, and even a blade of grass looked as large as a tree. At last they came to a narrow path winding through the grass forest, a path that was crowded with ants, each dragging or carrying a cookie crumb in its jaws.

"Why, I never saw this road before," said Billy in surprise.

"It was there all the same," chuckled the merry little elf. "But when you were a big boy you would have said this path was only about an eighth of an inch wide and, of course, you couldn't see it hidden away down here in the grass."

"Where does it lead to?"

"This is the road to Antland," replied Tinker, so he and Billy joined the crowd of hurrying ants and set off down the path to pay a visit to the ants' underground city.

"This certainly is a crooked path," said Billy a minute later. And indeed, the path was crooked, twisting in and out like a corkscrew between the trees of the grass forest.

Tinker and Billy were not the only ones traveling the road, not by any means. In fact, the way was crowded with busy ants, all hurrying along in the same direction, and each carrying or dragging a crumb of the cookie Billy had dropped under the old apple tree at the edge of the oat field.

After a while the path became wider, but it was just as crowded as ever, for every minute more ants joined the throng, and every one carried a burden, either on its back or clutched tightly in its jaws, although the newcomers, instead of being loaded down with cookie crumbs, carried seeds and kernels of grain. Still the path kept getting wider and wider, until at last Billy and Tinker were trudging along a wide road, smooth and hard as a cement walk.

Now if Billy had seen this road before he drank Tinker's magic brew, he would have said it was only about two inches wide, but you must remember he was now no larger than the ants that crowded against him on every side. So, you see, the road was really six or eight times as wide as Billy was tall, and if you compare those figures with a road built by

men, it made the ant's highway at least twenty-five or thirty feet broad.

"It's funny I never saw this road before," said Billy. "I can't understand how I could have missed it, as it is as wide as the street that runs past my house."

"That's the way it looks to you now," replied Tinker, "because you are no larger than the ants who built the road."

"Do you mean to say these little fellows built this fine road?" demanded Billy, stopping so suddenly that an ant hurrying along right at his heels bumped into him and dropped its load.

"Oh, I beg your pardon, Mr. Ant," said Billy, stooping to help the ant pick up his load.

"That's all right," replied the ant. "Accidents are bound to happen, but hurry along now or you will block traffic and we will all be late for dinner."

"Why, Tinker, I never knew ants could talk," said Billy as they resumed their journey. "I spoke to that fellow and he answered me as plainly as could be."

"Of course ants can talk," replied the elf. "If they couldn't, how do you suppose they could accomplish all the wonderful things you will see when we reach their underground city. Of course they do not speak the same language as you do, they have a tongue of their own."

"It certainly does provoke me to hear men, who think they are so very wise, call the Little People who dwell in the woods and meadows 'Dump Animals' and declare they can neither talk or think. Why, Billy Boy, animals have more sense than lots of men, even though they can't do sums in arithmetic. Take this road, for instance. Could the ants have built such a fine highway if they were as dumb as some people would have us believe?"

"No, I guess they couldn't," replied Billy. "But why did they build it?"

"You saw for yourself what hard work it is dragging a load through the grass forest where the ground is covered with sticks and stones, over which the load had to be lifted. So the Little People built this road from their underground city to the harvest fields to make it easier to carry home the good things they gather in the meadows."

"Your father would say this road is about ten feet long, but when you compare it with the size of an ant, this highway is really as long as a ten-mile stretch of roadway built by men."



Redeem Your Karo Syrup Labels —Karo Premium Offer

SEND us labels from 50c. worth of Karo (red or blue) and 85 cents and receive this Wonderful 10½ inch Aluminum Griddle by prepaid parcels post. This griddle retails regularly at \$2.25. It cooks uniformly on entire baking surface. Needs no greasing, therefore does not smoke, is as light and bright as a new dollar, never rusts, easily kept clean, will not break and lasts a lifetime.

At great expense we are seeking to place a Karo Aluminum Griddle in the homes of all Karo users, so that Karo—the famous spread for griddle cakes and waffles—may be served on the most deliciously baked cakes that can be made.

Karo the Syrup Choice on Thousands of Farm Tables

THE woman who keeps the syrup pitcher filled knows better than anyone else how strong the men of her household are for Karo on the griddle cakes, hot biscuits, bread and waffles.

She may not know how many thousand cans of Karo are used in her home state, but she does know how often her own Karo pitcher is emptied. The forehanded housewife buys Karo by the dozen and keeps it in the pantry ready for the daily filling of the syrup pitcher.



CORN PRODUCTS REFINING CO.

Dept. 102

New York

P. O. Box 161



Blue Ribbon Auto Trailer

Hauls 12 to 14 Milk Cans to town in ½ the time required with horse and wagon. Saves ⅔ of men's time.

DURANT-DORT CCE. CO.
Flint, Mich.

HITCH QUICK DETACHABLE

Steel tire	\$42.50
Rubber tire	\$52.50
Ball bearings	10.00

Write for particulars to Dept. F.

Durant-Dort Cce., Co.
FLINT, MICH.

KEEP YOUR MONEY SAFE BUT KEEP IT WORKING

Safety for your surplus funds is, of course the first and greatest consideration, but to secure safety you do not need to sacrifice income.

You can obtain both of these necessary features by purchasing

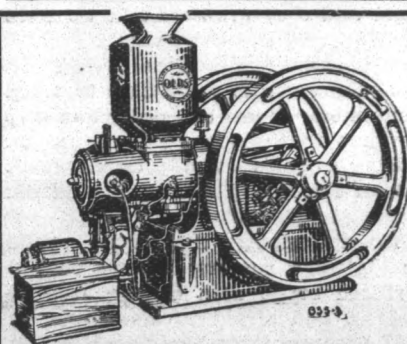
4% TO 6% MUNICIPAL BONDS

many of which are tax free.

The bonds are in denominations of \$100, \$500 and \$1,000 and can be bought either for cash or on easy payments. Send us your name and address for our interesting free booklet "Bonds of Our Country."

BOND DEPARTMENT

THE NEW FIRST NATIONAL BANK, Columbus, O.



Olds Engines

No Friend like an "OLDS" Friend
GET OUR NEW PRICES

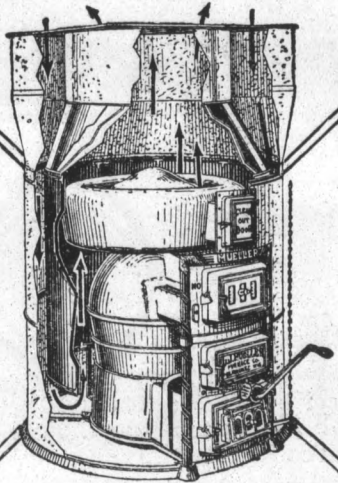
O-perates economically
L-asts a lifetime
D-elivers what we claim
S-implifies farm work

Seager Engine Works
986 Walnut St. Lansing, Michigan.

When writing advertisers please mention The Michigan Farmer

A New Kind of Furnace

No pipes--No waste heat
--Goes in any cellar, no matter how small.



Mueller Pipeless Furnace

Here's the furnace you have been looking for—one that you can put in any kind or size of house, no matter how old, where located or how small the cellar, and keep every room warm as toast. No pipes to take up space—no alteration or tearing up necessary. If you have no cellar you can easily install the Mueller Pipeless by digging a small pit in which to place it.

Positive circulation of air at correct moisture gives rooms the even temperature and proper ventilation that safeguards health. Far cleaner, handier and more sanitary than stoves—keeps rooms warm, cellar cool. Built of cast iron. Easily operated. Burns either coal or wood.

Send for Free Book

Find out how well this new kind of furnace is adapted to your home. Learn how it will save you labor and money. Our Free Book tells just what you ought to know. Write for it today.

L. J. Mueller Furnace Co.,
195 Reed Street Milwaukee, Wis.
"Makers of Heating Systems
of all Kinds Since 1857."

Keep Your Home Really Clean

Not just free from visible dirt, but free from disease and hidden dangers. 20 Mule Team Borax will prove your best helper.

Sinks and drain pipes are breeding places for germs of all kinds. These avenues for the spread of disease may be made hygienically clean by flooding them daily with a strong solution of Borax and boiling water. This will remove the germs and odors and lessen the danger of contagion from this source.

20 MULE TEAM



BORAX

Built Right

Built tight to hold heat; built strong to last! That's the secret of the big success in

Eclipse Stoves and Ranges

Write us today for name of Eclipse dealer in your community. We will also send free illustrated booklet.

ECLIPSE STOVE COMPANY
Mansfield, Ohio



THE TURES LAMP

400 Candle Power of the finest, whitest, softest light at a cost of 1/4 cent per hour. Burns common gasoline—simple and safe. AGENTS can secure good territory and steady income selling the wonderful TURES Lighting Systems. Portable Lamps, Saffery Lanterns and self-heating Sad Irons. Write for catalogues, terms, etc.

TURES MFG. CO.
390 Sixth Street Milwaukee, Wis.



Woman and Her Needs At Home and Elsewhere



Babies Up to Date

THERE isn't anything about babies that's done as it was when mine were little," complained grandmother. She hung greedily over the bassinet studying the lineaments of the latest arrival.

"I'm just hungry to take him up and rock him and squeeze him and kiss him, but do you suppose I dare?" she continued. "Rocking would jar his brain and squeezing would disturb his nervous equilibrium and kissing would give him germs! As if I had leprosy or something, and could give anybody anything. When I had mine I kissed them whenever I wanted to and I never gave 'em anything. But it's different now, everything is."

"Susan does everything by the book. Take up at 8:30; feed at 8:35; put back in bassinet at 8:45; do absolutely nothing till 9:30, when bath time comes. Then return to bassinet, when a well regulated child should fall asleep and sleep till 12:35. Then feed again. You can't even feed 'em when they're hungry any more. Mine always wanted to eat as soon as they had their bath. They were sleepy, and they'd take a little milk and go right off to sleep. But this poor child could not have a drop after his bath if he was dying for it, because it isn't the right time. He can yell himself to sleep, poor little thing, when a spoonful or two of milk would satisfy him and he'd drop right off."

"I thought it was bad enough when the poor little things could only be fed every two hours, but now they've stretched it out to four hours. It don't stand to reason that we could have been feeding them every two hours or oftener ever since Eve raised Cain and have it all wrong up to now. If we were feeding them twice as often as we should why didn't they die? It's hard work for me to go four hours between meals sometimes, and to expect a little baby with its tiny little stomach to go four hours without food is too much. It's against nature, it seems to me."

"The new fangled goings on are beyond me. Sleeping by the clock and eating by the clock and playing by the clock and crying by the clock, though I notice this one yells whenever he feels like it, whether it is the scheduled time or not. You'd think babies were machines instead of flesh and blood humans. Where's your individuality going to come in if they're all trained to the same pattern? My babies were allowed to grow naturally and it gave some spice to life, for no two of them were alike. John insisted on sleeping all day and playing half the night and Mary slept all the time, day and night, and the twins didn't sleep at all, or so it seemed. Just little cat naps. And I just let them do as they pleased and we got along and they grew up and we were all happy. I see now, though, that I should have made them all do the same thing at the same time to teach them habits of law and order and give me time to develop my own nature. Raising babies was development enough for me. I got all the human nature studying them I needed."

"No, the modern mother is beyond me. Always running around with a sterilized bottle or a thermometer or a clock, and afraid to kiss her own child because she's likely to bring in a germ from some place and give the baby something. What's a baby for if

it isn't to kiss and play with and be silly over? You might as well come into the world all grown up, if you can't be babied when you're a baby. You get enough disciplining when you're grown up."

"I know Susan would just love to make a big fuss over this one if she dared. But she's read so many scientific books on bringing up children, and written so many weighty papers on the subject that she's afraid to show right out what she feels. I saw her looking real envious at Milly Brown the other day when Milly was hugging and kissing her baby and tickling its neck and talking baby talk to it at the exact time when she should have been putting it in its basket and turning out the light and walking off and leaving it to go to sleep alone. Susan would give a good deal if she dared let the baby stay awake when he wanted to and go to sleep when he was sleepy. But she

THANKSGIVING.

BY LALIA MITCHELL.

Things to be thankful for, whisper them over,
Grain in the bin and a mow full of clover,
Apples as smooth and as red as a cherry,
And yellow as gold the sweet prints from the dairy,
Fruit in the cellar, strawberries and peaches,
With jars of preserves, and a royal prize each is,
Honey from hives where the brown bees are humming,
And nuts from the woodland—
Thanksgiving is coming.

Things to be thankful for, tell them together,
Palace or cot, a retreat from the weather,
Sheltering walls that the firelight will brighten,
Someone to smile and the weary way lighten,
Someone that cares, and a dream ever pleasant,
Of a future that copies the bliss of the present,
Peace and a joy in the fruit of my labor,
Peace with myself, with my God and my neighbor.

daren't. He's got to do it by the clock. "Poor little thing. He's a victim to science. Grandma'd like to rock him, so she would, but she daren't." And Grandma wiped away a tear and sat down to read, "Holt on Babies."

DEBORAH.

HONEY, THE MOST WHOLESOME SWEET.

BY JULIA R. DAVIS.

Honey, it is claimed by those who have tried it, is one of the most wholesome things that one can eat. It should be given to children in place of candy and sugar and cake to satisfy the demands of the craving which all children have for sweets, and which is the natural call of the bodily tissues for an element which it needs. Honey is one of the purest forms of true sugar known. It is also a natural preservative, and bread and cake made with honey will keep almost indefinitely.

The blended flavors of fruit and honey are wonderfully delicious, and fruit preserved in honey is far superior to the usual way of using sugar. Plums, peaches, quinces, figs, and other fruit are an entirely different kind of conserve done with honey, and

those who like new dishes, especially most delectable ones, should try this method. Just use your old recipes, but substitute honey in the place of sugar.

Here are a few novel honey recipes:

Honey Mousse.—Beat the yolks of four eggs until a lemon color, and then beat into them gradually, a cupful of strained honey. Heat gradually until thick, stirring constantly. Remove and cool and add the whites of the four eggs that have been whipped to a froth. Then add a pint of whipped cream and blend all together. Pack in ice and salt and freeze without stirring.

Honey and Apples.—Select large apples, core them and fill the cavities with honey. Bake, after putting a little butter on top of each.

Honey—Quince Marmalade.—Wipe quinces, remove blossom ends, cut in quarters, remove seeds; then cut in small pieces. Put into a preserving kettle and add enough water to nearly cover. Cook slowly until soft, rub through a hair sieve, and add three-fourths of the measure in heated honey. Cook slowly for 25 minutes, stirring constantly to prevent burning. Put in tumblers.

Spiced Apple Sauce.—Wipe, quarter, core, and pare eight sour apples. Put in a saucepan and pour over one cup of honey. Add eight cloves and enough water to prevent apples from burning. Cook to a mush, stirring constantly.

Honeyed Peaches.—Peel, cut in halves, and remove stones from six peaches. Place in a shallow pan. Fill each cavity with one teaspoon of honey, one-half teaspoon of butter, a few drops of lemon juice, and a slight grating of nutmeg. Cook 20 minutes and serve on circular pieces of buttered dry toast.

Honey Gingerbread.—Blend together one cupful of honey, half a cupful of sour milk, two eggs well beaten, two cupfuls of flour, half a teaspoonful of cinnamon, the same of ginger, half a teaspoonful of salt, and one and three-quarters of a teaspoonful of soda. Heat the honey and butter together and just before it reaches the boiling point remove from the fire. Then add the sour milk and eggs and other ingredients. When cool coat with a thin icing.

RECIPES.

Household Editor:—I am enclosing a number of recipes for your paper, which are in season, just at this time of year. Many thanks for the splendid helps given through your columns concerning babies. From a country mother living hundreds of miles from her own mother.—Mrs. F. V.

Beet Relish.

One quart of raw cabbage, chopped fine; one quart of boiled beets, chopped fine; two cups of white sugar; one tablespoon of salt; half teaspoon of black pepper; one cup of grated horseradish. Cover with cold vinegar and seal.

Stuffed Tomatoes.

Select sound tomatoes, remove pulp, mix with chopped green peppers, minced ham, green corn and butter. Season to taste and refill cavity. Cover with grated cheese and bake. Serve with or without cream dressing.

Ripe Tomato Relish.

One peck of ripe tomatoes, peeled, chopped and drained over night; two cups of onion, chopped fine; two cups of celery, chopped fine; two cups of

grated horseradish; four green peppers, chopped; half a cup of salt; one cup of white mustard seed; two cups of brown sugar. Mix thoroughly with one quart of vinegar and put in glass cans without cooking.—Mrs. F. V. Montague, Mich.

Peach Font.

Make a pudding of biscuit dough. Roll it out and wrap the half of a peach in it, with sugar sprinkled in the center. Make a half dozen of these rolls and place them in a buttered tin. Pour a sugar syrup over them and bake in a quick oven.

When preserving peaches, reserve some of the syrup and bottle it, to be used later for cooking cranberries, instead of the usual water and sugar. The combination of flavors will be found very agreeable.

HOME QUERIES.

Household Editor:—Will someone please give me a recipe for tomato catsup like we buy?—Mrs. M. E. S.

Each pickling company has its own rule for catsup, and it would be impossible to give you directions for making catsup exactly like that you buy. The following rule from the Boston Cooking School cook book is a very good one:

Cut up one peck of ripe tomatoes till soft. Force through sieve, add three cups of sugar, one-fourth cup of salt, one tablespoon of black pepper, one teaspoon of ginger, one teaspoon of cloves, one-eighth teaspoon of cayenne pepper and one quart of vinegar. Bring to boiling point and let simmer until right consistency. Fill bottles to overflowing, cork and seal.

Dear Deborah:—Am enclosing directions for one kind of pineapple lace, which was requested in a recent issue of the Michigan Farmer. As there are several patterns known as pineapple, this may not be the one desired. I have one or two more which I will gladly loan, or copy if they are wanted. I have a request, or suggestion, to make in regard to the department which the farmer's wife is particularly interested in, and I am sure others besides myself will enjoy it, too. May we have some quilt patterns, as piecing quilts is becoming quite popular again? I am sure that you will enjoy them, too. I like your department of the Michigan Farmer very much.—Mrs. S.

Thank you for the pineapple pattern lace pattern, and for your kind words regarding our department. I will be unable to print the directions, but will be glad to forward them on receipt of a self-addressed and stamped envelope. Will be glad to use quilt patterns.

REMOVING STAINS.

BY OLIVE RICHEY.

In removing stains from clothes the sooner one gets to work the better. Fresh stains are much easier to remove than those that are allowed to dry or set. Before the staining fluid has dried an application of salt or starch will take up much of the fluid.

Most of the ordinary fruit stains can be removed by milk. If the stain is fresh it may be removed by dipping immediately in sweet milk, but when old, soaking in buttermilk for several hours may be necessary to remove the stains. Soak the article in buttermilk, cover with salt and expose in an airy place. Buttermilk will also remove mildew, wine stains and tea stains.

A simple method of removing grease spots from cloth is to lay over the spot a piece of brown paper and press with a hot iron. In removing grease from silk or colored goods, care should be taken that the iron is not hot enough to change the color of the goods.

Perhaps the simplest and best method of removing grease and paint-stains, and of cleaning goods generally, is to wash them in gasoline. In using gas-

oline, care should be taken that no lighted lamps or fires are in the room where the cleaning is being done. In using gasoline, a large quantity of the liquid should be used in order to insure good work. Three earthenware vessels should be prepared and gasoline placed in each. The articles to be cleaned should be well brushed to remove all loose dirt. Place in first vessel and soak for an hour or two. Rub between the hands, paying particular attention to the greasy or dirty spots. Press out all the gasoline possible and place in the second vessel. Again rinse and place in the third vessel. After rinsing the third time the article should be stretched and shaped and hung on the line to allow the gasoline to evaporate. When thoroughly dry, press with a hot iron. If the goods are not badly soiled, putting them through two vessels containing the gasoline may be sufficient.

When through cleaning the gasoline may be saved for future use by straining through several thicknesses of cheesecloth. When so strained all the dirt and sediment are removed.

SHORT CUTS TO HOUSEKEEPING.

The pulp that was left in my jelly bag looked so nice after the juice was drained out, that I put it through a sieve, added half its weight of sugar, stirred thoroughly and set the kettle in the oven on an asbestos mat. The door was left ajar and the marmalade stirred once in a while. The result was a delicious compound which did not burn on. I shall try putting my grape marmalade in the oven when I make it.—Mrs. M. M. N.

MICHIGAN FARMER PATTERNS.

Our latest Fashion Book, containing illustrations of over 400 designs of ladies', misses' and children's garments in current fashions, also newest embroidery designs, and a concise and comprehensive article on dressmaking which gives valuable hints to the home dressmaker, will be sent to any address upon receipt of ten cents.



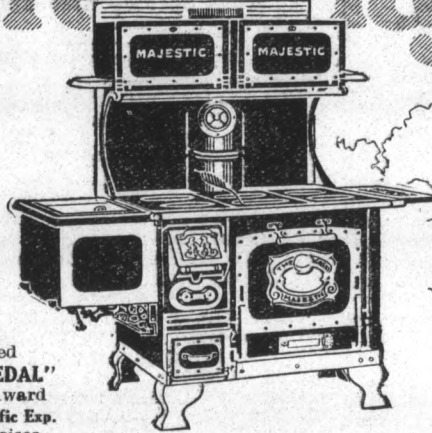
No. 1280—Ladies' Kimono. Cut in 3 sizes, small, medium and large. It requires 5½ yds. of 44-inch material for a medium size. Price 10c.

No. 1290 Waist. 1289 Skirt. Ladies' Costume. Waist cut in 6 sizes, 34, 36, 38, 40, 42 and 44 inches bust measure. Skirt cut in 6 sizes, 22, 24, 26, 28, 30 and 32 inches waist measure. It requires 7½ yds. of 44-inch material for a medium size. The skirt measures about 3¾ yds. at its lower edge, with plaits drawn out. This calls for two separate patterns. Each pattern 10c.

No. 1282—Girls' "Junior" Dress. Cut in 3 sizes, 12, 14 and 16 years. It requires 5½ yds. of 36-inch material for a 14-year size. Price 10c.

No. 1275—Girls' Apron. Cut in 6 sizes, 4, 6, 8, 10, 12 and 14 years. It requires 2½ yds. of 36-inch material for a 10-year size. Price 10c.

Great Majestic



Awarded
"GOLD MEDAL"
Highest Award
Panama Pacific Exp.
San Francisco

The "Thoroughbred"

It's as poor policy to keep a "scrub" range in the kitchen as to keep a "scrub" cow on the farm. Whether it be range or cow, the cost of keeping a scrub is more than that of the thoroughbred—and the results are less.

The Majestic is the thoroughbred among ranges. It takes a small "feed" of fuel and gets the utmost cooking value out of it, because it distributes the heat where it will do its best work and keeps it there—the heat can't leak out of the ever-tight, cold-riveted Majestic. With no heat wasted, less fuel is used.

The Majestic oven never fails you because its scientific construction circulates the heat evenly to all parts of oven; and its heavy

asbestos lining reflects the heat all over and under the baking; perfectly baking and browning all sides, without turning.

The Majestic body of charcoal iron resists rust three times as long as steel; and its top, doors, frames, etc., made of tough, malleable iron are unbreakable. Repair expense is reduced to practically nothing.

The little extra price of a Majestic is soon saved by its economy in fuel, food and repairs—and it outlasts three ordinary ranges.

There is a Majestic dealer in nearly every county of 42 States. If you don't know one near you, write us and we will tell you who he is.

One quality, many styles and sizes, with or without legs.



Write for Book.
Tells what to look for and what to avoid when buying a range. You can't judge a range by looks. You should know how they are made and why.
Write for free copy
MAJESTIC
Manufacturing Co.
Dept. 21
St. Louis, Mo.



DON'T PAY TWO PRICES HOOSIER Stoves Ranges FREE

To try in your own home for 30 days. Show your friends. Freight paid by us. Send it back at our expense if you do not want to keep it. You can buy the best at Actual Factory Prices. Are heavily made, of the highest grade selected material, beautifully finished, with improvements that absolutely surpass anything ever produced. The Best in the World. Guaranteed for years by a Two Million Dollar Bond. No matter where you live, you can try a HOOSIER in your own home thirty days, without a penny's expense or obligation to you. You can save enough on a single HOOSIER STOVE to buy your winter's fuel. Write or send postal today for Large Free Catalog and prices showing large assortment to select from. No Obligations.

HOOSIER STOVE COMPANY,
131 State Street, - MARION, IND.



Alkali, Lucern, Eucalyptus, Sheep: Use these words or any others to test WEBSTER'S NEW INTERNATIONAL

DICTIONARY, The One Supreme Authority.

This New Creation not only answers your questions about soil, seed, crops, stock, feeding, but answers all kinds of questions in history, biography, fiction, trades, arts, and sciences, puzzling war words, etc.

GRAND PRIZE, Panama-Pacific
International Exposition.
400,000 Words. 2700 Pages.
6000 Illustrations.

G. & C. MERRIAM CO., Springfield, Mass.



Name _____
Address _____



The best emollient yet discovered for wounds, burns, sores, cuts, and skin diseases of all sorts. Always reliable, always brings relief—an invaluable remedy to keep about the house.

Trade **Vaseline** Mark
WHITE
PETROLEUM JELLY

Put up in handy glass bottles. At drug and general stores. Send postal for free "Vaseline" booklet.

CHESEBROUGH MFG. CO.
(Consolidated)
33 State Street New York City

Beacon BURNER FREE

FITS YOUR OLD LAMP.
100 Candle Power Incandescent pure white light from (kerosene) coal oil. Beats either gas or electricity. COSTS ONLY 1 CENT FOR 6 HOURS. We want one person in each locality to whom we can refer new customers. Take advantage of our Special Offer to secure a Beacon Burner FREE. Write today. AGENTS WANTED.

HOME SUPPLY CO., 28 Home Bldg., Kansas City, Mo.

FOX, COON, SKUNK AND RABBIT HOUNDS
Broke to gun and field. Prices right. Fox and Coon hound pups \$5 each. Stamp for reply.
H. C. LYTLE, Fredericksburg, Ohio.

4000 FERRETS FOR SALE
Price list free. C. J. DIMICK, Rochester, Ohio.

FERRETS FOR SALE. Catalogue free.
C. D. MURRAY, R. 2, New London, Ohio.

HOUNDS FOR HUNTING
ages. 500 ferrets, send 2 cent stamp. W. E. LECKY, Holmesville, Ohio.

BELGAIN Hares fine pedigree, bucks 4 months \$2.50 each, ability bucks \$1.00 each, fine healthy stock. No Dose for sale. Rose Comb White Leghorn Cockerels \$1.00 S. S. Ham-burg Cockerels \$1. Riverview Farm, R. S. Vassar, Mich.

Squab Breeders—Full grown Carneaux youngsters ready for mating. Reasonable. The Florence Farm, Dublin, Mich.

PATENTS That Protect and Pay
Send Sketch or Model for Search.
BOOKS AND ADVICE FREE
Watson E. Coleman, Patent Lawyer, Washington, D.C.

Markets.

WEATHER FORECAST.

For week beginning October 27 for region of the Great Lakes. Partly cloudy weather on Wednesday and Thursday will be followed by rain Friday or Saturday and probably fair weather at the end of the week. It will be warmer Thursday and Friday and somewhat cooler during the second half of the week.

GRAINS AND SEEDS.

October 26, 1915.

Wheat.—The bears seemed to have the controlling hand in the wheat market the past week in that prices ruled on a considerably lower basis than for the previous period. The chief argument used by the buyers was the exceedingly heavy deliveries throughout the northwestern territory. In the winter wheat district of that section total receipts at primary points were almost double the quantity received a year ago. Notwithstanding this, a reaction in the trade occurred on Monday, and despite the big movement, prices began to advance in the northwestern trade centers and other markets were obliged to follow. Bad weather in the Canadian provinces, enormous purchases by foreign agents in Winnipeg, the heavy buying by millers in Minneapolis were all important factors in bringing about the change. Both England and the Mediterranean countries are bidding for cargoes and American exports are increasing as a result. There is an active demand for flour. The visible supply increased 1,725,000 bushels. One year ago No. 2 red wheat was quoted locally at \$1.12½ per bushel. Quotations are as follows:

	No. 2	No. 1	Dec.
Wednesday	1.16½	1.13½	1.18
Thursday	1.15½	1.12½	1.17
Friday	1.12½	1.09½	1.15
Saturday	1.10	1.07	1.12
Monday	1.11½	1.08½	1.14
Tuesday	1.11½	1.08½	1.14
Chicago—December	wheat		\$1.00;
May	1.02½		

Corn.—Despite bearishness in the wheat market, corn values were well maintained throughout the past week. There has been fairly good weather over the country and farmers have taken advantage of it to put the crop away in good shape. The demand, however, seems healthy and with an abnormal foreign call for wheat and oats, the market for corn will profit thereby. The visible supply decreased 855,000 bushels. One year ago No. 3 corn was quoted here at 77c per bu. Quotations are as follows:

	No. 3	No. 3
	Mixed.	Yellow.
Wednesday	67½	68½
Thursday	67½	68½
Friday	68	69
Saturday	68	69
Monday	68	69
Tuesday	68	69

Chicago—October corn 63.4; Dec., 58.6; May 60.2.

Oats.—With the visible supply holding about steady and the prospects of a big demand from foreign countries, the position of the oat deal would seem to be favorable for at least maintaining the present price basis. The conservative marketing by farmers will have an important bearing on the fluctuation of values, however. One year ago standard oats were quoted at 51c per bushel on this market. Quotations are as follows:

	No. 3	White.
	Standard.	
Wednesday	41½	40
Thursday	41½	40
Friday	41½	40
Saturday	41½	40
Monday	41	39½
Tuesday	40½	39

Chicago—December oats 38.4c per bu.; May 39.4c.

Rye.—This cereal is higher and the market is firm. Foreigners are looking for the grain. Cash No. 2 is quoted at \$1.03 per bushel.

Barley.—Steady with malting grades at Milwaukee, quoted at 56¢63c per bushel, and at Chicago 54¢62c per bushel.

Peas.—Market is steady with the new crop quoted at \$2.15@2.25 per bushel, sacks included, at Chicago.

Beans.—There is a good demand for beans, and the market continues firm. Immediate and prompt shipment are quoted here at \$3.50; November \$3.30. At Chicago market is firm with the supply of old beans very small. Hand-picked pea beans, good to choice \$3.80@4; common to fair \$3.50@3.75; red kidney \$3.50@4.

Clover Seed.—Market steady, prime spot \$12.25; December \$12.10; prime

alsike \$10.20. At Toledo prime spot \$12.30; March \$12.10; prime alsike \$10.20.

Timothy Seed.—Prime spot steady at \$3.60 per bushel.

FLOUR AND FEEDS.

Flour.—Jobbing lots in one-eighth paper sacks are selling on the Detroit market per 196 lbs., as follows: Best patent \$5.90; seconds \$5.60; straight \$5.20; spring patent \$6.60; rye flour \$6.20.

Feed.—In 100-lb. sacks, jobbing lots are: Bran \$28; standard middlings \$24; fine middlings \$32; cracked corn \$24.50; corn and oat chop \$31.60 per ton.

Hay.—No. 1 timothy \$18@19 a ton; standard timothy \$17@18; light mixed \$17@18; No. 2 timothy \$15@16; No. 2 mixed \$10@12; No. 1 clover \$10@12.

Chicago.—Choice timothy quoted at \$18@19; No. 1 do. \$17@17.50; No. 2 do. \$14@15; No. 3 do. \$11@12 per ton.

Straw.—Wheat and oat straw \$6.50@7; rye straw \$8@8.50 per ton.

DAIRY AND POULTRY PRODUCTS.

Butter.—A moderate supply and active demand holds market firm at prices ½c lower than last week. Extra creamery 27½c; firsts 26½c; dairy 21c; packing 19c.

Eggs.—A good demand exists at last week's prices. The price, based on sales, is 27½c.

Chicago.—A firmer tone prevails and goods are moving freely at prices slightly higher than last week. Extra creamery 27½@27½c; extra firsts 26@26½c; firsts 24@25½c; extra dairies 26c; packing stock 19@19½c.

Eggs.—Tone of the market is firm. Prices are unchanged. Canned firsts 26½c; current receipts 24½c.

Chicago.—A firm feeling exists for fresh stock. The best grade is slightly higher. Refrigerator stock steady. Firsts 26½@27c; ordinary firsts 25@25½c; miscellaneous lots, cases included 20@26c.

Poultry.—Lighter receipts have made market firm. A lot of poor quality stock still being received. Turkeys 14@15c; spring turkeys 18c; fowls 7½@13½c according to quality; spring chickens 10@13½c; ducks 14c; geese 13@13½c.

Chicago.—Market is steady and unchanged except for springs which are ½c higher. Turkeys 10@14c; spring turkeys 20c; fowls 10@12½c; springs 13½c; ducks 12@14c; geese 10@14c.

FRUITS AND VEGETABLES.

Apples.—A good steady demand at unchanged prices. Fancy \$2.75@3.25 a bbl; common \$1.25@1.50. At Chicago the demand is moderate. Poor quality hurts market. No. 1 Greenings and Kings \$2.50@3; Jonathans No. 1 \$3@3.50; Snows and McIntosh \$2.75@3.25; Wagener and Hubbards \$2.25@2.50; Spies \$2.50@3.25.

Potatoes.—Market is steady with Minnesota offerings at 65¢68c and Michigan 60¢65c per bushel. At Chicago the market is firm and active at increased prices. Michigans are not quoted. Prices range from 43¢55c.

WOOL.

Boston.—The situation in the wool trade improved considerably the past week. Sales were much larger and prices are stronger. There is a possibility that England may tax wool going out of that country and dealers court the possibility of an import duty in this country. The foreign market is also very strong, and the approach of the active season lends further reason for the better tone of the trade. Fleeces were in active demand with delaines selling at 29½c; quarter-bloods 35@37c; three-eighths blood 37c per pound.

GRAND RAPIDS.

Reports from upstate where potato digging is in progress show better yields than was expected, though the crop is still far below normal. Prices of tubers do not show much change from last week. White pea beans are quoted at \$3 to farmers, while the red kidney bean market opens at \$3.10. Fresh eggs continue scarce and are worth 28@30c. The apple market is somewhat lower, with Spies around 60c, Baldwins 55c and other varieties a few cents lower on this market. The cabbage crop this year has been large and prices are low. Grain prices show no material changes from last week. Timothy hay is bringing \$13@16 on the city market.

DETROIT EASTERN MARKET.

Trading was fair at the Eastern Market on Tuesday morning. Cabbage was offered liberally at prices ranging from 30¢45c per bushel. Apples easier at 50¢@1.50 per bushel;

potatoes 60¢90c; onions \$1; pears 85¢@1; celery 35c per bunch; eggs 38¢40c; butter 38c; chickens, springers \$60 each; loose hay is coming more freely and the market is easier with prices up to \$22 per ton.

LIVE STOCK MARKETS.

Buffalo.

October 25, 1915.

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

Receipts of stock here today as follows: Cattle, 290 cars; hogs, 139 d. d.; sheep and lambs, 50 d. d.; calves, 1200 head.

With 290 loads of cattle on our market here today, the good cattle sold strong to about 10c higher than last week's prices, and the medium kind sold 15¢25c lower. The butcher cows and heifers were 15¢25c lower, and the common cows from 25¢40c lower. Good stockers sold steady, but the common kind sold 25c lower. The best springers and cows with calves sold steady and the common kind were lower. Several loads of cattle left over tonight unsold and prospects do not look good for the balance of the week.

With 139 double decks of hogs on sale here today, which were a great many more than were generally looked for, the demand was good for all classes and prices strong, and pigs generally a quarter higher. The bulk of the light mixed and yorkers sold at \$7.85, with a few strong weight loads at 8c, and one load of fancy hogs at \$8.10. Quite a number of ordinary yorkers sold around \$7.65@7.75; pigs and lights \$7.25@7.50; roughs \$6.75; stags \$5@6. About everything sold that arrived in time for market and the close was full strong with the opening.

The lamb market was active today, prices 15c higher than the close of last week. All sold and we look for about steady prices balance of the week.

We quote: Lambs \$9.15@9.25; cull to fair \$7@9; yearlings \$6.75@7.50; bucks \$4@5.25; handy ewes \$6@6.25; heavy do \$5.75@6; wethers \$6.50@6.75; cull sheep \$3.50@5; veals, good to choice \$11.75@12; common to fair \$8.50@11.50; heavy calves \$6@9.

Chicago.

October 25, 1915.

Cattle. Hogs. Sheep.
Receipts today..17,000 16,000 20,000
Same day 1914..18,299 29,993 43,343
Last week.....43,615 127,422 73,309
Same wk 1914..65,473 139,530 128,002

Shipments from here last week embraced 683 cattle and 1,276 hogs, not a single shipment being made of sheep. Shipments from here for the corresponding week last year amounted to 24,522 cattle, 24,552 hogs and 51,179 sheep. Hogs received averaged 203 pounds.

The week opens today with a small supply of cattle and active buying of fat steers, yearlings and butcher stock at stronger prices, but otherwise trade drags at barely steady prices. Hogs opened about 5c higher, with an \$8 top and some early sales a dime higher, but packers were not disposed to operate freely at the advance, and advances were largely for choice offerings sold by speculators. Sheep were steady, but bids for lambs were lower, with choice natives going at \$8.65.

Cattle were marketed so much less freely last week, following the bad breaks in prices that were brought about by the unusually liberal receipts of the preceding week, that good buying early in the week caused sharp advances in values, especially for good to prime corn-fed beefs. The market was especially strong for cattle salable at \$9 and over, and the poorest offerings off grass sold none too well, although these averaged considerably higher up to Wednesday, when a reaction set in for cattle that were not of a desirable kind. During the latter part of the week the early advances were largely lost, but prime beefs were well. During the week the bulk of the steers sold at \$7.50@9.90, with prime heavy steers bringing 10@10.40 and prime little yearlings \$10@10.50. Good, fat, corn-fed steers went at \$9 and over, and pretty fair corn-feds sold at \$8.60 and upward, while medium to good handy short-feds sold at \$7.60@8.50, common to medium warmed-ups at \$6.50@7.50 and inferior to plain grass steers at \$4.35@6.45. Butchering cows and heifers had an outlet on the basis of \$4.70@8, with the best cows taken at \$7.10 and a few small scattering sales of prime to fancy little yearling heifers at \$8.10@9.25, while two heifers that averaged 865 lbs. sold at \$9.75. Cutters went at \$4.10@4.65, canners at \$3@4 and bulls at \$4@7.15. There was an active trade in calves, with light vealers taken at \$9.75@11.50 and heavy calves at \$4@9. Western range cattle were marketed moderately and advanced

with natives, steers going at \$6.75@8.60 and cows and heifers at \$3.75@7.35. During the latter part of the week there was a bad market for the 1200 to 1400-lb. class of native steers, lacking finish, although fat, with sales at \$8.75@9.50. Monday is very apt to be the high day of the week these times, although at times prices are higher on Wednesday. At the week's close the bulk of the steers were 25¢50c lower than a week earlier, aside from yearlings, but cows and heifers averaged 25¢60c higher. Closing top for calves was \$10.75.

Hogs surprised most traders last week by the extraordinarily wild fluctuations in prices, early sales at the highest prices of the year being followed by tremendous declines. The early top price was \$8.95, but there was a big break in the market the following day, followed by sensational declines later in the week, the break on one day amounting to 25¢50c per 100 lbs. Local packers had no outside competition to contend with and purchased some hogs on Thursday as much as 75c lower than on Wednesday. Light weight hogs and pigs have been comprising a large share of the recent receipts, the average falling to 204 lbs., comparing with 214 lbs. a week earlier, 227 lbs. a fortnight earlier, 244 lbs. a month earlier and 230 lbs. a year ago. The packers have claimed that the receipts of hogs will increase materially from now on, warranting a lower price scale. Saturday's sales were at \$6.50@7.30 for heavy packing hogs, \$7.35@7.85 for heavy shipping hogs, \$7.55@7.95 for selected butchers, and \$3.50@7.25 for pigs. A week earlier hogs brought \$7.85@8.92½.

Lambs were lowered in prices at various times last week, despite the continued meager supplies offered, and sheep shared in the downward movement, the daily runs consisting mainly of native lambs and native ewes, with decreased offerings of range lambs from Montana, Wyoming, Utah, Idaho and Nevada. There was no outward movement from here, and local killers fixed prices to suit themselves. Sales at the close were as follows: Lambs \$6.75@8.85; yearlings \$6@7.35; wethers \$5.75@6.50; ewes \$3@5.90; bucks \$4.25@5. A little rally in prices left range lambs largely 25c lower and most sheep 50c lower than a week earlier.

Horses were marketed with fair liberality last week, and there was the usual large showing of army horses, with an unabated demand at unchanged prices, sales ranging at \$125@187.50. Otherwise trade was apt to be slow, and in numerous instances prices looked \$10@15 per head lower. Choice to fancy drafters were firm, however, with a limited supply, prices ruling at \$250@300. Rejected army horses went at \$65@120, and commercial horses were sold at \$160@245.

VETERINARY.

Barren Sow.—I have a sow that had one litter of pigs and though she comes in heat regularly, she fails to breed. Is there anything I can do? M. J. M., Rushton, Mich.—Six hours before you have her served inject her with the following solution, made by dissolving 2 ozs. of bicarbonate soda in three pints of clean tepid water.

Ptomaine Poison.—We have some year-old hens that show lameness for a while, then die. Some are lame in both legs and can hardly walk. They have free range and are fed on oats. Would like to have you give cause and cure for this weakness. P. D., Brown City, Mich.—I am inclined to believe that your chickens die the result of picking up infected food, perhaps decomposed meat with a ptomaine; therefore, I would suggest that you make a change in their feed and perhaps water. Their lameness would indicate a rheumatic ailment which is very often an infection of the joints. Give a half grain of salicylate of soda two or three times a day.

(Continued from page 392).

of fall grains sown as last year. Apples about one-half normal crop, and bring \$2.35, tree run, or \$3 per bbl. Wheat \$1; eggs 26¢28c; butter 28c.

Nebraska.

Hitchcock Co., Oct. 16.—Wheat sowing is in full force, some looking fine and the ground is in excellent condition. A good deal of threshing yet to be done. Corn is good, though some is soft. Some potatoes, also apples, shipped in. Potatoes 50c; apples 75¢85c per bushel; wheat \$1; corn 45c; barley 38c; eggs 20c; butter-fat 25c.

Missouri.

Vernon Co., Oct. 18.—Wheat seeding about over and a large acreage sown. Potatoes a good crop. Apple picking is at hand and the crop is fair. Not much surplus stock. Plenty of hay and grain in the country. Wheat 95c; oats 30c; corn 60c; hay \$5; apples \$1; butter 35c; eggs 20c; chickens 12c per pound.

THIS IS THE LAST EDITION.

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

DETROIT LIVE STOCK MARKETS.

Thursday's Market.

October 28, 1915.

Cattle.

Receipts 2576. There was a good fair run in all departments at the local yards but nearly everything was late in arriving, especially so on the Grand Trunk on Wednesday, it being about 4:30 before their stock was yarded. The cattle trade continues dull and prices are no higher than they were a week ago; the quality was again common and there was hardly a steer in the yards good enough to bring over \$7.25@7.50 per cwt. Again the farmers cut a big figure in the trade, and a large number were bought by them and shipped back for feeding purposes. The milk cow trade was a trifle better than last week, good ones bringing \$85. The close was steady but no higher. Best heavy steers \$7.50@8; best handy weight butcher steers \$6.50@7.25; mixed steers and heifers \$5.50@6.25; handy light butchers \$5@5.50; light butchers \$4.50@5; best cows \$5@5.75; butcher cows \$4.50@5; common cows \$4@4.25; canners \$2.50@3.75; best heavy bulls \$5.50@5.75; bologna bulls \$5@5.50; stock bulls \$4@4.75; feeders \$6@7; stockers \$5@6; milkers and springers \$40@85.

Haley & M. sold Applebaum 4 cows av 1055 at \$4.50; to Hammond, S. & Co. 1 do wgh 860 at \$3; to Kamman 4 butchers av 667 at \$5.35; to Schumaker 34 feeders av 714 at \$6.35, 4 stockers av 637 at \$6.35; to Schlischer 1 cow wgh 410 at \$4.50, 2 do av 660 at \$5.50, 2 do av 1040 at \$4.80; to Mich. B. Co. 38 butchers av 690, \$5.50; to Hoffend 6 do av 657 at \$4.75, 3 do av 673 at \$5; to Kamman B. Co. 29 steers av 1030 at \$6.65; to Newton B. Co. 20 butchers av 1057 at \$5; to Hammond, S. & Co. 22 do av 1016 at \$6.90, 18 do av 916 at \$5.90; to Schnader 17 steers av 960 at \$7; to Breitenbeck 2 cows av 995 at \$4.50; to Bray 2 stockers av 790 at \$6.25; to Schneider 12 do av 623 at \$6; to Hammond, S. & Co. 2 bulls av 1240 at \$5.40; to Thompson Bros. 5 cows av 934 at \$4, 3 do av 1070 at \$5.25, 17 steers av 770 at \$6.25, 5 cows av 1000 at \$4.15; to Newton B. Co. 18 butchers av 746 at \$5.30; to Rice 32 stockers av 650 at \$5.40; to Sullivan P. Co. 10 butchers av 827 at \$5.25; to Reardon 4 stockers av 662 at \$5.35; to Clark 12 do av 627 at \$5.50.

Reason & S. sold Bresnahan 6 cows av 916 at \$3.75; to Rattkowsky 5 butchers av 744 at \$4.65; to Hammond, S. & Co. 1 bull wgh 1040 at \$5; to Thompson Bros. 6 steers av 1070 at \$7.35, 5 butchers av 756 at \$5.40, 3 steers av 993 at \$7, 1 cow wgh 1010 at \$5, 15 butchers av 632 at \$5.40, 2 cows av 1100 at \$5.80; to Bresnahan 5 do av 1100 at \$5, 2 canners av 915 at \$3.75; to Thompson Bros. 1 heifer wgh 840 at \$5.75; to Feldman 2 bulls av 1265 at \$5.50; to Bresnahan 2 cows av 1075 at \$5, 1 do wgh 1060 at \$3.75.

Veal Calves.

Receipts 512. The veal calf trade was about 50c higher than last week but heavy grades were very dull. We quote: Best \$10@11; others \$7@9.50. Bishop, B. & H. sold Hammond, S. & Co. 6 av 155 at \$10.50, 2 av 125 at \$8, 5 av 155 at \$10.50, 2 av 135 at \$8, 7 av 120 at \$8.50, 2 av 140 at \$9, 2 av 200 at \$10; to Newton B. Co. 9 av 165 at \$10.75, 3 av 200 at \$11; to Sullivan P. Co. 3 av 140 at \$8.50, 25 av 160 at \$10; to McGuire 10 av 169 at \$10.75; to Thompson Bros. 2 av 150 at \$11; to Nagle P. Co. 15 av 150 at \$10, 5 av 150 at \$10.50, 8 av 145 at \$10, 2 av 185 at \$11, 3 av 175 at \$9, 3 av 145 at \$10.50.

Sheep and Lambs.

Receipts 7856. The sheep and lamb trade opened up on Wednesday 15c higher tops selling at \$8.90. Thursday's prices were steady and tops went at \$8.85@8.90; the trade was fairly active. Best lambs \$8.50@8.75; fair lambs \$8@8.25; light to common lambs \$6@7.50; fair to good sheep \$4.50@5.50; culls and common \$3@3.50.

Haley & M. sold Nagle P. Co. 24 sheep av 120 at \$5, 5 lambs av 60 at \$8, 3 sheep av 160 at \$5.25, 2 do av 115 at \$5.50; to Armour & Co. 53 lambs av 80 at \$8.90, 172 do av 85 at \$8.90, 70 do av 75 at \$8.90, 23 sheep av 110 at \$5.50, 98 lambs av 75 at \$8.90, 64 do av 70 at \$8.90; to Costello 62 do av 50 at \$7.50; to Nagle P. Co. 24 sheep av 115 at \$5.

Hogs.

Receipts 5055. In the hog department nothing was doing up to noon, but prospects are that they will be fully 10@15c lower here than on Wednesday, or as follows: Mixed yorkers \$6.85@7.15; pigs \$6@6.50.

M. W. SAVAGE WANTS TO GIVE YOU THIS NEW PICTURE

FREE

IN, 14 COLORS, OF A \$500. PAINTING

This NEW Splendid COLOR PICTURE of M. W. Savage's Three, World Champion Stallions is on LARGE 22 by 28 Size, Extra Heavy, and Superfine Enamel Stock. Mailed in Extra Heavy Mailing Tube, to insure safe delivery. Free of Advertising and is Worthy to Hang in Any Home or Office. It is a Very Fine Horse Picture. I Want to Mail You One—Absolutely Free, Postage Prepaid, IF You Are Over 21 Years of Age and Answer THREE Questions.

FIRST—In What Paper did you read this Free Picture Offer?

SECOND—How Many Horses, Cattle, Sheep or Hogs do you own?

THIRD—Have you ever used the World Famous, International Stock Food Tonic, for Horses, Cattle, Sheep or Hogs?

FOR FREE PICTURE, WRITE TO International Stock Food Co. or to—

M. W. SAVAGE, Minneapolis, Minn.

A BEAUTIFUL 22 BY 28 PICTURE OF THREE, WORLD CHAMPION STALLIONS—ABSOLUTELY FREE, POSTAGE PREPAID.

When M. W. Savage says Free, it means Absolutely and Indisputably FREE. You do not have to buy any goods. You do not have to promise to buy any goods. You do not have to do any work and you do not have to pay postage. But these Splendid Art Pictures, 22 by 28, in 14 Colors, are mailed



Dan Patch 1:55, World Champion.

Minor Heir 1:58 and Geo. Gano 2:02, Champion Team 2:02.

WONDERFUL AND SENSATIONAL DAN PATCH RECORDS—THAT WILL PROBABLY NEVER BE EQUALLED IN YOUR LIFE TIME.

Some horse may go as fast or faster but when will ANY HORSE do what Dan Patch has done, and Every Day for over Fourteen Years. Dan Patch, has had International Stock Food Tonic, as also have My Other Stallions and 250 Brood Mares and Colts. DAN has paced One Mile in 1:55, One Mile in 1:55, Two Miles in 1:56, Three Miles in 1:56, Fourteen Miles averaging 1:54, Thirty Miles averaging 1:57, Forty-Five Miles averaging 1:59, Seventy-Five Miles averaging 1:59, 120 Miles averaging 2:02, 152 Miles averaging 2:04, Lowered World Records 14 Times, Mile Record, 1906 1:55, Half-mile track record 2:01, Mile Wagon record 1:57, Two mile record 4:17, Mile to high-wheel sulky 2:04, Half-mile record .58, Half-mile on a mile track .58, Dan Patch never lost a race. He was never hitched double and NEVER Went Behind A Wind Shield. Dan Patch has traveled over 100,000 Miles during his speed exhibitions. Over Two Million Farmers and Stockmen have written me for Pictures of Dan Patch 1:55, and this is Indisputable Proof that he is the Most Popular Horse in all the World's History. Minor Heir and Geo. Gano, are the Champion Team of the World, with a Wagon Record of 2:02, and Geo. Gano is the Champion, Pacing Saddle Horse of the World, with a Record of 2:10. Dan Patch 1:55, has also proven to be one of the Greatest of Sires and has over ONE HUNDRED OF HIS COLTS IN THE OFFICIAL LIST and is the ONLY STALLION in All the World's History, to have Over 100 of His Colts in the official list, and being the sire of only 158 Colts, over two years old. All Three Stallions, are owned by M. W. Savage, Minneapolis, Minn.

P. S. Would You like to Own a Young Dan Patch Stallion? I will sell you one, on Long Time, without interest, so that HE CAN EARN his own purchase price before you pay me a cent and then earn you a Good Income for 20 Years. If interested, be sure and write for Farm Catalog.

What Should an Engine Weigh?

Abraham Lincoln was asked how long a man's legs should be and he replied, "they should be long enough to reach the ground—and no longer." An engine should weigh enough to do its work—and no more. Years ago it was necessary to cast engine parts very large and heavy, with heavy base and fly-wheel, or the violent explosions and fast and slow speeds of the old-style engine would tear it to pieces.

Six years ago the Cushman Motor Works designed a new type of farm engine weighing about one-fifth as much per H. P. as other farm engines, but so well built, balanced and governed that it ran more steadily and quietly than a farm engine was ever known to run. Some people laughed, and said that an engine weighing only 190 lbs. must be a toy, but when they saw the Cushman at work beside heavy engines weighing five or six times as much, they realized that weight does not mean power, and that the Cushman is a giant in power for its size.

Cushman Light Weight Engines

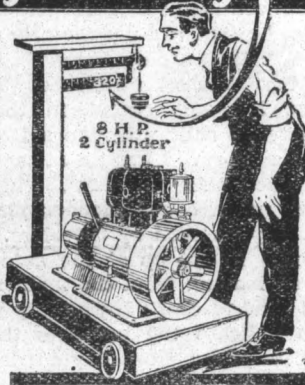
40 to 60 Pounds per Horse Power
4 H. P. Weighs Only 190 lbs. 15 H. P. Weighs Only 780 lbs.
8 H. P. Weighs Only 320 lbs. 20 H. P. Weighs Only 1200 lbs.

Cushman Engines have Throttle Governor and Schebler Carburetor, insuring regular speed even on jobs of irregular loads, like sawing. Their perfect balance also helps to make them steady, insuring unusual durability and freedom from engine trouble.

The 4 H. P. and the 8 H. P. are mounted on trucks, if desired, and may be pulled around by hand. These are very useful engines, as besides doing all work heavy engines do, they may be attached to machines in the field, as 4 H. P. on grain and corn binders and 8 H. P. on hay balers. All engines over 4 H. P. are double cylinder, which means steadier power.

The Cushman is not a cheap engine, but it is cheap in the long run. Engine Book free.

Cushman Motor Works
826 N. 21st Street Lincoln, Nebraska



Before Buying Any Engine

Ask These Questions

How much does it weigh? If it weighs more than 60 lbs. per horsepower, why?

Is it throttle governed? A throttle governor insures steady, quiet economical power

AUCTION SALE

NOV. 16th, at HILLCREST FARM

1 1/2 miles west of Harris, Flint Division of D. U. R.

Will sell 25 head of Imported and American bred Jerseys, also 30 head of pure bred Victoria hogs, also complete line of farm implements, machinery, horses, crops and everything. On day of sale all cars will be met at D. U. R. station Harris. Complete preparations arranged for in case of disagreeable weather. For details and further information address

S. B. WATTLES, TROY, MICH.

PONTIAC PHONE 720-Ring 11.

RAW FURS WANTED

Big demand for American Furs! We pay top market prices and keep furs separate upon request; keep you posted at all times, and send market reports and price lists—FREE! Write TODAY.

HARRY LEVY

Exporter of Raw Furs

265 Seventh Ave., New York.

"Oldest and Best" Established 1844

Dr. Wm. Somerville's Old Veterinary Remedies

1 bottle Anti-Fever Medicine.....\$1.00
1 bottle Anti-Pain (Colic) Medicine.....1.00
1 bottle Amber Liniment......50
1 can Aspirin Powder......50

Order Today—Special Offer—Sent Prepaid

Any assortment of the above amounting to \$2 will be sent for \$1.

Be Prepared—Trouble and sickness in the stable strike without warning. Don't wait until something happens. Give your animals protection. Your money refunded if you are in any way dissatisfied.

The Somerville Veterinary Med. Co., Buffalo, N. Y.

Save 25% on Your Reading

New Subscribers for the Youth's Companion will get the remaining weeks of 1915

Free and a Handsome Calendar for 1916

Youth's Companion New-Weekly to 1917 \$2.00

McCall Magazine & 1-15c pattern, 1 yr. .50

Michigan Farmer, 1 yr. New or renewal .50

Total \$3.00

My price \$2.25 for the three. You save 75c.

Send your order now to:

J. READE CROWE, "The Subscription Man"

1064 Oakwood Ave., Toledo, Ohio.

My prices are lowest. Reference D.L. Sav. Bk. Toledo, Ohio.

FARMS AND FARM LANDS FOR SALE

WHY PAY RENT when you can buy the best farm land in Michigan at from \$12 to \$20 an acre on easy terms. Write for particulars.

STAFFORD BROTHERS, Owners.

15 Merrill Bldg., Saginaw, West Side, Mich.

FOR SALE: 640 acres land located in Isabella Co., Michigan. Well adapted for corn, potatoes, beans and alfalfa. Thoroughly fenced. Write for particulars. Brinton F. Hall, Belding, Mich.

City House on Farm

\$3100 Income Last Year

Show your wife the picture of the beautiful modern residence of 12 rooms and bath on this productive 90-acre farm and she will want it for her home on Albany-Binghamton state road, only 1 1/2 mi. to live R. R. village with high school and all adv.; large barn, poultry house to 1500; 250 apple, plum and pear trees; owner left alone, forced to sell at a price only \$3500, part cash; it is an immediately profitable investment. 2 cows, several hundred hens, incubator, brooders, tools, wagons and machinery too numerous to mention thrown in; for picture and details, see page 2, "Biggest Farm Bargains", just out, copy free. Station 101, E. A. Strout Farm Agency, 47 West 34th St., New York City

The South—The Homeland

FOUR TO SIX TONS OF ALFALFA, 50 to 100 bushels of corn to the acre, \$100 to \$500 an acre from fruit or truck, opportunities for the stock raiser and dairyman, a climate which means two to four crops a year, pleasant home locations, attractive land prices, are things the South offers homeseekers. Our publications and special information on request.

M. V. RICHARDS

Southern Ind. and Agr. Com'r. Southern Ry. Mobile & Ohio Railway Room 78 Washington, D. C. (Opp. Capitol)

FARMS, GOOD, CHEAP, UNUSUAL OPPORTUNITIES NOW

State Board of Agriculture, Dover, Del.

59 Acres Dark loam soil, practically level. Water good. 2 barns, 30 by 40, 18 by 24; hen-house, hog-house, 6 room house, good condition; 3 miles to Owego. Will include 2 good horses, lumber wagon, platform wagon, buggy, sleds, harnesses, mower, drill, reaper, rake, plows, harrows, cultivators, all small tools, all for \$2500, part cash. Hall's Farm Agency, Owego, Tioga County, New York.

FOR SALE: One of the best Grain and Stock Farms in Eaton Co. 120 acres on main road; rural and milk route; telephone; near good market; five acres timber; good orchard; \$2,000 worth in building. For quick sale, will leave hay in barns and crops on ground. Price \$12,000. Half cash, bal. to suit. For description write owner A. O. Hutchings, Vermontville, Mich. R. 2.

FARMS WANTED—We have direct buyers. Write describing property, naming lowest price. We help buyers locate desirable property Free. American Investment Association, 10 Palace Bldg., Minneapolis, Minn.

SEND DESCRIPTION OF YOUR FARM OR RANCH! We have Cash Buyers. Don't Pay Commission. Write NATIONAL REAL ESTATE EXCHANGE ASSOCIATION: PERU, ILLINOIS.

For Sale—80 acres good land. Gibson Township, Bay Co., Mich. 50 acres cleared and stumped. New 8-room house and stables. Well fenced. \$3500.00. Charles H. Kelly, Sterling, Michigan.

Wanted to hear from owner of farmer or fruit ranch for sale. O.O. Mattson, 199 Andrus Bldg., Minneapolis, Minn.

FOR Sale—120 acres, 80 improved. Near Big Rapids. Good soil. Young bearing orchard, mostly apples. Good 10 room house. Barn 40x50, wing 30x40, also other buildings. Water at house and barn. \$5,500, half down, easy terms. David Maney, owner, 146 Rust Ave., Big Rapids, Mich.

RUFUS B. HOLMES CO.

High and Riopelle Sts. Detroit, Mich.

Commission Merchants

Poultry, Live or Dressed, Dressed Hogs, Calves, Sheep and Eggs. Reference, Peninsular Savings Bank, Sullivan Packing Co. Shipments Solicited. Satisfaction Guaranteed.

WE CAN SELL STOCKERS and feeders, also feeding lams, commission here to us, or if you are in the market for feeding stock write or wire us. HARPSTER COMMISSION COMPANY, Toledo Union Stock Yards, Toledo, Ohio

HAY OUR NEW LOCATION—

623-625 Wabash Bldg., Pittsburgh, Pa.

Daniel McCaffrey's Sons Co.

FRUIT

Growers, we want your entire crop. Highest market prices. Write for stencil. THE L. L. Richmond Co., Detroit, Mich.

FARMERS—We are paying from three to five cents above the highest official Detroit Market quotation for your eggs shipped direct to us by express. Write us for information. It will pay you. American Butter & Cheese Co., Detroit, Mich.

Farm Commerce.

Increasing Local Consumption

THE peach growers of Northwestern Michigan, despite the bumper crop this year, marketed their output to advantage. They did this by tactics somewhat different from those generally employed in the past. They stimulated local consumption to a point where it became the most important factor in marketing problem. They accomplished this largely by the use of paid newspaper advertising, free news stories and dignified editorials.

The Outlook was Discouraging.

By mid-summer it was apparent to the more alert among the fruit men that the peach crop was going to be a big one and that the problem of finding markets would be a serious one. It was reasoned that with maximum crops in the peach growing states to the east, south, and west that there was but one direction left in which to look for markets, and that the markets in this direction would be oversupplied long before the Northern Michigan peach would be ready to ship. Therefore, they argued, the only thing to do was to encourage home consumption. The reasoning was sound. The usual outlets for Northern Michigan peaches were clogged with fruit from the south and southwest long before the home-grown article began to color. Carloads of fruit from southern shipping points arriving in the states surrounding Michigan forced prices down to such low levels that these markets were no longer available, at least at a profit. The Northwestern Michigan peach grower had to either eat his own peaches or lose them. He chose to eat them, with such help as his neighbors could lend.

Advertisements calling attention to the fact that this was the year of all years to enjoy peaches were inserted in the local papers, along with the additional information that the price of sugar was lower than it had been for some time and that peaches properly canned would be good for several years. The ads were in the nature of paid reading notices. They were supplemented with unpaid notices and editorials of a similar tenor, the newspaper fraternity abetting in the program to create a demand for the local peach crop. On one occasion, that of the big day for the county fair, handbills were circulated. These carried the same line of argument. "Good peaches in large quantities at reasonable prices! Now is the time to get them to eat or to put up for future use!"

Local Consumption Increased.

While the advertising brought immediate results, as many sales could be traced, its indirect results were the most important. The attention of those who are responsible for well-filled larders was directed toward peaches and they proceeded to investigate the merits of the suggestions that had been thrown across their path, with the ultimate result that much larger quantities of peaches were ordered than would otherwise have been the case.

The city and town portion of the population probably doubled their orders for peaches, but the rural portion of the population took fully four times as much fruit as usual. The farmers back from the lake coast with its peach orchards, were the ones who absorbed the crop, especially those grades of fruit ranging below fancy, and thus kept the peach price at a level that was considerably above that prevailing in the other producing sections of the state. The farmers came to the principal peach market from

10, 20 and 30 miles away and bought one, two, five and even 10 bushel basket lots, which they carried off to their homes. Some returned for second and third loads and for bushels for their relatives and neighbors.

Another class that helped to consume the crop was the laboring element in the capital city of the region. By going to the fruit growers' market place they secured second and third grade peaches at figures that were low enough to permit them to lay in stocks that will last them for more than the coming season. In this way the poor grades of fruit were kept off the retail market and it was possible

to maintain fair prices for good fruit.

A few of the fruit growers advertised that canning peaches could be had at the orchards at fifty cents a bushel by those who brought their own baskets. This at a time when Number One peaches could be bought in Central Michigan all loaded in the car ready to roll at from forty to fifty cents. But the people had been informed that this was the year to get peaches, that it would pay them to lay in a supply of the fruit for the seven years of famine that might be ahead. They acted accordingly.

Because of the campaign, low-priced outside peaches were kept out of the region, except for one small shipment, the people of the region secured an abundance of fruit for future use, and the fruit growers of the section escaped the embarrassment of being called upon to send money to pay freight upon consignments that had been sent to glutted markets.

Gd. Traverse Co. R. H. ELSWORTH.

The Growing Market at the Door

WITH the increase of automobile travel a new market has opened up for farm produce. Comparatively few, and those only the ones who were gifted with foresight, have recognized this fact until within a year or two. Even now it is a long search to find a farmer who is taking full advantage of his opportunity. Farms located along main traveled roads, especially if the highway be the connecting link between two good-sized cities, are particularly fortunate.

Be Careful About Prices.

The method which has been tried out to some extent in the eastern states is selling by the aid of the bulletin board. First an attractive name is chosen for the farm. This name is put up in a conspicuous place where it may be seen by travelers. A blackboard is put up at the gate or driveway leading from the main road. This is used to chalk down daily prices and to indicate the products that are in their prime from day to day. Fresh eggs are a drawing card. Dressed poultry may also be disposed of to passers. The objection to this is the fact that it is not always advisable to have the poultry ready without knowing positively that it will be sold. Prices should not be put too high, for it must be remembered that the passing motorists are in a position to know pretty nearly the market price of produce. At any rate, if one sells right at the door for the city price, he is making a good profit. It is better to make the price a little lower and have this serve as an added reason for buying.

Canned Goods Included.

Garden truck may be disposed of to advantage in this way. Strawberries and other small fruits can be sold to some extent. With all perishable goods it is advisable to have some method of taking care of the surplus. Perhaps the best method is the home-canning outfit. Fruits and vegetables put up in attractive shape will always sell to passing motorists. Although a little more costly, the glass can is undoubtedly the best. Choose one of the makes with spring top, or a cover with no zinc or tin fittings and there is little likelihood of the product spoiling. Have attractive printed labels for the jars and offer them at a price that gives a reasonable profit. With canned goods the case is different than with fresh fruit and vegetables. In this case the city market does not compete. You have a better product than the motorists can purchase at home and they will be willing to pay accordingly.

Provide a Good Bulletin Board.

A New England farmer has erected signs one mile from his place in either direction. These advise the trav-

eler that iced milk is to be had at "Red Gate Farm," also fresh fruits and vegetables and that the distance is one mile. When the party arrives at said "Red Gate Farm" they usually have a thirst for "iced milk." During the height of the automobile travel, ice cream, lemonade and other refreshments may also be had. The daughter of the household likewise dispenses bunches of sweet peas and other cut flowers. The large bulletin board advertises "fresh eggs, fruits and vegetables." If the party can wait ten minutes they may go right out in the field and see the products gathered. Ten chances against one they will wait and buy. To the average city family it is quite a treat to see their fruit and vegetable courses gathered from the trees and vines.

A plan like that pursued at "Red Gate Farm" necessitates considerable work, but if there are sons and daughters in their teens it is work they will enjoy. A temporary pavillion should be erected for the refreshment trade and as a shelter in rainy weather. Not all dwellers along main automobile roads would care to cater to the passing travelers in the manner described, yet the market at the door should be studied more than it is at present. Almost anybody who will give the subject careful thought will find he is neglecting a valuable opportunity for profits.

New Hamp. C. H. CHESLEY.

MARKET NEWS SERVICE.

Visitors to the Department of Agriculture stop with wonder at the sound of numerous telegraph instruments coming from the rooms of the office of markets. These telegraph instruments play an important part in the development of an experimental market news service. The telegraphic work has been developed on a comprehensive scale only this year; in early spring in regard to carload movements of strawberries, and later in regard successively to carload shipments of tomatoes, cantaloupes and peaches. The machinery of the news service in the case of each of these crops has been practically the same, the purpose in each case being to secure reports by telegraph from all important car-lot producing sections. These reports not only give the number of cars shipped daily during the important shipping periods, but also state the destinations and later the diversions, if any, in order that officials at the Washington office may have before them a picture of the changing market conditions, with the cars converging at a given time on any one market.

In order to check up this informa-

tion, daily reports of arrivals are also received, from the various important markets. In addition to arrangements with shipping associations and market dealers, the news service depends on arrangements for the wiring of information as to shipments by the various transportation companies, including railroads, express companies and special-car-service lines. For the present, agents of the Department are depended on for information practically only in the chief diversion centers, such as Kansas City and St. Louis.

When the daily market information has been received employees summarize it and wire it out collect to all applicants, as well as to branch offices, from which individual applicants may receive it at less rates than if it were sent from Washington. The office of markets also mails from Washington detailed daily reports, including tables showing movements of the particular crop at a glance.

The object of the experiment is to determine the practicability of developing a permanent market news service, whose function would be to do away with the haphazard special crop movements that have been common for years, and the consequent alternate gluts and famines of the markets. When the peach season is over the showing of the service for the season, the value of the work and its possible future development will be considered carefully by all government officials concerned with a view to determining future activities.

Crop and Market Notes.

Michigan.

Calhoun Co., Oct. 19.—Corn half cut and silos mostly filled. Crop fair, with quite a quantity of soft corn. Bean harvest over, with a few fields good but mostly very poor, some not worth harvesting. More than the usual amount of wheat and rye sown. The potato yield is light with quality good but size small. Yield of wheat varied from 15 to 40 bushels per acre, oats 36 to 60 bushels. Wheat \$1; oats 30c; corn 60c; clover seed \$8; beans \$2.50; potatoes 55¢@60¢; apples 75¢@ \$1 per bushel; butter 25c; eggs 27c; chickens 10c.

Monroe Co., Oct. 19.—Wheat yielded from 25 to 47 bushels, with some damaged by sprouting in the shock. Oats 30 to 60 bushels, some not cut and some not threshed after being cut. Clover heads not well filled so was cut for hay. Early potatoes rotting in bin, late potatoes badly rotted in ground, some fields not worth digging. Beans almost a failure, with corn a close second. The usual amount of wheat and rye sown, some yet to sow. Very few cattle will be fed this winter, some being sold off pasture and none shipped in. There is the usual number of hogs. Fruit of all kinds scarce. Wheat \$1.02; oats 30c; rye 85c; potatoes 60¢@80¢; apples 75c per bushel; butter-fat 26c; eggs 26c.

Washtenaw Co., Oct. 18.—Corn generally half a crop; beans hardly average half a normal crop. Feeding stock except hogs, scarce. Apples now being picked, and are a good crop. Potatoes are being shipped in and sell for 80¢@90c per bushel; apples 75c per bushel; wheat \$1.

Ohio.

Ashtabula Co., Oct. 18.—Corn badly frosted, will make about half a crop. Silo filling progressing slowly, owing to soft condition of the fields. Potatoes being dug, will be about a third of a normal crop; shippers not buying them yet. Butter 28c; eggs 25c; pork 7¼c; chickens 12c; veal 10c; wheat \$1; oats 40c; rye 85c; baled hay \$17.

Illinois.

Perry Co., Oct. 18.—Yield of wheat below average; oat crop better than usual. Potato crop good, though some loss through rotting. Corn on flat land poor, but on higher land is good. About the usual amount of wheat and rye being sown. Hogs and cattle are scarce, while feed is plentiful. Pear crop almost a failure but apples are the best in years. Wheat \$1.05; potatoes 40c per bushel; apples 40c; eggs 27c; butter 20c.

New York.

Niagara Co., Oct. 18.—Wheat and oats were good. New clover seeding extra good owing to much rain. Potatoes blighted or drowned on low ground. Beans very poor, some fields being plowed under. Corn about two-thirds of a crop and most of it had to be cut by hand, fields being excessively wet. About two-thirds the amount (Continued on page 390).

Poultry.

THE CHRISTMAS BIRD IN THE MAKING.

(Continued from first page).

was sticking to their feet, they were driven over beds of fine sand, which adhered to the tar or pitch and made shoes which gave the feathered travelers full protection. Now poultry dealers ship the geese they pick up to this fattening plant, which feeds about 20,000 geese each season.

When first received the geese are herded in a big orchard and their throaty "honk honk!" can be heard even above the roar of the train as the visitor approaches. Then they go to the fattening barns, divided into two pens, holding a thousand geese. Once a day they are let out into yards while their pens are cleaned, giving them an opportunity to get a good sun bath.

Method of Feeding.

Instead of being fed by hand as on the Massachusetts farm, the geese here step up to home-made self-feeders and consume their fill. These feeders are really large boxes raised on bricks and with a 2x6 board in front over which the birds eat but which prevents them from crawling under the hopper. Each box contains from 80 to 100 bushels of corn. Running water for drinking is provided by means of a motor and a big pump. The floors of the fattening barns are concrete, preventing the loss of manure, and a little straw for bedding and to protect the feet from direct contact with the floor is scattered in each pen daily.

Green Food Essential.

From the point of view of the farmer, the raising of geese becomes profitable when it is possible for them to range on marshes or meadows which are not of much value for other purposes. While geese like the water and will spend considerable time in a pond or stream if available, yet they can be grown without water except for drinking purposes. If they have access to water they are easier to care for, however, and keep themselves cleaner. They are grazing creatures, though, and will subsist largely on tender grass and the leaves of vegetables. People who endeavor to grow geese without supplying an abundance of green food are likely to have trouble before the birds are very old. This is usually the reason that goslings are sometimes said to be hard to raise.

In many sections there is a call for "green" geese, meaning those which are from nine to twelve weeks old and if there is a good market it pays to sell them then. If not killed before they are three months old they must be kept for nearly three months longer, as they are then growing their adult plumage and picking them is almost impossible, besides which fact they are likely to be poor in flesh.

The Mating Time.

Geese should be mated up before the first of the year, as they need some time to get acquainted. Although they seem to prefer mating in pairs, it is possible to use three geese with a gander which is several years old. A young gander may refuse more than one mate and mated pairs are remarkably loyal. A rough shed gives all the protection that breeding geese need even in winter and in any case they will stay outside most of the time. Two feedings of grain a day will be required but over-feeding is to be avoided, as it will make the geese too fat to lay. By the first of March laying should begin and then it is well to feed a soft mash once a day, as well as cracked corn and oats, with plenty of green stuff if it is available. Roots will answer in place of grass or leaf crops. The number of eggs laid will vary from 15 to 50 and it is the usual custom to set the eggs first laid un-

der hens, keeping the geese from getting broody as long as possible. One large hen will cover four or five eggs, but a goose will find no difficulty in covering from 10 to 15.

The Care of Goslings.

In good weather goslings will need the care of hens for only a few days; they are very sturdy, active creatures. They should be kept on fresh grass, and will get along if fed only cracked corn, but it is better to give them mash a part of the time. The goslings hatched by geese will require very little attention on the part of the owner if there is a good field to run on and a little grain accessible.

When the hatching season has passed the mature geese may be plucked about every six weeks except, of course, in winter. And, of course, the work must be done only when the feathers are ripe, which is when they pull readily and the quills are found to be free from blood. Only the small feathers should be pulled and it is important to keep them clean. Between a quarter and a half pound of feathers will be obtained from each goose at a picking and they are easily cured if placed in muslin bags and hung in a dry spot, the feathers being ready for use in about three months. Altogether goose growing is easily made profitable on a farm where there is no lack of room and where the birds may be left to pick up most of their living. Under such conditions no kind of poultry will give larger returns and if one has pure-bred stock there is always an opportunity to make a little extra money from the sale of eggs for hatching.

BUMBLE-FOOT.

I would like information in regard to the cause and remedy for the swelling of chicken's feet. Several of my chickens have bunches swell up in the middle of their feet and after a while the bunches will break open and discharge.

Mrs. R. A. T.

Your chickens undoubtedly have what is called bumble-foot." This is a large abscess which forms on the bottom of the foot and in time breaks as you suggest. The cause of this trouble is too high or too narrow roosts, or undiscovered wounds caused by stepping on nails, splinters of glass or other sharp substances.

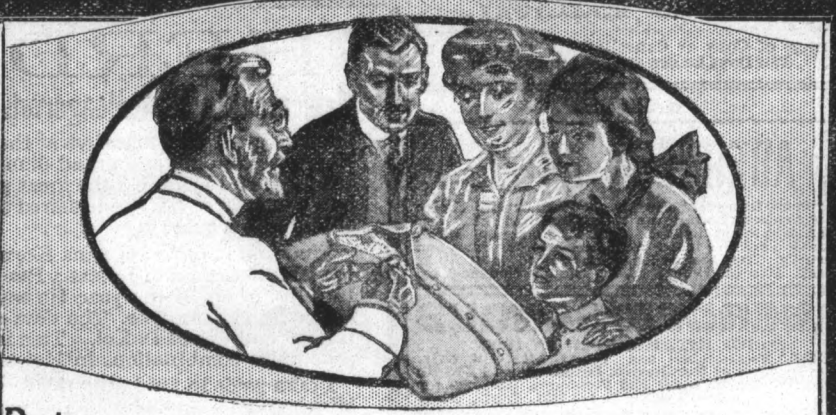
The best treatment is to tie a cord tightly around the leg above the foot to control the flow of blood, then with a clean, sharp knife open the abscess thoroughly. Care should be taken to go clear to the bottom and dig out the core.

After the hands have been thoroughly cleansed, the wound should be thoroughly washed out with warm water and then with a bichloride of mercury solution diluted one part of the bichloride to 1,000 parts of water. The region about the wound should be painted with dilute tincture of iodine, and the wound itself well powdered with iodoform, and then well bandaged. After about two days the bandages should be taken off and the treatment repeated. Usually two treatments are all that is necessary, although if the wound is very serious, the third one might be given after about three days. The bird under treatment should be isolated and kept in a small pen with soft litter on the floor.

Of course, to prevent the repetition of this trouble it will be necessary to remove the cause. Attention should therefore be given the roosts and the ground on which the hens travel, in order to find the cause of the trouble.

AT THE SOO FAIR

The poultry department was judged by Frank W. Traviss, of Jackson, who has visited this community on six previous occasions, either at county fairs or winter shows and says that the present year's exhibit was the best of any county fair he has ever seen, and that each year the exhibit here is greater and better than in any previous year.



Doctors Recommend

VELLASTIC

Elastic Ribbed, Fleece-Lined
UNDERWEAR

VELLASTIC is made the "health" way. Scientists agree that air is a great non-conductor of heat and cold. VELLASTIC with its thick, fleece lining keeps a cushion of warm air next to the skin. The porosity of the ribbed fabric keeps this aerated fleece dry and hygienic.

The fleece, besides protecting the body from draughts and colds, is gratefully pleasant to the skin, while the elasticity of the ribbed fabric permits perfect freedom of movement, and give smooth, snug fit. VELLASTIC is so well made, so strong in fabric and stitching that it is good for two seasons' wear and will more save than its costs in doctor's bills. Write for booklet No. 23.

UNION SUITS \$1.00 For MEN, WOMEN and CHILDREN
SEPARATE GARMENTS 50c.

UTICA KNITTING CO., Makers
Utica, N. Y.

More Eggs Finer Market Fowls

BALANCED RATIONS have made the hen one of the best money producers on the farm. Do you know that flocks on many farms are paying a net yearly profit of

\$2 to \$3 a Hen

Not only on poultry farms but on general farms—like yours. Scientific feeding does it. Try Red Comb Poultry Feeds and see the results. Red Comb costs less than you would have to pay for materials and mix them yourself. Write for Free Book "Feeding Poultry for Profit." Postal brings it.

Edwards & Loomis Company
344-GN. Elizabeth St., Chicago, Ill.

Red Comb MEANS HEALTH

BIG FOUR SUCCESSFUL POULTRY JOURNAL Raisers, devoted to the poultry interests of Michigan, Ill., Ind., and Wis. It should be your paper. Bright, Snappy and Alive. 50c a year, 3 years \$1.00. Send 12c in stamps for three months trial. Big 4 Successful Poultry Journal, 445 1/2 Plymouth Ct., Chicago, Ill.

5c A BIRD and less will build a new sanitary poultry house every year, any size. We can tell you how to get eggs all the time and not use beef scrap, charcoal, nor grit. Be progressive. Information free. Stamps appreciated.

CHEVIOT SUPPLY CO., Gambier, Ohio.

DON'T LET ROUP Get your poultry profits. Use Conkey's Roup Remedy in the drinking water. 50c. Conkey Co., Cleveland, Ohio.

POULTRY.

Barred Rock Cockerels—for Sept. and Oct. fairs, 500 yearling hens and pullets for shows and breeders. W. C. Coffman, R. 6, Benton Harbor, Mich.

BARRED ROCKS—Parks 200-egg strain stock and eggs in season. FRED ASTLING, Constantine, Michigan

BIG BARGAIN SALE OF BARRED ROCKS. 200 yearling hens that have laid 140 eggs each since Jan. 1st, 1915 to Aug. 1st, 1915, an average of 20 eggs per hen per month. Prices 6 hens \$10, 12 hens \$18, 20 hens \$28, 50 hens for \$90. They are pure bred, large and closely related to our first winners at Chicago, Cincinnati and Indianapolis shows. Suitable males to go with them at \$2 to \$5 each. 1500 young birds growing. G. EARL HOOVER, R. 7, Matthews, Indiana.

BIRD LAYN BUFF ROCKS, B. C. Buff Leghorns and Blue Orpingtons. Chicago, Madison and Minneapolis winners. Show birds after November 1. A few Black Orpington cockerels and pullets for sale at \$1.50 to \$4 each. Bird Lawn Farm, Lawrence, Mich.

FERRIS WHITE LEGHORNS FOR EGGS

Trapped 15 years. 60 first prizes, 15 big shows. Large, vigorous, laying, breeding, exhibition stock \$1.50 up. Shipped C. O. D. or on approval. Satisfaction or money back. 35 page free catalog gives prices and particulars. Write for it and save money. FERRIS LEGHORN FARM, 934 Union, Grand Rapids, Michigan.

FOR SALE—S. C. White Leghorn Cockerels. No better stock offered. Price each \$1, Two \$1.75, Five \$3.50. Prompt shipment. M. Mayer, Jr., Merrill, Michigan.

Pine Crest White Orpingtons, birds ready for fall on pens, pullets, and cockerels and Belgian Hares. Mrs. Willis Hough, Pine Crest Farm, Royal Oak, Mich.

Rose Comb Brown Leghorn Cockerels from Mat. Pn. winners \$1.00 each. CLAUDIA BETTS, Hillsdale, Michigan

RHODE ISLAND REDS and PLYMOUTH ROCKS. Males 5 to 12 lbs. according to age \$2 to \$5; P. R. hens weight 5 to 9 1/2 lbs., eggs 15 for \$1.00; E. R. eggs \$5 per 100. Mammoth Bronze Tom Turkeys, 8 to 35 lbs. according to age \$3 to \$25, 10 eggs \$3. A. E. Crampton, Vassar, Mich.

R. C. and S. C. RHODE ISLAND REDS from prize strains, fine layers with long bodies and rich red color. JENNIE BUELL, Ann Arbor, Michigan.

Rose Comb Brown Leghorn Cockerels. A few choice hatched, bred from prize winners, well matured, good color, \$1 each. E. HIMEBAUGH, Hillsdale, Mich.

ROSE COMB WHITE LEGHORNS. Cockerels for sale for \$1.00 to \$3.00 each. Union Phone 106-32. A. K. LEVEY, ELSIE, MICHIGAN.

SILVER Laced Golden and White Wyandotte Eggs for hatching. Ten cents each or 30 for \$2.50. 1 day parcel post charges. C. W. BROWNING, Portland, Michigan.

White Wyandotte a fine lot, male and female at low price and write your wants. DAVID RAY, 202 Forest Ave., Ypsilanti, Mich.

White P. Rocks, Pekin and white runner ducks, White guineas, eggs and day old ducks and chicks. H. V. HOSTETLER, St. Johns, Michigan.

SHEEP.

IT PAYS TO BUY PURE BRED SHEEP OF PARSONS "The Shepherds of the East" I sell and ship everywhere and pay express charges. I will start one man in each town. Write for club offer and descriptive price list. Oxford, Shropshire, Ram, Poller and Polled-Delaines.

PARSONS, Grand Ledge, Michigan R 1

Oxford Down Sheep. Good Yearling Field Rams and ewes of all ages for sale. M. F. GANSSLEY, Lennon, Michigan.

Oxford Down Sheep and Polled Durham Cattle For Sale. J. A. DeGarmo, R. No. 25, Muir, Mich.

Registered Oxford Down Sheep. Ram Lambs Yearling Ewes L. N. OLMSTED, J. SPAANS, MUIR, MICH.

OXFORDS—any age. Priced right. I bought the entire B. F. Miller flock of prize winners. O. M. YORK, MILLINGTON, MICHIGAN.

OXFORD RAMS—42 registered Rams for Sale. Lambs, yearlings and 2 yr. olds. W. H. McCARTY & SONS, Bad Axe, Mich.

For Sale: A registered Oxford Down Ram. Ram Lambs Berkshires b th sex. Also a few ewe lambs. Registered. J. W. GRAHAM, Davisburg, Michigan.

FOR SALE—Rambouillet Rams \$12.00 per head also good ewes from one of best flocks in Michigan. J. W. GRAHAM, Davisburg, Michigan.

BARGAIN SALE OF CANADIAN BRED SHROPSHIRE RAM LAMBS Ready for service, \$15 & \$20. Order now. They are good ones. KOPE KON FARM, S. L. WING, Propr., Kinderhook, Michigan.

Registered Shropshire ram lambs, few lambs and a few breeding ewes of good wool-mutton type. G. P. Andrews, Danaville, Mich.

Shropshires Ewes and Ram Lambs for Sale. DAN BOOHER, Marlon, Michigan.

Big Robust Wool-Mutton Shropshire Rams Priced right and satisfaction guaranteed or money back. Write today for Special Price List 24. A. H. FOSTER, Allegan, Michigan.

SHROPSHIRE. Am offering 4 yearling rams, 8 ram lambs and 6 young ewes at reasonable prices. C. J. Thompson, Rockford, Mich.

Shropshire Rams and RAM LAMBS. Registered, large and well woolled. Write your wants. A. E. BACON & SON, Sheridan, Mich.

Merinos and Delaines—Large, choicely bred, long staple, oily, heavy shearers. Delivered, priced to sell. S. H. Sanders, Ashtabula, Ohio.

Ten pure bred Hampshire Ewe Lambs. Will register. Wm. C. Smith, Rochester, Mich. Phone 3L-F2L.

Extra GOOD REGISTERED LINCOLN RAMS for sale. Prices reasonable. Robt. Knight & Son, Marlette, Michigan.

BREEDERS' DIRECTORY.

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

CATTLE.

ABERDEEN ANGUS

If you are in need of an extra good bull or a few choice young cows or heifers, we have them for sale. Our herd is headed by the Grand Champion Black Monarch 3rd. We invite you to come to our Farm and see them. They are bred right and priced right. U. L. Clark, Hunters Creek, Mich. Sidney Smith, Mgr.

ABERDEEN-ANGUS

HERD ESTABLISHED IN 1900.
TROYAN-ERICAS and BLACKBIRDS only.
Also breeders of Percheron, Hackney and Saddle Horses. Young bulls and Percheron stallions for sale. WOODCOTE STOCK FARM, Ionia, Mich.

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

THE VILLAGE FARM,
Grass Lake, Michigan,
GUERNSEY CATTLE.

MILO D. CAMPBELL CHAS. J. ANGEVINE

BEACH FARM
GUERNSEYS

The buyer of breeding stock should know that the herd from which he buys is healthy. We believe the Beach Farm Herd is as near perfect health as is possible. The tuberculin test does not show the least sign of reaction. We never had a case of contagious abortion. Have went a whole year without calling a Veterinary or giving a dose of Medicine.

WE OFFER FOR SALE—
Registered Guernsey Bulls

Very High Bred Grade Guernsey Cows
Bred Heifers, Open Heifers and Heifer Calves.
CAMPBELL & ANGEVINE, Coldwater, Mich.

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

GUERNSEY BULLS FOR SALE, ready for service from A. R. Dams. If you want the right kind write for price and breeding. BYERS & BARNES BROS., Coldwater, Michigan

REGISTERED Young Guernsey Bulls, great grand-sons of Gov. Chene, Serviceable age, nicely marked, exceptional breeding. Avondale Stock Farm, Wayne, Mich.

FOR SALE A choice lot of Registered Guernsey cows, heifers and bulls of May Rose breeding. H. W. WIGMAN, Lansing, Michigan.

Guernseys reg. for sale, Watervliet, Mich. May Rose Seven A. R. O. cows in herd. Address J. K. Blatchford, Auditorium Tower, Chicago, Ill.

REGISTERED Holsteins—Herd headed by Alma Boote Butter Boy. His dam has A. R. O. records as follows: at 2 yrs. milk 430, buter 18.85; 4 yrs. milk 664.8, butter 27.03; at 6 yrs. milk 620, buter 28.55 lbs. W. B. READER, Howell, Mich.

Do You Want A Bull?

Ready For Service.

From a grand daughter of The King of the Pontiacs. Sired by a bull that is more than a half brother to the Champion Holstein Cow of the World, and whose dam is a 30 lb. 6 1/4 fat daughter of Pontiac Aggie Korndyke who has more 30 lb. daughters than any other living bull. If you do write for pedigree.

EDWIN S. LEWIS, Marshall, Mich.



Purebred Registered
HOLSTEIN
CATTLE

Testing 12,000 Holstein cows in a year. Within the fiscal year ending April 30, 1915, 12,000 purebred Holstein cows were entered for tests with the advanced Registry Office, a gain of 2,278 over the previous year. These figures tell more forcibly than words the interest of Holstein owners in raising the standards of milk production. During the past year \$30,250 was received for membership fees in the Holstein-Friesian Association, positive proof of the recognition by dairymen of the advantages of membership in the largest and most prosperous dairy cattle association in the world. Investigate the big "Black-and-Whites."

Send for FREE Illustrated Descriptive Booklets
The Holstein-Friesian Association of America
F. L. Houghton, Sec'y., Box 164, Brattleboro, Vt.

I don't want to sell anything but
HOLSTEIN BULLS

and I have some bull bargains. Don't buy a bull until you know I have not got what you want. Come and see bulls.
L. E. CONNELL, Fayette, Ohio.

The Two Greatest Bulls
KING OF THE PONTIACS

DE KOL 2d's BUTTER BOY 3rd

I have young bulls from cows having high official records and Granddaughters of above bulls. Stock extra good. Prices reasonable.

BIGELOW'S HOLSTEIN FARMS,
BREEDSVILLE, MICH.

Choice Holstein Bull Calves: One to 20 months old. Alcarra Pontiac, whose dam is the famous Alcarra Polkadot, and from good A. R. O. dams. Will sell at reasonable prices. Come or write your needs. Farm 1/2 mile from Court House.
SETH B. RUBERT, Howell, Michigan.

HERD SIRE

Maplecrest Korndyke Hengerveld and Finderne Pontiac Johanna Korndyke

The two great Holstein sires at the head of the herd. Maplecrest Korndyke Hengerveld's dam and grand dam each made more than 1200-lbs. of butter in a year, and including the great grand dam each made more than 30-lbs. of butter in 7 days. His sire has sired three daughters that averaged over 1200-lbs. of butter in a year.

Finderne Pontiac Johanna Korndyke is the son of the world's champion cow, Finderne Pride Johanna Rue, who gave 28,403-lbs. of milk and made 1470-lbs. of butter in a year. He was sired by a brother to the 40-lb. 4 yr. old Mable Segis Korndyke. The dam of the sire is a 30-lb. daughter of Pieterje Hengerveld Count DeKol. This is believed by many to be one of the most productive combinations in Holstein breeding.

I take pride in tendering the services of these animals to the breeders of Michigan who are interested in yearly production. Many people feel it is the yearly work that makes the greatest profit and our effort is along the lines of yearly records. These two herd sires represent the highest culmination ever yet produced for yearly production.

A few high class heifers in calf to Maplecrest Korndyke Hengerveld, and a few bull calves from dams with records as high as 30-lbs. butter in 7 days, for sale.

D. D. AITKEN, . . . FLINT, MICHIGAN.

Duroc Jersey Boars and Sows

The Record of this Herd at Detroit Proves Conclusively that Our Durocs Have the Individuality and Blood Lines that Insure Good Results.

Choice Spring Pigs and Mature Stock. A large herd gives ample opportunity for selection. Send for our new circular and state your wants. Write, or better come.

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

Espanore Farm,

LANSING, MICHIGAN.

Offers for sale, registered Holstein Cows bred to the great bull Pledge Spafford Calamity Paul. If you need a bull, write for prices and pedigrees of our bull calves.

CHASE S. OSBORN, } Owners.
ADAM E. FERGUSON, }

Top Notch Holsteins!

Before buying your bull look ahead and think of the fine herd you hope to own in a few years. Fifty per cent, or over, of its value depends on your bull. Therefore, get a good bull. And don't be too particular about the price if you can be sure of the quality. McP. Farms Co. sells bulls of strictly high quality. Write them for a good bull or more and see their "Top-Notch" bulls for yourself. McPherson Farms Co., Howell, Mich.

Only \$150. One of the best bred bulls, 3 years old. Sure breeder. Out of 25 lb. butter cow. 1/2 White. A beauty.
ROUCEMONT FARMS, 418 West Canfield, Detroit.

Registered Holstein bull 2 months old. 19 lb. three old dam. A good one every way. \$50, delivered, safe arrival guaranteed. HOBART W. FAY, Mason, Mich.

Holstein Bull Calf 6 mo. old, 30 lb. sire and from a promising 2 yr. old dam. \$60 with all papers. Elmer E. Smith, Redford, Mich.

HATCH HERD
YPSILANTI, MICHIGAN

Registered Holstein-Friesian sires, grandson's of World's greatest dairy sire, out of choice A. R. O. dams and King Pontiac Jewel Korndyke; Brother of K. P. Pontiac Lass 44.15; average record of 50 dams in his pedigree 31.25 in 7 days; average per cent of fat three nearest dams 4.37; of his own dam 4.33. Sires in first three generations already have over 600 A. R. O. daughters. A few females bred to "King". Prices reasonable.

FOR SALE Registered Holstein Bulls ready for service, and bull calves, also females. FREEMAN J. FISHBECK, Howell, Michigan.

Reg. Holstein Friesian Bull Calves From heavy producing dams. Bargain prices. DEWEY C. PIERSON, Hadley, Michigan.

BOARDMAN FARM

JACKSON, MICHIGAN.

Registered Holsteins and Guernseys. We have some animals of both sexes and of both breeds for sale. Our herds represent a mingling of the most fashionable breeding today.

REGISTERED HOLSTEIN BULL, calved Jan. 2, 1914. Send for description. W. C. TAYLOR, Milan, Mich.

HOLSTEIN CATTLE and Duroc Jersey Swine. Choice pigs of both sexes now ready to ship. Prices reasonable. E. R. CORNELL, Howell, Michigan.

REGISTERED HOLSTEIN FEMALES. Choice 2 yearlings—Two year olds and matured cows. Haven't a room for them, must sell before winter. If interested come and see them they are in good stuff, in nice condition. J. M. WILLIAMS, No. Adams, Michigan.

We will take your note for one year at 5%—then why not buy a

Holstein Bull

at once, and get pick of 12 from best Breeding in Michigan. Send for prices and pedigrees. LONG BEACH FARM, AUGUSTA, MICH.

Purebred Holsteins. Young bulls of best individuality by the U. S. Government. For sale R. of M. cows, bull calves and heifer calves from R. of M. dams and grand dams and Hood Farm Sire. IRVIN FOX, Allegan, Michigan.

Choice Holstein Bulls. All from A. R. O. Dams. Semi-off-yearly records 720 lbs. butter in Jr. 4 yr. old class to over 1000 lbs. in mature class. Breeding: Cross "King of the Pontiacs" and the "Demick blood." Cherry Creek Stock Farm, Hilliards, Mich. M. E. Parmelee, Proprietor.

Elmway Farm, Wm. McCully, Proprietor, Pittsford, Mich., offers for sale eight High-Grade Holstein Cows, to freshen this fall and winter. Bred to a grandson of King Segis Pontiac. All raised on the farm not trading stock.

LAST BULL Sold to Mr. A. Fleming of Weidmo. He's a bargain at \$200. breeding conformation considered. Brother to former world's record 3 1/2 yr. old Holstein. M. L. McLaulin, Redford, Mich.

MAPLE Lane R. of M. Jersey Herd. Tuberculin tested by the U. S. Government. For sale R. of M. cows, bull calves and heifer calves from R. of M. dams and grand dams and Hood Farm Sire. IRVIN FOX, Allegan, Michigan.

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

THE WILDWOOD Jersey Herd. Registered Jersey Cattle of Quality. Herd headed by Majesty's Wonder 9777, one of the best sons of Royal Majesty. The daughters of Majesty's Wonder are mated to a son of Majesty's Oxford King. Herd tuberculin tested. We have for sale a few choice young bulls for fall service from high producing cows. Alvin Baldeen, Capac, Mich.

FOR SALE—Mature Jersey cows also heifers, fresh or to freshen soon. Heifer calves, 6 mo. to 1 yr. old. Also ready for service bulls. All from Reg. of Merit Stock. Waterman & Waterman, Meadowland Farm, Ann Arbor, Mich.

Jerseys. Bulls ready for service, extra quality sired by Jacobus's Fairy Emanon, No. 10711, from high producing dams. SMITH & PARKER, Howell, Mich.

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

HILLSIDE Farm Jerseys, yearling bulls, solid color, half brothers to ex-world's-record senior 2 yr. old and from R. of M. dams, with records from 400 lbs. to 800 lbs. C. and O. DEAKE, Ypsilanti, Michigan.

MILKING SHORTHORNS. Bull 10 months old \$125.00, 1 months \$100.00. 2 cows. DAVIDSON & HALL, Tecumseh, Michigan.

Shorthorn Cattle of both Sex for Sale W. W. KNAPP, Howell, Michigan.

Shorthorns for Sale 8 young bulls also female, farm 1/2 mile east of Davis crossing on A. A. R. R. W. B. McQUILLAN, Howell, Mich.

BIDWELL SHORTHORNS
For "Beef and Milk"
Registered Bulls, Cows and heifers, Scotch-topped roans, and reds for sale. Farm at N. Y. Central Depot. Also D. T. & I. R. Y.
BIDWELL STOCK FARM
Box B, Tecumseh, Mich.
Albion Stamp 352670

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

Dairy Bred Shorthorns of best Bates strains. Young bulls 7 months old for sale. Price \$100 each. J. B. HUMMEL, Mason, Mich.

A Choice Shorthorn Bull Calf, a blue ribbon winner in class of five, 10 mos. old, weight 800 lbs. Will sell for \$75. T. H. HARRIS, Traverse City, Michigan.

HOGS.

Durocs & Victorias—Grand bunch of Glits due March and April. Comprising the blood of Superba, Defender, Much Col., Orions and others. A few young boars. M. T. STORV, Lowell, Mich.

Berkshires. Two fall gilts bred for Aug. & Sept. farrowing and a choice lot of April gilts for sale. A. A. PATULLO, Deckerville, Mich.

Berkshires—sons, daughters, grandsons, granddaughters of such noted boars as Rival's Champion, Baron Duke 170th, Symbelee's Star 2nd, Grand Champion breeding at farmers' prices. T. V. Hicks, R. 1, Battle Creek, Mich.

Royalton Bred Berkshires—April boar well marked. Royalton Emperor. Both registered with papers at fair price. Write to D. F. Valentine, Supt., Temperance, Mich.

Registered Berkshires sold by the pound and shipped on approval. Boars 8c, and sows 10c per pound. B. B. REAVEY, Akron, Mich.

Berkshires. Of various ages, either sex, open or bred, prolific strains, Registered, at moderate price. Elmhurst Stock Farm, Almont, Michigan.

DUROC JERSEYS—A few choice ready to ship. Carey U Edmonds, Hastings, Mich.

Duroc Jersey—March pigs either sex, also am book-keeping orders for fall pigs for Nov. shipment. Inspection invited. E. D. Heydenberk, Wayland, Mich.

Capitol Herd Duroc Jersey Swine. Established 1888 Spring pigs for sale, satisfaction guaranteed. Express prepaid. J. H. Banghart, East Lansing, Mich.

Duroc Jerseys—Big Type, Heavy Boned Boars ready by Volunteer Grand Champion. F. J. Drott, R. 1, Monroe, Mich.

Durocs of the best of breeding. April farrow either sex or pairs for next 30 days \$20 each. Two fall boars. Oct. farrow \$30 each. Also Holstein bull one year Oct. 6. H. G. KEESLER, Cassopolis, Mich.

DUROC JERSEYS—Fall and spring pigs either sex, from choice strains. R. C. STAHLMAN, OHERRY LAWN FARM, Shepherd, Michigan.

DUROC JERSEY BOARS a choice lot of spring boars. Fall pigs, pairs and trios not akin. W. C. TAYLOR, Milan, Michigan.

J. W. KEENEY, Erie, Mich. Breeder of Duroc Swine D. M. & T. local from Monroe or Toledo, Keeney Stop.

Breeders' Directory—Continued on page 395.

Practical Science.

CANNED FOODS.

(Continued from last week).

Bacteria Are Indicators of Inferiority in Material.

Regarding bacteria it may be stated that the same condition pertains there as exists in most other instances in which we give consideration to the bacteria content of a food product. It is not, as a rule, the bacteria themselves with which we are concerned but it is the condition which prevails and which is indicated by the presence of bacteria, with which we are concerned. The presence of an excessive number of bacteria in catsup, the excessive amount of molds and the excessive amount of yeasts means a product so badly decomposed and contaminated that it is really unfit for food, so that while a subsequent sterilization may destroy the activity of the organism present, this sterilization does not remove the filth, does not remove the contamination, nor render the product fit for food. So in the laboratory we make a determination by actual count of the bacteria present, not because these bacteria are themselves injurious but because their presence is an indication to us of the condition of the food product when it was prepared.

Mold Means Insufficient Cleansing.

Likewise regarding molds. If the product is washed and scraped and thoroughly cleaned previous to manufacture, the molds will be found to be very effectively removed. The presence of mold, therefore, indicates very clearly that the product was not properly cleaned and washed previous to being manufactured into the pulp.

Yeasts Betray Spoilage.

The presence of yeasts in tomato pulp or tomato catsup indicates a condition which very frequently exists in a canning factory or in a food manufacturing concern handling this class of products. It means that too long a time has elapsed between the preparation of the pulp and the putting of it into sterile containers, a condition which so frequently exists with tomato pulp which has been shipped in tank cars from one locality to another. The yeasts, finding a favorable medium for growth after the first cooking and before the subsequent sterilization, begins actively the souring of the food, and any yeast action in the food is a deterioration of the product. Therefore, an abundance of yeast cells and spores indicates, to the extent to which they are present, just what deterioration has gone on in the product after it has been prepared into pulp.

Some Manufacturers Have Proven that Cleanliness Pays.

The Food and Drugs Act, together with the sanitary campaign carried on by various states, has been responsible in a large measure for the present high standard of sanitation which prevails in most canning factories. Some food manufacturers have believed with executive officials that it is possible to prepare foods commercially in a high state of cleanliness and perfection and having believed it, have demonstrated it, so that this condition is now no longer a theory but an established fact. The public of this country are undoubtedly consuming each year larger and larger quantities of canned foods and it is a very great satisfaction to know that the campaign for pure foods has been fully as productive of desirable results in this domain of food manufacture as in any other.

There is music in the beauty, and the silent note which Cupid strikes, far sweeter than the sound of an instrument; for there is music wherever there is harmony, order, or proportion; and thus far we may maintain the music of the spheres.—Browne.

Farmers' Clubs

OFFICERS OF THE STATE ASSOCIATION OF FARMERS' CLUBS.

President—R. J. Robb, Mason.
Vice-president—C. J. Reed, Spring Arbor.

Secretary and Treasurer—Mrs. J. S. Brown, Howell.

Directors—Alfred Allen, Mason; Joseph Harmon, Battle Creek; C. B. Scully, Almont; C. T. Hamline, Alma; W. K. Crafts, Grass Lake; Edward Burke, St. Johns.

Associational Motto:

"The skillful hand with cultured mind is the farmer's most valuable asset."

Associational Sentiment:

"The Farmer: He garners from the soil the primal wealth of nations."

CLUB DISCUSSIONS.

Open the Fair Season.—The October meeting of the Columbia Farmers' Club was held at the home of David Neely, the Misses Agnes and Jennie Neely and Mrs. Mattie Blowers entertaining. Prof. French, of the M. A. C., spoke along the line of an agricultural education. The future of civilization is the future of agriculture, the need of manual training in the public school, also domestic art. The man who has the right attitude toward his job is the man who will succeed. The average farmer has not the right attitude toward his work. Create a respect for the farm in the rural school. The function of the college is to help the farmer solve the various problems that confront him. Domestic science should be included in your high school even if other things are omitted. The Wenonah Camp Fire girls gave a most interesting demonstration of their work, including a ceremonial meeting. A poem, written by Mrs. Will Clark, explaining the aim of the campfire work, the seven points of the law, and the names and symbols chosen by the various members, was read by Miss Audrea Blowers. A living W. for Wenonah was formed by the girls before disbanding. Mrs. Dunn read an instructive article written by Mrs. Nash, with many practical suggestions for the sick room. Roll call, "What I saw at the county fair," was heartily responded to. After miscellaneous business the Club adjourned. It being the annual fair of the Club, the ladies exhibited several articles in fancy work, canned fruit and jelly. The fruit which was canned by Miss Raven at the county fair was also on exhibit. A small amount of farm products was on exhibit.

Farmers and City People Meet Together.—The members of East Otisco Farmers' Club were entertained in October at the home of Mr. and Mrs. Elvon C. Lloyd, at which place the regular meeting had been scheduled to be held. The members, about fifty in number, began arriving at about ten o'clock in the forenoon and at half past twelve a sumptuous dinner was served at which the covers were laid for 46. The topic for discussion was "What should be the relation between the farmer and the city man?" and was ably handled by Mr. E. C. Lloyd in behalf of the city man, and Mr. Ernest C. Woolridge for the farmer. After which a general discussion disclosed the fact that the differences between the two were mostly imaginary and that the relations existing between them were all right. Miss Edna Nummer, a graduate nurse, from Butterworth Hospital, Grand Rapids, a member of the Club, was present and gave a very excellent talk on "Home Hygienics," which interested everybody. One of the best numbers on the program was the initiation of the local board of commerce, and Mr. Gunsolus, as members of the Club. The questions asked in the initiating ceremony were of great importance and for a time it did seem as though "Gunny" didn't know beans, but he finally woke up to the seriousness of the situation and injected considerable humor into his answers. The members dispersed at about 4:30 in the afternoon and wended their way to their several homes. The next meeting will be held at the farm residence of Clyde Cooper on November 3, and will be the Club's annual fair. These meetings between the people of our city and surrounding country, are excellent and certainly serve to stimulate a more fraternal feeling among the inhabitants of the community. They should be encouraged and a great many of them held among the various Clubs and bodies, having as their object civic and municipal welfare.

Grange.

NEWAYGO POMONA MEETING.

Newaygo County Pomona Grange No. 11, met with Sitka Grange, October 6. Owing to four silo fillers being in the vicinity not many men were present, but the women of Sitka were equal to the occasion, and stayed right by us with royal entertainment and a chicken dinner.

After dinner convention was called to order by Worthy Master George Warren and Mr. and Mrs. M. Doran, of W. W. Carter Grange, Newaygo, were elected from the subordinate Granges to represent them at the Michigan State Grange, Muskegon. Mr. and Mrs. Israel Houlding, of Ashland, were elected Pomona delegates, after which the convention adjourned. With a song by Sitka Grange and the invocation by Rev. Elliott, of M. E. church, the Grange was open and in the hands of the lecturer, Mary Robertson.

Congressman James E. McLaughlin gave an able and interesting talk on his journeyings from place to place. He believes in people contributing something to those with whom they come in contact. He said there were more Jews in New York than in Jerusalem and more Italians than in Rome, yet they contributed very little to American life. He said this was a country of home owners and home builders and it was a pleasure to meet, an honor to know and an opportunity to come in contact with the people of such communities. He cited the difference between the United States and Mexico and said one of the reasons for the trouble down there was that the land was owned by large syndicates instead of the people, and that the laws relating to land must be changed before conditions would be any different.

Mr. McLaughlin is in favor of the township high school and good roads. He is in sympathy with the farmer and the marketing problem, and thought the government would have to come to the rescue.

"Would it be possible for the various rural communities of Michigan to employ an experienced person to do their selling and buying in the markets of the world?" was a question that brought produce buyers and others to the scene, and they were lined up and ready. Mr. H. B. Blanford, county agent, led and said he did not think the people were ready for such a move; that he would have to admit that he did not have brains enough to sell his crop. He believed that farming was a high calling and that we must have faith in ourselves and in our neighbors. He thought that if a plan of distribution had been worked out Michigan could have sold all her peaches. He said it was a slow process to educate the people in the rural districts.

J. H. Edwards said the farmer was surrounded by a line of skirmishers that was as long as the battle lines of Europe, and that everyone was trying to get a crack at him. George Warren said that the farmers do not bring stuff to market fit for hogs to eat, that if he could not co-operate, he should not stand back and everlastingly kick.

M. D. Buskirk told of sending to the canning factory for ten baskets of peaches to finish filling a car load. When he came to sort them he found five baskets filled in the middle with gnarly, poor stuff. The dishonesty of the farmer was emphasized so much that someone asked if the farmers were the only dishonest persons in the world. E. T. Carbine said "No, everybody was dishonest in a measure." The summing up of the question was, co-operation and more confidence in our fellowmen.

"How can we provide for a wider use of our school properties?" Miss Carrie L. Carter, commissioner of schools, said such large sums of money are tied up in our school plants that the use of them as social centers was being agitated. She talked of night school but thought it would not be profitable in rural districts, although they were carried on with success in Kentucky. Go-to-school week is going to be of much more importance than Patron's Day because then the patrons, by visiting the school, would see the actual work.

No evening meeting was held on account of the small number present. Wednesday morning the Grange assembled in the Grange hall, but so few were present that an informal meeting was called by L. H. Edwards and a vote taken to repeat the program at the next meeting. After a discussion on Grange insurance by Mr. Robertson and Mr. Edwards, the meeting adjourned.—Mary Robertson.

MAYER Dry-Sox Shoes are the ideal wet weather shoes. They keep your feet dry and warm and protect you from rain, snow and slush, because they have a cork waterproof filling between inner and outer sole, pig's bladder between upper leather and lining and rubber welt which make Dry-Sox Shoes as near water-proof as possible.

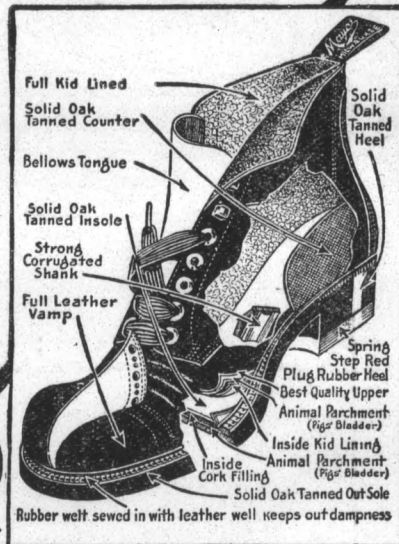
Mayer DRY-SOX SHOES HONORBILT

Give unusual wear on account of the way they are made, oak tanned soles, full vamps—strong, steel shank—solid counters.

WARNING—Always look for the name and Mayer trade mark on the sole. If your dealer cannot supply you, write to us.

We make Mayer Honorbilt Shoes in all styles for men, women, children; Honorbilt Cushion Shoes, Martha Washington Comfort Shoes.

F. Mayer Boot & Shoe Co. Milwaukee Wisconsin



THIS O.I.C. SOW WEIGHED 932 LBS. AT 23 MONTHS OLD

IONIA GIRL

I have started more breeders on the road to success than any man living. I have the largest and finest herd in the U.S. Every one an early developer, ready for the market at six months old. I want to place one hog in each community to advertise my herd. Write for my plan, "How to Make Money from Hogs." G. S. BENJAMIN, R. No. 10 Portland, Mich.

DUROC Jersey, Mar. & Sept. pigs either sex sired by a son of Volunteer, Champion of 3 State Fairs and Chicago Show in 1912. E. H. Morris, Monroe, Mich.

Big Heavy Boned Duroc Jerseys for sale of all ages. Write your wants. M. A. BRAY, Okemos, Ingham Co., Michigan.

Registered Durocs—July boars from good stock. Price \$10. CLAUDE S. SLATER, Lapeer, Mich., R. No. 1.

HAMPSHIRE Swine—Breeding stock of all ages from most popular strains. Write for breeding inspection invited. Floyd Myers, R. 2, Decatur, Ind.

HAMPSHIRE HOGS—the belted beauties. One yearling boar and spring pigs, either sex. Write your wants. John W. Snyder, St. Johns, Mich., R. No. 4.

Chester Whites—Special prices on March boars for next 30 days. Fall Pigs. F. W. ALEXANDER, Vassar, Michigan.

O. I. C. SWINE—Are you on the market for a choice bred sow to farrow the last of Aug. or fore part of Sept.? If you are, write me. I have them. A. J. GORDEN, R. No. 2 Doer, Michigan.

O. I. C. Serviceable boars, choice Gilts not bred, Spring pigs not akin, also Toulouse Geese. Write for low prices and photo. Alvin V. Hatt, Grass Lake, Mich.

O. I. C. GILT BRED SPRING PIGS ready to ship. H. J. FERLEY, Holt, Michigan.

O. I. C's—Bred sows, bred gilts, spring pigs both sex. Service Boars. Price low. A. R. GRAHAM, Flint, Michigan.

REGISTERED O. I. C. BOARS & GILTS High class fall pigs at reasonable prices. J. CARL JEWETT, Mason, Mich.

O. I. C. SPRING BOARS of good type and Red Polled bull calves. John Berner and Son, Grand Lodge, Mich.

O. I. C. SERVICEABLE BOARS. Priced to sell, and recorded in buyer's name. H. W. MANN, Dansville, Michigan.

O. I. C's STRICTLY BIG TYPE. March, April and May pigs sired by Lengthy Prince, White Monarch and Frost's Choice, all big type boars and sows weighing from 500 to 700 lbs. with quality second to none. Can furnish in pairs not akin. Prices reasonable. Newman's Stock Farm, Mariette, Mich. R. 1.

O. I. C's two yearling boars and a lot of last Spring pigs not akin. Also a lot of this fall pigs at \$10 each at 8 to 10 weeks old. Good stock. 1/2 mile west of depot. Otto B. Schulze, Nashville, Mich. Citizens phone 124.

O. I. C. Choice eighteen mos. old boar. Grand Champion at West Michigan State Fair 1915 and Mar. and Apr. gilts, also fall pigs. A. J. BARKER, BELMONT, MICH. R. No. 16.

O. I. C's. Spring Boars ready for fall service. Write JULIAN P. CLAXTON, Flint, Michigan, R. 8.

O. I. C. SERVICEABLE BOARS From best of stock. Priced to sell. Reg. free. E. B. MILETT, Fowlerville, Michigan.

Way Brothers Stock Farm. The home of the big for sale. Registered free. J. R. Way, Pompeii, Mich.

BIG TYPE P. C. Either sex, pairs or trics not akin. Bred sows and gilts. Have several 1000 lb. boar prospects. Absolutely no larger breeding. Everything guaranteed right. FRANK KRUGER, Ravenna, Mich.

Big Type POLAND CHINA all ages. Herd boar guaranteed. G. W. Holton, R. 11, Kalamazoo, Mich.

POLAND CHINAS of the big type. Boars ready for service. Barred Rock Cockerels. A. A. WOOD & SON, Saline, Michigan.

LARGE TYPE P. C. Some very choice April and May boars for sale. Brood Sow Sale in February. W. J. HAGELSHAW, Augusta, Mich.

Large Strain P. C. two extra good Summer Yearling Spring pigs that are beautiful, sired by Big Defender, the boar that everybody goes wild over. Come and see him. H. O. SWARTZ, Schoolcraft, Mich.

BIG Type Poland Chinas, boars as big, as good as grow in Iowa with quality to please you. ROBERT MARTIN, R. F. D. No. 7, Hastings, Mich.

Spring Pigs at Half Price—Bred from the largest strain of Poland Chinas on earth, none bigger. If you ever expect to own a registered Poland China, this is your opportunity. Get busy and order at once. Pairs and trics not akin \$15 each. A few bred sows at \$25. J. C. BUTLER, Portland, Mich. Bell Phone.

BIG type Poland Chinas with quality bred right, feed right, and priced right to go to their new homes and do right. A. D. GREGORY, Ionia, Mich.

POLAND CHINAS

The Large Prolific Kind We have a nice lot of **SPRING BOARS**

At Farmers' Prices. **ALLEN BROS., Paw Paw, Michigan.**

For Sale Poland Chinas of Merit, Ayreshire Bull. B. M. WING & SON, Sheridan, Mich.

DOES THIS LOOK GOOD TO YOU To advertise our herd, and get you started right, we offer a few **BIG TYPE POLAND CHINA** pigs, at weaning time, (either sex) from 100 pound sires and great big stretchy sows, of best breeding, for \$10.00 each, if ordered at once, offer withdrawn soon. Extra good spring boars and gilts for sale.

Hillcrest Farm, Kalamazoo, Mich.

Big Type Poland China—Western bred extra large boned. Stock for sale. Pairs not akin. Satisfaction guaranteed. W. BREWBAKER & SONS, Elsie, Mich. R. No. 5.

POLAND CHINA Spring Pigs from heavy boned prolific stock. Also Oxford Sheep, both sex at bargain prices. ROBERT NEVE, Pierson, Michigan.

REGISTERED YORKSHIRES Imported Strain. Both sexes. Prices Reasonable.

Hatch Herd, Ypsilanti, Michigan.

50 YORKSHIRES—All ages. Red Polled Cattle, Oxford Down Sheep, W. P. Rocks, I. R. Ducks. E. S. CARR, Homer, Mich.

Large Yorkshires Gilts bred for October farrow. Serviceable boars. Pigs all ages. Prices reasonable. W. C. Cook, Route 42, Ada, Michigan.

Yorkshire Service Boars—Also sows and fall pigs, pairs not akin. No Cholera. Send for Photos. CHAS. METZ, Ewart, Mich.

Mulefoot Hogs—Weaning Pigs. Brood Sows and Gilts. Young service Boars. Pairs not akin. Write for prices. C. F. Bacon, R. 3 Britton, Mich.

HORSES

LOESER BROS.

We have 100 head of Belgian and Percheron Stallions and mares. Imported and home bred. We have sold pure bred horses in Michigan for the last 25 years, and have the right kind, and at the right price. We can supply any number of work horses, both geldings and mares. Get in touch with us. **LIGONIER, INDIANA.**

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

Registered Percherons Brood mares, Fillies and Young Stallions. Priced to sell. Inspection invited. L. C. HUNT & CO., Eaton Rapids, Michigan.

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

CLYDESDALE STALLIONS FOR SALE—One (Imp.) 7 years old. Apply to JOHN FERGUSON, Camlachie, Ont., 14 miles from Sarnia.

Overland

TRADE MARK REG.

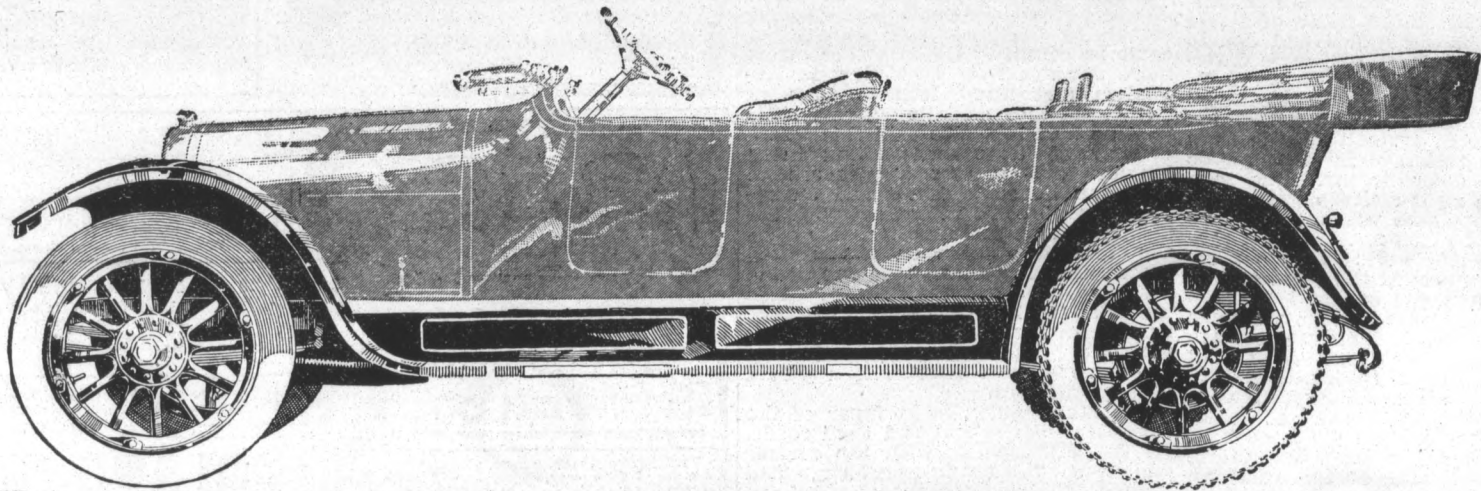
"Six"

Model 86

--

\$1145

f.o.b. Toledo



Just "Six" Facts—

To you who are confused with and weary of long drawn out aside-from-the-point arguments, we present these Six important basic facts:

The Overland Six has a wheelbase of one hundred and twenty-five inches.

Many a Six—*costing more*—has a *shorter* wheelbase.

The Overland motor develops full forty-five horsepower.

Many a Six—*costing more*—has considerably less power; considerably less speed.

The Overland is a roomy Six—seating seven adults with ease.

Many a Six—*costing more*—has a smaller tonneau; hence less comfort.

The Overland Six has 35"x4½" tires with non-skids on the rear.

Many a Six—*costing more*—has smaller tires.

The Overland Six has high tension magneto ignition.

Many a Six—*costing more*—has not.

Overland electric control buttons are on the steering column—within reach.

On other Sixes, that cost more, they are not as conveniently located.

These few major items alone should, we believe, convince any intelligent buyer of the downright wisdom and out-and-out economy of selecting an Overland Six.

Handsome catalogue on request. Please address Dept. 390.



The Willys-Overland Company, Toledo, Ohio

Also manufacturers of Willys-Knight Automobiles

"Made in U. S. A."

Model 83

Four-Cylinder 5-Passenger Touring Car - - - \$750
Roadster - - - - - \$725

f.o.b. Toledo