

MICHIGAN FARMER

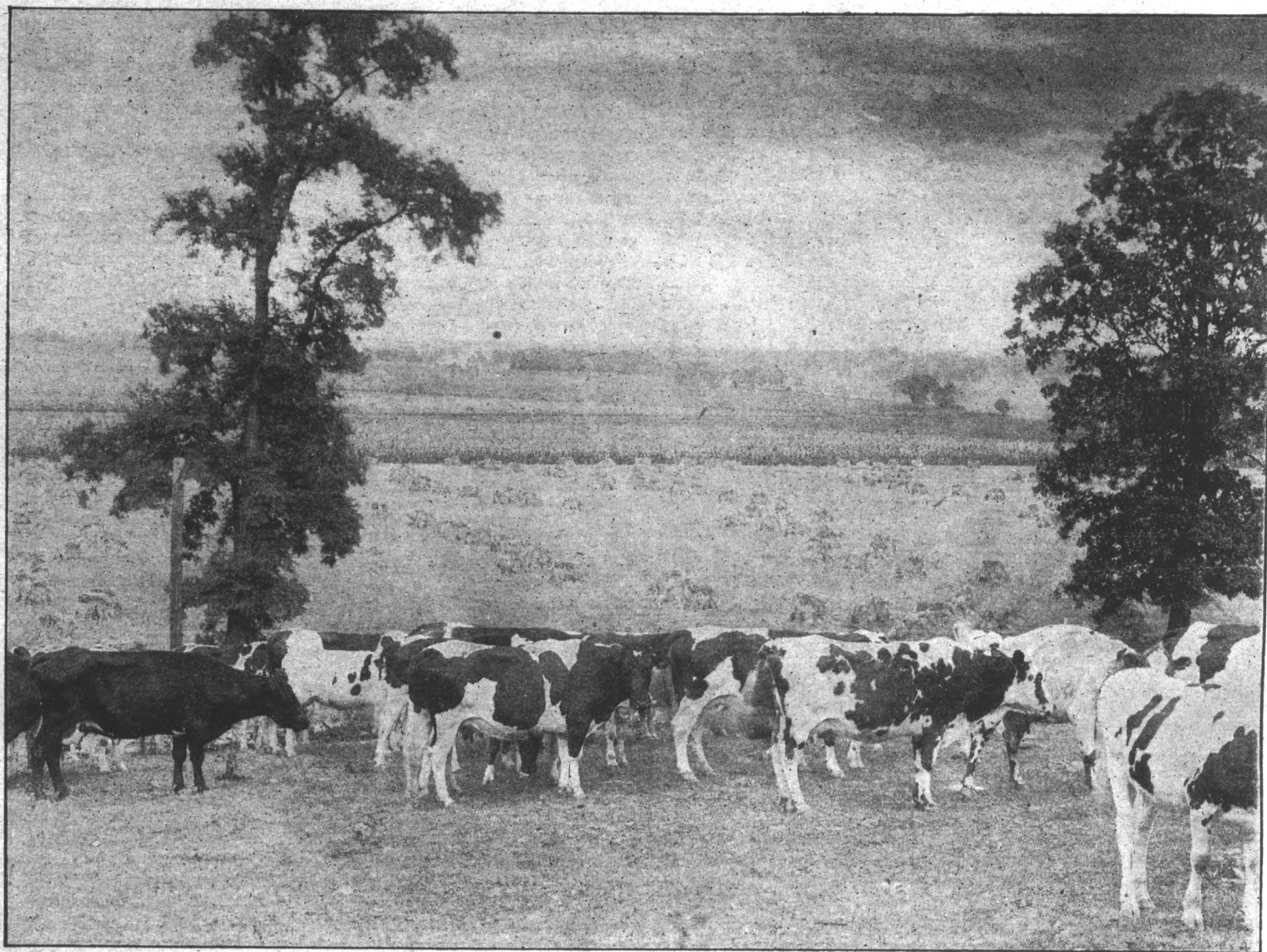
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How Shall We Maintain a Strong Farm Bureau?

THE SUCCESS of the State Farm Bureau depends precisely upon how every county makes its own program to fit its own conditions. Without the loyal support of men on the farms, no amount of hard work on the part of the leaders can accomplish the best results.

No hard and fast rules can be made that will apply with equal force to conditions in all counties. Every county has its own peculiar problems. Therefore, let it find its own line of work and adopt a program in harmony with

the guiding idea of improving the agriculture of the state as a whole, by building strongly upon the foundation of local agricultural needs.

It is only natural, that each county should feel its own problems are more important than those of other localities, yet they must bear in mind that Michigan farms produce a wide variety of crops and products, and that it is going to require a vast amount of detail work and special machinery to meet the requirements of all farmers of every section of the state.

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DETROIT, AUGUST 21, 1920

CURRENT COMMENT

Cloverland Farmers' Roundup

THAT the farmers of the upper peninsula are of the progressive kind was clearly shown at the Cloverland Farmers' Roundup, held at the Chatham Experiment Station last week. This was the second event of the kind held at the station. Last year's experience gave Superintendent McMillan an optimistic vision of the possibilities of this meeting which unfavorable weather conditions did not dampen, and the result verified his judgment regarding the enthusiasm of upper peninsula farmers. The sight of some five hundred automobiles parked in the station grounds, and nearly twenty-five hundred people inspecting the experiment plats, following the stump blasting demonstrations and watching the boys and girls' stock judging contests, and later gathered in the grove to do justice to the roast ox, etc., and listen to the program, was proof of an agricultural enthusiasm on the part of Cloverland farmers, which the farmers of lower Michigan might emulate to their own advantage. The fact that some of these people had driven a hundred and twenty-five miles to attend the roundup is proof of their appreciation of the work which the experiment station is doing for them, while the fact that they came for the most part over the best of permanent roads shows that the upper peninsula counties are fully alive to the possibilities and importance of their rapidly developing agriculture, while the cooperation of Alger county, in furnishing an excellently served barbecue with all the trimmings which properly go with such an event, at a cost of sixteen hundred dollars shows a unity of interest which insures the rapid development of an already prosperous upper peninsula agriculture.

The general program was well balanced and calculated to still further augment interest in and more closely correlate the various departments of organized activities with the station and its work. Very properly the boys and girls had a prominent part in its success, as was the case with the entire program. Mr. R. A. Turner, State Boys' and Girls' Club Leader, discussed "Club Work and its Relation to the Farm Bureau," following with a handicraft demonstration by the McMillan Team of Luce county. Members Woodman and Waterbury, of the State Board of Agriculture, spoke briefly on the interest and plans of the board as related to the upper peninsula station, the former making it clear that the function of the state board in this regard was to carry out the plans made or suggested by Cloverland farmers and

their station workers. Mrs. Dora Stockman, member of the state board, spoke on "The Value of Home Demonstration Agents to the Upper Peninsula," speaking from a wealth of experience and wide observation which made her counsel of special value to the farm women who heard her. Dean Shaw, of M. A. C., spoke on "Experiment Station Work and its Relation to Agriculture in the Upper Peninsula"; R. J. Baldwin, Director of Extension Work, spoke on "County Agent Work as a Factor in Developing Agriculture," and Dr. Mumford, State Leader of County Agents, on "Development of Farm Bureau Organization Work."

A report of the boys' and girls' and women's sections of the meet appears in another column. Watch the next issue for further details.

American Railroad Inefficiency

THE American people are today being haunted by the spirit of that disembodied specter known as "the car shortage." Every failure to deliver is charged to an inability to secure cars. Our farmers are without coal, machinery, fertilizers, lumber and a hundred other things because the railroads cannot, or do not, furnish cars, and on the other hand, their granaries are filled with old grain that should have been marketed weeks ago because of the same excuse. Speculators have fattened through the shifting of transportation accommodations from one district to another. Factories are idle, either because they cannot get materials or on account of being unable to move their manufactured products. For a year back the markets for farm products have been "spotted" just because there existed this transportation obstacle in the road of the free passage of goods to where those goods were most needed.

The question has arisen as to whether the situation is as bad as it has been pictured, and if it is, are the railroads distributing the available cars so that every class will have an equitable share or are some classes favored at the expense of others? These are questions frequently asked and because of the general public interest facts just gathered by the Illinois Agricultural Association are timely. A freight car survey made by representatives of that organization covering four hundred and ninety-four stations located in forty-six different counties of Illinois, showed the actual number of cars in the stations each day for seven consecutive days. In one hundred and forty-six stations, or 29.5 per cent, some of the same cars remained on the track throughout the time of the counting. At all the stations 9,294 cars were listed the first day and of these nine hundred and thirty-eight, or a little over ten per cent, had not been moved after seven days.

The Indiana Farm Bureau has also collected some information on the situation and it has computed that if the average distance traveled per car could be increased one mile per day there would be 100,000 cars released; that if the average load be raised from seventy to seventy-five per cent of the capacity of the cars that 120,000 cars more would be available and that if the average idle time of the cars be reduced from eight hours per day to seven hours, an additional 140,000 cars would be accessible. The total that could be released through these three sources would be far in excess of the present needs as claimed by the railroads themselves. May one not reasonably ask in the light of these facts whether or not the remedy for our present railroad crisis does not lie precisely at the feet of the managers now operating the railroads?

Farmers' Day at Chatham

DID it rain in Chatham, August 11? Somebody spoke about its sprinkling, and there were rumors of thunder and allusions to lightning. But the hundred or so children of the Cloverland Boys' and Girls' Club who danced about the fire in the camp on Slapneck River never felt a drop. How could they, with "weenies" spluttering on the end of long sticks held in the blaze, heaps of roasting ears on the right hand and mountains of ice cream cones on the left? Surely that would have been enough to make any boy insensible to an upper peninsula thunder storm. And when visions of a Deagan barbecue on the morrow topped it, with slabs of juicy beef between fat buttered rolls, and more roasting ears and ice cream and pop stands and brass bands and a million or so folks swarming through the woods, who could expect a regular fellow to know it was pouring and the old folks were disgustedly scurrying for shelter?

There had been all kinds of serious doings through the day, but this was the small boy's innings. As one coming agriculturist told the world, "This is the life. This beats farmin' all holler." But he had done his share of the farming, or he wouldn't have been in on the feast. The seventy-five boys and dozen or more girls had been faithfully performing the work mapped out for their club, the boys under the direction of A. G. Kettunen, in charge of the boys' work for the upper peninsula, and the girls under the supervision of Miss Barbara Van Heulen.

And they had been at attention during the day's program. If the college experts who gave them instruction in live stock judging could be as sure of so close attention everywhere they go as these Cloverland boys gave them, that trio of men, Messrs. Waldron, Mc-

Millan and Brown, would feel that their labor had not been in vain.

Following the judging came a tour of the experimental plots and station buildings, when the troop kept at the heels of the instructors, absorbing every scrap of information which might help them in their gardening problems. Then came the "weenie" roast, with R. A. Turner and Mr. Kittunen in charge of the boys, and Miss Van Heulen and Miss Flora McIlhenny chaperoning the girls. There were songs and stories and all sorts of club stunts, speeches by State Leader R. A. Turner and Dean R. S. Shaw, then taps, and silence in the camp under the elms, until the get-up call in the morning.

On Thursday the boys were given a chance to show how much they had heard of the stock judging talks the day before. From nine o'clock to eleven, teams from the thirteen counties represented in the gathering tried their skill at judging cattle, sheep and pigs. Carl Johnson, of Gogebic county, carried off first honors in the cattle judging contest, and was given a purebred Holstein dairy calf. Theo. Jarvinen, of Baraga county, proved that he knew more about pigs than the rest of the boys and drew a purebred Duroc pig, while Laurence McNamara, of Alger county, won the purebred Hampshire ewe sheep in the sheep judging contest. The prizes were presented at the mass meeting in the afternoon by D. L. McMillan, director of the experiment station. In addition the Gogebic county team will be sent to the State Fair, as its three boys had the highest score for any county, with Alger ranking second.

The youngsters were not alone in their disdain of rain, though the weather man followed up his "wet and continued cold" threat on Thursday. Thursday morning came, it could hard-

ly be said to dawn, for the sun would not shine and the clouds wouldn't show their silver lining. The wind blew strong and cold, and the damp of rain was increased by a heavy mist, but in spite of it, two thousand four hundred visitors swarmed over the experiment station grounds. Early in the day they began to arrive in every sort of automotive conveyance, from flyovers to town cars, but nary a vehicle so ancient as a horse-drawn buggy or cart hove in sight. Long before noon the parking space reserved in the orchard was filled and the overflow spread out on either side of the drive, and even back to the woods, where the ox, donated by Alger county, was being slowly roasted by Chef Deagan, of Marquette. If Director McMillan had any fears that the roundup might be not as well attended as the program promised deserved, they must have faded away long before the big day was well started. The morning for men was devoted to inspection of the station work and live stock demonstration, and to stump blasting demonstrations.

The woman's conference was also held in the morning, under the direction of Miss McIlhenny, home demonstration agent for Houghton county, who took over the work in the absence of Miss Aurelia Potts, Assistant Home trip. Much honor is due Miss McIlhenny, who worked under heavy odds in taking up another's work at the last moment, and to Miss Sylvia Richardson, agent for Gogebic county, who assisted Miss McIlhenny in preparing the exhibits and putting over a program for which every speaker but two failed to appear.

Mrs. Dora Stockman, member of the state board of agriculture, opened the program, with a talk on the plans of M. A. C. for women. She said that the great object of her work while on the board is to bring the college close to the women in the homes, through the "golden link," the home agent. She emphasized the need that farm women have for play as well as work, and urged them to get outdoors every day; if they hadn't time to get out and play with the children, at least to have some outside activity, if it could only be a garden or chickens. As a help to better homes for better boys and girls, she urged consultation with the home agent, the consultation to include a history of successes as well as a recital of trials.

Miss May Foley, assistant secretary of the M. A. C. Alumni Association read a paper on "How Home Demonstration Agents Can Help the Home-Maker," written by Mrs. Rice, of Houghton county. She pointed out the three-fold nature of the home-makers' work—housing, home-keeping and home-making, enumerated its various ramifications from darning the children's socks to nursing them when they are sick, and pointed out that as the home-maker can not go to institutions to learn the latest and best ways of doing her work, she should look to the home agent for new light.

Mrs. Smith, of Schoolcraft county, read a paper prepared by Mrs. Matthew Brearley, on Food Study Clubs, taking as the standard the club started in Gulliver last year. Stress was laid on the fact that discussing and analyzing the effect of food made the daily round a pleasurable experience instead of a drudgery, and that learning the why of steps taken in cooking made that ancient art a sure thing instead of a hit-or-miss procedure.

Mrs. Ella Swanson, of Foster City, covered the topic, "Helps in Home Sewing." She exhibited a natty suit made from a serge skirt and velvet coat, with the aid of the home agent, and pointed out how many-sided the work of these workers is. Following

(Continued on page 208).

"News of the Week" appears on page 217.

Michigan's Million Pupil School

By an Escaped Bachelor

THE other morning as Bill had just turned out and was seated on the edge of the bed stretching himself for the fourth time, I says to him, "Bill, did you ever attend Michigan's Million Pupil School?"

Bill stared at me a full minute before he spoke. Knowing his very interesting habit of going around to the back door of one's think tank, I was not surprised when he answered, "How long have you been in the nut business?" placing strong emphasis on the word "you."

Well, there was an old dictionary over on the stand and we immediately went to look up definitions, as is our usual custom when Bill and I get into an argument. We found that a school was "an institution of learning; an educational establishment; a place for acquiring knowledge and mental training." After reading this definition over the second time, says I to Bill, "I am right; Michigan has a million pupil

vinced, an accomplishment in which one can take some pride since he, after an argument, is almost always "of the same opinion still."

EXPLAINED to him that an institution which supplied a great outdoor laboratory in which all the processes necessary to the growing of a crop of wheat, harvesting it, grinding the grain into flour, putting the flour into a loaf, baking it and preparing for final consumption, looked to me like a most remarkable educational institution. Indeed, bringing together every process connected with the wheat industry is an accomplishment that goes far beyond the ability of the majority of our schools to handle.

The common method of studying an industry of this kind by which the student goes to one expert for information

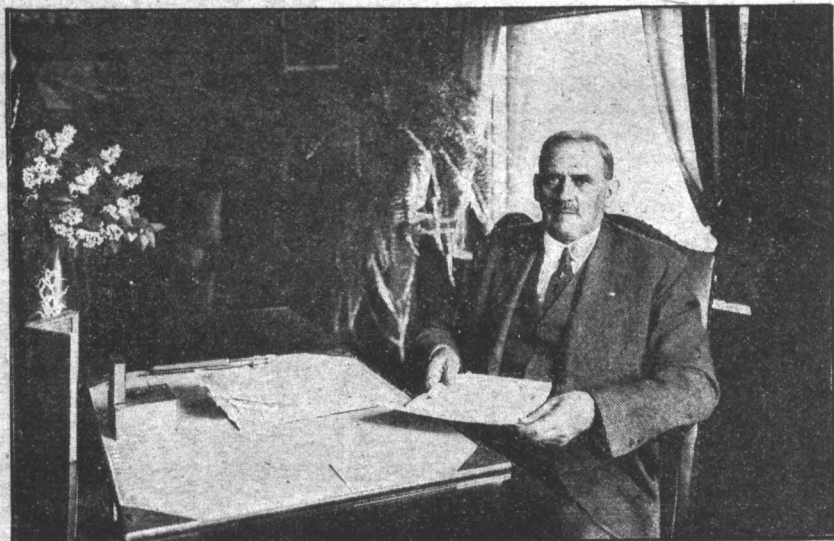
gle line of work until they seem to have an amazing lack of appreciation of what the fellow is doing in the next yard.

Mr. G. W. Dickinson, the master superintendent of the million-pupil school of which we have been speaking, got a vision of this very fault and proceeded to correct it by bringing the very best and latest information regarding each line into this great laboratory and then correlating this information to give the pupil full knowledge of each process and yet not to allow the pupil to lose sight of the whole. In the case of wheat the student could better study the question of the advisability of introducing a variety of high or low gluten content upon the average farms of the state, if he knew better the milling and cooking situation.

and build up within their minds worthwhile breeding types.

ANOTHER matter which seems to have taken a deep hold on the modern educator, according to Bill's talk, is that a person to get the most from his life, should have a variety of interests. He should know something of a good many things. This enables him to bring a wider experience and more related information to his special business and at the same time prepares him to stand on an equality with other informed men and also makes himself ready to live a full life to the end.

The great school is peculiarly equipped in this regard. There are twenty



Mr. Dickinson at His Desk, He Says there will be an Attendance of a Million this Fall.

school, or at least she has one educational institution which will in all probability enroll a million pupils this fall."

Bill's face turned sad and pitiful and I could tell at the first glance that he thought I had already reached the second stage of dementia. However, before we had finished the chores that morning Bill was relieved of his concern over me, and further, was in full accord with my opinion about the big school. In our discussion he had come to realize that here in the state of Michigan could be found the most generously patronized educational establishment in the country and for all we knew in the whole world. It was in this wise that my friend Bill was con-

vinced, an accomplishment in which one can take some pride since he, after an argument, is almost always "of the same opinion still."

WHILE Bill failed to show signs of weakening in his position, I saw clearly that he was interested and so proceeded quickly to my second argument on the creation of ideas and ideals. He agreed that one of the great functions of a modern school is to build in the minds of the pupils ideals toward which they can work. In fact, Bill thought that this was the real essence of education, to get a vision of what life should be.

Now, Mr. Dickinson's school can hardly be outdistanced in this respect, I told him. If a man or boy sets out to develop a herd of Brown Swiss cattle the very first thing that that man or boy must get in his mind is an ideal type of Brown Swiss animal, and the very finest way to build this type animal is to see the best specimens of the breed where they can be studied together. In time the composite impression made upon the mind gives the man or the boy a type toward which he may work in selecting his animals for breeding. To this Bill agreed perfectly.

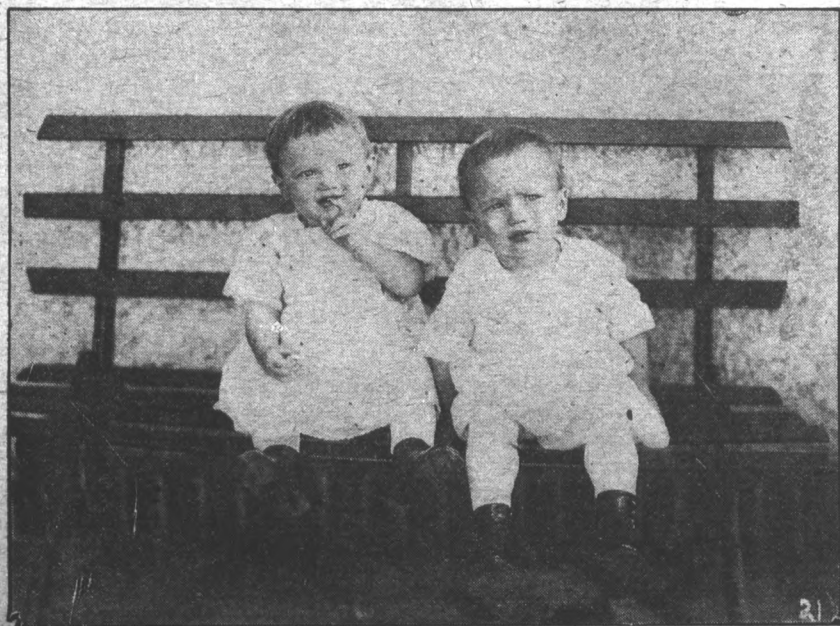
"And," said I, "The same thing is true with crops. A man gets nowhere in laboring to improve a strain of wheat, or barley, or potatoes or cucumbers unless he has within him an ideal toward which to work." And then I proceeded to describe how that in this school Mr. Dickinson was bringing together the very finest animals of every breed of stock common to the state, every class of grains adapted to our soils, every type of fruit, and all the vegetables, and laying them before the patrons of his school, giving the scholars the privilege of studying the lines in which they may be interested



The Average Person Knows Very Little About Our Fur Bearing Animals.

different departments covering nearly the whole range of human interests, especially those interests in which the farmer is concerned. Some of the subjects not always found in the curriculum of agricultural schools, are decorative and industrial arts, a course looking toward the growing of better babies, needlework, merchandising, demonstrations, pet stocks, etc. One of the new lines might be especially noticed. Mr. Dickinson has arranged to have an exhibit of live fur-bearing animals. In conjunction with the exhibit arrangements have been made to have the president of the National Fox Breeders' Association on hand to assist those who may be interested in the possibilities of this profitable line of farming. The exhibit will contain these animals: Ten pairs of black and silver fox, two pairs of red fox, two pairs of cross fox, one pair of blue fox, one pair of white fox, one colony

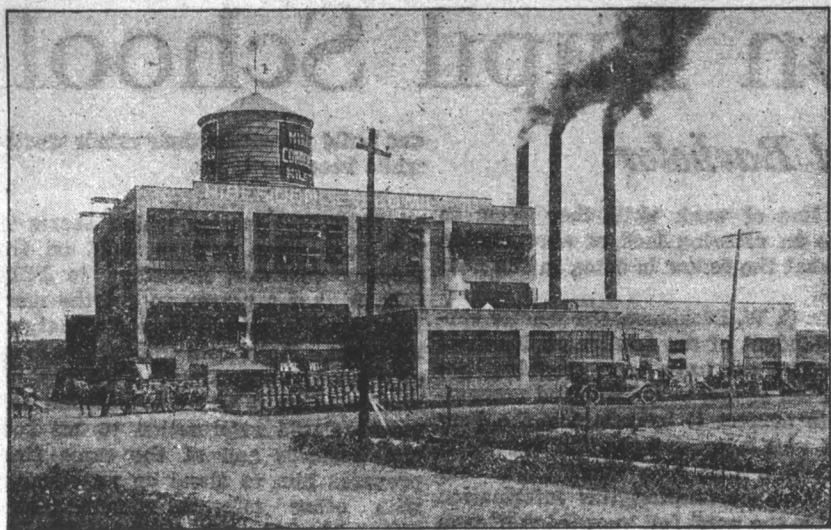
(Continued on page 221)



Mothers Learn the Needs of the Growing Child.



The Boys All Say That They Want To Come Again.



The Milk Condensary at Cass City.

WHOEVER enjoys motoring in the country and finds keen enjoyment in the summer views of growing crops, orchards laden with fruit, pastures dotted with thoroughbred cattle and sheep, with here and there deep green woodlands suggesting quiet, cool nooks, inviting and restful, certainly would find his ideals realized in a leisurely trip through Tuscola county.

Blessed with all the endowments that nature may bestow on our favored land, Tuscola is one of the garden spots of Michigan, and its prosperity is a measure of the industry and enterprise of its people. Its ideal location, directly east of Saginaw and Bay counties and north of Genesee and Lapeer, gives it a ready market to three or four of the large cities in the state, and the railroad facilities are all that could be desired. As one of the trio of counties comprising the "Thumb" of Michigan, which has a history all its own, it deserves much more than a passing notice in this series of articles on the work of the Farm Bureaus.

It is the all important work of these organizations, which mean so much to the farming communities, that we are chiefly concerned and through my circuit of Tuscola county I met everywhere the kindest interest and cooperation in my quest for information as to what the Farm Bureau and its active members were doing. Nowhere have I found a more cordial or agreeable people, and I left the confines of their county with regret that I could not linger with them. I had a real pressing duty—that of preparing the "copy" for this article, in order that the thousands of readers of the Michigan Farmer might know what I had learned about Tuscola, in as early an issue as possible.

THE start of my itinerary through this county was at Richville, in Denmark township, a thriving little village situated one mile east of the county line of Saginaw, and fifteen miles from the city of Saginaw. Through perfectly level country you motor over good stone and gravel roads, and enter Tuscola either at Reese, a village situated on the county line, or at a point three miles south, as I did. But these are not the only routes by improved highways that you may reach the county seat from the west. There are two others from Saginaw county, one by the way of Frankenthum, through Tuscola village, to Vassar, and the other from Taymouth and Birch Run to Millington and Fostoria. Four other main highways from Bay county enter the northern townships and accord direct communication by smooth roads between Bay City and all villages in those townships.

Tuscola County's Road System.

I have mentioned these highways in some detail because they are the connecting links between one of the most comprehensive road systems in this

part of the state and the two prosperous and growing cities which afford the best markets for the farmers of Tuscola county. The road commissioners of this county have built a well connected and systematic system of highways convenient to the greatest number of people, by linking up all the principal villages and hamlets, so that you may go from any one of them to any other without often leaving a really fine and smooth road. Crossroads in many places are also improved; and all the roads are generally kept in excellent condition for heavy traffic. The heaviest travel is between Saginaw and



How County Agent MacVittie Looks.

Caro and Cass City, and between Saginaw, Vassar, Millington and Mayville. In the eastern townships joining on Sanilac county the improved roads are laid out on the same comprehensive plan, and all lead directly to, or by short connecting links, to the thriving town of Caro, the county seat.

Wonderful Crop Conditions.

Touring northward through Richville for three miles and turning east toward Watrousville, you will be at once impressed, as every interested person must be, with the richness of the country thereabout. On every side the crops give every promise of huge yields, and you quickly become enthusiastic and think in glowing terms of the profits the fortunate farmers will likely realize this fall. You wish many times you were the happy possessor of this forty of set-up barley, that twenty of beans, this seven of sugar beets, or yonder thirty of corn, while the "College Wonder" oats at your left cause exclamations of wonderment. Over a long period of years I have seldom seen such a thrifty growth of beans, or so promising fields of beets, but corn is not doing so well in places owing to cool nights during the greater part of July. In Fairgrove and Gilford townships particularly the crops appear well advanced for late July, though in Ellington, Indianfields, Juniata and Vassar townships they are

Our Farm Bureaus

Agricultural Agent MacVitte of Tuscola One of Our Garden Spots and Also

less advanced only in an unmeasurable degree.

Many New Farm Buildings Seen.

An impression I quickly gained as I kept on to Caro, where I was to meet the county agent, was the large number of new, and fairly new, farm houses and barns, and the very good condition of farm fences and all other property. These things speak in eloquent terms of the prosperity and financial well-being of the farming community; and I was told that the value of farm property in Tuscola had more than doubled in the last three years. Most farms are better stocked with modern machinery than ever before, and it is better cared for, while practically every successful farmer has his motor car, and it is not so often a flivver either.

The Farm Bureau Organizations.

THE Tuscola County Farm Bureau was organized last March with a membership of twenty-five hundred. The association is an enthusiastic body of men determined upon correcting the evils of individual marketing of farm products and single-handed purchasing of necessary supplies. There is too great a difference, they know, between the prices they receive for foodstuffs and the prices the consumer is required to pay; and the one big idea is to bring the consumer and themselves closer together by eliminating the middlemen in trade, who everywhere are making huge profits. This may prove a difficult thing to accomplish, but it is a good fight and there is no want of determination on the part of the leading farmers to secure the results desired.

Upon completion of the bureau organization the following officers were elected for the ensuing year: J. S. Murday, Fairgrove, president; Claude Cole, of Caro, vice-president; Miss Mattie Graham, Caro, secretary-treasurer; Alexander MacVittie, county agent. The executive committee is comprised of the following members: F. W. Alexander, Denmark township; H. J. Marsh, Vassar township; M. D. Lynch, Fremont township; Dorr Perry, Ellington township; Joseph Campbell, Fairgrove township, and C. J. Stuffer, Elkland township.

The Bureau is Divided Into Community Locals.

Since the organization of the parent association several community locals have been created, the boundaries of which were determined by the members themselves generally in regard to convenient shipping points. These lo-

cals are known by the names of the central shipping stations and are: Akron, Reese, Cass City, Ellington, Silverwood, Deford, Vassar, Mayville, Millington, and Kingston, while the units at Fairgrove and Caro will soon swing into line with the cooperative elevator associations at those places.

An enthusiastic meeting at Akron elected officers of the community local, who are: B. B. Reavey, president, Will Latimer, vice-president, and John A. Dosser, Henry Uhan, George Prine, John Parsell, John D. Horst and William J. McAlpine, as a board of directors.

At Deford the community local officers are: George S. Spencer, president; Norman A. Gillies, vice-president; N. W. Bridges, secretary-treasurer; and Lewis Retherford, William W. Kelley, Colin Ferguson, William D'Arcy, A. H. Henderson, M. C. Wentworth as members of the board of directors.

The Kingston local organized with the following officers: R. G. Winterstein, president; Ed. Fulford, vice-president; Vernon Everett, secretary-treasurer; Henry Downing, Stanley Stokes, Charles M. Henderson, Cassius E. Hill, Eugene R. Hurst and James E. Green comprise the board of directors.

At Millington the leading farmers met and elected Ed Ordway president; O. M. York, vice-president; H. F. Donigan, secretary and treasurer, and Carl Kennath, Sidney J. Murray, George Henry, Mike Daenzer, Marcus Jensen and Burt Kester as a board of directors.

The Fostoria local is represented by L. C. Chapin, president; William Fowler, vice-president; W. H. Atkinson, secretary-treasurer, and Walter J. Bell, Edward Colling, Earl Ensign, Thomas Valentine, Thomas H. Farrar and G. R. McGuigan, compose the board of directors.

At Dayton a community local was organized with the following officers: Floyd L. Willsey, president; Edward Witkovsky, Albert Hunter, Charles Stewart, Joseph Stelzer, Tilden Tait, Edgar A. Ross, Alfred Deverna and Clinton Beardslee form the board of directors.

The Unionville local met and elected William Halm, president; William H. Beatenhead, vice-president; Marion Rumble, secretary-treasurer, and Geo. L. Rumble, George J. Irion, Charles F. Ewald, Murray McCollum, John H. Uhl and Theodore S. Baur as members of a board of directors.

The community local at Caro has for its officers, W. L. Eldridge, president;



Some Quality-Holsteins Belonging to George Clark.

and Their Work

Shows the Saginaw Valley Field Man, Enthusiastic Farm Bureau Workers

W. F. Witkovsky, vice-president, and D. W. Streeter, E. R. Purdy, R. H. Johnson, William Emery, Lewis G. Ogden and John Browning for its board of directors.

The Purchase of Supplies is a Big Problem.

IN talking with many of these progressive farmers I found the chief concern of the farming communities was in the purchase and distribution of coal, not only for household needs but also for that needed for threshing. The cooperative elevators through which farmers have been accustomed to buy necessary supplies, are unable at present to buy in sufficient quantities to supply anywhere near the demand, and transportation has broken down to a point where no one will guarantee any delivery of coal at all.

The Farm Bureaus, I was told, are able to contract with some degree of certainty that they will get delivery, at a price about two dollars below the price asked by the elevators. In July the price quoted was around nine dollars per ton delivered at railroad siding, but no one would hazard a prediction as to how long the price would hold. Many farmers in Tuscola have modern house-heating furnaces that require anywhere from ten to sixteen tons of soft coal a year to heat comfortably, and a further supply for cooking.

The matter of securing sufficient supplies of fertilizer is another, but less troublesome, problem, but most farmers feel assured that there will be enough of various kinds to go around when needed. The cottonseed meal supplies have also been short at times, but by speeding up of railroad freights little trouble is anticipated this fall.

In the matter of marketing wool, the farmers are practically a unit in pooling their stocks, and heavy shipments have been made to Lansing, the State Wool Exchange giving receipts upon which farmers may, if they choose, get an advance up to seventy-five per cent of normal value, from the country banks.

Strong Cooperation of Farmers Needed.

With all the well-laid plans of the County Farm Bureau officers, there is needed an enthusiastic cooperation of all farmers who are interested in securing the best results from their labor and invested capital. Each farmer should assist his own community local, as the success of the whole movement is dependent upon the progress made by the local units.

Institutions of this kind must be properly financed, and the method of

issuing non-interest bearing notes as security is a good way to accomplish this. However, if the association intends to purchase a warehouse or equipment of any kind, the association may issue investment notes, the individual members of the community local loaning the money to the association for its note. These notes draw interest at six per cent, and the management of the association sets aside a sufficient amount each year to pay these notes at the end of ten years.

The Boys' and Girls' Club Work.

IN promoting club work among the boys and girls, Tuscola county has not been backward. The movement was started several years ago and in 1918 probably reached its peak, at least so far as results are concerned. The organizations of the various clubs have been quite generally maintained and a renewal of activities is expected this year.

The Diligent Canning Club at Fostoria is the largest club of the kind in the county, having twenty-four members, and Mrs Ray Fox as club leader; Ira Robison is president; Tillie Gieger,

Lon, vice-president; Leona Kennedy, secretary, and Lena Lapratt, treasurer of this active club.

At Akron the canning club has thirteen members, from ten to fifteen years of age, who made a canning exhibit at the county fair at Caro, in 1919. Lulu Horst is president; Madeline Rohlf, vice-president, and Grace Beach is secretary and treasurer of this active club, with Mrs. E. A. Hess as club leader. There is also a poultry club at Akron with six members, of which Margaret Kennedy is president,

ident; Cereal Herman, vice-president; Dorothy Coleman, secretary, and Lillie Hile is treasurer of this club. There is also a potato club with six members, of which Ida Berry is president; Hampton Curry, vice-president; Elizabeth Fraede, secretary, and Mary Fox is treasurer.

The leading garment-making club is at Caro with ten members, and the others are at Watrousville with ten members, Gagetown with four members, Berry, with ten members.

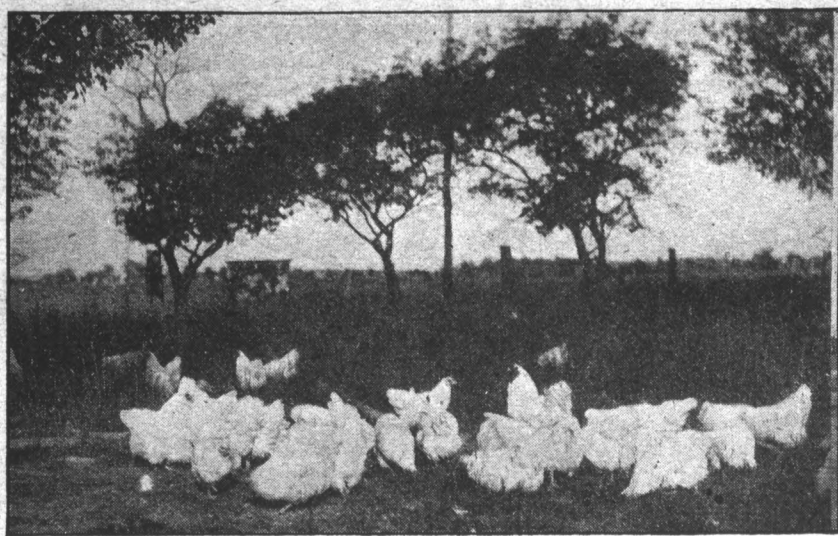
The Farm Leaders of Tuscola County.

Alexander MacVittie, the popular county agent of Tuscola, whom every farmer and citizen regards with pride and speaks of in the highest terms, is one of the big men of this prosperous farming community. He was born at Forester, Sanilac county, on January 2, 1883, and was reared on his father's farm in Macomb county. His early education was obtained in the rural schools, and he afterward took a full course at the Michigan Agricultural College, from which he was graduated in 1911, with the degree of B. S. From 1911 to 1913 he was a teacher in the high school at St. Johns, and from 1913 to 1917 he held a like position in the Bay City Eastern High School. In 1918 he came to Tuscola as its county agent.

Into a somewhat disorganized situation Mr. MacVittie thrust all the force of an intense energy and a strong and pleasing personality. His ability as an organizer was quickly recognized and he soon rallied to his support the earnest and progressive farmers and business men throughout the county. Steadfast in their interests his work has proved most helpful and stimulating to the farmers, who have been greatly aided by his counsel both as to matters pertaining to farming and to the business of marketing products to the best advantage.

The organization of the various units of the Farm Bureau in Tuscola required high ability and a great amount of work rightly directed. In this exacting position Mr. MacVittie, of good Scotch temperament and enthusiasm, again proved the wisdom of the county authorities in selecting him for the position of county agent, a fact which will be readily vouched for by all persons who have met this thoroughly honest and capable county agent.

Miss Mattie Graham, of Caro, who very capably fills the responsible position of secretary and treasurer of the Tuscola County Farm Bureau, is probably the most favorably known business woman in the county. She combines the clerical duties of an official in this busy organization with the undefined work of assistant to Mr. MacVittie, with credit to herself and an entire satisfaction of a large bureau membership. As Miss Graham is a native of the county, having been born in Almer township, nine miles north of Caro, (on a date not divulged), and



White Wyandottes on William Schultz's Farm.



Herman Rupprecht's Excellent Farm Home.

vice-president; Alma Foster, secretary, and Marion Boulton is treasurer of this enterprising and active club.

In gardening there is an active club at Gagetown with thirteen members; and one at Deford, of which the local leader is Vernon Everett. There are twenty members, and Keith Retherford is president; Ruth Kilgore, vice-president; Beatrice Cooper, secretary, and Hattie Brown, treasurer. The Frenchtown Agricultural Club, at Cass City, has a membership of seventeen, with Miss Florence Smith as leader. Irene Dolwith is president; Leroy Dil-

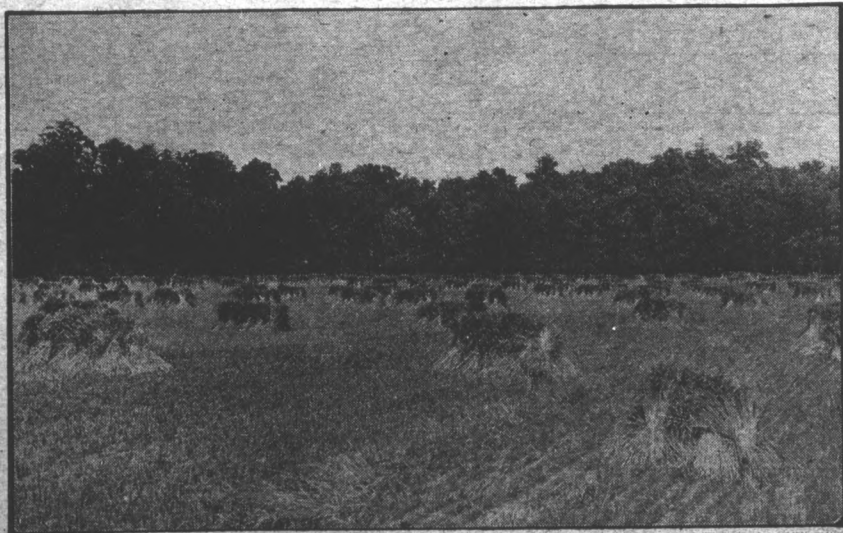
and Maurice Sampson secretary and treasurer.

Other poultry clubs are located at Fostoria and Cass City. The former has six members, and Pearl Pyles is president; R. G. Bouford, vice-president; Harold Manchester, secretary and Jennie Bell, treasurer. The other club is the Bingham Poultry Club, with Mr. MacVittie as leader, and Margaret Wold as president; Marie Lang, secretary, and Nelson Anker, treasurer.

Of calf clubs the one at Caro is the largest with twenty members. Eight boys of this club gained valuable experience at the State Fair last year judging live stock, scoring second as a team, and Harold Stewart scored second in the contest. Other calf clubs are located at Gagetown, with two members; Fairgrove, with three members; Akron, with eight members, and Gilford, with one member.

There is an active rabbit club of sixteen members at Akron, with Claude Harrison, president; Richard Sampson vice-president, and Phila Streeter, secretary-treasurer. A club at Gagetown has five members, with Harry Terbush as leader. Charles Beckett is president; George Halliday, secretary, and Glenn Terbush is treasurer.

Of other clubs there are two corn clubs, one at Akron with two active members, and the other at Deford with four members; a pig club at Caro with seven members, of which Mrs. L. H. Parsons is leader. Edna Terry is pres-



Field of Red Rock Wheat on Farm of Claude Cole.

having spent practically all her life in this community, the people regard her as their very own. Her helpful influence and counsel extends beyond the groups and farm units in which her work takes her. In March of the present year she was elected secretary and treasurer of the Tuscola County Farm Bureau, which office she holds with ability quite in contrast to that exhibited by some officials with whom the writer has come in contact.

One of the first farmers I called on in my circuit of Tuscola was J. S. Murday, president of the Tuscola Farm Bureau, whose fine farm of two hundred acres is situated three miles southwest of Fairgrove village. He is one of the more progressive farmers, and when asked what, in his opinion, was the most important work before the Farm Bureau in his county, he said: "I believe the promotion of a campaign for extended use of pedigreed seed is by far the biggest plan that we can follow. Much of the failure of crops can be traced directly to poor seed or to the use of seed not adapted to our own soils. Take sugar beet seed, for instance: That was a problem that called for many months of rigid tests some twenty-odd years ago, in Saginaw, before the right seed for Michigan soils was determined, and then it had to be imported from Germany. I believe the whole success of beet growing in Michigan is due to the careful and painstaking tests made by the founders of the industry a year or more before the first sugar factory was built in Bay City. I mention this circumstance to show the necessity of more careful tests and the adoption of the right seed for the particular soils. Then, if the work is followed on scientific lines we may expect the maximum results, both as to quality and quantity of our crops. You may put me down as an earnest booster for better seeds."

"Look at this field of 'Wisconsin 6' barley," he continued, "seventeen acres and the finest stand I ever grew. We just finished setting it up yesterday. Over there is a field of twenty-nine acres of 'Worthy' oats, and I think every farmer will say it is as good as any hereabouts. On the back lot I have another twenty-nine acres of 'Early Wonder' beans, and when I say they look as well as any in the county, you know they must be good. My corn patch back of the barn contains twenty acres, and it promises well, though the cool nights the past week or ten days have not advanced it as far as in some seasons. All told, the fields are above the average year and we look for splendid crops and good returns this fall."

Mr. Murday also divulged the information that he is a native of Michigan, and has been working this big farm for twenty-one years.

Mr. Murday also divulged the information that he is a native of Michigan, and has been working this big farm for twenty-one years.

MY interview with Claude Cole, of Juniata, vice-president of the Tuscola Farm Bureau, was both interesting and profitable, as it furnished me with some information I had sought, but not obtained, from another source. I found him at the Fairgrove elevator, a cooperative farmer association of which he is a prominent member. He was very willing to give me the facts in regard to the proposed Fairgrove and Caro elevators joining the Farm Bureau in the business of marketing farm products and furnishing the bureau members with needful supplies,

and he regards this as one of the most important things to be attained this fall.

When the project was first proposed at the time of the permanent organization of the Farm Bureau last spring, the difficulties of consolidation seemed insurmountable. The method of doing business, setting prices, etc., of the elevator associations, which are conducted as any private concern does business, namely for profit and paying of dividends, is so at variance with the method of the Farm Bureau for marketing farm products at the best prices obtainable with actual expense of operation, with no thought of profit to the Bureau, and to sell its members needful supplies at the actual cost of the goods and handling, that for awhile it was thought inadvisable to attempt to consolidate the associations. Within the last few weeks, however, some of the leading shareholders in the associations, and few are not members of both, have come to the conclusion that an amalgamation of the interests may be effected, and thus present to the farming community a solid front in the handling and solution of the problems that arise to vex them. What the foundation and terms of the consolidation will be no one yet knows, but the whole matter will shortly be taken up by the leading farmers, and I have little doubt that an equitable arrangement will be made to the advantage of all concerned.

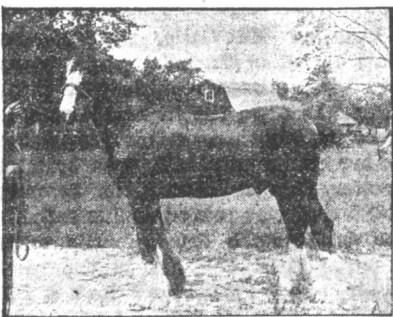
Mr. Cole, who was born in Tuscola county thirty-five years ago, is the owner of a fine farm of one hundred and eighty acres, situated one mile north of Watrousville and eight miles west of Caro, the county seat of Tuscola. He is a strong believer in the value of pedigreed seeds, and this year has twenty acres of "Red Rock" wheat, eighteen acres of corn, eleven of oats, thirteen of beans and thirteen of sugar beets, all in fine condition promising large crops. He also planted a small plot of two acres to potatoes.

When asked about the beet sugar situation in Tuscola he spoke in a rather disparaging tone. He believes the movement to shut off the production was a sharp political game, and in evidence of the little support the Tuscola farmers gave the effort to curtail production, called my attention to the extensive acreage put in beets this year in his vicinity. This is an admitted fact, and in some places farmers, who had hitherto given little or no attention to the growing of sugar beets, have this year put in all the land they could spare. Judging from the wonderful appearance of nearly every beet field around Fairgrove and south to Vassar, it is probable these fortunate farmers will make big profits from their beets this fall.

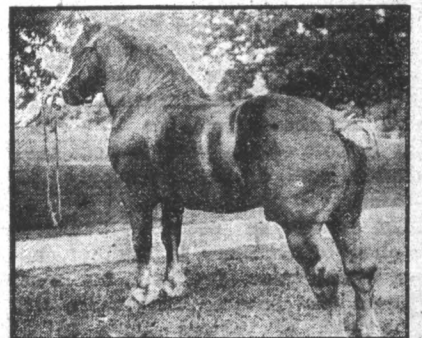
A project in which Mr. Cole is much interested, is the consolidation of schools, to secure economy and efficiency in education of rural children, and several schools in Juniata township will this fall be united under one or more teachers.

Dorr Perry, of Ellington.

MY drive to the farm of Dorrr Perry in Ellington township, eight miles northeast of Caro, was one of the delightful experiences of my trip through Tuscola county. It was in the early evening toward the latter part of July, (Continued on page 222).



Findlay Bros.' Clydesdale.



Belgian Stallion Owned by H. E. Hobart.

Buying Feeder Steers For Greatest Margins

WHAT weight of feeder cattle shall I choose? This is a vital question confronting the beef producer when he enters the feeder alleys to select his raw material. Should he take light steers weighing under eight hundred pounds, medium weights from eight hundred to one thousand pounds, or the heavy-weight feeders weighing over one thousand pounds? Upon which will it be possible to obtain the largest margin?

The price averages which we are presenting graphically herewith are of unusual significance to the cattle feeder in answering these questions. Each line on the chart gives the average value per month of fat steers, 1909-1918. The weight of cattle represented is shown above each line and the scale of prices is given at the left.

It is notable, first, that there is a correlation between weight and value per hundred weight, each increase in avoirdupois being associated with an increase in price. This is not because on the average with large numbers of steers considered, the cattle of heavier weight are fatter and they dress out higher percentages of beef than the lighter weights of corresponding grades.

It is evident from a study of the chart that the premium for weight is relatively small in the winter and spring months beginning with January and continuing until July. In August there is a noticeable widening of the spread due to the weight factor. This spread becomes most conspicuous in October and continues very wide till the end of the year.

January is given at the right of the chart again to show the relation be-

tween the December and the January price averages on cattle of each weight. It is strikingly shown that the cattle weighing 1,350 pounds or over continue to decrease in value in January, the January price being considerably below that for December, and the heavier the weight the more marked the decline during the former month. The weights under 1,350 pounds, on the other hand, increase in value during January over the December price, and the lighter the weight the more decided the rise.

In connection with a previous chart the seasonal fluctuations in beef steer prices and the reasons for the characteristic seasonal behavior of these

prices were discussed. The accompanying chart shows that for all weights September has averaged higher than any other month, although for the lighter weights June, July and August are virtually as high as September. The low month for the weights under 1,350 pounds is December, but for those weighing over 1,350 pounds January is the lowest month of the year, as a rule.

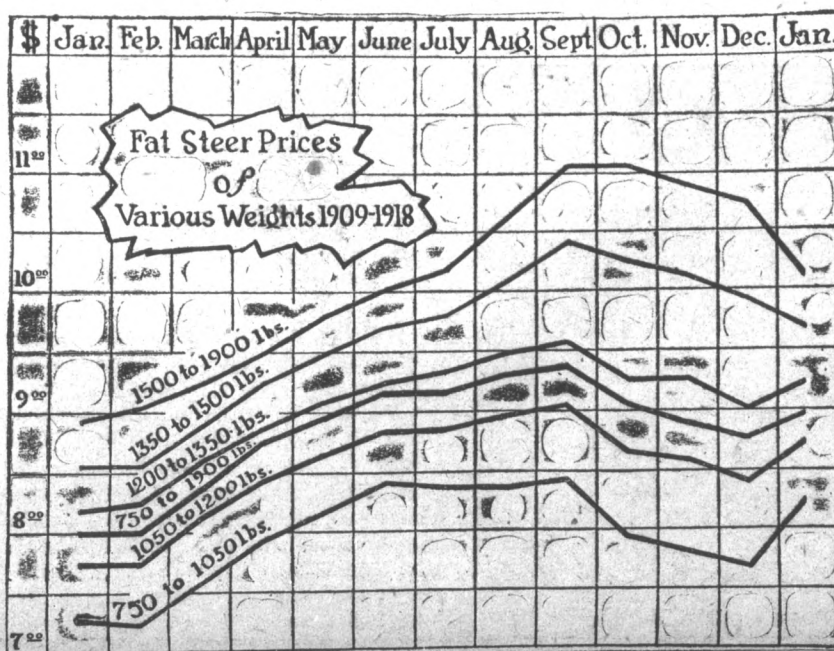
The bearing of these changes upon the size of margins is obvious. Light weight feeders sell cheaply in the fall months in line with the low prices upon light-weight beef steers. Heavy-weight feeders will sell at a premium during those same months in sympathy

with the high prices being paid for heavy fat steers. When the fat cattle produced by the use of light-weight feeders are put upon the market during the following winter or spring months, they will sell to good advantage, while the more costly heavy-weight feeders purchased in the fall produce heavy fat cattle which lose after the first of the year the premium associated with weight. In short, those who purchase light-weight feeders in the fall are working with the current in this way, while those who purchase the heavy weights must suffer this loss of premium.

The reverse holds true in purchasing for feeding for the late summer or fall markets. Weight then, is an asset, since its possession avoids the competition of the light-weight grass-fat steers and the premium for it becomes large.

The test of any principle or theory is how does it work? Can it be cashed in upon at the pay window? One cattle feeder who acted in harmony with the tendencies just described recently sold on the Chicago market some light-weight steers purchased last fall, and upon which he obtained a margin of six dollars per hundred weight. At the same time the purchasers of heavy-weight feeders last fall were, in some cases, getting little more than first cost of their cattle. This feeder has made a practice of buying light weights in the fall during each of the last five years and has found it a safe scheme.

Light-weight fat cattle coming on the market in early spring will substitute for yearlings which are scarce at that season and strongly in demand. This is also a period of butcher cattle (Continued on page 206).



Uncle Sam's Hired Men Who Serve Us

If George Livingston, Chief of the Bureau of Markets, Doesn't Put Money In Your Pockets, It Won't Be His Fault—By Frank George

IT will be recalled that in Greek mythology, Argus, the son of Zeus and Niobe, had a hundred eyes. George Livingston, Chief of the Bureau of Markets, United States Department of Agriculture, has but two eyes—being just an every-day human being—but his friends say that his vision is better than Argus' ever was. It has to be good to see all sides of the big farm marketing problems of today and then to look after one hundred field offices distributed throughout the United States, as well as to direct the activities of some thirteen hundred and fifty employees who are trying to solve them.

But going back a little farther, George Livingston first saw the light of day on September 14, 1886. Thereafter, he spent eighteen years on a farm. During that time he saw a great many things. Other people saw them, too. But whereas others sat down and grumbled at the hard lot of the farmer, George Livingston determined to apply corrective measures if he ever got the opportunity. At the same time he perceived that Mr. Opportunity might fail to put in an appearance, so he donned his hunting togs and went after him.

At twenty-nine G. L. was an authority on grain and grain marketing. He had graduated from the Ohio State University and thereafter spent five years specializing in agricultural and marketing methods in the capacity of instructor and assistant professor at various universities. His post-graduate course at Cornell University subsequently led him to Europe to study agricultural practices there. Then he joined the Bureau of Markets. His executive ability and genius for organization were soon recognized and four years later he was appointed chief of the bureau.

Quick to recognize ability in others George Livingston is never satisfied until its full force is being applied. When he established the grain inspection service he assembled the best talent that could be found—men who knew that while the adoption of standard grades would remove the guesswork from grain marketing and therefore be of huge benefit to the farmer, it would also reduce their own incomes considerably. However, that did not deter G. L. for a moment. But instead of holding a bludgeon over their heads he sought quietly to secure their cooperation. And he did it. That is the way he does everything—quietly, courteously, unerringly.

For more than half a century agricultural experts and agencies have devoted almost their entire attention to production problems. But these experts are now agreed that the question of marketing is of equal importance, and that the present marketing system is wasteful and inefficient in many spots. They say that with the present methods farmers lose millions of dollars annually. More important than that is the economic waste caused by the quantity of food actually lost.

It is only comparatively recently, however, that any organized effort has been made to develop the machinery of marketing to meet the nation's requirements. And with the United States leading the world in the maintenance of a government agency to study and devise new marketing methods, economists and students of food distribution problems everywhere are watching closely the results secured by the Bureau of Markets and the man who directs its activities.

Already conspicuous achievements

have been secured by establishing standard grades for farm products, reducing waste caused by faulty storage and shipping methods, and lowering costs of distribution of some agricultural products. One or two examples will indicate what it is possible to accomplish by improving present marketing methods.

By developing an inexpensive storage house for sweet potatoes and widely advocating its use the loss by decay of the sweet potato crop has been reduced from twenty-five per cent to two per cent—a saving of about two million dollars a year.

The president of a national bank in Marshall county, Texas, has stated that the service rendered by the Bureau of Markets in connection with the assistance given cotton growers in grading and stapling cotton before sale has been worth \$150,000 to the county. Another prominent man in Hall county, Texas, states that similar service performed there has been worth \$200,000.

tian cottons, and tentative standards testing the condition of their perishable products received at central markets, a service that facilitates the distribution of the products covered, hastens the release of cars, lessens deterioration and waste on account of delays resulting from disputes as to the condition of products, and prevents unfair trade practices.

Then there is the organization of farmers' cooperative associations—permanent, economic institutions that have a far-reaching effect. There are now more than fourteen thousand farmers' cooperative associations in the United States, in the organization of many of which the bureau was called upon to lend assistance. A staff of experts is maintained to study practical methods of cooperative marketing and to place the results in the hands of the farmers.

The writer endeavored to draw out from George Livingston something about himself. But without success. Self has no place in his lexicon. But he had a great deal to say about the work of the Bureau of Markets, and in doing so the force of his personality and capability was plainly evident in spite of his modesty.

"The Bureau of Markets is endeavoring to devise the quickest, most direct, and least expensive methods of getting products to market," he said. "Slipshod methods must go, for the new methods will be better."

"Of course, it must be appreciated that the job cannot be done overnight. Present marketing methods are the product of evolution, and better marketing practices must come through gradual improvement in methods and procedure. It has taken decades and, in fact, a century or so to develop the production side of agriculture to its present degree of efficiency, and there yet remains much to be done. I hope that the development of efficient marketing machinery will not take that long, but it is a vast undertaking, and every step of the journey must be sure-footed."

"To accomplish that result the bureau needs to have on its staff workers of proved ability through practical experience; workers who are keenly sympathetic with the farmer's needs. In a word, we want in the Bureau of Markets the best marketing specialists found anywhere in the world."

But of equal importance is the hearty cooperation of everyone. By the character of service rendered we want the farmer to know that the bureau is his friend, and not to hesitate to call upon it to help him solve his marketing problems. It is his bureau, and we are ready and anxious to serve him."

In that last sentence is contained the keynote to George Livingston's code. Service to others is his religion. He is constantly devising means of helping the farmers with their problems, and the only reward he asks is that the farmers come half way to meet him.

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WILL PRODUCE SUGAR IN INDIA.

EXTENSIVE developments are expected in the sugar industry of British India, where sugar is scarce and expensive. A sugar committee, recently appointed by the Indian government to investigate, is expected to recommend that manufacture be taken up on a large scale with government assistance. Chief difficulty seems to be in getting plant and machinery. The interests in India have established a large corporation for the refining of sugar.



George Livingston, Chief of the Bureau of Markets, United States Department of Agriculture.

Hundreds of letters containing statements such as these regarding all agricultural products are continually received by the bureau.

G. L. considers that the standardization of farm products and the containers in which they are packed is fundamentally the most important work being performed by the bureau; a work that is basic to all improvement in marketing, for without established standards and grades there is no recognized basis for buying and selling; no common language by which the parties to a transaction may understand each other; no uniform standard of quality upon which values and prices may be based.

Mandatory standards have been fixed for American Upland cotton, including grade, color, and length of staple; for shelled corn, wheat and oats; and for climax baskets and containers for small fruits; berries, and vegetables. Permissive standards have been recommended for white potatoes, sweet potatoes, Bermuda onions, strawberries, Sea Island and American-Egyptian

four railroads. The cantaloupe growers and shippers of California, state that this service, together with the assistance given by personal representatives of the Bureau of Markets, have saved them one million dollars in a single season.

The daily, weekly, and monthly market reports and summaries showing market conditions, prices, movement, supply and demand in connection with live stock, meats, wool, hides, and skins; the preliminary standardization of classes and grades of these products; investigation of waste and loss in marketing with suggestions for improved methods, and stock-yard supervision calculated to detect and prevent dishonest practices have effected a stabilization of the live stock markets and a saving of millions of dollars, directly and indirectly, to the producers and shippers and handlers concerned.

Another important factor in marketing is the Food Products Inspection Service established by the bureau, by the use of which shippers and others interested can obtain certificates at

Michigan State Fair DETROIT

September 3rd
TO
September 12th

EDUCATIONAL ENTERTAINING

*Federal Government and
Michigan Agricultural
College will conduct a*

GREAT TEN DAY EXHIBIT

of Farm Products and
Educational Course in
Agriculture.

Big Program of Free Exhibitions

will offer relaxation and amusement.

Fur Farming

Exhibit of all Michigan fur
animals and practical instruc-
tion in fur farming.

\$100,000 in Premiums

Stock show will be greatest
ever held in Middle West

Seventy-first Annual Exposition

TEN DAYS
SEPTEMBER 3

TEN NIGHTS
SEPTEMBER 12

A Competitor In Apples

*Michigan Growers will be Interested in a Survey
of West Virginia Orchards*

APPLE growers of New York, Ohio, Michigan and other northern states will soon find their strongest competitor, not in the Pacific Northwest, but in the Southern Appalachian apple belt, extending down through the Cumberland Valley in Pennsylvania and Maryland, and the Shenandoah Valley in Virginia. The writer has reached this conclusion while accompanying the advisory board of the American plant pathologists on their summer conference tour devoted to a study of fruit diseases and methods of control. The visiting pathologists from nearly every state in the union and several from foreign countries, started at Staunton, Va., on August 2, and worked their way northward into Pennsylvania, where a field conference was held on August 6 at Gettysburg.

Commercial orcharding is a comparatively new industry in the valley of Virginia. Most of the trees are less than twenty-five years old. Nevertheless there were 2,185,000 commercial apple trees in Virginia in 1918, of which sixty per cent were between the ages of one and twelve years. Orchard planting has been going on at a rapid rate since that date, and it is probable there are upwards of 2,500,000 apple trees in the state. Many apple trees are also being planted in West Virginia and Maryland. These young apple orchards are being developed under the most thorough culture following scientific methods, and there is little doubt that a large percentage of the trees will live to maturity and produce large yields of fruit.

Augusta county, of which Staunton is the county seat, is young in commercial apple production, but it is destined to be the largest apple producing county in the Shenandoah apple belt. In Augusta county there are 5,500 farms, and on every farm will be found an apple orchard which the owner is working to develop into a commercial proposition. There are now 1,200 orchards that produce or ship one or more carloads of apples each year. The largest commercial orchard in the county contains 22,000 trees planted on 750 acres. There are more orchard companies operating successfully in Augusta county than in any other county in the United States.

A CHARACTERISTIC of all this apple district is the spirit of practical cooperation and helpfulness among the growers. They cooperate for orchard improvement and in marketing their fruit. The proximity of red cedars to orchards is the cause of rust infections. It was found that removal of the cedars resulted in eliminating the rust. Last year the growers around Winchester lost upwards of a million dollars because of this disease, and the losses from this cause were heavy in all the valley counties. After the apple harvest a cedar tree cutting campaign was organized, with a manager over each district. Thousands of cedars were cut down. The work was done so well that it is not easy to find a cedar tree near an orchard in the county, and there is little cedar rust to be found in the orchards. A similar campaign was waged in other apple-producing counties, with equally favorable results.

The growers are receiving substantial aid from their state governments. At Inwood on the Cumberland Valley Railroad in Berkley county, West Virginia, the extension division of the state college of agriculture has erected a large apple packing plant to be used

as a demonstration packing plant. While this plant will be utilized as a commercial packing house, fruit being supplied and packed for the nearby growers, there will also be conducted a series of extension schools in picking, packing and marketing apples and other fruits, together with the general problems of operating a packing house. Students will go through all the actual operations until they have acquired sufficient skill and speed to satisfy the requirements. This plant has a capacity of one thousand barrels a day, and will be used for the first time this fall. It was erected at a cost of \$34,000.

The larger growers have their own packing and storage plants, and "camps" for their employees. In the John W. Stewart two hundred and twenty-five acre orchard near Martinsburg, West Virginia, is a "camp" with accommodations for one hundred and fifteen men. It is equipped with large airy sleeping quarters, dining-room, sanitary plumbing, shower baths and electric lights, giving the men as good living conditions as they could find in the cities.

APPLE orchards and orchard lands are bringing big prices in the valley fruit district. The Cohill seven-hundred and fifty-acre orchard near Hancock, Md., was sold some time ago for \$300,000. This orchard, the first planting in which was done in 1903, extends four miles along the mountain side. In 1918 more than 45,000 barrels of fruit were shipped from this orchard. Last year the yield was 40,000 barrels, and this year the owners estimate a 65,000 barrel crop. A man who owns a two hundred and forty-acre farm near Staunton, with one hundred and forty acres of young fruit trees, told me he had been offered \$70,000 for the place, and it is not in the best of condition.

One of the big orchards on "Apple Pie Ridge" in Berkley county, West Virginia, is owned by D. Gold Miller. Mr. Miller started his orchard planting some twenty-five years ago. Then the farm would not bring more than \$15,000 and he was compelled to borrow money to pay expenses. By the advice of an expert from Washington he increased his borrowings to get money to plant an orchard. Today the place would readily bring \$200,000. The annual production is from 8,000 to 10,000 barrels of apples, with an 8,000-barrel crop now on the trees. Large quantities of early fruit have already gone to market. On this place is an apple storage of large capacity, and near by on the highest point on the place, Mr. Miller has erected a lookout tower from which he is able to see what is going on in all parts of his orchard and farm. A farm of seventy-five acres adjoining Mr. Miller's place was sold last year for \$75,000, and this is away up on a West Virginia ridge several miles from a town.

Apple crop estimates and percentages are somewhat uncertain. My observations, however, lead me to believe that throughout the district from the Cumberland Valley south to Staunton there will be a large crop of choice, well developed fruit. Frederick county, Va., which includes the Winchester district, will have better than sixty per cent of a normal yield, and is counting on a 500,000 barrel crop. Berkley county, W. Va., has a big apple crop. The yield is estimated at a half million barrels, which is fifteen per cent above last year's crop. Many summer apples are grown in Berkley county. They began selling at \$2.75

(Continued on page 206).

Michigan Crop Prospects

FROM present prospects an excellent crop year for Michigan is in sight. While it is too early to predict a bumper yield for any crop, and no crop shows better than a ninety-five per cent condition, seldom has the general level of condition of all crops been as high. Only two crops of the twenty-five leading ones in the state show a condition below the ten-year average, and a number are from six to ten per cent better. Most of the fruits are from fifteen to thirty per cent better. The two that are below normal are wheat and hay. Sixteen of the twenty-five crops show improvement over last month. Notwithstanding the decrease of about five per cent in the acreage of crops in the state this year, the present conditions and prices indicate a crop production that will exceed last year's in value by \$35,000,000 to \$40,000,000, or approximately nine per cent. These are some of the leading features of the August 1 crop report for Michigan prepared by Verne H. Church, Agricultural Statistician, U. S. Bureau of Crop Estimates and Coleman C. Vaughan, Secretary of State.

Corn.—Corn varies greatly in condition, the average being eighty-six per cent, eight per cent better than the ten-year average and three per cent better than one year ago. If sufficient rainfall occurs during the next ten or fifteen days, this condition should be maintained throughout the season, and is equivalent to a total production of 57,420,000 bushels. However, about forty per cent of the crop usually goes into silos.

Winter Wheat.—Early threshing returns indicate rather poor yields in the southwestern counties, where the damage by Hessian fly and winter-killing was extensive. Elsewhere the yields are about normal. The average as shown by the reports of our correspondents is fifteen bushels per acre, or a crop of 12,855,000 bushels as compared with 19,285,000 produced last year.

According to the reports of mills and elevators, the amount of wheat marketed during July was 646,000 bushels.

Oats.—The condition of oats is ninety-two per cent, an improvement of eight per cent during the last month, six per cent better than the ten-year average, and thirty per cent better than on the same date last year. This condition forecasts a crop of 52,490,000 bushels. The carry-over from last year is relatively light, being only 4.0 per cent, or 1,475,000 bushels.

Barley.—Barley has also improved very materially, the condition of ninety per cent being an increase of seven per cent over July 1, and twenty-five per cent better than last year. The crop indicated by this condition is 6,734,000 bushels. The amount remaining on farms from last year's crop is very small, being 2.1 per cent, or 117,000 bushels.

Rye.—The prospective crop of rye amounts to 11,907,000 bushels, or 14.7 bushels per acre. This yield is the same as the ten-year average, and the total crop is approximately 1,500,000 bushels less than that of last year.

Buckwheat.—A decreased acreage of buckwheat was sown according to the reports of correspondents. The preliminary estimate is 42,000 acres, a loss of 6,000 acres compared with last year. The condition of the crop is eighty-eight per cent, and the estimated production, 647,000 bushels.

Potatoes.—The crop is reported in excellent condition throughout the state, although one per cent below last month's figure. The outlook is for ninety-two per cent of a normal crop, or ten per cent better than the ten-year average. This forecasts a total crop of 32,864,000 bushels as compared with 28,688,000 bushels produced last year. The estimated crop of the Unit-

ed States is 402,134,000 bushels compared with 357,901,000 bushels grown last year.

Beans.—The average condition of beans is ninety per cent. If normal conditions prevail until harvest, the crop will be approximately 3,194,000 bushels. The total production of the six leading states based on present conditions, is estimated at 11,417,000 bushels, a decrease of only 71,000 bushels from last year's final report.

Tame Hay.—Late hay has made some improvement during July. The total acreage of tame hay is placed at 2,624,000 and the total production, 3,359,000 tons. Last year's crop was 3,180,000 tons. The condition of timothy is eighty-four per cent. The yield of clover is 1.15 tons per acre on the average, but varies considerably throughout the state. The quality is up to the average. The condition of alfalfa is ninety-five per cent; millet eighty-five per cent, and pastures eighty-three per cent.

Sugar Beets.—The outlook for sugar beets is generally favorable, the condition being eighty-nine per cent compared with eighty-six last month, eighty-seven the ten-year average, and seventy-two one year ago.

Truck Crops.—Tomatoes, cabbage and onions are unusually promising. The percentages of condition are ninety-three, ninety-two and ninety-two respectively, the ten-year average of each being eighty-four.

Fruit.—The apple crop continues very promising, eighty-six per cent of a full crop being indicated for the entire state as compared with thirty-nine per cent last year. There is a heavy crop of early varieties, and most of the winter varieties are showing up well. In some orchards Baldwins are reported to be lighter than other varieties, but on the whole the crop will be good.

The outlook for peaches is eighty per cent as compared with twenty-five last year. Nearly all western Michigan orchards are carrying almost a full crop. Grapes promise even better than last year, ninety-one per cent being the estimated proportion of a full crop. Pears promise eighty per cent of a crop compared with fifty per cent last year. Blackberries and raspberries yielded eighty-five per cent of a crop, and the outlook for watermelons and cantaloupes is eighty per cent.

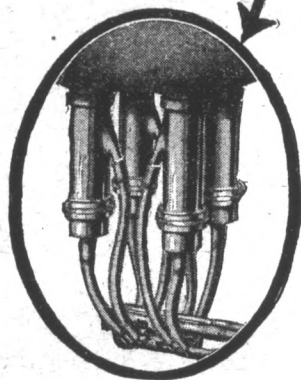
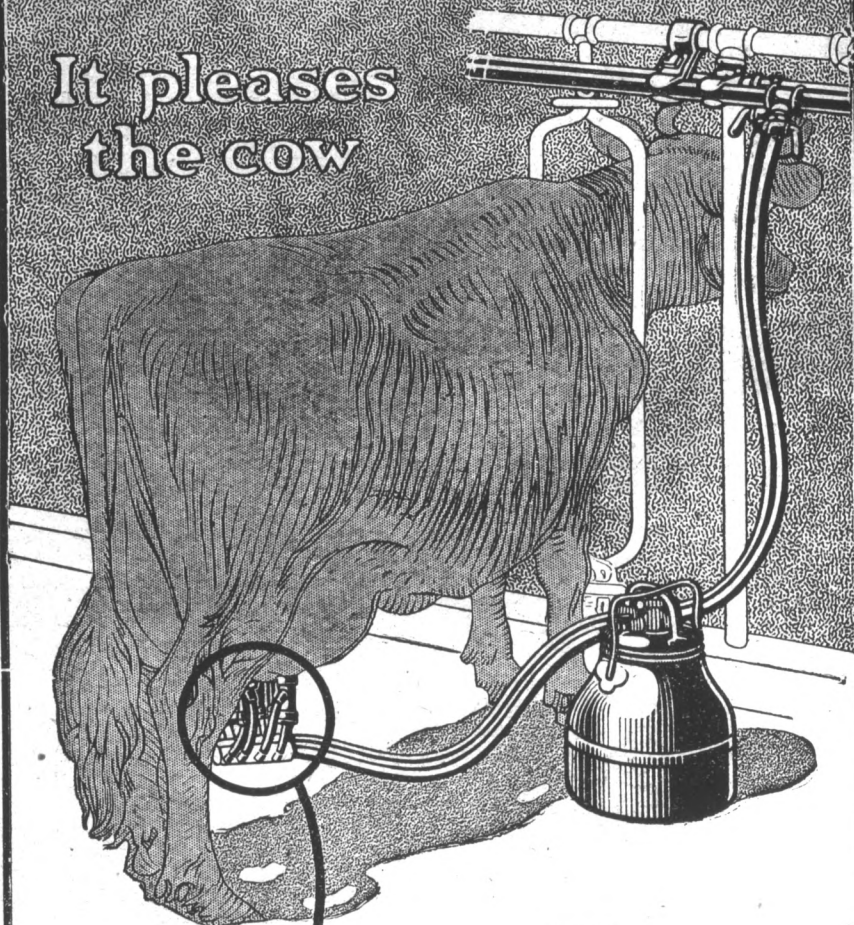
Commercial Fruits.—The commercial apple crop prospects are very flattering, and promise one of Michigan's old-time apple crops. Except in three or four localities which had good crops last year, nearly all growers agree that there will be twice as many to ship as last year and in some sections several times as many. Baldwins and Spies will be a fair crop, and all other varieties of winter apples promise well. There is a large crop of summer varieties, particularly Duchess. The estimate of 2,112,000 barrels made one month ago, based on a condition of eighty per cent, seems to require no revision at this date. The quality is excellent except in some northwestern counties where scab developed about the middle of July. It is most prevalent on Duchess and other early varieties, and least on the winter varieties. The outbreak extends from Oceana county northward.

While the acreage of peaches is much smaller than a decade ago, the trees that are in bearing condition promise eighty-six per cent of a full commercial crop. The principal part of the crop is grown in Berrien, Van Buren, Allegan, Kent, Oceana and Mason counties, with some orchards still remaining in Benzie, Leelanau and Grand Traverse counties.

There is a good crop of pears in (Continued on page 208).

The De Laval Milker

It pleases
the cow



The Teat-cups and Udder Pulsator

The De Laval teat-cups alternately draw the milk from the udder and massage the teats. This change in action takes place 45 times a minute and is regulated by the Udder Pulsator.

The Udder Pulsator is an exclusive, patented De Laval feature. As shown in the illustration, it is located within a few inches of the teats, resulting in positive, snappy action of the teat-cups. Every cow is milked in the same way every day and the result of this gentle, regular action is maximum production.

There is only one moving part in the Udder Pulsator—a plain piston—requiring no oiling, adjusting or repairing.

The De Laval teat-cups and Udder Pulsator are a distinct step in advance in milker construction, and the success of the De Laval Milker depends to a very great extent upon their functions.

The De Laval Milker possesses many other new and exclusive features that are of inestimable value to the careful dairyman and owner of valuable cows. Its action is positive and uniform from day to day, and it is faster, more reliable and more sanitary than any other method of milking.

Wherever cows are milked the world over, the name 'De Laval' stands for quality and highest value to the user. The fact that it bears the name 'De Laval' is a guarantee that it will give the service claimed for it.

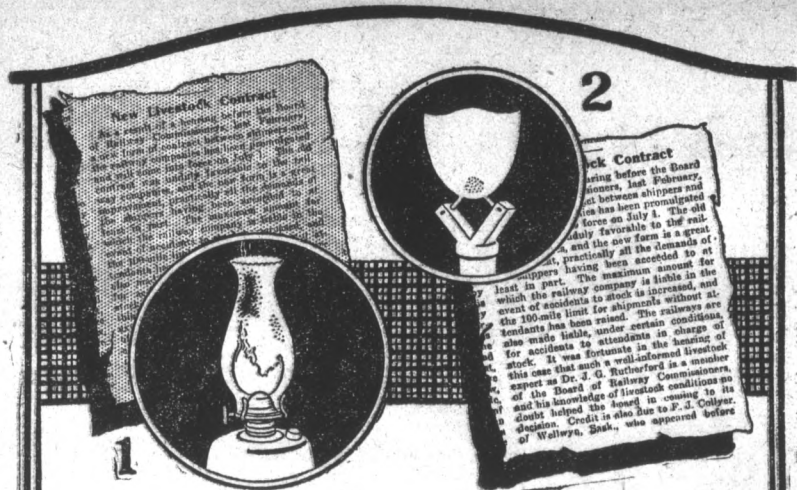
Write to nearest De Laval office for Milker
Catalog, mentioning number of cows milked

The De Laval Separator Co.

165 Broadway
New York

29 East Madison Street
Chicago

61 Beale Street
San Francisco



Let Your Own Eyes Decide

Study these pictures carefully. They show why Carbide Gas is used on more than 300,000 farms in preference to all other forms of lighting.

1. An oil lamp flame; large, wasteful, dim and smoky, consumes much of the life-giving oxygen from the air. Has an unpleasant smell and discharges soot into the room. The clipping shows how ordinary newspaper type looks to normal eyes by lamp-light at a distance of 12 feet.
2. The Colt Carbide Gas Flame. Note its small size. Consumes far less oxygen than an oil flame. It is economical, bright, smokeless and odorless; gives the nearest light to actual sunlight—ten times as efficient as lamplight. The clipping shows how ordinary newspaper type looks to normal eyes by Colt light at a distance of 12 feet.



CARBIDE LIGHTING AND COOKING PLANTS

furnish this remarkable light to every room in the house and to barns and outbuildings too. Just a twist of the fingers—no matches needed—no more filling and trimming lamps.

Colt Carbide Gas is easily made right at home. It gives a hot cooking flame when you need it. It keeps the kitchen cool and clean and supplies a self-heating flat iron.

The Colt Plant is easily installed and requires scarcely any attention. It is economical, efficient and dependable.

J. B. COLT COMPANY

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Save 50% on a Motor Truck

Built for a Government job in 1919—used only a few weeks—stored for a year—that's their history.

Two ton Denbys, 2 ton Internationals, 2½ ton Gramm-Bernsteins. Just the size for the farm.

We give you the same guarantee with these trucks that you get from the factory. If you are interested in the purchase of a truck and will drop us a line, we will send you pictures, and detailed descriptions. After you have received full information, if you decide you would like to purchase a truck, we will deliver it to you, on approval anywhere within 300 miles of Detroit—if everything is not exactly as represented you will not be obligated to take it.

We have only a few left and as the hauling season is at hand we expect to dispose of them quickly. So if you want a truck write now.

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Make Big Money

Saw 50 to 60 Cords a Day



Help Save Coal! Coal shortage coming. Big demand for wood. Get your rig while we can make delivery.

Write for direct low factory prices on Power Saws and Log Saws with BOSCH Magneto—Free.

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Mention The Michigan Farmer When Writing Advertisers

A Newly Invented SAW RIG

COSTS so little no one with wood to cut can afford to be without it. Will saw your winter's wood in a few hours. Does all practical work any other saw rig can, and makes unnecessary the expensive, cumbersome rigs used in the past. For a small part of their cost you can now own the

OTTAWA SAW RIG

Powerful 4-cycle motor. Suitable for driving belt driven machinery. Easy to operate, light to move, simple to handle. Users say they make \$1.00 per day cutting wood for the neighbors. 30 Days Trial; 10-Year Guarantee. Let the Ottawa do your sawing 30 days to prove our claims. Free Book.

OTTAWA MFG. COMPANY
224 Main Street
OTTAWA, KANSAS.
Ottawa Ships 'em Quick.

A Competition In Apples

(Continued from page 204).

to \$3.00 but later dropped to sixty cents a bushel. The orchards of Maryland will produce 226,000 barrels of apples this fall, according to estimates of S. B. Shaw, secretary of the State Horticultural Society. This is a ten per cent better than the ten-year average, and much above last year's crop, the prospects being for 171,000 more barrels of apples and 87,000 more bushels of peaches this fall than last year.

Being near the source of supply of raw materials the barrel problem is not so serious a matter as in northern fruit sections. Many of the growers secured their barrel stock several months ago. One dollar is the prevailing price in Augusta county. In Berkeley county barrels were contracted at \$1.25 and are now costing \$1.30.

Much of the success of the fruit growers in the southern apple belt is due to the work of the plant pathologists in searching out the various disease infections and means of control. The growers have to contend with a few very serious diseases that are not prevalent in the northern orchards. Cedar rust is one, and in finding means of controlling this one pest the pathologists have benefited the growers to the extent of millions of dollars.

According to Dr. F. D. Fromme, of the Virginia station, root rot is one of the most serious problems in Virginia orchards, and there is no preventive remedy for it.

In Berkeley county, W. Va., the pathologists visited the first orchard in the east where collar blight was identified. Many thousands of trees have been lost in the district by this disease. Grimes Golden is especially susceptible to infection. Dr. M. B. Waite, of the Bureau of Plant Industry, suggests a new method of controlling this disease. He suggests cutting two-inch strips of bark up near the limbs and extending below where the infection occurs. He would then bridge-graft the strip with scions from an immune variety, Northwestern Greening, Pargason or Black Twig. He advises using wax, and disinfecting with coal tar creosote two or three weeks before the grafting is done. Leave enough strips so as not to endanger the life of the tree, and the next year cut out these remaining strips of bark, and graft as before.

In the D. Gold Miller orchard a striking demonstration of the benefits from spraying for apple blotch was observed.

Peach yellows was found to be quite prevalent in West Virginia and Western Maryland. Many trees are dying from this disease. Dr. Waite says he is able to keep down the yellows in his own orchard with a loss of about one per cent of the trees a year, by inspecting the orchard several times a year, and removing every tree which shows signs of yellows infection. Prof. Scott has a large orchard in Western Maryland and has been equally successful in controlling yellows by this method.

DUSTING versus spraying was the source of much discussion with considerable difference of opinion among the specialists as well as the farmers on this trip. In dusting and spraying experiments of the Virginia Experiment Station in an orchard near Harrisonburg, dusting seemed to be slightly more effective than spraying. In the Optimus orchards at Bunker Hill, W. Va., the demonstration was decidedly favorable to spraying.

In conversation with the growers I found the sentiment strongly in favor of spraying apple orchards, while some favored dusting for peach orchards. Isaac Long, a large orchardist of Washington county, Md., said he could see no difference in effectiveness, but the

spray stayed on the trees better than the dust and was cheaper. In Mr. Long's peach orchard untreated trees showed one hundred per cent scab, while dusted trees alongside were clean. The county agent said apple growers have tried dusting and returned to spraying.

Peach growers around Smithburg, Md., are dusting and getting good control of brown rot with dust. They give a dormant liquid spray. There is very little dusting of apples done. In Berkeley county, W. Va., D. Gold Miller said he tried out dusting some years ago, but returned to spraying and was well satisfied with the results.

The American Phytopathological Society is a young organization with five hundred members, including all the plant pathologists of the country. The first field conference of the society was held last year at Riverhead, L. I. Most of the trip this year was made by automobiles furnished by the fruit growers of the various sections. F. D. Fromme had charge of the Virginia end of the program. N. J. Giddings and Anthony Berg, of the West Virginia University conducted the party through that state. C. E. Temple, pathologist of the University of Maryland, made arrangements for the trip through his state, and C. R. Orton, of the Bureau of Plant Industry at Washington, planned the trip through Pennsylvania. M. B. Waite, of the Department of Agriculture, is the other member of the committee. Visiting pathologists from England, France, Italy and Japan were with the party. E. E. REYNOLDS.

BUYING FEEDER STEERS.

(Continued from page 202).

scarcity and plain light steers are used to supply that deficit.

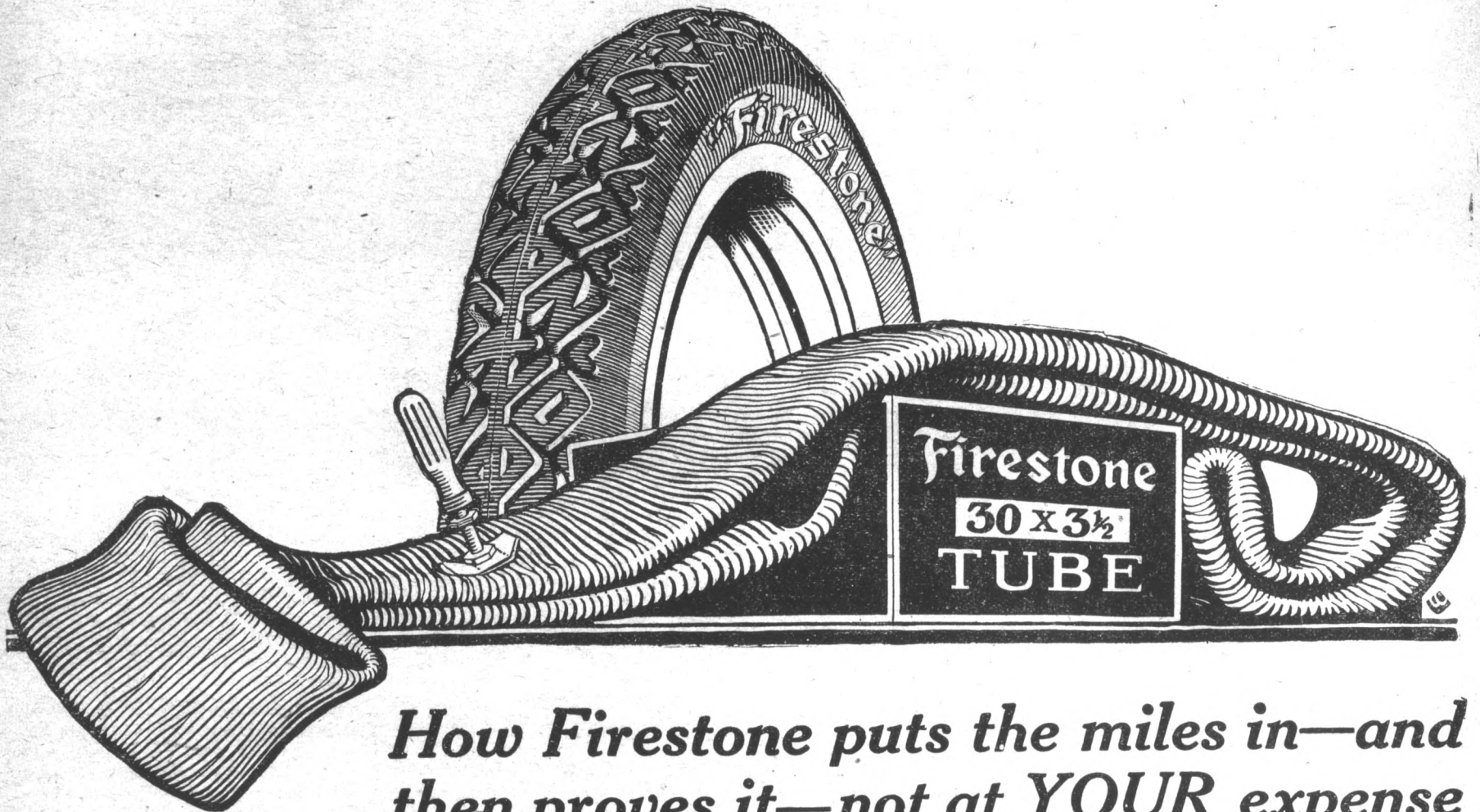
In selecting light-weight feeder cattle, extremely careful culling is necessary in order to avoid those which have been stunted and are unthrifty. They must be capable of responding to feed or their hard feeding characteristics will more than offset the gain due to good judgment in the choice of weight. They also must be well fed so that they will go to market reasonably fat, even though light in weight, which means that they must be given a fairly heavy feed of concentrates.

This change in market attitude probably applies to stocker cattle purchased for wintering, although definite figures are not available to prove it. Thus the increase in value per hundred weight on cattle carried through the winter in stocker condition would be much greater on those weighing four hundred pounds in the fall than upon those weighing seven hundred pounds, while in the spring the advantage would be with the purchase of heavy stockers for carrying through the summer to sell in the fall.

There are other factors to consider besides weight, of course. The margin must be heavier upon light cattle to make up for their lightness. The heavier weights can use a larger amount of roughage in their ration, they may make larger daily gain and finish more quickly than the lighter weights which, on the other hand, if thrifty, will make their gains with fewer pounds of feed. But the changes in the market attitude toward weight in cattle may be the deciding factor in determining whether the cattle feeder makes or loses.

If the majority of cattle feeders should buy light steers in the fall they would reverse the market habit which has been pointed out so that they would be no better off than before. However, it is not possible that the change of fashion among cattle feeders will be sudden or complete, so that those who do avail themselves of this principle will be the gainers thereby.

A big-scale road test on 3,200 tubes



How Firestone puts the miles in—and then proves it—not at YOUR expense

No other tubes in the world are road tested on so big a scale as Firestones. The Yellow Cab Company of Chicago uses Firestone Tubes exclusively on its 800 taxicabs. The service of these tubes is checked constantly—improvements and developments are arrived at.

By close watching of a large number of tubes in service—not confined to isolated instances—the conclusions are accurate and definite.

Firestone puts the best in materials into tubes by establishing purchasing experts at Singapore, center of the world's rubber market. Firestone puts the best in workmanship into tubes by organizing the crack

manufacturing organization of the industry on a profit-sharing basis.

And then subjects the finished product to this big-scale road test—in order to get you more for your tube money and most miles out of your tires.

Firestone Tubes resist heat—which everyone knows is the tubes' worst enemy. Their laminated construction, ply on ply of thin rubber sheets laid crosswise and perfectly vulcanized, gives the stoutest tube wall. Their larger sectional size means less stretch to fill the casing. Ask your dealer for Firestone Tubes. They cost no more than the ordinary kind.

30x3½ Red, \$4.50; Gray, \$3.75
Other sizes in proportion

Firestone

Co-Operative Marketing

THE grain exchange system of the United States constitutes the first successful co-operative market in the world. In it today the buyers and sellers of the world's grain crops meet. It is colossal yet like the most delicate scientific instrument, its quotations instantly and accurately reflect crop values as affected by world conditions. It is only by such a system that correct prices may prevail and the crops of the world be brought into honest competition.

HONEST competition! How does the public benefit by that? It benefits because competition in the open market for any product reduces to the minimum, the profits of the middleman. The law of supply and demand determines values; competition determines the profit of the intermediary, for buyer and seller naturally gravitate to the bartering machinery which is most economical.

IF the grain exchange system were wiped out today any succeeding system would, of a necessity include all of the machinery and functions of its predecessor. The farmer would still haul his grain to some country receiving station; this station would have to sell it to some central market; transportation companies would still have to take their toll of charges for moving it; some one would have to store it; some one pay insurance and perhaps taxes; some one find an ultimate market for it.

AND through it all, some one would have to assume the risk of ownership. There is no ownership without risk. In grain

crops worth billions of dollars the risk of ownership is almost boundless, yet any marketing system must care for it.

UNDER the present system thousands of speculators assume the responsibility. The farmer himself who holds back his grain, waiting for a higher price, takes the most of the risk, and is therefore as a class the greatest speculator of all. Such risk as he desires to transfer to other shoulders is assumed by speculator. In any grain marketing system the speculator will always exist, for there must always be an owner.

THE risk of ownership of American grain crops is one which no insurance company is big enough to take. Only the government was capable of sustaining the burden during the war.

IT is probably wise that no single organization can assume this insurance, for the speculators who in the aggregate assume this function are not organized, and hence cannot fix their own profit for the service they render, and the return on the money they risk.

THE grain exchange system, including the Board of Trade of Chicago, has been searchingly examined by legislative committees, courts and economists. All have recognized the fairness of its dealings, the economy of its processes and the necessity for its marketing machinery. It is because of the great service rendered the public that it has become indispensable, while other organizations, unable to deliver service so cheaply, have come and gone like puffs of wind. Herbert C. Hoover made this report to congress: "The Chicago Board of Trade is the most economical agency in the world for the distribution of foodstuffs."

IT is vital that growers and handlers of grain should understand the grain marketing system. To do so simply drop a postal to Room 717, Board of Trade, Chicago and receive free booklet entitled "Things You Should Know About The Board of Trade."

FARMERS' DAY AT CHATHAM.

(Continued from page 198).

her, Edna Nordstrom and Lempie Al-anen, of the Hill-Top Sewing Club, of Iron county, gave a clever garment-making demonstration. They started with drafting a pattern for a kimona apron, and followed with a little history of their club and exhibits of the garments they have made—sewing apron, bloomers, kimona apron, princess slip, kimona dresses, which they were wearing, darning, and patching. They also told of the accounts they are expected to keep, and their parties, hikes and potato roasts. The first year this club had no sewing machine, and met from house to house, but this year their board of education has given them a machine.

Miss Van Heulen, state girls' leader, followed the girls with a little talk on the plans of the leaders—the advisability of starting the girls to sewing at the age of ten, and the aim to make the work do more than teach the mechanical art of sewing, teaching business methods through the keeping of accounts, and cultivating the social side through the business meetings, when the girls get a drill in parliamentary law, and their parties when they learn how to receive and serve simple refreshments.

During the afternoon program three boys from Luce county, members of the handicraft team, made a garden cultivator. The names of the three Gogebic county boys who are to go to the State Fair were announced—Leonard Nyland, Luther Olsen and Carl Johnson. The prize stock given the winners was a gift from the experiment station.

The sewing and millinery exhibits drew crowds of interested women. There was an infant's layette made by the agents and used throughout the peninsula as a model for workers; remodeled garments; garments for children, made from stockings and adults' discarded garments; flowers, and other trimmings and frames for hats; decorative stitches, and samples of dying and remodeling done by the girls' clubs. Not the least important was the hot lunch exhibit, where the stove and cooking utensils needed to serve a hot lunch were shown with prices attached. The importance of milk as a food was proclaimed by charts, and illustrated outside with free iced milk drinks flavored with fruit syrups and made "peppy" with charged water.

Alger county did itself proud with the dinner given the crowd on closing day. There was not only the huge roast ox, but mashed potatoes and gravy, buttered rolls, corn on the cob and baked beans enough to feed the two thousand four hundred there, and then some. The Marquette band furnished music.

The M. A. C. Alumni picnic supper was a feature of Wednesday evening. About eighty "old boys" and their wives, ate supper in the barn, driven there by the rain.

MICHIGAN CROP REPORT.

(Continued from page 205).

many orchards, but some orchards have a light crop. The present outlook is for seventy-four per cent of a full crop, or 505,000 bushels that will go into strictly commercial channels.

The cherry crop, according to the final report, was seventy-seven per cent of a full one. The yield was better in some sections and poorer in others than earlier estimates indicated.

A city friend named Walter Ivory would lower the cost of living by starting a giraffe farm. He says that many of them could be kept on a limited acreage because they are tall and there is always lots of room in the air.



A SPECIAL Factory Cut-Price

U. S. Officer's Shoes

Hand sewed, first grade factory, cut-down price. Direct to you at only \$6.85. Made of the best Water proof Mahogany calf leather. If these shoes are not just as we say, send them back. You do not lose a cent. Retail price of this shoe is \$10. Built for work and dress at the same time. If you are sending money order or check do not include postage. Pay only for shoes. We pay postage.

U. S. Army Marching Shoes

First grade factory, cut-down price. Direct to you at only \$5.15. Retail price of these shoes is \$8.00. Made of the best elk skin waterproof leather.

U. S. NATIONAL MUNSON ARMY SHOE CO., Inc.
Dept. 863 Westfield, Mass.

Collie Puppies at farmers prices and from registered stock, natural heelers.
CHAS. A. BEATTY, Milford, Mich.

Mention The Michigan Farmer When Writing Advertisers

HOLDEN Lime and Fertilizer Distributor

Handles All Kinds of Lime Rock and Fertilizer Spreads 75 to 10,000 Pounds Per Acre.

The only successful lime and fertilizer distributor—saves time, labor and money. Handle fertilizer only once by hauling direct from cars to field. Patented Auger Force Feed—attaches to any wagon—no holes to bore. Spreads evenly 16½ feet wide, on hilly or level land. Simple and practical; no clogging or caking possible. Built strong—will give years of service. Hopper is level with bottom of wagon. Low in price.

Guaranteed To Handle Wet, Dry or Lumpy Lime (In Any Form), Commercial Fertilizer, Phosphate, Gypsum, Wood Ashes, Crushed Shells, etc.

Put this distributor to every test—you run no risk. The Holden Lime and Fertilizer Distributor is guaranteed to do all that is claimed for it or you may send it back and your money will be refunded. Thousands now in use—a proven success in all sections of the country. Write TODAY for full particulars. DEALERS WANTED

The Holden Co., Inc.
113 Olive St., Peoria, Ill.

Spreads 16½ Feet





THE more miles you ride
on Goodrich Tires, the
greater your wonder grows
that so many more miles of
service are still left.

Goodrich Tires

"Best in the Long Run"

FOUNDED 1870

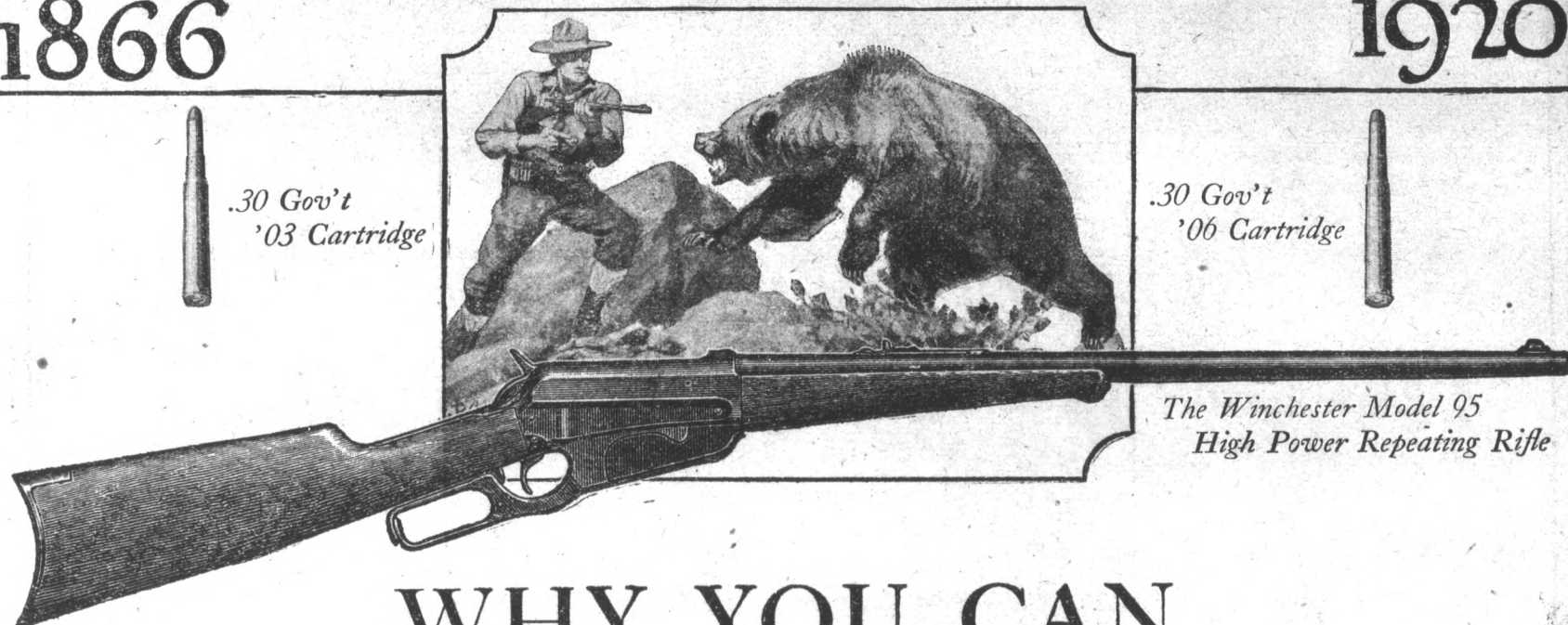


The Goodrich Adjustment Basis: Silvertown Cords, 8000 Miles; Fabric Tires, 6000 Miles

WINCHESTER

1866

1920



WHY YOU CAN TRUST YOUR WINCHESTER

NO matter how critical a test you may put your Winchester Rifle to, it has been put through harder ones for you before leaving the factory.

The barrel must pass the Provisional Proof Test as soon as it is bored. In this it is fired with a powder charge two or three times the normal strength and a bullet one-third heavier than usual.

This is to determine if the steel can stand such abuse without sign of flaw or strain.

Loading, firing, and ejecting are tested just as completely. It must handle and fire standard cartridges in all positions, smoothly and rapidly, or it cannot pass.

Then it is given the Definitive Proof Test, which is officially accepted by the British Government in lieu of any further test. This requires your Winchester to withstand a charge 25 to 40 per cent. more powerful than that for which it is intended.

Following these many shooting tests, your rifle is taken to the range for targetting. Here its sights are set correctly, and it is then required to meet the Winchester test for accuracy—and do it fully and regularly. The firing is at distances up to 200 yards.

Having withstood all these severe

tests, your Winchester Rifle then receives the Winchester proof (P) mark on barrel and receiver—than (W) which there is no higher mark in gunsmithing.

How vital to you to have this Winchester proof mark on your rifle when a hunting climax comes. To have for those few swift seconds a rifle *which you know you can trust.*

For grizzly and Alaskan brown bears, moose, and other large game of great vitality, as well as for long-range shooting at caribou, mountain sheep and goats, above timber, we recommend the Winchester Model 95, shown above. It is the most powerful American sporting rifle. Made in .30 Army, .303 British, .30 Government, .35 Winchester, and .405 Winchester calibers.

Other Winchesters are made in abundance—there is a tested Winchester which you can trust for any game. For deer, we suggest the popular Model 94, of .30, .32 W. S., .32-40, or .38-55 caliber.

Go to your local hardware or sporting goods store for detailed specifications of the Winchester Rifle and Ammunition you are interested in. If you wish further information, write to us, and mention the kinds of game you intend to hunt.

WORLD EVENTS IN PICTURES



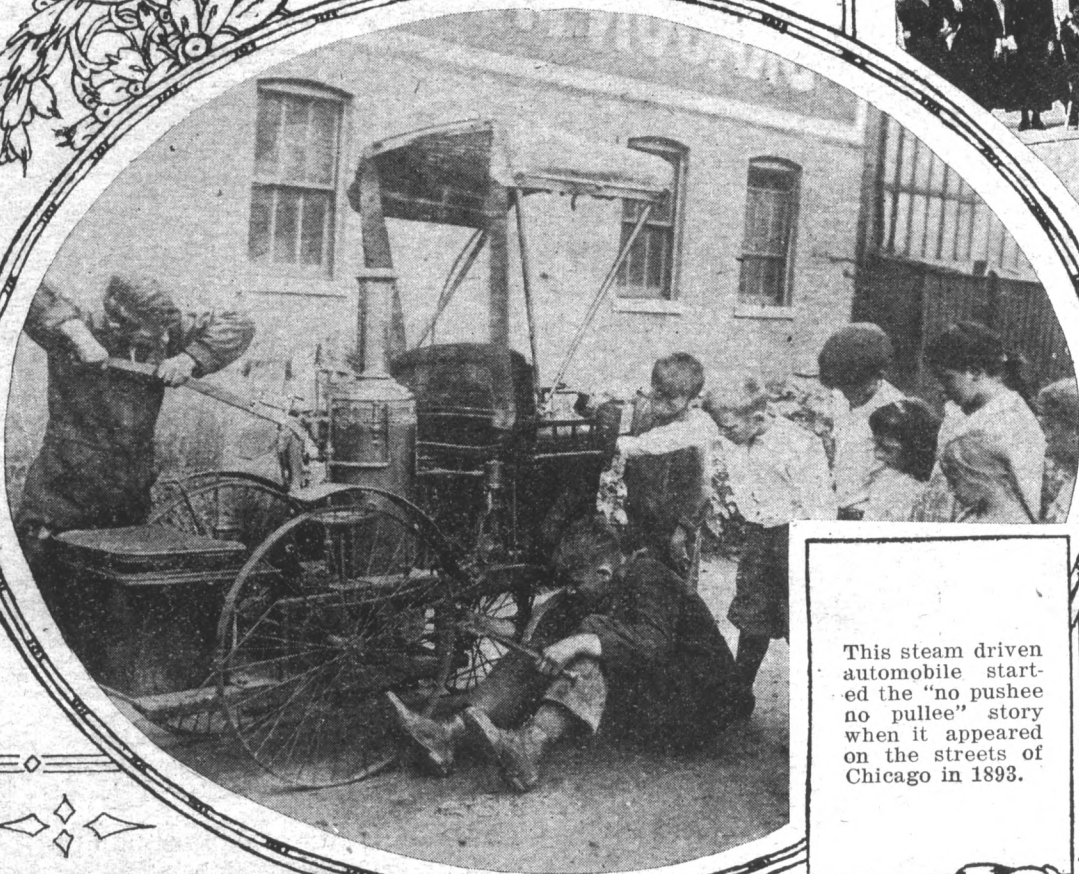
These kiddies are not worrying about the advanced railroad rates nor the high price of gasoline.



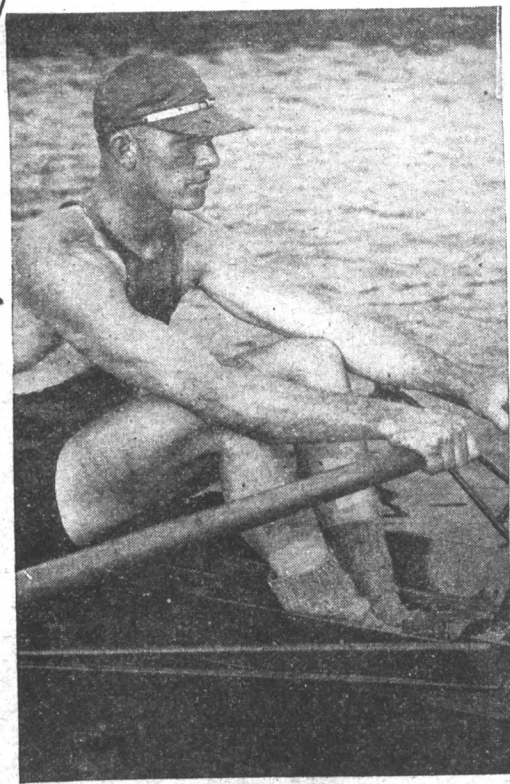
With the nomination of Aaron S. Watkins, Germantown, Ohio, as the prohibition candidate for President, that state has this year three presidential nominees.



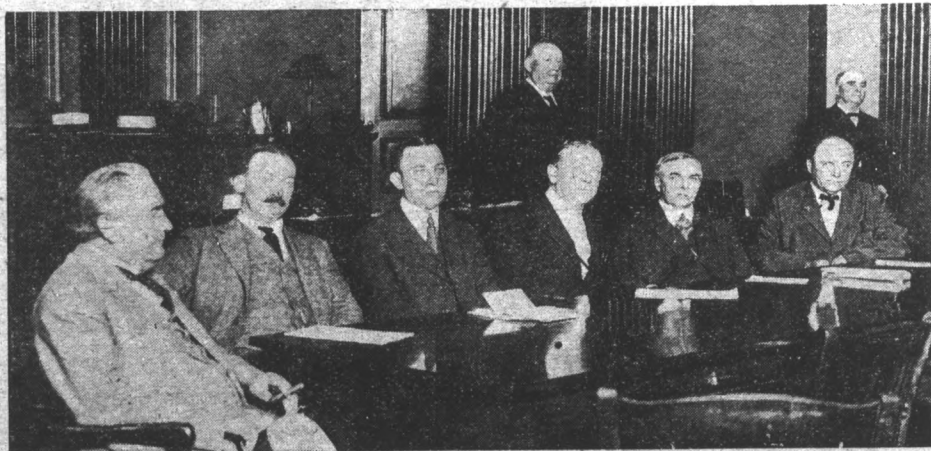
To give employees fresh air and exercise this New York company has organized a boxing tournament for its girl workers.



This steam driven automobile started the "no pushee no pullee" story when it appeared on the streets of Chicago in 1893.



Here is Jack Kelly, the Vester Boat Club Wonder and Champion Sculler of America, who will represent the United States at the Olympic Games at Antwerp, Belgium.



One of the most important international questions before America is the Japanese problem, and this congressional committee is in session at Seattle, Washington, calling numerous witnesses to learn first-hand whatever information they can secure on the matter.

THE VALLEY OF THE GIANTS

A ROMANCE OF THE REDWOODS

By Peter B. Kyne



"Item two," he challenged, and ticked it off on his middle finger. "The Cardigan Redwood Lumber Company owns two fine bodies of redwood timber widely separated—one to the south of Sequoia in the San Hedrin watershed and at present practically valueless because inaccessible, and the other to the north of Sequoia, immediately adjoining our holdings in Township Nine and valuable because of its accessibility." He paused a moment and looked at her smilingly. "The logging railroad of our corporation, the Laguna Grande Lumber Company, makes it accessible. Now, while the building of the N. C. O. would be a grand thing for the county in general, we can get along without it because it doesn't help us out particularly. We already have a railroad running from our timber to tidewater, and we can reach the markets of the world with our ships."

"I think I understand, Uncle Seth. When Cardigan's hauling contract with our road expires, his timber in Township Nine will depreciate in value because it will no longer be accessible, while our timber, being still accessible, retains its value."

"Exactly. And to be perfectly frank with you, Shirley, I do not want Cardigan's timber in Township Nine given back its value through accessibility provided by the N. C. O. If that road is not built, Cardigan's timber in Township Nine will be valuable to us, but not to another living soul. Moreover, the Trinidad Redwood Timber Company has a raft of fine timber still farther north and adjoining the holdings of our company and Cardigan's, and if this infernal N. C. O. isn't built, we'll be enabled to buy that Trinidad timber pretty cheap one of these bright days, too."

"All of which appears to me to constitute sound business logic, Uncle Seth."

He nodded: "Item three," he continued, and ticked it off on his third finger: "I want to see the feeder for a transcontinental line built into Sequoia from the south, for the reason that it will tap the Cardigan holdings in the San Hedrin watershed and give a tremendous value to timber which at the present time is rather a negative asset; consequently I would prefer to have that value created after Cardigan's San Hedrin timber has been merged with the assets of the Laguna Grande Lumber Company."

"And so—"

"I must investigate this N. C. O. outfit and block it if possible—and it should be possible."

"How, for instance?"

"I haven't considered the means, my

dear. Those come later. For the present I am convinced that the N. C. O. is a corporate joke, sprung on the dear public by the Trinidad Redwood Timber Company to get the said dear public excited, create a real-estate boom, and boost timber-values. Before the boom collapses—a condition which will follow the collapse of the N. C. O.—the Trinidad people hope to sell their holdings and get from under."

"Really," said Shirley, demurely, "the more I see of business, the more fascinating I find it."

"Shirley, it's the grandest game in the world."

"And yet," she added musingly, "old Mr. Cardigan is so blind and helpless."

"They'll be saying that about me some day if I live to be as old as John Cardigan."

"Nevertheless, I feel sorry for him, Uncle Seth."

"Well, if you continue to waste your sympathy on him rather than on his son, I'll not object," he retorted laughingly.

"Oh, Bryce Cardigan is able to take care of himself."

"Yes, and mean enough."

"He saved our lives, Uncle Seth."

"He had to—in order to save his own. Don't forget that, my dear." Carefully he dissected a sand-dab and removed the backbone. "I'd give a ripe peach to learn the identity of the scheming buttinsky who bought old Cardigan's Valley of the Giants," he said presently. "I'll be hanged if that doesn't complicate matters a little."

"You should have bought it when the opportunity offered," she reminded him. "You could have had it then for fifty thousand dollars less than you would have paid for it a year ago—and I'm sure that should have been sufficient indication to you that the game you and the Cardigans had been playing so long had come to an end. He was beaten and acknowledged it, and I think you might have been a little more generous to your fallen enemy, Uncle Seth."

"I dare say," he admitted lightly. "However, I wasn't, and now I'm going to be punished for it, my dear: so don't roast me any more. By the way, that speckled hot-air fellow Ogilvy, who is promoting the Northern California Oregon Railroad, is back in town again. Somehow I haven't much confidence in that fellow. I think I'll wire the San Francisco office to look him up in Dun's and Bradstreet's. Folks up

this way are taking too much for

granted on that fellow's mere say-so but I for one intend to delve for facts—particularly with regard to the N. C. O. bank-roll and Ogilvy's associates. I'd sleep a lot more soundly tonight if I knew the answer to two very important questions."

"What are they, Uncle Seth?"

"Well, I'd like to know whether the N. C. O. is genuine or a screen to hide the operations of the Trinidad Redwood Timber Company."

"It might," said Shirley, with one of those sudden flashes of intuition peculiar to women, "be a screen to hide the operations of Bryce Cardigan. Now that he knows you aren't going to renew his hauling contract, he may have decided to build his own logging railroad."

After a pause the Colonel made answer: "No, I have no fear of that. It would cost five hundred thousand dollars to build that twelve-mile line and bridge, Mad River, and the Cardigans haven't got that amount of money. What's more, they can't get it."

"But suppose," she persisted, "that the real builder of the road should prove to be Bryce Cardigan, after all. What would you do?"

Colonel Pennington's eyes twinkled. "I greatly fear, my dear, I should make a noise like something doing."

"Suppose you lost the battle."

"In that event the Laguna Grande Lumber Company wouldn't be any worse off than it is at present. The principal loser, as I view the situation would be Miss Shirley Sumner, who has the misfortune to be loaded up with Cardigan bonds. And as for Mr. Bryce Cardigan—well, that young man would certainly know he had been through a fight."

"I wonder if he'll fight to the last, Uncle Seth."

"Why, I believe he will," Pennington replied soberly.

"I'd love to see you beat him."

"Shirley! Why, my dear, you're growing ferocious." Her uncle's tones were laden with banter, but his countenance could not conceal the pleasure her last remark had given him.

"Why not? I have something at stake, have I not?"

"Then you really want me to smash him?" The Colonel's voice proclaimed his incredulity.

"You got me into this fight by buying Cardigan bonds for me," she replied meaningly, "and I look to you to save the investment or as much of it as possible; for certainly, if it should

develop that the Cardigans are the real promoters of the N. C. O., to permit them to go another half-million dollars into debt in a forlorn hope of saving a company already top-heavy with indebtedness wouldn't savor of common business sense. Would it?"

The Colonel rose hastily, came around the table, and kissed her paternally. "My dear," he murmured, "you are such a comfort to me. Upon my word, you are."

"I'm so glad you have explained the situation to me, Uncle Seth."

"I would have explained it long ago had I not cherished a sneaking suspicion that—er—well, that despite everything, young Cardigan might—er—influence you against your better judgment and—er—mine."

"You silly man!"

He shrugged. "One must figure every angle of a possible situation, my dear, and I should hesitate to start something with the Cardigans, and have you, because of foolish sentiment, call off my dogs."

Shirley thrust out her adorable chin aggressively. "Sick 'em, Tige!" she answered. "Shake 'em up, boy!"

"You bet I'll shake 'em up," the Colonel declared joyously. He paused with a morsel of food on his fork and waved the fork at her aggressively. "You stimulate me into activity, Shirley. My mind has been singularly dull of late; I have worried unnecessarily, but now that I know you are with me, I am inspired. I'll tell you how we'll fix this new railroad, if it exhibits signs of being dangerous." Again he smote the table. "We'll sew 'em up tighter than a new buttonhole."

"Do tell me how," she pleaded eagerly.

"I'll block them on their franchise to run over the city streets of Sequoia."

"How?"

"By making the mayor and the city council see things my way," he answered dryly. "Furthermore, in order to enter Sequoia, the N. C. O. will have to cross the tracks of the Laguna Grande Lumber Company's line on Water Street—make a jump-crossing—and I'll enjoin them and hold them up in the courts till the cows come home."

"Uncle Seth, you're a wizard."

"Well, at least I'm no slouch at looking after my own interests and yours, Shirley. In the midst of peace we should be prepared for war. You've met Major Poundstone and his lady, haven't you?"

"I had tea at her house last week."

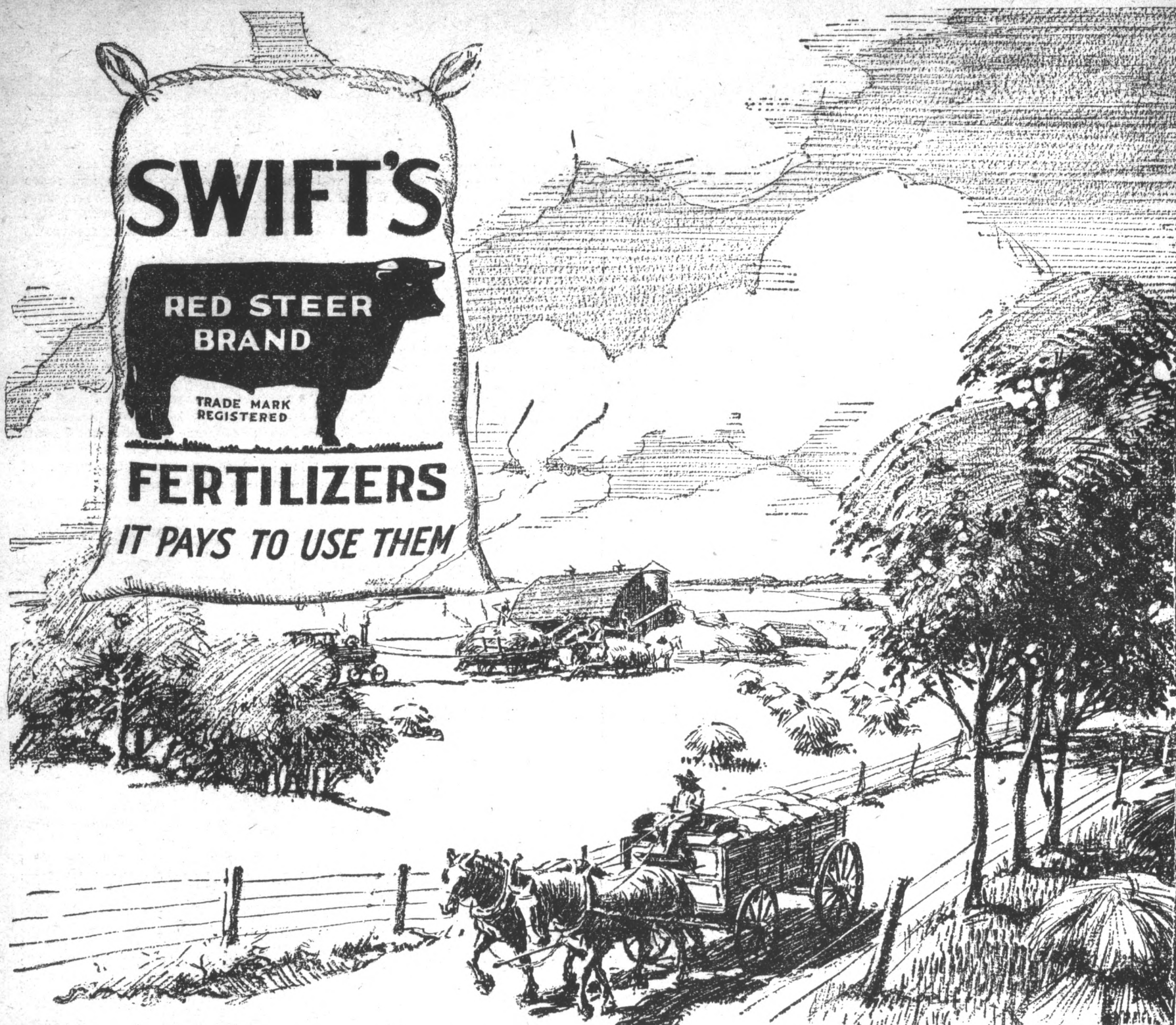
"Good news. Suppose you invite her and Poundstone here for dinner some night this week. Just a quiet little

(Continued on page 214).

AL ACRES—Yes, Maw, Put the Cat Out, Wind the Clock and We'll All "Fall In."

—By Frank R. Leet





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The Church In The Country

Our Weekly Sermon—By N. A. McCune

A SMALL town in the state is at- ary." If a new line of work is under- tempting to unite its three taken by one church the others copy churches and organize one strong it or do something else, so they will not church. To do this, they are thinking be outdone in the denominational race. of dropping the present denominational The young minister is reminded that organizations, and forming a church he must not allow others to get ahead of some other denomination so that no of his church. Is it any marvel that misunderstandings or jealousies will young men pull up stakes and move arise. It is not easy to do this, as on? A man has but one life to live, these good people are finding out. and it is short enough at best. If this The denominations to which the local is all the Christian ministry means, we churches belong do not always want cannot expect strong men to enter it. to give them up, or there are members But on the other hand, that same vil- who cannot bear to think of dropping lage with one church could pay a liv- the name of the church where they ing salary, and could command and have worshiped so long. And yet in keep a strong man, who would love this particular instance, I think it will his work. A young man said the other be done. Two churches have voted to day: "It is my intention to devote my do so, and the third may come in at a life to the rural pastorate. None of a later time. It is delightful to contem- the city for me." He is a fine type of plate what might be done with such a American manhood, a college graduate, church in such a town. The whole and trained for his work. Denomina- village could be organized around the tional rivalry has done immense harm to the church in the country. Denom- church. Farmers for several miles in inational cooperation is the only road each direction could be made to feel to success and strength.

AND the fine thing about all this is, that there is lay leadership in most of such towns. Each church has one or more strong men who are capable of doing big things, and who are willing to do them. The trouble now is, that such men are worked to death. They have to do too much. But if the churches in a village could by a miracle or otherwise be brought together, these leaders would come together, each would be given some wonderful task to perform, on which he could bestow his energy. He would no longer have to be Sunday School superintendent, trustee, elder, leader of the Boy Scouts, and head janitor. Only by such an ideal can the best men of the community be interested. Where churches overlap and rub elbows, they lose the respect of the men, and there is no help for it. These hardheaded fellows know that there is no such institution as the "best church," which one must enter or be lost. That might do to preach fifty years ago, but it is a dead issue now. The "best church" is the church that does the best work. And the best work cannot be done now, as things are, in many of the smaller towns. But a better day is coming. The new type of church is not a dream, it is a reality. It has arrived and is money to "pay the elder's back sal- at work.

THE reason why the church in the country or the village is so frequently in a languishing state is for want of pastoral leadership. The right kind of man simply cannot be found. Or if he is found, he soon wipes the village dust off his feet and is off for the city. The small church cannot command the services of the man needed. And do you blame the young man? Here are three or four or five churches in a village when everybody knows that one would be ample. Each of these churches pays a pittance of a salary that is less than any day laborer receives. Moreover, the salary is usually behind, and once in a while an ice cream social is given to make

The Valley of the Giants

(Continued from page 212).

family dinner, Shirley, and after dinner you can take Mrs. Poundstone upstairs, on some pretext or other, while I sound Poundstone out on his attitude toward the N. C. O. They haven't asked for a franchise yet; at least, the Sentinel hasn't printed a word about it; but when they do, of course, the franchise will be advertised for sale to the highest bidder. Naturally, I don't want to bid against them; they might run the price up on me and leave me with a franchise on my hands—something I do not want, because I have no use for the blamed thing myself. I feel certain, however, I can find some less expensive means of keeping them out of it—say by convincing Poundstone and a majority of the city council that the N. C. O. is not such a public asset as its promoters claim for it. Hence I think it wise to sound the situation out in advance, don't you, my dear?"

She nodded. "I shall attend to the matter, Uncle Seth."

Five minutes after dinner was over, Shirley joined her uncle in the library and announced that His Honor, the

Mayor, and Mrs. Poundstone, would be delighted to dine with them on the following Thursday night.

CHAPTER XXIV.

TO return to Bryce Cardigan:

Having completed his preliminary plans to build the N. C. O. Bryce had returned to Sequoia, prepared to sit quietly on the side-lines and watch his peppery henchman Buck Ogilvy go into action. The more Bryce considered that young man's fitness for the position he occupied, the more satisfied did he become with his decision. While he had not been in touch with Ogilvy for several years, he had known him intimately at Princeton.

In his last year at college Ogilvy's father, a well-known railroad magnate, had come a disastrous cropper in the stock market, thus throwing Buck upon his own resources and cutting short his college career—which was probably the very best thing that could happen to his father's son. For a brief period—perhaps five minutes—Buck had staggered under the blow; then his tremendous optimism had asserted itself, and while he packed his trunk, he had planned for the future. As to

(Continued from page 212).

how that future had developed, the reader will have gleaned some slight idea from the information imparted in his letter to Bryce Cardigan, already quoted. In a word, Mr. Ogilvy had had his ups and downs.

Ogilvy's return to Sequoia following his three-weeks tour in search of rights of way for the N. C. O. was heralded by a visit from him to Bryce Cardigan at the latter's office. As he breasted the counter in the general office, Moira McTavish left her desk and came over to see what the visitor desired.

"I should like to see Mr. Bryce Cardigan," Buck began in crisp business-like accents. He was fumbling in his card-case and did not look up until about to hand his card to Moira—when his mouth flew half open, the while he stared at her with consummate frankness. The girl's glance met his momentarily, then was lowered modestly; she took the card and carried it to Bryce.

"Hum-m-m!" Bryce grunted. "That noisy fellow Ogilvy, eh?"

"His clothes are simply wonderful—and so is his voice. He's very refined. But he's carrotty red and has freckled hands, Mr. Bryce."

Bryce rose and sauntered into the general office.

"Mr. Bryce Cardigan?" Buck queried politely, with an interrogative lift of his blond eyebrows.

"At your service, Mr. Ogilvy. Please come in."

"Thank you so much, sir." He followed Bryce to the latter's private office, closed the door carefully behind him, and stood with his broad back against it.

"Buck, are you losing your mind?" Bryce demanded.

"Losing it? I should say not. I've just lost it."

"I believe you. If you were quite sane, you wouldn't run the risk of being seen entering my office."

"Tut-tut, old dear! None of that! Am I not the main-spring of the Northern California Oregon Railroad and privileged to run the destinies of that soulless corporation as I see fit?" He sat down, crossed his long legs, and jerked a speckled thumb toward the outer office. "I was sane when I came in here, but the eyes of the girl outside—oh, yow, them eyes! I must be introduced to her. And you're scolding me for coming around here in broad daylight. Why, you duffer, if I come at night, dy'e suppose I'd have met her? Be sensible."

(Continued next week).

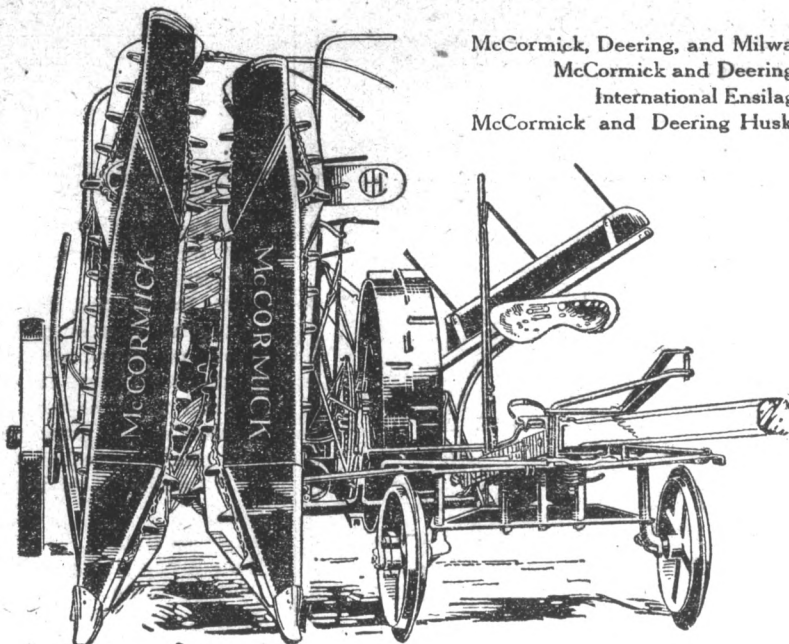
Sunshine Hollow Items

By Rube Rubicon

Last fall Egbert Throckmorton, who lives in the village, kicked on the price of eggs so he bought six pullets to show his egg lady that he could produce them at a low cost per dozen. But he didn't get any eggs all winter and the pullets died this spring. Now he is ashamed to buy any more eggs from his egg lady in the country and the Throckmorton's buy them at the grocery store.

Hiram Whizzle made a speech at the community picnic and said that all that he was he owed to his wife. Mrs. Whizzle jumped right up and said that Hiram had been blaming things on her all his life and she wouldn't stand it any more.

Martha Muggins has found a way to cut down living expenses. She serves pie for dinner first and it takes the edge off the hired man's appetite so he don't eat so much of the other stuff. She says the hired man used to eat enough before the pie course and then eat the pie anyway so now she serves pie first and finds it pays.



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Our Boys' and Girls' Page

"Rosen Rye" (A Dialogue for Club Members)

THE following unique dialogue was suggested by Miss Mignon Quaw, Assistant Home Demonstration Agent for the state of Montana. It has recently been revised and rewritten for Rosen Rye, by G. O. Stewart, County Club Leader of Wayne county, and was presented at a public meeting with the very finest effect. The directions and text are here given to help club members in arranging a program for a picnic or other meeting. The parts taken by either boys or girls are:

Seed.
Blade of Rye.
Bundle or sheaf of rye.
Sack of grain.
Speeches and Suggestions for Costumes.

The "Seed" is represented by a very small child wearing a little bag of tan-colored silicia stuffed to look as fat as possible. Arms do not show. Out of this bag stick only the head and little legs. The child comes onto the platform alone and makes a bow.

SEED:

"I am but a tiny seed
My name is Rosen Rye
They're going to take good care of me
And plant me by and bye.
But I don't mind it, not one bit
For I will soon come out,
You cannot keep a good thing down
And I am going to sprout."

(Here the child suddenly thrusts up a stick covered to look like a sprout, through the neck of the bag, then moves over to make room for the next child).

The "Blade of Rye" comes onto the platform. This child is dressed all in green and should look tall and slender. The face peeps out from a tall sheaf of green which may be made of tissue paper. Arms do not show.

BLADE:

"I am a blade of Winter Rye
'Tis easy to be seen
Altho I'm young and tender, too,
I'm not so very green.
That seedy thing's my (sister or brother) dear
We're Rosen Rye, you know
Discovered at the M. A. C.
And fostered by the Farm Bureau;
My (sister or brother) sprouted, so
(he or she) said,
But I'll come to a head."

(Here blade shoves up a stick covered with paper or cloth and made to represent a head of rye. He shoves over, pushing little seed, who glares at him angrily).

"Sheaf of Rye" is made ready by using a large sheaf of Rosen Rye and arranging around body of child to represent a sheaf.

SHEAF:

"I'm a sheaf of Rosen Rye
All ripe, as you can see,
I've had an operation, too, (proudly)
They cut my feet off me.
My (brother or sister) Seed and (brother or sister) Blade
Have very loudly talked
Of sprouts and heads, but as for me
I'm going to be shocked.

(Pushes others over. Both glare at him).

This child is representing the "Sack of Rye," is dressed in an ordinary gunny sack sewed exactly as rye sacks are: Two holes are cut for feet and two for arms. His head sticks out of sack. He comes onto the stage crying, his knuckles in his eyes.

SACK OF RYE:

"BOO—hoo—hoo!"

OTHERS (in unison, looking at him):
"Why, Brother, what's the matter now?"

The Rosen Ryes don't cry,
Come, smile a bit (pause). You won't? All right.

Then tell the reason why,
You're crying so. It sure must be
A finger that you've smashed."

SACK:

"You'd cry too, if you were me
"For I have just been threshed!"
(Goes on crying, others gathering about him, patting him on shoulder).

OTHERS (in unison):

"Come on, don't mind, cheer up my dear,

You never need to cry
Altho they thresh you; for you are
Pedigreed ROSEN RYE!"
(Sack wipes his eyes and smiles).
(Exeunt).

HOGS NEED SHADE AND CLEAN WATER.

ONE who has had experience makes these suggestions to pig club members: Shade and clean water during the summer months are essential to successful pork production. All kinds of hogs must have shade. Too much direct sunlight and heat is a frequent cause of hogs failing to thrive and is often the cause of hogs dying. During August small pigs often blister on the backs and about the ears which causes, in some cases, severe infections and bad sores.

Expensive shelter is not necessary. Shade trees provide ample protection. Where no trees exist temporary shade may be provided by the covering of a frame with canvas, under which the hogs may go for protection. Some producers build individual hog houses with sides that may be lifted to provide an increased amount of shade during the summer months. This plan furnishes shade for hogs where only a few are kept.

Clean fresh water for drinking and wallow is equally as important as, or more important than, shade. The old-time wallow hole covered with scum, which was once also the drinking fountain, is no longer in high favor. Hogs must have water to drink, and if they cannot have fresh clean water in the trough or fountain, they will drink where they can find it, regardless of its condition. This fact has caused some to believe that hogs prefer nothing better, but they do and will dem-



Members of Sand Hill Poultry Club of Wayne County, present "Rosen Rye," at Farm Bureau Picnic. Members are: Ruth Wells, "Sheaf" Howard McPherson, "Blade," Marion Strong, "Seed," Elroy Damerow, "Sack."

onstrate the fact when they are able to get fresh water from the well.

The clean wallow hole is also important. Hogs may use the muddy wallow if no other is available; but, again, if clean water is provided in a concrete wallow they will prefer it to the mud hole. An excavation six by eight feet, or larger, and about fourteen inches deep, walled and floored with concrete and filled with water, will prove a profitable attraction to the hogs on hot summer days.

News of the Week

Tuesday, August 10.

THE premiers of Great Britain and France agree to reimpose the blockade of Russian ports, give support to Poland by technical advice, and supply her with needed munitions.—The United States will announce a definite stand regarding the Polish situation at a very early date.—The governor of Tennessee urges the legislation of that state to ratify the amendment to the federal constitution giving to women the right of franchise.

Wednesday, August 11.

IN a note to Italy the United States reaffirms its opposition to the soviet government of Russia.—British mission leaves London for Moscow to urge acceptance by soviet Russia of the British terms with regard to Poland.—Cotton growers in Oklahoma form selling association.—Reports from Purdue University show that the boys and girls of Indiana earned a quarter of a million dollars in their club work enterprises last year.—The Missouri State Fair has arranged for a Farm Bureau Day.

Thursday, August 12.

THE California Prune and Apricot Growers, incorporated, names the opening prices on the 1920 crop of California prunes; despite high production costs the prices named are lower than those secured last year.—Tennessee legislature defeats vote on motion by anti-suffrage leaders to lay ratification of suffrage amendment on table.—Soviet Russia asks Rumania for a renewal of peace negotiations.—Should the allies act the United States will join in the blockade of Russia.—Increased production and an extension of the coal car priority order promises to relieve the soft coal situation to some extent.

Friday, August 13.

THE recognition of the Wrangel regime by France is looked upon by some diplomats as the beginning of the end of the league of nations.—The Winnipeg wheat exchange will resume trading in wheat futures on August 16.—Premier Hughes, of Australia, comes to England to discuss the terms of the Anglo-Japanese treaty.—It is predicted that normal sugar prices will return in less than a month when retail prices will be from eighteen to twenty cents.—Connecticut will not call a special session of her legislature to act upon the woman suffrage amendment.

Saturday, August 14.

THE Russian reds are speeding up their drive on the Polish capitol, which is only twenty miles beyond their advanced lines. The inter state commerce commission grants permission to express companies to advance rates 12.5 per cent.—A noted German hygienist declares that famine will kill from ten to fifteen million Germans because of the present inability of the nation to properly feed her population.—New York longshoremen have voted to resume work.—Canadian and United States engineers are looking over the grounds for the location of the proposed Long Sault power plant, a part of the plans of the Great Lakes and St. Lawrence deep-waterways scheme.—The break in the price of raw sugar is reported to be worrying refiners.

Sunday, August 15.

LIVING costs in London, England, have advanced 152 per cent in six years.—United States vessels carried sixty per cent of the total cargoes that moved between this and other countries during the past six months.—Reports from the federal reserve banks show that the excessive demand for credit has shifted during the past fortnight from the west to the east.

Monday, August 16.

THE battle for Warsaw increases in intensity, with Poles putting up a good fight although the Russians are now within ten miles of the city walls.—Permission has been granted to the Mexican government to allow her gunboats to pass through the Panama Canal to aid the military authorities in quelling the revolution in lower California.

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4. He favors lake-to-ocean route as outlet to Michigan products and gateway for Michigan necessities.
5. He believes in generous treatment of service-men and their families.
6. He has had broad experience in State affairs as Representative, Senator and Secretary of State and as such took great interest in advancement of child welfare, pure food laws, health laws, laws relating to good roads and the betterment of farm conditions.
7. He has at heart the highest good of the State, the correlation of all its varied activities and the fullest development of its business, social and religious life.

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Woman's Interests

Is Woman's Work Ever Done?

By R. E. Borradaile



JUST how big a factor is the farm woman in the farm enterprise? How much work should be expected to do? Should she have union hours and a vacation? Could she be replaced entirely in the scheme of farming and yet the farmer and his family subsist comfortably and show a profit at the end of the year? Is the woman of the farm living a life of hardship compared with her city sister, or has she sufficient conveniences and labor-saving devices to make her work pleasant and to shorten the hours of menial labor? Has she facilities, does she take advantage of community organizations, and does she live up to her social obligations?

These are some of the questions to which Miss Florence E. Ward, of the States Relations Service of the United States Department of Agriculture, tried to find the answers in the testi-

most of Michigan's farms they would not have believed their eyes. Farming in parts of Michigan is still so young that some of the oldest inhabitants can remember distinctly their early experiences in frontier life and the extremely practical sort of conditions with which they were surrounded.

"Marked progress has been made during the last few years in raising rural home standards of living," says Miss Ward. "Every community boasts some homes which exemplify the fact that the country today with a reasonable amount of prosperity and good management offers all of the freedom and independence of rural living with most of the hardships of former days eliminated. The telephone and the automobile free the farm family from isolation. Modern machinery for farm and home takes the drudgery from kitchen and field. Rural engineering

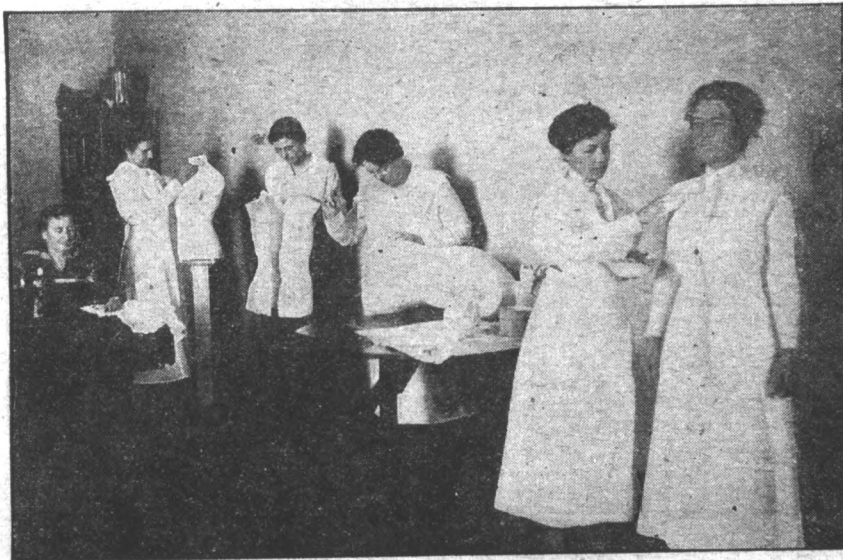
the term "vacation" is difficult to define and when not made entirely clear in a survey of this kind the percentage is likely to be inaccurate. In the central states we find that on the average there are 7.7 rooms in the farm house, and 1.3 stoves; that seventy-nine per cent of the families use kerosene lamps and that sixty-eight per cent carry water for use in the home. The average distance the housewife lugs this water is forty-one feet, and if the farmer wishes to find out how many tons of water his wife is carrying during the year it is a simple matter of arithmetic, with an answer which is astounding. Ninety-seven per cent of the women on these farms do their own washing; ninety-four per cent their own sewing; and seventy-eight per cent make their own bread. It is interesting to note that the percentage of women baking bread in the central states is much less than in the eastern states where it is eighty-nine per cent, and in the western states, where it runs as high as ninety-seven per cent.

The caring for kerosene lamps is one of the items in the housewife's work which is not usually found in the cities or even in the small towns. That the half hour or so spent in washing, trimming and polishing lamps daily is considered an arduous task which should be eliminated as soon as possible is reflected in the fact that in twenty-one per cent of the households surveyed a modern system of some kind has been installed.

Woman's work on the farm, according for the stoves to some other member of the family. Nine thousand of the seven-room houses mentioned in the survey are supplied with from one to two stoves, not including the kitchen range. "This adds to the daily work of fifty-four per cent of the rural women who, when heat is needed, not only carry into the house the coal or wood to feed these stoves, but, according to their statements, kindle the fires in the morning and keep the home fires burning throughout the day."

Some of the comforts enjoyed by most town and city dwellers is a house which is warm throughout the winter season, and the ease with which warm water is supplied for all purposes. The city family abhors such discomforts as going to bed in chilled rooms, breaking of ice in the water pitcher on rising in the morning, and the lack of warm quarters for bathing and dressing, but altogether too many farm families are accustomed to just these sort of inconveniences and many of them have accepted these conditions needlessly.

On nearly one-half of the farms some sort of power for operating machinery is reported, and on about half of these farms the power is used in some way to lighten the household tasks, such as churning, washing machinery, etc. A very wide difference exists in various parts of the country in regard to the amount of equipment carried in the farm home or on the farm for supplying power. In the east as high as fifty per cent of the farms report power on the premises and twelve per cent in



A Home Demonstration Agent and Her Dress Form School.

mony taken from more than ten thousand farm women located in typical farming counties in the thirty-three northern and western states. More than a dozen of these counties are located in Michigan, both in the northern and southern peninsulas. The results are particularly interesting to farmers in this state because of the labor situation and the fact that the farm woman frequently is the partner who really decides whether the family will continue to farm or move to the town or city. We have experienced within the past few months an exodus of farmers from many farming districts. These include not only the localities where farming has been very profitable, but also those where the struggle has been intense.

Miss Ward's survey taken as a whole shows surprising progress in the household conditions on farms when we remember that it was not many years ago that the log cabin with its primitive outfit could be found on many Michigan farms. In fact, that time is not so far removed but what it is still possible to find these serviceable and picturesque buildings on many farms, although they are now frequently relegated to the use of tenants or have been transformed into sheds or barns. If the early inhabitants of those log houses could have looked forward to the present-day conveniences upon

has mastered the problems of sanitation for the farm home.

Community centers make possible wholesome and inspiring social contacts and mediums of self-expression. With all these modern resources which are taken advantage of and enjoyed by many progressive and prosperous farm families, there is still a large percentage of the total of farm homes in this country which has not yet, according to the figures of the survey, felt to any marked degree the influence of these life-giving factors. It is the realization of this need that stimulates the department of Agriculture and the state colleges of agriculture to offer the service of extension work with women, a work which would not be needed if all homes had reached the high state of comfort and efficiency attained by the few."

In discussing the number of hours which farm women work, Miss Ward points out that in the central states the average in summer is about 13.2, compared with 10.5 during the winter, and rest hours are 1.5 and 2.5 respectively. This, of course, indicates a very long working day with comparatively little time for recreation. The surprising point about the survey, however, is the fact that eighty-seven per cent of 8,773 women reported no vacation during the year. The interpretation of this, however, is open to question since

the home. One state reports seven per cent, and another—the lowest—two per cent of machinery in the home. In one state, however, forty-three per cent of the homes have power, whereas only twenty-one per cent report power for out-of-door work. In still another state—the highest—forty-eight per cent of the homes contain power and seventy-nine per cent carry power for operating farm machinery.

Miss Ward found that in the central states on the farms surveyed, sixty-seven per cent had washing machinery; ninety-five per cent sewing machines; ninety-eight per cent screened windows and doors; ninety-three per cent out-of-door toilets; eighty-three per cent bath tubs; and fifty-two per cent sink and drain. She also found that twenty-six per cent of the women help with the live stock; twenty-two per cent in the field; fifty-seven per cent in caring for gardens; thirty-four per cent in keeping farm accounts, and thirty-three per cent in keeping home accounts.

Where dairying is an important feature of farm work, and where cows are kept only for the family milk and butter, it is frequently part of the women's task to help with the dairy work in some way. About thirty-three per cent of the farm women in the survey in the central part of this country make butter to sell; nine per cent retain part or all of the money from this source; forty-five per cent of the women help milk; ninety-three per cent wash the pails; seventy-six per cent wash the separator; and sixty-six per cent make the butter. In the same way the care of the poultry largely falls to the lot of the housewife. In the central states eighty-nine per cent of the women do this work, caring for an average flock of one hundred and two fowls. The agreement between husband and wife as to who is to keep the money from the eggs, however, seems to show more leniency on the part of the farmer since sixteen per cent of the women have the egg money, whereas only nine per cent are successful in cornering the returns from their activities with the dairy.

Michigan being the birthplace of most automobiles it is not surprising to find that on seventy-three per cent of 9,545 farms, automobiles for family use are found, against forty-eight per cent in the east and sixty-two per cent in the west. The automobile, of course, has worked wonders in the improvement of rural social conditions, annihilating distance and giving country folk access to the trade centers and social and religious activities, and has "put their neighborliness and piety to the test." The automobile also helps in such community enterprises as canning kitchens, buying-centers, markets, laundries, salvage shops, sewing rooms, etc., and breaks down the isolation of the country, making it much preferable in the estimation of many to life in crowded, disillusionizing cities. The survey shows that eighty-five per cent of the rural homes have telephones. Here again the central states outstrip the east, which has sixty-seven per cent, and the west, which can boast of only fifty-six per cent.

Thus the survey brings out both the strong and weak points of the farm home organization, and the lot which falls to the woman.

To preserve orange peel, wash the peel in hot water, cut it into strips very narrow and about an inch long. Boil until soft. The water should be a little more than cover the peel when the sugar is added. If the bitter flavor is liked, add the sugar to the same water in which the peel was boiled. If not, pour off that water and add fresh. Add sugar to suit the taste and boil until the peel is clear.

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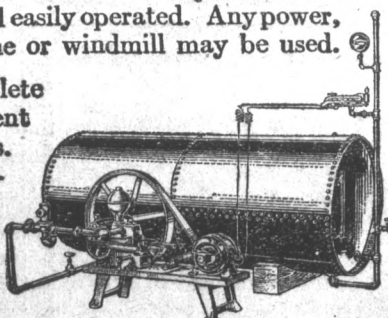
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A Puzzle for Poultrymen

Will Egg Prices This Winter Warrant Carrying Over a Large Flock?—By E. I. Farrington

ALTHOUGH the poultry situation is a little more settled than it was during the war and just after, yet many poultry keepers find themselves puzzled when they look into the future. With the cost of feed making a big demand upon their resources, they are wondering whether or not it will pay them to carry large flocks through the coming winter. In particular they are undecided whether it is best to carry over the yearling hens or to get them into the market now when poultry is bringing a long price.

Of course, the most carefully thought out predictions may prove all wrong, but there is every reason to believe that eggs will be higher the coming winter than ever before in the history of the land. Some people are talking about eggs at \$2.00 a dozen. Well, they went up to \$1.25 a dozen last winter, and sold without difficulty. Whether or not people will pay \$2.00 remains to be seen. The chances are that many people will, in order to have eggs which they know are absolutely fresh. That eggs will be high is made pretty certain by the fact that the total number of laying hens has not yet become normal, that transportation is still in a chaotic condition and that eggs have gone into cold storage at prices never before dreamed of. Many people in my part of the country have put down eggs in waterglass for which they paid from forty to seventy-five cents. These are summer prices. The winter prices are sure to be almost double. Eggs are not plentiful nor likely to be.

In New York last week the storage holdings were four hundred thousand cases less than a year ago. Almost as great a decrease in storage stocks is reported from other cities. There seems to be every reason to believe, therefore, that eggs will sell high enough to warrant the carrying of a good-sized flock in spite of the high prices charged for grain.

At the same time the inexperienced and unsympathetic poultry keeper is likely to lose out. There never was a time when it was more imperative to apply business methods to poultry keeping, even with small flocks, if they are being run on a commercial basis. One of the most important matters this fall will be the culling out of poor stock. If this culling is done properly it will leave a flock of yearling hens which ought to prove highly profitable. On the whole, though, it would be better to send the whole flock to market than not to cull. The methods by which a physical examination determines the laying qualities of the hen are now well known. They can be obtained in detail by writing to almost any state experiment station.

Experts go somewhat further, however, than to follow the directions usually given. Mr. George B. Smith, a Connecticut poultryman doing a large business, has pointed out that much can be determined by the scales on the shanks of a hen. From these indications alone he can tell approximately how many eggs a hen has laid, even if given nothing but her feet and shanks to work with. The heavier laying brings about deep creases in the shanks which deepen as the output increases. In the case of a hen which has laid very heavily the scales become so rough that to rub them is like drawing one's hand over a meat saw. This method will be a new one to many people, but by working with it for a season or two poultrymen will learn that the scale condition offers one of the quickest and most certain

indices to the laying qualities of the fowl.

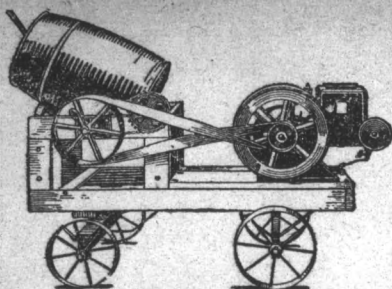
Not only should hens that are not heavy layers be expelled from the flock, but also those which have a persistent tendency to broodiness, even though they may be easily broken up. The hen which is constantly going broody is not a good hen to have in the flock. This trait, however, is one which can readily be bred out. There are flocks of Rhode Island Reds, for example, in the eastern states where this breed is very popular, which have been rendered very largely non-broody by careful selection from year to year.

It is also important to remove the hens which molt early. It is the late-molting hen which makes the best producer. She molts more quickly than the one who commences early, and begins laying more promptly. If there is a hen in the flock which has kept laying steadily right through the spring and summer up to early fall, by all means keep her. By proper mating she can be made one of the most valuable assets which the poultryman can have. In other words, she is quite likely to become the mother of a strain of persistent layers.

Culling is quite as important with the growing chickens as with the laying hens. It is a waste of time and effort to carry along a lot of runts. If they have been raised to a point large enough to be dressed off they should be turned into meat as quickly as possible. As a matter of fact, it is better to dispose of the runts before they have time to consume much grain, for they never will pay for what they eat. I recently heard of one poultryman who announced his intention to kill off all the male birds as soon as he could detect the sex, figuring that it cost more to raise them than he got for them. It's a question whether he is not making a mistake, although, of course, something must depend upon labor costs and market conditions. With business as it is now, however, no poultryman is wise who keeps for any length of time a fowl of any kind which is not in good condition and reasonably certain to earn a profit.

One opportunity for money making has been seized upon by a number of poultrymen this season. Never before has there been so great a demand for half-grown pullets. These pullets when sold alive have brought double their value as broilers. At the present time it seems a mistake to make any attempt to carry on a broiler business. The egg end of the industry is paying much better than the meat end, anyway, and almost any bird which promises well as a layer can be sold at a higher price alive than for meat. This applies in many sections even to yearling hens. While market buyers will come into the yard and offer prices which seem very high, yet there are other men who will pay even more for them in order to use them for egg production, providing of course, that they are reasonably good stock.

All in all, the outlook for those who are engaged in producing eggs for market is an excellent one, judging from conditions as they exist now, and while it may mean a considerable investment to carry along a flock of pullets and hens during the unproductive season, in the end the returns will be worth while. And there is one matter in this connection which is commonly misunderstood. Many farmers think it economy to sell their yearling hens as soon as they stop laying, because of the expense required to keep them until they commence again. Now experiments



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You can't afford to waste valuable time, good materials and money by having to do over again concrete work which was mixed by shovels. Get a Sheldon Farm Concrete Mixer and put in your own concrete so it will last a lifetime—it will save its price on the first job. What is more, you can do the work when you please in otherwise idle time. No big gang of men needed.

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is made especially for farm use and has a reputation of six years of successful operation on thousands of farms all over the U.S. No complicated machinery to get out of order—easy to operate—easy to move—mixes 3 cubic feet at a batch—a 1½ H. P. engine will run it. No other mixer excels its quality of work nor approaches its low price.

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BIG CROPS ASSURED IN WESTERN CANADA

Need of Farm Labor Urgently Required for Harvest

Rains of the past week, which have been general throughout all portions of Western Canada, covering Manitoba, Saskatchewan and Alberta, have placed beyond all manner of doubt the certainty of vast grain crops throughout the entire district.

Reports from all points indicate marvelous and rapid growth. The conditions of a week or so back, which were decidedly less promising and led many to think there might be a partial failure, have disappeared altogether and now there is a wave of optimism circulating throughout the entire country.

In 1915 there were enormous yields reported from all parts, and it would appear now as if in many places the yields of 1915 would be equaled if not beaten.

What might appear to be a drawback is the apparent shortage of farm help. The Province of Manitoba, through its Employment Bureau in Winnipeg, is asking for 10,000 harvest hands and over, offering from \$5 to \$6 per day. The Province of Saskatchewan is asking for 15,000 extra hands, to take care of the immense harvest that is certain to be reaped in that Province. In Alberta the crop area is somewhat less, the labor conditions somewhat better, and a request is being made for 5,000 extra farm hands.

Interviewing the officials of the different Governments, they are inclined to the opinion that as the crops in Kansas, Nebraska, South Dakota, Illinois and other Central States are harvested, there will be a movement northward that will materially help to take care of the labor situation. With the low railroad rates that may be secured on application to the Employment Office at Winnipeg and at boundary points, or which may be secured through the Canadian Government Offices at Chicago, Ill.; Detroit, Mich.; Milwaukee, Wis.; Kansas City, Mo.; Omaha, Neb.; Des Moines, Iowa; Watertown, S. D.; St. Paul, Minn., and Grand Forks, N. D., will give to those seeking employment the opportunity to reach the harvest fields at a low cost.

World's Best Roofing At Factory Prices

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

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cost less; outlast three ordinary roofs. No painting or repairs. Guaranteed rot, fire, rust, lightning proof.

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Lowest prices on Ready-Made Fire-Proof Steel Garages, 8' up any place. Send postcard for Garage Book, showing styles. THE EDWARDS MFG. CO., 817-887 Pike St., Cincinnati, O.

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DYNAMITE

Blast out those Stumps and Boulders with Dynamite. Magazines in all parts of United States. Write us for prices.

ACME EXPLOSIVES CO.
Terre Haute, Indiana.

have shown that it costs very much less to carry a hen through this period of non-production than it does to raise a pullet to replace her. Indeed, it is claimed by some who ought to know, that the cost of the grain consumed by the hen during her idle weeks is no greater than that of putting the last pound of flesh onto a pullet before she starts laying. With this consideration in mind, possibly some farmers will make a change in their usual methods.

MILLION DOLLAR SCHOOL

(Continued from page 199)

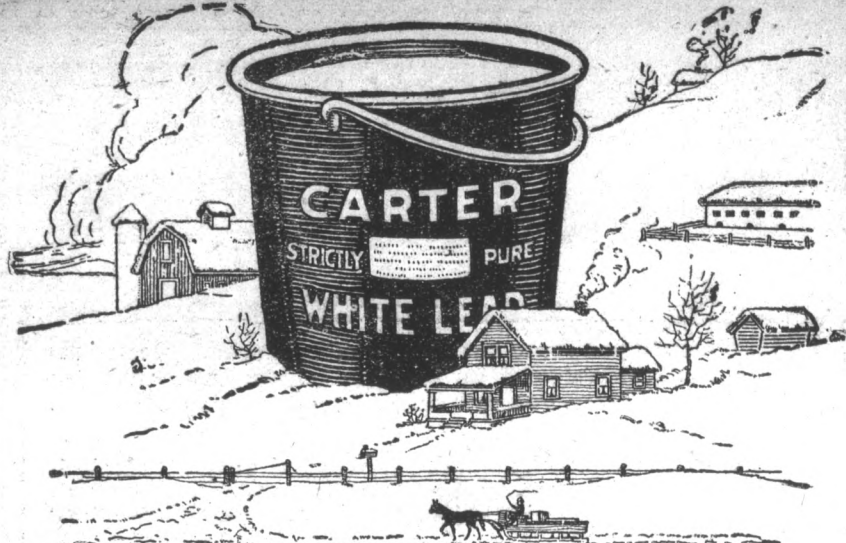
of twelve muskrats, one colony of mink, two pairs of weazels, one pair of martin, one pair of ermine, one pair of sable, one pair of wolves, one pair of badgers, two pair of woodchucks, two pair of gray squirrels, one pair of black squirrels, two pairs of fox squirrels, one pair of cub bears and two pair of deer.

AND proceeding, we discussed to some extent that other great function of the school, the dissemination of knowledge. No other agency has aided more in bringing to the individual the large amount of classified knowledge that the public schools of the land have. But in this the school of which Mr. Dickinson is the head, is no less efficient because it emphasizes ideals and presents a diversity of subjects. If a farmer wishes to meet breeders to get information, he can do this with the least expenditure of energy by attending this big school, the Michigan State Fair, for that is the school of which we have been speaking. If he would care to be informed on farm machinery here is without question the best place. Should his hobby be rabbits, poultry, skunks, peonies, bees, bugs or what not, there will be opportunity to jump on and ride that hobby to his heart's content.

SO important has the big fair become as a place for giving out information that the federal department of agriculture and the Michigan Agricultural College have taken over the entire 13,000 square feet of floor space in the Agricultural Building and in it they will set up exhibits that will teach the fair visitor the hundreds and thousands of things which these departments of the state and federal governments have been endeavoring to bring to the farmers through bulletins, on the lecture platform and in other ways. Here alone will be found exhibits which will warrant the expense of attending this big school, and in addition to the exhibit men qualified to give information will be there to aid those in search of knowledge along any particular line, to get full details of what is wanted. Here one will learn how the weather bureau forecasts storms, frosts, and floods for the protection of agriculture, commerce and navigation; how the bureau of animal industry proposes to increase the country's supply of meat; how to save the millions of dollars lost to the farmers of the country each year by controlling destructive diseases and insects; how good roads are built; how an up-to-date kitchen should be arranged; how to preserve fruit and vegetables; how to prevent forest fires and how to use the products of the forest to the greatest advantage. A thousand popular questions will be answered.

"Yes," says Bill, "I am agreed that it is a school, but how about the million pupils."

"Well last year the attendance was the largest of any fair in the country and it totaled 750,000. The many improvements and additions make the million mark not only possible but probable this year from the time it opens at Detroit on September third to the closing date ten days' later on September 12.



Winter Proof Paint

PAINT is the armor-plate that protects the surface on which it is spread from the elements regardless of extremes in temperature.

The weather resistant qualities of paint are put to the acid test when a biting cold "nor-wester" whips sleet or snow into the paint film. That's the time that inborn stamina counts.

To do its job properly—to make it worth every penny you invest in it—paint must be *part of the surface it covers*.

It must expand or contract in summer's heat or winter's cold.

Metallic lead is soft and pliable. White lead is corroded metallic lead; it retains the metal's characteristics.

Carter White Lead has four points of superiority—intense whiteness, extreme fineness, great spreading capacity and absolute uniformity.

Paint made from Carter White Lead and pure linseed oil, colored to suit, will not crack or scale because the lead and oil form a perfect film that dries hard into the pores of the wood yet keeps its "life" through years of honest service.

It will cost more to use a cheaper paint than Carter White Lead and pure linseed oil.

Carter White Lead Co., Chicago, Ill.

"Save the surface and you save all" *Paint & Varnish*

Feed Every 3rd Hog FREE

Save feed and get your hogs ready for market in less time. Prove at our risk that you can save fully one third your feed, making it possible to feed every third hog free by feeding

Milkoline At 2c a Gallon

Milkoline has a base of pasteurized and sterilized, modified Buttermilk. It is guaranteed not to contain any sulphuric acid or anything of an injurious nature to hogs or poultry.

Aids Digestion: Thousands of the most successful hog raisers from New York to California during the past seven years have proved that Milkoline helps and assists digestion, tending to insure perfect assimilation of feed. It helps tone up the system so that hogs are less subject to disease, and practically insures gains of 2½ pounds per head per day.

University Tested Professor W. B. Combs while Ass't. Prof. of Dairy Husbandry at Missouri University conducted a scientific test on Milkoline and found that Milkoline fed hogs put on more weight and showed 82.57% more profit than hogs not fed Milkoline. W. H. Graham a successful feeder of Middletown, Mo., said \$30 worth of Milkoline made him an extra profit of \$420. Lee Jackson of Wappingers Falls, N. Y., says Milkoline fixed up a bunch of shoats in fine style and is great for brood sows.

Can't Spoil: Milkoline is guaranteed not to rot, sour or mold. It will keep indefinitely in any climate. Flies do not come near it. It is always uniform, and is guaranteed to make you money or it doesn't cost you anything.

—Distributed by—

SCHWARTZ BROS.,

Saginaw, Mich.



2c a Gallon Milkoline comes in condensed form, and you do the diluting on your own farm. When fed as directed Milkoline mixture (one part Milkoline to 50 parts water or swill) costs only 2c a gallon. Full feeding directions free. It is shipped in convenient kegs and barrels which we supply free. The prices are as follows: 5 gal. \$7.50; 10 gal. \$12.50; 15 gal. \$16.50; 32 gal. \$32.00; 55 gal. \$49.50. It pays to buy in barrel lots because you save 60c a gal. over the 5 gal. quantities.

30-Day Guaranteed Trial. You are safe in ordering any quantity of Milkoline today. Feed one half the shipment to your hogs and poultry in a thirty day test, then if you aren't entirely satisfied return the unused part to us at our expense and we'll immediately refund every cent you paid us. We are so confident that you will find Milkoline the best money maker on the farm that the S. W. Boulevard Bank of Kansas City substantiates this offer. You are the sole judge. Send money order, or check, to us or our nearest dealer and we will ship immediately. Our booklet, "How to Hustle Heavy Hogs to Market" will be sent free on request—your name on a card will do.

WANTED: Men owning rig or auto to sell oils, house paints, barn paints and roofing materials direct to farmers. Commissions paid weekly. Special Monthly Bonus paid on sales. Old reliable concern selling farm trade for years—financially responsible and standing back of every material sold. Write us today for our complete sales proposition. CENTRAL PETROLEUM CO., Cleveland, Ohio.

CORN HARVESTER One man, one horse, one row. Self-Gathering. Equal to a Corn Binder. Sold direct to Farmers for 22 yrs. Only \$25 with folder binder. Free Catalog showing pictures of harvesters. **PROCESS CORN HARVESTER CO., Salina, Kans.**

Wanted first class foreman at once, understanding Farm and dairy work. References required. **H. H. DRIGGS, Palmyra, Mich.**



Finish Your Silage Job RIGHT!

THE money you make out of your silage depends upon two things: Its *cost*--and its *feeding value*. With a Ross Ensilage Cutter, you get *bed rock* production cost--and *better silage*. Every piece is sliced slick and clean.

The Ross is powerful, smooth-running and very economical. It runs at slow speed--hums right along from morning to night, with never a chatter. It is dependable, stays on the job, and does *faster work* with *fewer men* and *less power*!

ROSS SPECIAL OFFER COUPON

Ensilage Cutter

E. W. Ross Co., 520 Warder St., Springfield, Ohio.

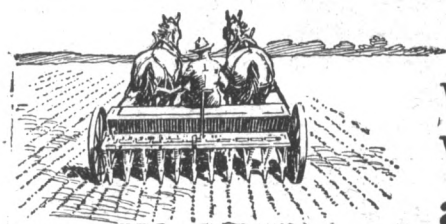
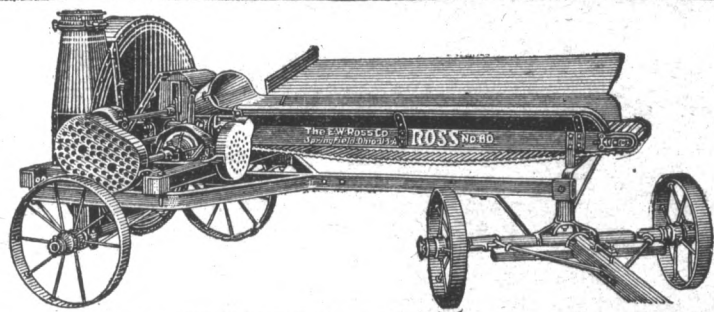
Gentlemen: I own a.....Horse power engine. Give me full details of your special offer on the Ross Cutter best suited for my needs.

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ADDRESS.....

If you want all the facts about the best Cutter built--and a special money-saving proposition--mail this coupon or a post card today. No obligation.

The E. W. Ross Co., 520 Warder St. Springfield, Ohio



Wheat Winter Oats and Rye

should receive the right kind of fertilization if they are to be profitable under the present trying conditions on the farm.

Use a fertilizer containing 3% to 4% of

REAL POTASH

and 6% to 8% if these grains are to be followed by grass or clover. There is plenty of Potash in the country at less than a third of the war prices, and if you insist on getting it, you will again find that

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SOIL AND CROP SERVICE, POTASH SYNDICATE, H. A. HUSTON, Manager
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DOG DISEASES
And How to Feed**

Mailed free to any address by the Author

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America's
Pioneer
Dog Medicines

Dickey Glazed Tile Silos

Best of materials, six different diameters, everlasting hollow tile roof, easiest to build--such features as these have made the Dickey pre-eminent among silos.

The Fruit Jar of the Field
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at the World's Original and Greatest School and become independent with no capital invested. Every branch of the business taught. Write today for free catalog.

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**The PERFECT
CORN HARVESTER**

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

Works in any kind of soil. Cuts stalks, doesn't pull like other cutters. **Absolutely no danger.** Cuts Four to Seven Acres a day with one man and one horse. Here is what one farmer says:

Dear Sirs:--In reply to your letter will say that the machine can't be beat. I do not know how many shocks I cut, as I went so fast I lost count.

Yours truly, T. C. HARTUNG, Springport, Mich.

SOLD DIRECT TO THE FARMER
Send for booklet and circulars telling all about this labor-saving machine; also testimonials of many users.

LOVE MANUFACTURING COMPANY
Dept. 4 Lincoln, Illinois



George Ridgeman Owns a Holstein Herd with Real Quality.

Our Farm Bureaus

(Continued from page 202).

when the country looked its best, and the roads were in excellent condition. The series of summer showers which had blessed the crops had also served to keep the gravel and stone roads, which connect the principal towns throughout the county hard and smooth, and the air that evening was just cool enough to make motoring a pleasant pastime.

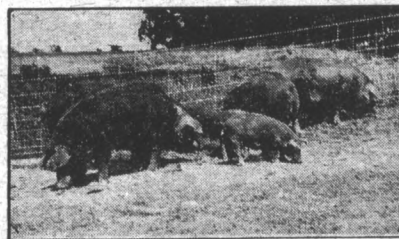
I found Mr. Perry about to bring in his last load of hay for the day, but he generously gave me a half-hour of his time--precious time to a busy farmer at this time of the year. His beautiful farm along the town line of Elmwood is probably the highest point in the county. Mr. Perry was born on this farm forty-eight years ago, his father having settled there in 1868 in what was then a dense wilderness. His mother, a daughter of Elder McKinney, came to these parts in 1854 and her father built the first barn east

H. J. MARSH, of Vassar, one of the big progressive farmers of Tuscola, is the owner of two hundred and forty-four acres of rich rolling land just north of the village. He is also a strong believer in the value of using pedigreed seeds, and, indeed, in the advantage of growing pure strains of selected seeds for the market. This year he has fifteen acres of "Purple Stem" wheat and twenty-four acres of "Crown" oats for seed, the oats being as fine a stand as I have seen of this New York state variety. There are also thirty acres of rye, twelve acres of beans and fifteen of corn, all of which were in splendid condition the latter part of July.

A considerable acreage of the farm is good bottom land along the Cass river, suitable for pasturage, and this year Mr. Marsh has increased his herd of Holsteins. A creamery at Vassar, less than a mile from the farm, handles all the milk produced, a part going to Detroit. Mr. Marsh is also interested in raising Chester White pigs, with which he has been successful.

In speaking of the important work before the Tuscola Farm Bureau, Mr. Marsh said he believed the very necessary thing to do is to concentrate the efforts of the more progressive farmers in the business of securing supplies, particularly of coal and fertilizer. He has tried to secure contracts to supply coal direct from the mines to farmers in Tuscola, but thus far the operators have refused to deal direct with the consumers claiming previous contracts prevented their doing so and that the lack of adequate transportation hindered them in their normal output. A concerted effort by a large number of farmers, he hopes, may result in getting deliveries of a part, at least, of the requirements for the coming fall and winter.

The value to the farmer of a greater use of pedigreed seed is a matter of great interest to Mr. Marsh, and at a meeting of the executive committee on August 3, attended by John W. Nicholson, of the State Farm Bureau, the

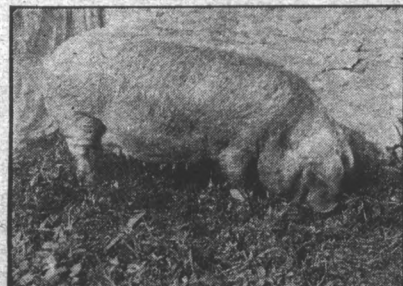


Some of Mr. Ordway's Polands.

of Watrousville in this county. They may thus be classed as real pioneers. Mr. Perry takes particular pride in improving his property each year. A year ago he added a large wing to his home, to accommodate his growing family, and this fall will install a modern water pressure system in his house and barns. He contemplates adding next year a complete electric lighting system to make life still more comfortable on the farm.

In speaking of the farm and the prospects of good crops, Mr. Perry said he had given much study and experiment in the culture of pedigreed seeds, and firmly believed in the use of the best seeds of pure strain that can be obtained. He has grown several varieties of pure seeds for market, and was the first farmer in this part of the county to grow Rosen Rye and to make tests with alfalfa. He has in his farm of one hundred and sixty acres of cleared land under the plow, a large field of alfalfa the second cutting of which will be made about August 10, and the third cutting about October 1. All his pure seed raised is sold to farmers in the vicinity or near Caro.

In stock raising his principal interest lies in thoroughbred Oxford Down sheep, of which he has made a careful breeding since 1891, or twenty-nine years, and he owns a fine flock of this desirable breed.



Mr. Alexander's Chester White Sow.

problem was discussed and efforts will be made to increase the use of the better strains of northern grown seed. There are plenty of object lessons right at home for farmers not fully converted to the use of better seeds, and it is

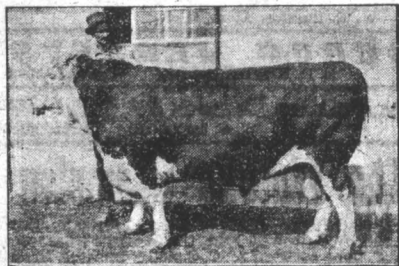


Head of Mr. Murphy's Herd.

believed many more will fall into line next year.

F. W. ALEXANDER, of Denmark township, one of the leading farmers of Tuscola, was born on the farm which his father preempted in 1862. The farm now comprises one hundred and sixty acres, of which one hundred and four are this year under the plow, the remainder being in wood and pasture. Mr. Alexander, a stockholder in farmers' elevator associations, believes these associations should come into the Tuscola Farm Bureau, and his arguments, as an interested party in both, are based on sound business principles. He is much interested in promoting the greater use of pedigreed seeds, and this year has eleven acres of "Wisconsin 6" barley, and eighteen acres of "College Success" oats, and has two test plats of soy beans in corn. Of wheat he has fifteen acres, and of beans and corn the same acreage of each, and he cut hay from thirty acres.

It is in stock raising, however, that Mr. Alexander has gained considerable prominence in Tuscola, and he takes great pride, as well he may, in showing his fine herd of Holsteins. His



Mr. Bigelow's Hereford Sire.

specialty, if such it may be termed, is raising of thoroughbred Chester White hogs, and his pens are among the best in the county. There are ten brood sows of this breed, two of which took first and second ribbons at the Saginaw County Fair, in 1919, while his Chester White boar was sired by Petroleum King, by Petroleum Giant, eight times champion in Indiana and Ohio. There are, besides these thirty odd pigs and young hogs fattening for market.

JOSEPH CAMPBELL, of Fairgrove, is another farmer who may be classed with the enterprising leaders in his township. The day I called at his farm he was busy threshing. I learned that the farm of one hundred and forty acres is quite evenly divided between the usual grains grown and beans, and judging from the appearance of the fields within reach of the eye, I should say that the rosiest expectations of these thrifty farmers are more than likely to be realized. They are quite interested in raising thoroughbred stock and poultry, too, on a small scale.



Jersey Sire Owned by C. S. Cottrell.

AMSCO TRACTOR DRILL
AMERICAN SEEDING MACHINE

The Oliver No. 7 Plow
An Oliver Plow for every farming need also has been designed for the Fordson.

Roderick Lean Automatic Disc Harrow
Built in seven foot size. Other sizes are also made for special conditions. Complete line of specialized tractor spike tooth, spring tooth and orchard harrows.

Proper Seeding Assures Profitable Harvests

Every farmer wants a good stand of grain everywhere in his field. He knows that a spotted field means a poor yield. The most vigorous seed in the best seed bed will not yield a maximum harvest unless the seed is properly put into the ground. With the Amsco Tractor Drill, built especially for use with the Fordson, uniformly correct seeding and even growth are assured for wheat, oats, rye, barley, rice, peas, beans, etc.

Thousands of farmers in every section of the country are using the Amsco Tractor Drill with the Fordson and are reaping the greater harvests resulting from better seed-

ing. You, too, can have this same assurance of larger profits which comes with the use of a properly designed Fordson implement.

Then too there are Oliver Plows and Roderick Lean Automatic Disc Harrows especially built for Fordson farming. All of these implements are easily controlled by the operator from the tractor seat.

There is a farm tool especially designed for use with the Fordson to cover every farming need. This constitutes "Farming the Fordson Way."

See the Fordson Dealer in your town.

Distributors of These Implements

Hubbell Auto Sales Co., Saginaw, Mich.

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POWER FARMING BRINGS THE GREATEST PROFIT

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If You Want to Save \$200 or \$300

on your corn crop this year you will write for this big valuable book on Martin Steel Crib. It gives surprising facts about the enormous amount of expensive corn that is annually wasted by rats, fire, mould and thieves. It tells how other farmers are stopping their corn losses and saving money. Find out today about these modern Ratproof—Fireproof—Weatherproof

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Just fill out the coupon and get this valuable book now, and we will show you how a Martin Crib will pay for itself on your farm in a short time. If you want to make more money out of your corn crop than you have ever made before, you will sit right down and send in that coupon now. Don't wait until it is too late. Remember, the book is free and postpaid.

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I am interested in a corn crib holding about.....bushels.

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Separating Vetch from Wheat Rye or Oats

The Sinclair Scott Co.
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Hoosier WOOD SILO

Yellow Pine or Oregon Fir, with or without hinged doors. Best Anchoring system on the market. We can furnish complete silos in Pine up to 24 feet long. Fir up to 32 feet long. Prompt shipment from stock.

Steel Roofs, Chutes, and Paints

Complete line of steel roofs and chutes for silos. Paints for all kinds of farm buildings at money-saving prices direct from manufacturer to buyer. Write for prices and special agents' proposition.

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

Wildwood Farms Angus

Effies Lass 238203 sold on May 6th for \$7100. She was sired by Black Monarch 3rd. We are offering for sale Editor of Wildwood 295059 a full brother in blood lines to Effies Lass also four more choice bulls which are old enough for service and sired also by the champion show and breeding bull Black Monarch 3rd.

Our herd is under State and Federal Supervision.

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Imported Herd Bulls
ELCHO OF HARVESTOUN (45547)
by Jason of Ballindalloch (38048)
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by Escort of Harvestoun (36006)
Woodcote Stock Farm, Ionia, Mich.

A Two Yr. Old

heifer produced 30 lbs. more B. F. and less cost in 1 yr. than her dam through use of a pure bred Guernsey sire. For sale: A 2½ yr. old son of Imp. Golden Noble V 14834. Dam, Aldata an A. R. cow.

DeLEON SMITH,
Jonesville, Mich.

Three registered Guernsey bull calves, May Rose breeding, closely related to Spottswood Daisy Pearl, Dolly Dimples, Langwater Nancy, Langwater Hope, Langwater Daisy and imported Itchen Daisy 3rd, cows that have the higher milk and butter fat production of the breed. Calves sired by Albany's King of Anna Dean Farm; his grand dam Spottswood Daisy Pearl. Alec Harper, Edward Lowe, Robinson Rd. Grand Rapids, Mich.

SPRING DELL FARM GUERNSEYS
For sale: Choice of two bulls two and three years old; also bull calves three to twelve months. Registered. Splendid individuals and breeding. Prices right.
WHITE BROTHERS, R. 2, Box 20, La Porte, Indiana.

Guernsey Bulls. Two nearly ready for light service. An opportunity to get the high producing "Golden Secret" strain for a snap. Excellent individuals, growthy, and perfectly marked. Will sell anywhere in Michigan for \$75 each. P. S. Myers & Son, Grand Blanc, Mich.

Pure bred Guernsey bulls from one to four weeks old. Registered \$30, not registered \$25. Orders shipped in rotation received. No excuse for scrub bulls.
WALTER PHIPPS FARM, 80 Alfred St. Detroit, Geo. E. Currie, Mgr.

For Sale: Guernsey bulls from 3 months to 6 months old. Their sire is DOTTIE'S PRINCE No. 44996; his dam has an official yearly record of 647 lbs. butter fat.
L. J. BYERS, Coldwater, Mich.

For Sale Registered Guernsey bulls, May Rose breeding cheap if taken soon. Come or write. John Ebels R. 2 Holland, Michigan.

Registered Guernseys a very fine show calf, this bull calf is out of a cow milking 40 lbs. a day, the price will surprise you, better get his pedigree.
J. M. WILLIAMS, North Adams, Mich.

GUERNSEY BULL CALVES whose sire's dam made 19,460.20 milk, 909.05 fat. Their mother's sire's dam made 15,108.10 milk, 778.80 fat.
T. V. HICKS, Battle Creek, Mich.

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



Stock the Farm with Purebred Holstein Cattle

In spite of the increasing cost of feeding, dairying offers you a better opening today than it ever has in the past.

The scales and the Babcock test have systematized the industry until it is no more uncertain than any other business. Even city business men are awakening to its opportunities. Every year it becomes clearer that with large-yield cows, the cost of milk and butter production can be brought down to a point that makes dairying profitable. Have you ever figured out what your farm would be worth to you, if stocked with purebred Holsteins?

Send for free Illustrated Booklets.

THE HOLSTEIN-FRIESIAN ASSOCIATION
164 Hudson Street
Bartlettboro Vermont.

O. I. C. SOWS FOR SALE

One of the Best Herds in Michigan
Young sows due to farrow in September. Spring boars ready for shipment. Choice individuals of BIG TYPE breeding. I ship C. O. D. pay express and register in buyer's name.
J. CARL JEWETT, R. 5, Mason, Michigan.

May Echo Sylvia Bull calf. 2 crosses to May Echo Sylvia, and 3 crosses to King of the Pontiacs, Dam a 2 yr. old daughter of a 29 lb. cow, 6 of his nearest tested dams average 34.49 lb. of butter and 759 milk.
C. H. GIDDINGS, Gobleville, Mich.

LONG DISTANCE HOLSTEIN HERD
(Prince Ona) 23655 Five dams av 1186 lbs. butter and 24771 lbs. milk in 1 yr. Only 1 good bull calf left, born Nov. 18th '19, dam untested, \$100. State and Federal supv.—a clean herd. A. FLEMING, Lake, Mich.

OUR HERD SIRE Model King Segis Glista

By a 30 lb. son of Lakeside King Segis Alban De Kol. His dam Glista Fenelle 32.37 lbs. Her dam Glista Ernestine 35.96 lbs. His three nearest dams average over 38 lbs and his forty-six nearest tested relatives average over 30 lbs. of butter in seven days. Write for prices on his sons.

Grand River Stock Farms
Cory J. Spencer, Owner Eaton Rapids, Mich.

-WinnWood Herd-

Flint Maplecrest Boy No. 166974
Has Made Good

one of his SONS will raise your herd to a higher standard and better production we have them for sale at moderate prices.

A Few Females For Sale

—OUR JUNIOR HERD SIRE—

Sir Ormsby Skylark Burke No. 264966
A brother to the world champion cow over all breeds.

DUCHESSE SKYLARK ORMSBY
Michigan's best bred Ormsby bull.
Better get on the list for one of his sons out of a daughter of Flint Maplecrest Boy.

JOHN H. WINN, (Inc.)
Roscommon, Michigan

"TOP NOTCH"

HOLSTEINS
McPHERSON FARMS COMPANY
has raised many great milk cows—

1	"	"	842 lbs. milk in 7 days
1	"	"	3394 lbs. milk in 30 days
1	"	"	120 lbs. milk in 1 day
1	"	"	811 lbs. milk in 7 days
1	"	"	over 1000 lbs. milk in 100 days
1	"	"	405 lbs. milk in 1 day
1	"	"	696 lbs. milk in 7 days
1	"	"	2669 lbs. milk in 30 days
1	"	"	100 lbs. milk in 1 day
1	"	"	20854 lbs. milk in 1 year
1	"	"	100 lbs. milk in 1 day
1	"	"	659 lbs. milk in 7 days
1	"	"	18675 lbs. milk in 1 year

Others under test are making large milk records
A fine lot of young bulls from 3 months to 2 years old for sale. Get a "milk" bull, and increase milk production in your herd.

Our herds are under U. S. supervision.
McPHERSON FARMS CO., Howell, Mich.

31.06 lb. butter 571.46 lb. milk in 7 days, tested dams of 2 mo. old bull. Price \$150. Terms 2/10.
M. L. McLAULIN, Redford, Mich.

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

Registered Holstein cows and heifers due to freshen this fall. Some bred to a 42 lb. bull. Price \$200 to \$400 each.
B. B. REAVEY, Akron, Mich.

HOLSTEIN

BULL CALVES FOR SALE

From dams with good records.
BULL CALVES Sired by 45 lb. BULL.
BULL CALVES Sired by 34 lb. BULL.
BULL CALVES Sired by 33 lb. BULL.
PRICES VERY REASONABLE.
Privilege of return if not satisfied.

A. W. COPLAND,
Birmingham, Michigan.
Herd under State and Federal Supervision.

CLUNY STOCK FARM

A Semi-Official Bred Bull to Head
Your Herd
Maplecrest Application Pontiac No. 132652, heads
Our Herd

His dam's record is 1344.3 lbs. butter 23,421.2 lbs. milk in 365 days, and 35,103 lbs. butter and 515.6 lbs. milk in 7 days.

One of his sons from our good record dams will carry these great blood lines into Your Herd.
For Pedigrees and Prices write to
R. Bruce McPherson, Howell, Mich.

Holsteins of Quality

for sale. Heifers from 8 to 24 months old. All registered and sold subject to tuberculin test.
E. A. HARDY, Rochester, Mich.

The Traverse Herd

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

TRAVERSE CITY STATE HOSPITAL
Traverse City, Mich.

For Sale 1 Reg. Holstein bull calf, born Dec. 2, 1919, price \$300.00. Satisfaction guaranteed.
Write to LOUIS LIETAERT, Tower, Mich.

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

Increase the Efficiency of your DAIRY HERD

by using a
Registered Holstein Sire

We have bulls of all ages listed at reasonable prices.
Also grade and pure-bred cows and heifers.

Michigan Holstein-Friesian Asso.
Old State Block,
Lansing, Mich.

BARGAIN PRICES

on pure bred Holstein heifers and young bulls ready for service.
JOSEPH H. BREWER, Grand Rapids, Michigan

HEREFORDS

20 Cows and Heifers of popular breeding for sale also bulls not related.

ALLEN BROS.
PAW PAW, MICHIGAN

HEREFORDS

D. S. Polled Herefords
Herd headed by Renner Bullion, \$15933. (18242) son of grand champion Bullion 4th.

For Sale—A few good polled and horned cows bred to this great bull. Also three fine bull calves not related to him. Correspondence solicited.

Cole & Gardner, Hudson, Mich.

Herefords. Just purchased 3 new herds, now have 150 head, we offer you anything desired either sex, horned or polled, any age. Priced reasonable.
THE McCARTYS, Bad Axe, Mich.

Herefords: 4 Reg. bulls 5 to 8 mo. old. Prices reasonable for quick sale visitors welcome.
Reed Schultz, R. 3, Homer, Mich.

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

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

For Sale Jersey bull calves of Majesty breeding from good producing stock. Herd on Government "Accredited List." Write for price and pedigree to C. A. TAGGETT, R. 2, Fairgrove, Mich.

LILLIE Farmstead Jerseys—A few heifers bred to L freshen soon, heifers bred to freshen next fall, 3 cows, R. of M. bull calves. C. C. Lillie, Coopersville, Mich.

Jerseys For Sale. Register of Merit Smith and Parker, Howell, Michigan.

For Sale. Jersey bull ready for service sired by Flying Fox's Gay Lad. Dam record 472.5 lbs. butter 9875 lbs. milk.
Notten Farm, Grass Lake, Mich.

BIDWELL SHORTHORNS

You Can Buy

a bull that will put weights on your dairy calves—the difference will soon pay for the bull. Now selling good Scotch and Scotch-topped yearlings, reasonably priced. A roan, senior yearling, a Missie of Villager breeding, a herd bull prospect, Federal Test.

BIDWELL STOCK FARM,
Box D, Tecumseh, Michigan

We Now Have

a number of choice bred Scotch females of any age for sale also three bulls from 6 to 18 months old. Visit our herd before buying. Sold 5 calves for \$5400.
CARR BROS., & CO., Bad Axe, Mich.

Richland Stock Farms

Home of the Michigan Champions.
Shorthorn Sires in Service:

IMP. Lorne, IMP. Newton Champion, Sterling Supreme. Why not buy a young bull to head your herd that carries the blood that is making Shorthorn History. Only a few real headers left. Write your wants.

C. H. PRESCOTT & SONS, Tawas City, Mich.

Shorthorns New list 39 bulls, 49 females. Central Mich. Shorthorn Assn. write OSCAR SKINNER, Sec., Gowen, Mich.

Shorthorns Scotch and Scotch Topped bulls and heifers priced right. Sultan Champion heads herd, one Scotch two yr. old herd bull by Red Cumberland priced right.
H. J. FLOWER & SON, Milo, Mich.

St. Joseph Valley Shorthorn Ass'n has for sale males and females of all ages and best breeding.
AARON HAGENBUCH, Sec-treas. Three Rivers, Mich.

Milking SHORTHORNS. Clay bred bull calves Herd under Federal Supervision.
Davidson & Hall, Beland & Beland, Tecumseh, Mich.

Shorthorns Good Scotch bred bulls, cows and heifers priced right.
W. B. McQUILLAN, R. 4 Howell, Mich.

MEADOW HILLS Shorthorns. Herd headed by Silver King, full brother of Lavender Sultan Purdue University's great sire. For sale females of all ages, a few young bulls. Geo. D. Doster, Doster, Mich.

Milking Shorthorns of best Bates breeding, bulls 8 to 8 mo. old for sale.
E. H. KURTZ, Mason, Mich.

Shorthorns of Merit Both males and females for sale. ARTHUR DODDS, Lapeer, Michigan

Shorthorn Bulls Eight to ten months old of Scotch and Scotch Topped breeding. Lawrence F. Otto, Charlotte, Mich.

Reg. Red Polled cattle choice young bulls from 6 to 18 mo. old for sale.
FRANK KEBLER, R. 1, Grand Ledge, Mich.

Steers For Sale Several bunches of good stockers and feeders weighing from 650 to 1050 lbs. Each bunch even in size and color write at once stating your wants.
W. W. DYER, Ottumwa, Iowa

HOGS

Berkshires size with quality is our specialty. Write your wants to
M. G. MOSHER & SONS, Osseo, Mich.

Registered Berkshires, Gilts, and Sows bred for April May and June farrow. A yearling Boar and a few younger Spring pigs. Chase Stock Farm, Marlette, Mich.



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

Duroc sows and gilts bred to Walt's King 29499, who has sired more 1st and 2nd prize pigs at the State Fair in last 2 years than any other Duroc boar. Everyone will be a money maker for the buyer. Cat. and price list.
NEWTON BARNHART, St. Johns, Mich.

Thos. Underhill & Son,
Salem, Mich. Breeders of Reg. Duroc Jersey swine. Watch for our sale adv. in Mich. Farmer, July 24 issue, of bred sows, bred gilts, open gilts and boars.

OAKWOOD FARM DUROCS

We can furnish you with anything from a weanling pig to a boar of herd heading caliber at reasonable prices. Your inspection and correspondence is solicited.
RUSH BROS., Romeo, Mich.

12 Choice Duroc gilts bred to farrow July and August. Daughters of Michigan Cherry Col. bred to Jacks Cherry Oriob King Number 169259. Son of the \$10,000.00 champion Jacks Orion King 2nd. All large type, heavy bone gilts, 250 to 300 lbs.
THE JENNINGS FARMS, R. 1, Bailey, Mich.

MICHIGANA FARM DUROCS

Breeding Stock For Sale
O. F. FOSTER, Mgr., Pavilion, Mich.

Durocs A few very choice Feb. pigs, either sex, males large enough for service, very long and big bone, \$25 to \$30. Am booking orders for June and July pigs for \$10 to \$15. Satisfaction or money back.
B. E. KIES, Hillsdale, Mich.

Duroc Jerseys of the right type, good blood at a price you can afford to pay. Guaranteed to suit you. W. E. Bartley, Alma, Mich.

DUROC JERSEYS
E. D. HEYDENBERG, Wayland, Mich.

Am Selling Durocs August 4th. Send for catalog.
W. C. TAYLOR, Milan, Mich.

The World's Champion

big type O.I.C's. Stock of all ages for sale. Herd headed by Calloway Edd, the World's Champion O. I. C. boar assisted by C. C. Schoolmaster, Grand Champion boar of Michigan, New York and Tennessee state fairs. Also, C. C. Giant Buster, undefeated Senior boar pig wherever shown and Grand Champion of Oklahoma state fair. Get our catalogue of Crandell's prize hogs. Cass City, Mich.

CHESTERS two good fall gilts bred to a boar of Wildwood Prince Jr. breeding for Sept. farrow; spring pigs
F. W. ALEXANDER, Vassar, Mich.



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

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

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

O. I. C's. One Sept. boar. March farrowed pigs of either sex.
C. J. THOMPSON, Rockford, Mich.

O. I. C's A few choice late fall and winter boars, also a fine two year old boar.
WEBER BROS., R. No. 2, Royal Oak, Mich.

O. I. C. Gilts bred for July and Aug. farrow. Also spring farrowed pigs.
G. P. ANDREWS, Dansville, Mich.

O. I. C. Gilts bred for Sept. farrow and spring pigs.
F. O. BURGESS, R. 3, Mason, Mich.

O. I. C's Eight young boars and spring pigs for June shipment.
CLOVER LEAF STOCK FARM, Monroe, Mich.

O. I. C's Booking orders for spring pigs, we register free and ship C. O. D.
A. J. BARKER & SON, Belmont, Mich.

O. I. C's Spring pigs ready for shipment. Splendid stock. I ship C. O. D. pay express and register in buyers name.
CHAS. KING, Melvin, Mich.



**Keep
your
hogs
free
from
lice**

Keep their sleeping quarters, the feeding grounds, pure and healthful. Use the sprinkling can. Add four tablespoonfuls of Dr. Hess Dip and Disinfectant to each gallon of water. Sprinkle the animal body to kill the lice, the sleeping quarters and feeding grounds to destroy the disease germs. Or provide a wallow, to which add about one gallon D and D to every 70 gallons of water. Disinfect the barns, the poultry house.

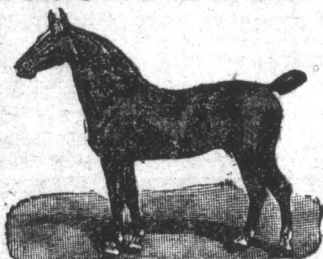
Also use it about the home, in the sick room, sink and cesspools, to establish better health conditions.

DR. HESS & CLARK Ashland, Ohio

DR. HESS DIP
and
DISINFECTANT

Warranted to Give Satisfaction

Gombault's Caustic Balsam



Has Imitators But No Competitors

A Safe, Speedy, Positive Remedy for

Curb, Splint, Sweeney, Capped Heck, Strained Tendons, Founder, Wind Puffs and Lameness from Spavin, Ringbone and other bony tumors. Cures skin diseases or Parasites, Thrush, Diphtheria. Removes Bunches from Horses or Cattle.

As a Humane Liniment and Antiseptic for external use it is invaluable.

Every bottle of Caustic Balsam sold is warranted to give satisfaction. Price \$1.75 per bottle. Sold by druggists, or sent by parcel post, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address The Lawrence-Williams Co., Cleveland, O.

MINERAL HEAVE COMPOUND
CURES HEAVES
Booklet Free
\$2.25 Box guaranteed to give satisfaction or money back.
\$1.10 Box Sufficient for ordinary cases. (Includes War Tax.)
MINERAL HEAVE REMEDY CO., 403 Fourth Ave., Pittsburgh, Pa.

POTATO BAGS Sound and free from holes. Sold direct to growers at wholesale prices. WRITE LINCOLN BAG CO., Dept. D, Springfield, Ill.

SHEEP.

Put Your Faith

in better breeding stock. For the best in Shropshire and Hampshire Rams write or visit KOPEKON FARMS, S. L. Wing, Propr. Coldwater, Mich. See our exhibit at the Ohio and Mich. State Fairs.

Idle Wild Stock Farms Shropshire yearling rams from prize winning stock. Make your selection early. Cliff Middleton, Proprietor. Clayton, Mich. R. 2.

SHROPSHIRE Yearling and Lamb Rams sired by Imp. Kerry No. 163 for sale. Also a few ewes. ARTHUR DODDS, Lapeer, Michigan

Want a Sheep? Let American Hampshire Sheep Association send you dandy booklet with list of breeders. Write COMFORT A. TYLER, 22 Woodland Ave., Detroit, Mich.

Wool-Mutton Shropshire Rams. Good strong individuals, royally bred, priced right. A. H. FOSTER, Allegan, Mich.

Cotswolds yearling rams, ram lambs, Cotswolds ewes all ages sired by Cans. A. M. BORTEL, Britton, Mich.

Reg. Oxford Rams ready to ship at \$30, \$35 and \$40, rog. and delivered. J. Robert Hicks, St. Johns, Mich.

M. D. Lynch, an enterprising farmer and also a member of the executive committee of the Tuscola Farm Bureau, owns and operates a fine farm of one hundred and twenty acres west and north of Silverwood. The farm is improved, excepting fifteen acres of beech and maple timber, and this year there are twenty acres to white wheat, nine acres of "Wisconsin 6" barley, fifteen acres of "College Success" pedigree oats, twenty-three acres of corn, twenty to clover and seven of potatoes. There is also a good orchard which promises very well this season. Mr. Lynch does not pasture any stock but has two silos which he fills and feeds out during the winter.

THINK RATE TOO HIGH.

DECLARING unfair certain rates charged by Chicago commission men on cooperative shipments of live stock, Secretary of Agriculture Meredith has evoked the powers of the Food Control Act to fix other rates to become effective August 16, it was announced at the Department of Agriculture. Action was taken as a result of a hearing held in Chicago on April 12-13, at which seven commission firms operating under federal licenses appeared in answer to a complaint filed with the department by the American Society of Equity.

In its complaint the society charged that as a result of action by the Chicago Live Stock Exchange members were required to charge a different and higher rate on live stock in carlots having more than one owner. The difference between the rates for single and plural ownership, it was complained, was unreasonable and discriminatory in that it was laid for the purpose of discouraging cooperative marketing of live stock by farm organizations.

Secretary Meredith's action was in the form of a notice to the commission men that the present rates must be discontinued and that the following schedule of rates would be allowed for carlots having more than one owner in addition to the rate for a carlot having a single owner:

For more than one and not more than ten owners, \$2.00.

For more than ten but not more than twenty owners, \$3.00.

For more than twenty owners, \$3.50; provided that in no case shall any one owner of such carlot pay a higher rate than the maximum charge for a car having a single owner.

The order, it was pointed out, is not directed at the Chicago Live Stock Exchange, but at the commission firms themselves, because being under federal license they are subject to regulation under the Food Control Act which is still in force. President Wilson, by proclamation, June 18, 1918, required commission men to take out federal licenses and later prescribed regulations for conducting their businesses. These licenses and regulations are still in force, it was said.

"I find," Secretary Meredith said in his order, "that the difference in the commission rates charged for selling a single ownership car and a plural ownership car should be the actual cost of the additional weighing and accounting required in the case of a plural ownership car. I find that you have been following a schedule of commission rates which permits, and that you have been exacting, a maximum charge of \$7.00 in the case of cattle and calves, \$5.00 in the case of hogs, and \$6.00 in the case of sheep and goats, more for a car lot of live stock having more than one owner than for a like car lot of live stock having a single owner, and that the amount of the charge is determined by the number of live stock in the car rather than by the number of owners. I find that both these charges and the method of determining the amount of the same are unjust, unreasonable, discriminatory and unfair."



ECLIPSE

**38 years
old-still
pumping**

ECLIPSE WINDMILLS erected 38 years ago are still pumping water, with no repair bills. A reliable water supply year after year at a cost of \$1.65 a year figured on a 38-year service basis.

The ECLIPSE WOOD WINDMILL has been sold for 50 years, always giving wonderful service. It is sensitive to light breezes—practically storm-proof. Requires only occasional oiling—has direct stroke—no gears—but little friction—noiseless. See your dealer and have him prove these claims to you.

Fairbanks, Morse & Co.
MANUFACTURERS CHICAGO

Brookwater Duroc Jerseys

FOR SALE

Bred Gifts of Choice Breeding

A few good ones left. This is your opportunity to buy at **ROCK BOTTOM PRICES**

—also—

READY FOR SERVICE BOAR

Brookwater Durocs are the real pork producers and the best bred hogs in Michigan.

COME TO FARM OR WRITE—MAIL ORDERS A SPECIALTY

BROOKWATER FARM
ANN ARBOR, MICH.

H. W. Mumford, Owner, J. B. Andrews, Mgr.

O. I. O's 51 last fall boars and 15 last fall gilts bred for fall farrow. Weight 230 to 325 lbs. extra good stock. Also this spring's pigs not akin, 1/4 mile west of depot. Citizens phone 124. Otto B. Schuiz, Nashville, Mich.

MILLER Meadow's L. T. P. C. boars all sold. Gilts raised by General Jones and bred to our young boar Alaska, address CLYDE WEAVER, Ceresco, Mich.

FOR SALE Registered Big Type Poland China gilts bred for Sept. farrow, weighing 225 lbs. for \$50, spring pigs all sold, guaranteed satisfaction. DORUS HOVER, Akron, Mich.

L. S. P. C.

One 400 lb. sow and 7 pigs by side, price \$100.00. One 275 lb. gilt and 6 pigs by side, price \$85.00. Two choice boars.

H. O. SWARTZ, Schoolcraft, Mich.

Big Type Poland Chinas

Our herd is representative of the best in Big Types. Choice boars for sale now. Wesley Hile, R. 6, Ionia, Mich.

Bred Sow Sale at Fairgrounds
August 5th. Carey U. Edmonds, Hastings, Mich.

Big Type P. C. Bred gilts, Fall yearlings, prize winners, out 1100 lb. sire and mammoth sows from Iowa's greatest herds. E. J. Mathewson, Burr Oak, Mich.

Big Bob Mastodon pigs takes the cake, book your order now. Fall boars and gilts sired by a grandson of Disher Giant, open or bred to Big Bob for Sept. 23 yearling sons. C. E. GARNANT, Eaton Rapids, Mich.

Big Type Poland Chinas with quality, at reasonable prices. Pigs of both sex, and bred sows and gilts. G. A. BAUMGARDNER, R. 2, Middleville, Mich.

Big Type Poland Chinas all sold out. Watch this ad for further announcements. Breeding stock for sale in season. L. L. CHAMBERLAIN, Marcellus, Mich.

I am offering Large Type Poland China Sows, bred to F's Orange, at reasonable prices; also fall pigs. Write or call Clyde Fisher, St. Louis, Mich. R. R. 3.

Lindhurst Poland Chinas

Stock for sale at all times. Public Sale Oct. 23. WM. H. LIND, Aito, Mich.

POLAND CHINAS

W. J. HAGELSHAW, Augusta, Mich.

LARGE TYPE P. C. SWINE. One yearling boar, one fall yearling boar, fall pigs, a few more bred sows. B. W. Mills, Saline, Mich.

Poland China Brood Sows Bred for May and June farrow, \$50.00. Maplewood Stock Farm, Allegan, Mich.

Leonards B. T. P. C. See exhibit at Mich. State Fair. Let your name on mailing list for public sale Oct. 23. Double immune. E. R. Leonard, St. Louis, Mich. R. 3.

B. T. Poland China pigs ready for shipment sired by Orange Buster. White Points Club. Joseph L. Hickey, sales mgr., R. 3, Vermontville, Mich.

Large Type Poland Chinas nothing for sale at present. Spring pigs doing fine. A. A. FELDKAMP, R. 2, Manchester, Mich.

HAMPSHIRE

1914 1920

Choice Spring boars, popular breeding. Booking orders for fall pigs. All stock Cholera Immuned and guaranteed breeders. Satisfaction guaranteed.

STEUBEN'S HAMPSHIRE FARM
R. 3, Angola, Ind.

Edgewood Hampshires

All bred gilts sold. Now booking orders for gilts bred for fall farrow, and pigs for pig club work only. Depew Head, Edgewood Farm, Marion, Ohio.

Hampshires get your boar pigs, now a few bred gilts left new blood lines of quality. JOHN W. SYNDER, R. 4, St. Johns, Mich.

YORKSHIRES BRED GILTS
WATERMAN & WATERMAN
Packard Rd. Ann Arbor, Mich.

HORSES

For Sale or Trade

We are closing out our registered Percherons, and offer for sale or trade for anything I can use one registered stud-colt three year old also a yearling from ton sire and 1900 lb. dams. J. C. BUTLER, Portland, Mich.

BAY MARE

For Sale, sound and right in every way, weight about 950 lbs. Must be sold at once cause I can use one registered stud-colt three year old also a yearling from ton sire and 1900 lb. dams. J. C. BUTLER, Portland, Mich.

Percheron Stallions and mares at reasonable prices; inspection invited. F. L. KING & SON, Charlotte, Mich.

Latest Market Reports

GRAIN QUOTATIONS

August 17, 1920.

Wheat.

Detroit.—Cash No. 1 red \$2.54; December \$2.40; March \$2.42; No. 1 white and No. 1 mixed \$2.52.

Chicago.—No. 2 red \$2.54@2.55; No. 2 hard \$2.52½@2.55½; December \$2.38½; March \$2.40½.

Corn.

Detroit.—Cash No. 2 mixed \$1.65; No. 2 yellow \$1.70.

Chicago.—No. 2 mixed \$1.58½; No. 2 yellow \$1.61½.

Oats.

Detroit Cash No. 2 white old 99c; No. 3 white old 98c; No. 4 white old 97c; No. 2 white new 81c.

Chicago.—No. 2 white 72½@73½c; No. 3 white 69½@72½c.

Rye.

Detroit.—Cash No. 2 \$2.05.

Chicago.—Cash No. 2 \$2.01@2.02.

Beans.

Detroit.—Immediate and prompt at \$6.25 per cwt.

Chicago.—Hand-picked choice to fancy \$6.50@7.

New York.—Choice pea \$7.75.

Seeds.

Detroit.—Prime red clover, spot, October and December \$19.25; alsike at \$19.50; timothy \$4.70.

Toledo.—Prime cash and October at \$18.90; December \$18.75; alsike \$19; timothy \$4.50.

WHEAT

Recent estimates of the import wheat needs of the world run about 600,000,000 bushels. Export surpluses are suggested as follows, in millions of bushels: United States 210; Canada 160; Argentina 100; Australia and India 130; East Europe 50, making a total of 650,000,000 bushels. The Canadian crop estimate issued during the week was far above expectations. Kansas, Nebraska and Oklahoma have a wheat crop of about 215,000,000 bushels which is pressing upon the market, and the spring wheat states will be ready to ship soon. The movement since July 1, however, is only about two-thirds as large as last year. Foreigners are buying, boats not being available to move the supply fast enough from Galveston. Flour buyers were disposed to purchase upon the recent break, but withdrew when the market rallied.

CORN

Diversion of cars to haul the southwestern wheat crop has contributed to the reduction of corn receipts and will give strength to the cash market during the next few months. The corn crop of Missouri, Kansas, Texas and Oklahoma is near a record, which means that the southern demand can be satisfied nearer home than usual. The Argentine surplus is unusually large, and estimated at 237,000,000 bushels. The method of disposing of it is of great interest to American growers.

OATS

The oat crop estimate is practically equal to the normal consumption, including export during recent years. During the last few years the fall export demand has been very large but that factor in the trade is said to be absent this year. Thus far the new crop is not arriving at terminals very rapidly, but it is not probable that prices have yet found bottom.

SEEDS

Big declines in prices of clover seed have taken place during the summer. The crop outlook is excellent both in this country and in France from which we usually import. The high prices of the last year or two, together with the abundance of forage is expected to result in all promising acreage being left for seed. Timothy is an export product and foreign needs are large, but foreign exchanges punishes the buyer. Toledo quotes cash prime red clover at \$19.50 per cwt and timothy at \$4.50 @6.50.

FEEDS

Millfeeds are following the course of the wheat market for the most part. Slight gains were made last week. Prices may not yet have seen bottom for the season but there is no reason for thinking they will go much below recent quotations. Chicago prices per ton on carlots in 100-lb. bags are: Bran \$43@43.50; standard middlings \$53.50 @54.50; flour middlings \$61@62; red dog \$71; old process oil meal \$65; cottonseed meal \$63@64.

BUTTER

A considerable improvement both as to prices and general tone was evident last week on the various butter markets. Buyers began to take on large lots late last week as soon as the market looked right for an advance, and trade was fairly satisfactory. The Danish in storage at New York of course, was offered at the first advance, showing a profit and this acted as a check. No new orders of foreign butter were reported placed, however, as the price of offerings is not attractive in view of our lower market and higher prices ruling at Copenhagen and other foreign butter markets. A further shrinkage in make is looked for this week, but a considerable quantity of cream which formerly went to cheese factories is now finding an outlet in butter-making, due to low returns possible at present cheese prices. The close was steady. Closing prices on 92 score butter on the four markets Monday were as follows: Chicago 54½c; New York 55½c; Boston 56½c; Philadelphia 58½c per pound.

CHEESE

The lack of buying interest in a real wholesale way again characterized the cheese markets at the four principal distributing points the past week. Speculative demand seemed to be entirely lacking and buyers were content to purchase small lots for consumptive demand only. However, receipts were light and the small demand seemed to be sufficient to keep dealers' floors fairly well cleaned with cheese showing good quality going into storage. The market in Chicago ruled quite firm and considerable confidence was shown in all quarters while eastern markets remained about steady throughout the week. The U. S. Bureau of Markets quotes the market on August 14 for No. 1 American cheese:

DETROIT

Cattle.

Market slow but steady.

Best heavy steers	\$12.00@13.00
Best handy wt bu steers	9.50@10.50
Mixed steers and heifers	7.50@8.50
Handy light butchers	6.50@7.25
Light butchers	5.75@6.25
Best cows	8.00@8.25
Butcher cows	6.00@7.00
Cutters	4.75@5.00
Canners	4.00@4.50
Choice bulls	7.00@7.50
Bologna bulls	6.0@6.75
Stock bulls	5.50@5.75
Feeders	8.00@9.00
Stockers	6.00@8.00
Milkers and springers	\$ 70@ 140

Veal Calves.

Receipts 376. Market steady.

Best	\$17.00@18.00
Others	7.00@14.00

Hogs.

Market dull.

Mixed	\$15.75@16.00
Heavy	15.75
Pigs	15.50
Rough	12.00@13.00
Stags	10.00

Sheep and Lambs.

Market dull.

Best lambs	\$11.50@12.00
Fair lambs	9.50@11.00
Light to common	7.00@8.00
Fair to good sheep	7.00@8.50
Culls	2.00@4.00

CHICAGO

Hogs.

Estimated receipts today are 15,000; holdover 11,408. Market 10@20c lower than yesterday's average. Bulk of sales \$14.25@15.85; tops \$16; heavy 250 lbs up medium, good and choice \$14.50@15.65; medium 200 to 250 lbs, medium, good and choice \$15@15.90; light 150 to 200 lbs common, medium, good and choice \$15.25@15.90; light lights 130 to 150 lbs common, medium, good and choice at \$15@15.75; heavy packing sows 250 lbs up smooth \$14.20 @14.50; packing sows 200 lbs up rough \$13.75@14.20; pigs 130 lbs down, medium, good and choice \$13.75@15.35.

Cattle.

Estimated receipts today are 7,000. Market very slow on beef and butcher cattle; stockers firm; calves weak. Beef steers medium and heavy weight 1100 lbs up choice and prime \$16.25@17.50; do medium and good \$12.25@16.25; do common at \$10@12.25; light weight 1100 lbs down good and choice \$14.50@17.25; do common and medium

Chicago—Flats 24@25c; twins 24@24½c; single daisies 24@24½c! Young Americas 26@27c; longhorns 25@26c; square prints 25@25½c.

Philadelphia—Flats 27@28c; single daisies 26½@27½c; longhorns 26½@27½c.

WOOL

Wool supplies are piled high in the warehouses at big receiving points, and enormous quantities are in transit. Buyers are lying low awaiting developments, but a slight increase in interest was manifested the past week. The woolen goods trade is inactive, sales for fall delivery are not large and the mills are still closed or on reduced schedules. Practically three months have passed since the market collapsed. The reduction in stocks of goods during that interval will counteract some of the bearish sentiment. Quotations are nominal and seem out of line with the occasional published reports of sales.

DETROIT AREA MILK PRICES.

At an adjourned meeting of the Detroit Milk Commission the following prices were agreed upon: For all August milk the price will be \$3.70 for 3.50 per cent milk f. o. b. Detroit, and a price differential of four cents for each point above or below, except that where the test is four per cent or above the differential will be six cents per point. During August milk will retail in Detroit at sixteen cents per quart and nine cents per pint and in bulk will sell at fifty-two cents per gallon. The price to producers for all September milk will be \$4.10 with the same differentials as above and the city price will be sixteen cents per quart, ten cents per pint and fifty-six cents per gallon in bulk.

Live Stock Market Service

\$9@14.25; butcher cattle heifers, common, medium, good and choice \$6@15; cows, common, medium, good and choice \$5@12.50; bulls, bologna and beef \$5.50@11.75; canners and cutters cows and heifers \$4@6.25; do canner steers \$4.50@7; veal calves, light and handyweight medium, good and choice \$14@15; feeder steers common, medium, good and choice \$7.50@12.25; stocker steers common, medium, good and choice \$5.50@10.75; stocker cows and heifers, common, medium, good and choice \$5@9.

Sheep and Lambs.

Estimated receipts today are 34,000. Market mostly 25c lower. Lambs 84 lbs down medium, good, choice and prime \$10.50@13; do culls and common \$7@10; spring lambs, medium, good, choice and prime \$7.55@9.25; ewes, medium, good and choice \$5.50@7.35; ewes, cull and common \$2.50@5; breeding ewes, full mouths to yearlings at \$5.75@10.75; yearling wethers, medium, good and choice \$10.75@12.25.

BUFFALO

Pigs sold here today at \$16.25; medium and heavy at \$15.75@17; lambs \$13; calves \$17.50; cattle are slow.

For Best Net Results

Ship to
CULOTTA & JULL
Detroit, Mich.

"Enough Said"

Eggs

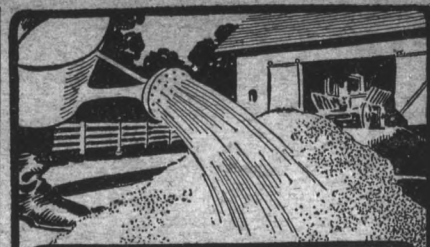
We have a good demand for fancy fresh eggs and will pay you 57c per dozen, delivered Detroit, cases included for express shipment. Strictly new laid eggs shipped direct by farmers. Old, stale or broken eggs will be settled for at what they are worth. This price good for week ending August 28th, 1920. AMERICAN BUTTER & CHEESE COMPANY, Detroit, Mich.

Holmes, Stuve Co., 445 Riopelle St.

Commission Merchants. Dressed Beef, Hogs, calves, Poultry, Live & Dressed, Provisions, etc. Correspondence Solicited. Ref. Wayne County & Home Savings Bank, Bradstreet, Detroit, Mich. Cad. 2878

EGGS, Etc.—Small consignments from producers in your territory bring very attractive prices NOW. Prompt returns always. Refer to Dun or Bradstreet ship us your next case. ZENITH BUTTER & EGG CO., 170 Duane St., New York, N. Y.

HAY Ship to The Old Reliable House Daniel McCaffey's Sons, 623-625 Wabash Bldg., Pittsburg, Pa.



Treat All Seeds

Take no chances. Smut is a common disease which usually decreases the yield of grain as much as 20%. Formaldehyde is endorsed by the U. S. Department of Agriculture as the standard treatment of seed grain, to prevent smuts, fungus growth, potato scab and black-leg.

FORMALDEHYDE
The Farmer's Friend

Insures a full yield because it destroys all forms of smuts and checks all plant diseases known to affect grain crops. Can be used also on the soil. One pint bottle of Formaldehyde—from the Laboratories of the Perth Amboy Chemical Works—treats 40 bushels of seed. New hand-book just issued free.

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but you can clean them off promptly with

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

and you work the horse same time. Does not blister or remove the hair. \$2.50 per bottle, delivered. Will tell you more if you write. Book 4 R free. ABSORBINE, JR., the antiseptic liniment for mankind, reduces Varicose Veins, Ruptured Muscles or Ligaments, Enlarged Glands, Wens, Cysts. Alays pain quickly. Price \$1.25 a bottle at druggists or delivered. Made in the U. S. A. by W. F. YOUNG, INC., 268 Temple St., Springfield, Mass.

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PEERLESS MACHINERY CO.
65-ODDFELLOWS BLOCK
CEDAR FALLS, IOWA

NEWTON'S FOR HORSES, CATTLE, HOGS.

20 YEARS SALE
Cures Coughs, Colds, Distemper, Indigestion, Cures Heaves by correcting the cause—Indigestion. Prevents Colic, Staggers, etc. Best Conditioner and Worm Expeller. Three large cans guaranteed to cure Heaves or money refunded. \$6.50 and \$1.50 per can (includes War Tax). At dealers or mail. Largest packages. Dose is small. Cheapest to use.
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Selections of pure seed of Fultz and Poole varieties for starting high-grade seed crops. We have a limited quantity of very fine seed. Booklet. Samples.
O. C. Shepard Co. Box 62, Medina, O.

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Just what YOU need. Three SURE-SHOT double-Stroke Spark Intensifier. (Complete for 4 cylinders). No glass to break or parts to wear out. Guaranteed for life of car. Makes old of cracked plugs fire like new. Save gasoline and oil. Attached to any Ford in 3 minutes. Thousands of satisfied users. Mailed anywhere upon receipt of \$1. (Canada, \$1.25). We refund your money if not satisfied after 2 weeks use. What's more fair? Order today. Agents wanted.
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GEO. R. ELDRIDGE CO.
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Remember! We guarantee your satisfaction with every shipment

Twenty-dollars Cash Brings You this JIM DANDY MIXER!

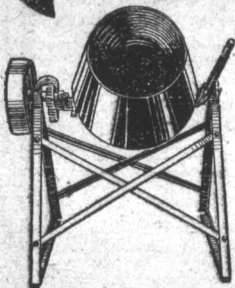
YOU can't afford to mix by the old fashioned, expensive, back-breaking shovel method.

You can't afford to pay three men's wages to do the mixing that one man will do with this Jim Dandy.

You can't afford to be without the quick, cheap and perfectly mixed concrete that the Jim Dandy will give you.

WRITE NOW

Drop us a post card this very minute and we will send you our latest illustrated circular completely describing the four models in which Jim Dandy Mixer is built and give you complete particulars about our special \$20 offer.



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MFG. CO.**

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Farms and Farm Lands For Sale

\$2200 Cash Secures 375-Acre Farm With

Valuable growing crops, 28 cows, 2 horses, calf, bull, machinery, tools, implements, dairy utensils; a heart leading dairy section; 100 acres fields, spring, watered pasture, woodlot, fruit trees, sugar maples; 9-room house, running spring water; big 3-story barn, new garage; affairs must be settled; everything for \$2200, only \$2200 cash balance easy terms. Details page 24. Strout's Big Illustrated Catalog. Bargains 33 States. Copy free. STROUT FARM AGENCY, 814 BC Ford Bldg., Detroit, Mich.

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You can become happy and independent farming in Virginia. You can grow profitably alfalfa and all grasses, corn, fruits, grains, beef and dairy cattle. Virginia boasts the finest apple growing section in the world. Prices very reasonable, but advancing. We welcome you. Write now for illustrated hand book and maps.

G. W. KOINER

State Commissioner of Agriculture, Richmond, Va.

205 ACRES,

25 head of stock, all crops and tools, \$2800 down, 150 acres tractor worked fields, balance pasture and woods, three miles from railroad town, one half mile to macadam road and stores, good eight room house, large basement barn, also horse barn and other out buildings, good fruit and water, everything goes for \$6800. Write for free catalogue of Mints Southern New York Farms. Members Farm Broker's Association. 216 Phelps Bldg., Binghamton, N. Y.

A Farm For The Family Who Know and Care

136 acres productive clay loam, 90 highly improved, 32 timber, balance good pasture, plenty meadow. Fine ten room oak finished house worth half the price of farm, elegant barns, silo, outbuildings. Water in house, to barns. Fine orchard. Complete farm in fine country, near standard school and elegant Lake Resort. Price \$15,000 terms. Get full particulars. Holman Real Estate Agency, Lapeer, Mich.

FOR SALE

Two good small farms in the Village of Ewart, Michigan described as follows: 10 acres and good house and fair garage within city limits house seven rooms and basement, frame, one and one-half stories within one half mile of high school. 20 acres, all cleared, good brick house six rooms, fair small barn, good soil, fine for fruit or chicken farm. Price of ten acres \$1200 with \$700 down. Price of twenty acres \$2000 with \$1200 down. Plenty of work here for laborers. Write W. F. Umphrey, Ewart, Mich.

Modern Home Farm,

100 acres, adjoining Lapeer, elegant 16 room strictly modern house, electric light, hot water heat, complete bath, hardwood natural finish, elegant grounds, abundance fruit. Good barn and outbuildings. First class, clay loam, level land. Elegant country home farm that house would cost price of farm to replace. Price \$150 the acre. Fine place for pure bred stock farm, or dairy. Holman Real Estate Agency, Lapeer, Mich.

For Sale Modern 43 acre farm. Located 4 miles from Whitehall, Mich. Now in operation. Fully equipped with modern machinery fully stocked buildings electric lighted. All but 5 acres in crops now. Will sacrifice to interested party. Anxious to retire reason for wanting to sell. A. E. Dietz, owner, Whitehall, Mich. R. 2.

Farm wanted. About 60 to 80 acre farm; cleared; good soil and fencing; Modern house; good buildings; fruit; near school. Location in Central or southern part of Michigan. Write to C. P. BURLER, 857 W. 63d St., Chicago, Ill.

Please mention the Michigan Farmer when writing to advertisers.

UNUSUAL SPREAD IN CATTLE PRICES.

PRIME steers scored at \$17.50 at Chicago last week, which is high mark for the year. Good steers generally gained 25@50c during the interval but the undesirables are about where they were a week ago. The price spread has not yet stopped widening. Chicago received its first taste of Montana cattle on the week's opening session. Despite feed abundance in the pastoral region they were marketed prematurely.

Good she stock as well as canners, gained 25@40c but medium and lower grades of cows lost about 25c last week. Bulls of beef and bologna varieties advanced 25@50c, the better kinds advancing most. Enlarged receipts at eastern markets, big runs of Texas calves and low prices for calf skins, all figured in the break of 50@75c in the veal division during the closing days of the week. Wholesale prices on veal carcasses are off \$4@6.

FEEDER DEMAND BROADENS.

FEEDER outlet has broadened recently. Iowa inquires but does little, Illinois is buying and Pennsylvania is purchasing earlier than usual. The behavior of this market hinges greatly upon the corn crop. Frosts in Northern Nebraska are reported already. Should the corn crop, now from one to three weeks late, be caught by frost, it would mean a furore in stocker and feeder buying circles. Values are now about the lowest in three years and much further depreciation seems improbable. The supply of well-bred stuff in the market runs is meager.

WHAT A PACKER THINKS ABOUT.

PERIODICAL breaks and rallies within a range of about \$1.00 feature the hog trade. The recent slump which reached low point the middle of last week was due in part to reduced demand at Chicago for shipment to the eastern markets. Receipts were, curtailed slightly by the break and packers started to buy more freely on the lower price scale, turning the tide in the other direction. The inconsistency of packers' action toward values renders interpretation of their motives uncertain, but the belief prevails that they are bent on supporting the market to avoid depreciating values of their storage stocks. During the period when eastern shipper buyers were out of western markets the spread between bacon and packing grades narrowed. A slight advance in lard also helped the lower end of the hog price list. The southwest is selling breeding stock, but its offerings show more finish than in the recent drouth years.

GOOD DRAFT HORSES WANTED MOST.

LOGGERS, wagon horses and southern chunks are reasonably popular kinds of horse flesh at present, but good big drafters are wanted most. Between good ones and blemished, unconditioned sorts a great gulf is fixed. Quotations at Chicago are: Good heavy drafters \$235@275; common and medium drafters \$125@175; good wagon horses \$200@215; farm mares \$125@240.

PROVISION PRICES INDICATE CHEAP HOGS.

PRICES of mess pork are approximately on the basis of \$10 hogs; short ribs on the basis of \$12 hogs, and lard prices would indicate \$14 hogs. If these products were the sole outlet for hog meat the price would be low indeed. Fresh pork demand raises the level materially. Recently cured products have advanced slightly, as we are entering the usual season of big lard sales. Foreign purchases for future shipment are claimed but the amounts are not specified and those who scrutinize the provision market for possible indications of the behavior of the live hog market get little satisfaction. The movement across the Atlantic is only fair, but the sale of crops in Europe is said to be helping foreigners make purchases and their fat stores are depleted. The cotton-picking season, and consequent provision buying, will begin soon in the south. Strength in the provision market will not help growers greatly this year as the spring-born crop of pigs will begin to press upon the market before long.

COMING LIVE STOCK SALES.

Poland-Chinas, Oct. 26, Wesley Hile, Ionia, Mich.
Big Type Poland-China Sale Circuit in Central Michigan, October 26-30.



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The thinking farmer—realizes that his entire holdings are the result of hard labor, long hours, and careful expenditures and that he cannot afford to risk his money on anything that is not safe and sound.

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The Peninsular Fire Insurance Company—The Big Michigan Company—through its large farm department, offers just what thinking farmers want. Full protection with buildings rated according to their location, and all protective improvements carefully considered. That is why the Peninsular Policy is such a sound investment and should be added to your present policy.

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Field of No. 6 Junior Wheat Grown by James N. McBride, Yield 47 Bushels per Acre

Grow Number Six Junior Wheat

A SELECTION from the old Gold Coin or Number 6 White Winter Wheat, grown in Michigan and well adapted to Michigan conditions.

The Hickox-Rumsey Number Six Junior has no equal for purity, quality or high yielding ability. Every field grown for us in Michigan carefully rogued for rye, weeds or mixtures.

A Number Six Junior wheat grower is a Satisfied farmer. He gets results. Yields better than red varieties in many sections.

The Seed Department, Michigan State Farm Bureau will handle in car lots for each county where there is a demand. In small quantities write us

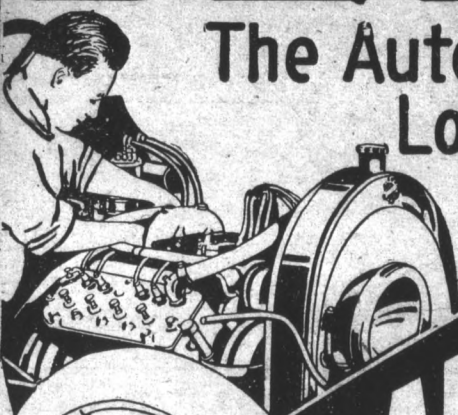
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Head and
Hand

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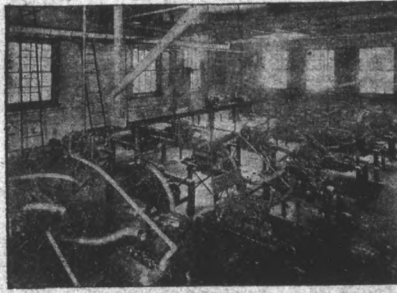
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Factories, service stations, repair shops, garages and tractor farms are calling for men faster than we can supply them. In addition to the handsome salaries and quick advancement offered by employers there is a wide-open opportunity to start a business of your own. Ten million or more automobiles, trucks and tractors throughout the United States and Canada have created a tremendous demand for garages, repair shops and service stations. Thousands of openings in good territory are awaiting you.

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We teach the automobile and tractor business from A to Z. Very thorough and complete training is given in electric, starting, lighting, ignition, wiring, testing, repairing, including batteries, etc. Our equipment and instruction are positively the best. We give actual factory experience in assembling, block testing, bearing scraping, valve grinding, road testing, etc.

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Complete and thorough instruction in the principles, construction and operation of automotive equipment used on the farms. Lighting plants, stationary engines, tractors, their care and repair is part of the M. S. A. S. Regular Course. Tractor Course includes actual work on M. S. A. S. eighteen-acre Tractor Farm. The M. S. A. S. Tractor Farm, located at Detroit city limits, is fully equipped. Here the student gets actual field experience and instruction in addition to the complete course given in classroom and mechanical departments. Our automobile course in connection with tractor course is highly praised by tractor men and manufacturers. Manufacturers of tractors as well as automobiles and trucks, farm lighting plants, etc., have placed their machines with us for the instruction of students.

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Complete training for operating a tire repair shop or for production work in a tire factory. Course includes retreading, vulcanizing, all types of cord tires, etc.

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Oxy-acetylene brazing, welding and cutting—Complete training in structural and repair work.

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There are thousands of openings in good territories. Very little capital is required when you know your business. You can sell cars, tractors and all kinds of accessories in connection with a garage business.

REPAIR AND OPERATE TRACTORS

Many of our graduates train and go back to the farm and operate and repair tractors. There is big money in this work.

FACTORY AND OTHER POSITIONS OPEN

The factories where they are turning out three million automobiles, trucks and tractors each year are seriously handicapped for lack of trained men. Garages and shops are turning away work for lack of trained men.

BE A SALESMAN

M. S. A. S. graduates are in great demand as salesmen. Their complete and thorough knowledge of the business and the machines gives them a great advantage over the ordinary salesman. Train in Detroit and go back to the farm.

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We guarantee to qualify you for a position as chauffeur, repair man, demonstrator, auto electrician, garage man, automobile dealer or tractor mechanic and operator paying from \$1,500 to \$5,000 a year or refund your money.



Wish to say that this is one of the best schools in the country and would not hesitate to recommend it to any one who is desirous of learning the automobile business. It is a recognized institution among the automobile factories of this city. Their methods of instruction, their lectures and theories are 100 per cent perfect. With all of the equipment and with the practical work that the students are able to get in their own organization, I really believe that mechanics throughout the country are missing one great opportunity if they do not take advantage of their course. I do not know of another place in the country that has the number of different type motors, chassis and the thoroughness of going into various electrical appliances and equipments as used on modern motor cars, that I found in this school. MAXWELL MOTOR CO., INC. A. E. Richmond, Supt. of Service.



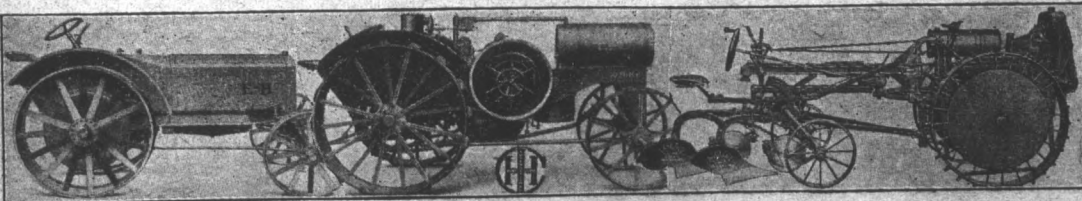
Answering your letter of January 15th, relative to the Michigan State Auto School at Detroit. It is our understanding that they conduct a very good school. In fact, we do not know of a better automobile school that we could recommend to you than the Michigan State. Yours very truly, THE STUDEBAKER CORPORATION OF AMERICA



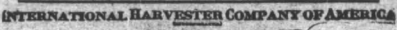
The Michigan State Auto School enjoys a very enviable reputation and is probably one of the best of its kind in the United States. Have no hesitation in recommending it in every particular. Yours very truly, PACKARD MOTOR CAR COMPANY



Having had the pleasure of recently visiting and inspecting most carefully your school, permit me to say that I was deeply impressed with the personnel of your organization, the equipment that you have and the methods you use to teach your students. Yours very truly, G. E. Salisbury, Manager Service Department



The Michigan State Auto School in our opinion, is the finest institution of its kind in the country. In fact we endorse its method of instruction. We have recommended a great many students to them and the results were satisfactory. The Michigan State Auto School ranks highest in the standard of schools. Its equipment and personnel is second to none. This school is thought very highly of by the automobile men of Detroit and is considered one of the most efficient schools in the country. If you intend to visit any school, then by all means choose the best one. The Michigan State Auto School, so far as we know is the best. You will make no mistake by entering for a course. Yours faithfully, HUDSON MOTOR CAR COMPANY Service Department



Your practice of co-operating with the factories is very commendable for it brings together the biggest men and most successful ideas to be had. We will gladly co-operate with the Michigan State Auto School through our ninety branches in the United States in placing your tractor graduates. There is a constant demand for competent trained tractor men at very good wages. Very truly yours, INTERNATIONAL HARVESTER COMPANY OF AMERICA

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