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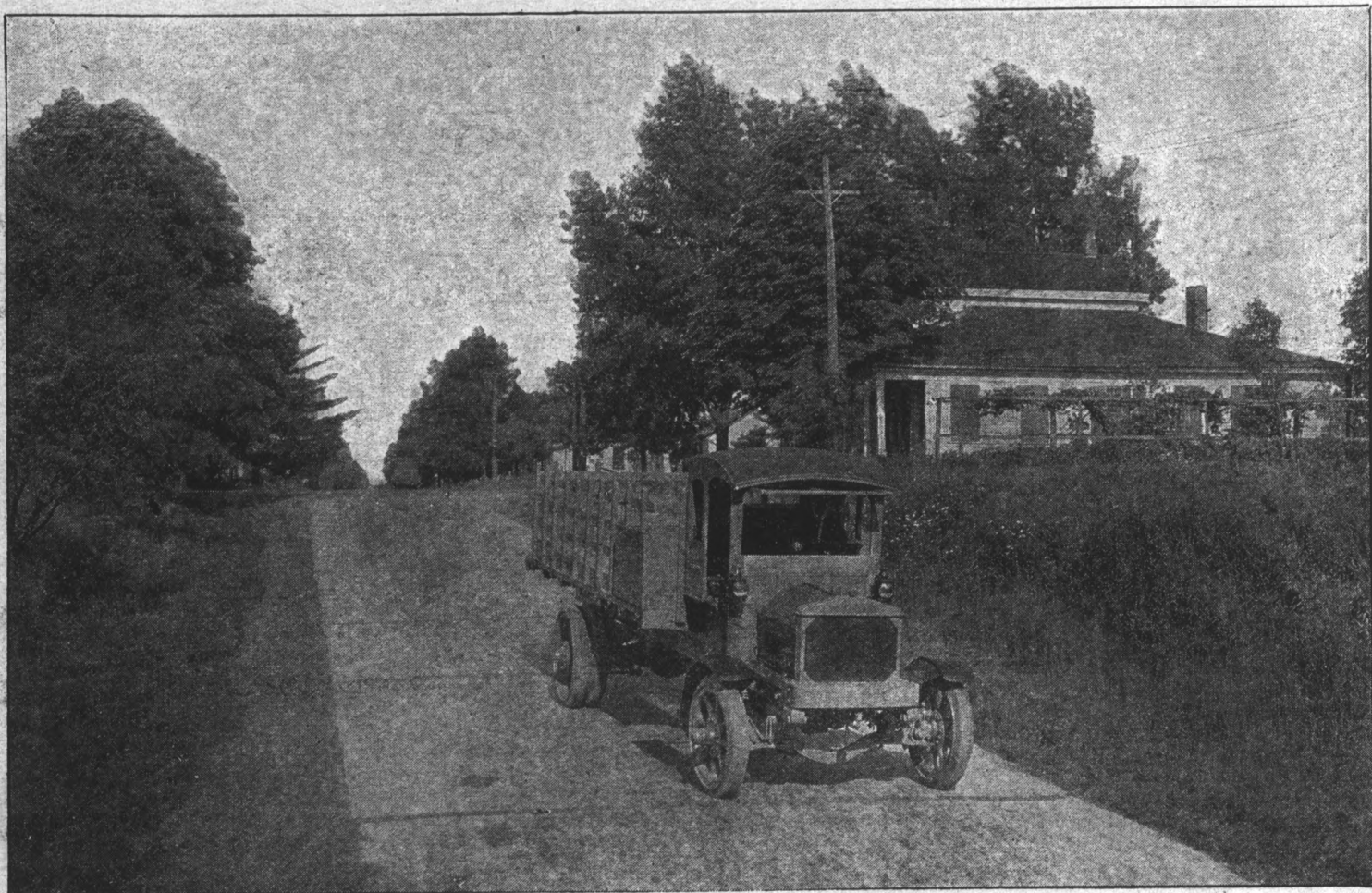
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THE RURAL MOTOR EXPRESS

THE war will be responsible for two great developments in the power field. First, the use of the various types of flying machines in transportation, and, secondly, the development of a motor express line through rural sections. The war has developed thousands of men capable of operating both aeroplanes and motor trucks, and the natural consequence would be for these men to turn their energies in these directions.

Mr. F. W. Fenn, is one of the leaders of the rural motor express idea. Regarding the proposed system he recently said: "For many years hucksters have called on farmers, bargained with them for products and sold to the market at a profit. This was bad for the farmer, because the prices he obtained hardly made it worth while to produce; bad for the merchant, because it added little to the prosperity of the farmer and so kept him incapable of becoming the good customer he ought to have been; and bad for the consumer, because the product of the farmers was insufficient and a lot of material came into town that was unfit for food, as, for example, the decrepit rooster and the disreputable egg.

"It was supposed that railroads carried all the food necessary. We had overlooked the fact that half of our farmers are miles away from a railroad and receive so little encouragement that they produce only what they need for home consumption. Still, it was only when the railroads failed, when embargoes be-

came general, and when the farmer was obliged to waste a great part of what he had raised, that our minds turned definitely toward this newer method of transportation.

"A movement which commands the unqualified support and approval of government officials, merchants and farmers as this one has, must of necessity possess great merit. The rural motor express line is:

"A method of introducing to the market supplies of food hitherto unavailable because of the distance between producer and the market and lack of transportation.

"A method of relieving railroads of short and unprofitable hauls.

"A method of encouraging business between farmers and merchants by increasing the earnings of the farmer and improving his purchasing power.

"A method of decreasing dissatisfaction on the part of farmers and farm hands by providing increased facilities and comfort for them.

"A method of transporting produce to the consumer more quickly and in better condition than ever before.

"A method of maintaining men on the farms and in producing work who now spend a great part of their time driving to the market.

"A method of overcoming in some (Continued on page 732).

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CURRENT COMMENT

The Soil Fertility Problem

THE soil fertility problem has come to be a pressing one in Michigan as well as in most other sections of the country. This fact will be impressed upon the careful observer of agricultural conditions in a day's ride through any of the older agricultural sections of the state. Notwithstanding the generally excellent condition of the wheat crop, poor stands of wheat are too often in evidence on naturally good wheat soils, indicating in most cases that the natural requirements of the crop have not been properly met, and that in these cases the yield does not promise to be a profitable one even under the most favorable seasonal conditions. A still better test is the generally unsatisfactory outlook for a big hay crop at a time when it is especially needed, due to the failure of clover seedings under the unfavorable seasonal conditions of last year.

In striking comparison one will observe an excellent condition of the wheat crop on adjacent farms where the soil has been kept in condition to meet the requirements of the crop under the prevailing favorable seasonal conditions. Likewise good seedings of clover and alfalfa will be seen on farms where the soil has been maintained in a condition to enable these plants to withstand the unfavorable weather conditions which hampered their normal development last year. There is a valuable lesson in these comparisons for every farmer who will carefully study them, and an occasional trip of inspection among the farms within easy reach would be a profitable investment for every farmer who has received practical notice of a more or less serious soil problem through the unsatisfactory condition of his crops or through poor average crop yields.

While the failure of satisfactory results under moderately unfavorable conditions is a warning of a serious impending soil problem which should be heeded, a notable failure of such results under reasonably favorable con-

ditions is a warning which should not be neglected for another year or another hour. Where these conditions are noted an object lesson in one's own community may clearly point out the remedy. In any case, counsel may be had without cost by any farmer in any county where a county agricultural agent is employed. Most of us are inclined to feel that we know more about our own soil problems and the possibility of remedying them under our conditions and within our means than does the county agent, who may be a younger and perhaps less experienced man. The same argument might be applied with equal force to our bodies, yet when we are ill we send for the doctor, and don't hesitate because we have to pay him well for his services, either.

And if our soil shows symptoms of being sick the same course would be just as logical. Indeed, it would be more logical, because the services of the soil doctor in the person of the county agent are ours for the asking. And we should not forget that he is a man who has had special training along this line, as well as far wider opportunities for observation than we have enjoyed, and that he has a big staff of specialists at his command to help in the solution of any problem which is beyond his own resources.

If you have a soil problem, either serious or impending, as practically every farmer has, get into touch with your county agent and put it up to him. It will cost you nothing but your effort and you will be under no obligations to follow his advice if you don't want to, but the chances are that you will have taken a long step toward the solution of the problem by increasing your own interest in it if nothing more.

The solution of the soil fertility problem is absolutely essential to a permanently prosperous agriculture. Labor expended on a preventable crop failure is labor lost, and under present conditions labor is too valuable a commodity to lose or even to invest carelessly.

More Sheep More Wool

THE most encouraging feature of the present wool and mutton situation is the fact that the federal government is beginning to realize that a better flock-husbandry is a vital military and economic necessity, and that the United States must produce greater quantities of wool to make it independent of imports. So long as there is even remote danger of war our national safety depends upon an ample supply of wool fabrics.

At the conference of the More Sheep and More Wool Association held at Philadelphia April 30, resolutions were passed urging that the federal government encourage flock husbandry by putting in operation a system of wool inspection that would discourage the use of "shoddy" materials and protect both wool growers and the public against misrepresentations on the part of manufacturers and dealers.

The time is ripe for the government to do something to protect the sheep industry so that wool producers will be insured of a fair return for their wool clip. There is little use of attempting to build up our flock-husbandry unless plans are made to stimulate a demand for better fabrics and discourage the use of "shoddy" in the manufacture of wool fabrics.

At present prices of clothing wool is the cheapest factor that enters into its manufacture. And when we stop and do a little figuring it is rather puzzling to understand why the public should be forced to pay from five to ten dollars a pound for every pound of wool that is used in the manufacture of fabrics used in clothing materials.

Wool prices can be maintained only by an increased use of wool in our

fabrics, and this can be brought about in no other way than by using more wool and less "shoddy." The public is willing to pay fair prices for good wool fabrics, but it stands but little chance of getting such fabrics, so long as the federal government neglects to protect it from manufacturers who insist upon forcing their substitutes upon the trade. There is absolutely no excuse for the outrageous prices now demanded by the clothing trade for suits containing only a small percentage of wool. Such prices are doing more than anything else to curtail wool consumption and discourage the building up of a permanent and profitable flock-husbandry.

The Farm Labor Shortage

ONE of the most serious of our reconstruction problems is the labor problem. The much talked of problem of unemployment seems to have disappeared. Everywhere and in practically all indus-

tries there seems to be a present or prospective shortage of labor, and everywhere organized labor is demanding higher wages and shorter hours. Greedy landlords have helped to increase this general condition of dissatisfaction and unrest by taking advantage of the shortage of houses, due to the enforced cessation of building during the war, and increasing rents to an exorbitant degree, and increased prices of necessities following the abandonment of government control, have contributed to the difficulties of industrial workers. Yet the majority of the returning soldiers prefer city jobs, even those who went into the service from country homes, and farm labor is not only scarce, but absolutely unavailable in anything like an adequate supply.

In the meantime agitation for cheaper foods continues. A better understanding of farm labor conditions by government officials as well as by urban dwellers is needed, else shortened production may result in a really acute food shortage.

Dangers and Remedies

WE are passing through a crucial period that is destined to test severely the wisdom and form of our government. Four years of world war, with our active participation for nearly two years, have brought into the limelight many new and untried conditions and influences, the adjustments of which are fraught with dangerous shoals and treacherous reefs. But I am thoroughly optimistic as to the outcome. I have supreme confidence in the superior intelligence, judgment and moral courage of the great masses of our one hundred and ten million of people, our statesmen and the press of America to meet the emergency with the skill and force that is needed. There are four policies that demand immediate and vigorous action by congress and appeal to the hearty support of the people:

First.—All elements or propaganda, with anarchistic tendencies, opposition to law and order, whether Bolshevistic, I. W. W., socialistic or under whatsoever name, must be put down with a just but firm hand; and public sentiment must be aroused to ostracize and punish every man and woman who propagates violation of law in any form. Teach our people that the only safe way to accomplish reforms is through the elective franchise and by orderly discussion. There is no logical basis for antagonism between capital and labor. That the employer may be truly interested in the prosperity, wealth and happiness of those who labor in his industry, likewise that those who do the work may have a genuine interest in the success of that industry, is not a mythical millenium but a practical possibility. Adjustment of differences by conciliatory methods and compromise is a reasonable method. There is no class nor social handicap over the American laborer; with ability, industry and economy the door is wide open for him to advance to wealth and industrial responsibilities. As evidence of this, it is safe to state that nine-tenths of the men of great wealth and great responsibilities in this country today came up from the ranks of labor. The being who propagates antagonism and bitterness between the employe and the employer is a decided and dangerous enemy to both.

Second.—In my judgment we want no covenant nor alliance with any other nations. Industrial treaties—yes. Agreements as to marine and similar matters—yes. But we should not sign any pact that surrenders any particle of our sovereignty or gives to any combination of representatives of other nations authority to dictate to us our course industrially or in interna-

tional relations in peace or war. We should be ready and willing at all times to help any other nation or people when in our own judgment it is needed and deserved. European nations, from their peculiar conditions, may be justified in making alliances for defense, but America, on account of its peculiarly different conditions, must decline it. For one hundred and fifty years the United States has progressed in civilization, industry, art, science and power through the loving patriotic management of its own people.

Third.—All government dictation and operation of the great industries of this country should be annulled and abandoned at once. Every experiment along this line has proved signally disastrous, not only from a financial point of view, but the communistic ideal is a decided calamity to the industrial progress of our country, as it eliminates all individual ambition and curtails the individual ability which has actually produced and matured the great industrial development of this country. I say turn everything back to the owners as speedily as possible and again let the stimulating influences of competition and fair rivalry have their swing.

Fourth.—To my mind there was never a time in the industrial history of this country when we needed so much a just and fairly applied protective tariff. Employers are in favor of a liberal wage scale to labor, but cannot maintain it against the flood of cheap labor products that are certain soon to enter our markets, without a protective tariff sufficient to balance the difference in cost of production. The federal treasury needs very badly the revenue that will be paid in this form much more easily and cheerfully than in exorbitant taxes.

In conclusion let me define my ideal of a good American citizen: An individual who adheres steadfastly to strict honesty and moral habits; who upholds absolute truth as the basis of all good character; who abhors the idler, the spendthrift and the fanatic; who believes that work and constant engagement in industry is not only a duty but necessary to physical health and happiness; who respects the law and considers its violation a crime.

In my long life I have noticed that those who are kind, patient and helpful to little children are kind and just to everybody. One who is cruel to a servant or an animal is a coward. "His life was gentle, and the elements so mixed in him, that Nature might stand up And say to all the world, 'This was a man.'"

M. J. LAWRENCE.

Putting the Wolves Out of Wool

WHILE the farmer of the United States is jumping from pillar to post about his 1919 wool clip, the Canadian farmer is sitting tight and anticipating his wool profits. Autocratic government control of wool south of the line sent 1,400,000 more sheep to the block the first five months of its leadership than for the same period of the previous year; helpful co-operative wool growers' associations are doubling the sheep flocks on Canada's green pastures.

In a nut shell, this is the difference between haphazard wool distribution and business-like methods, retaining the balance of power in the hands of the man who mothers the lambs and clips the wool, rather than placing it in the arms of the operator of the shuttle that weaves the fabric. It's the difference between uncertainty and certainty; the difference between a dying sheep industry and a developing, expanding and profitable one.

But Canadians could not crow very loud eight years ago about their sheep industry. The commission appointed by the Minister of Agriculture, after carefully looking things over from the Atlantic to the Pacific, reported that "from shearing to marketing no country in the world handles its wool in a worse manner." Considerable of a slam at the complacent breeder who thought he was about to step off at the station of Ideal, and as a further compliment, the commission added: "As far as the wool of mutton breeds and cross-breeds go, we do not know of any country where it is handled in such an unsatisfactory manner and delivered in such a bad condition."

After this report, the commission went home, but not to forget. They, under the helpful leadership of the Sheep Division of the Live Stock Branch of the Dominion Department of Agriculture, organized themselves into team-work brigades, with the view of not alone putting sheep raising on a higher plane, but of adopting constructive and profitable methods of grading and distribution.

Wool growers' associations were organized throughout Canada, the work of which was first to produce good wool and then to properly classify it, Alberta, Manitoba, Ontario and Quebec sheepmen handled 206,129 pounds of wool in 1914 under these arrangements while the next year nineteen organizations distributed over Canada classified and offered for sale through co-operative organizations a total of 420,000 pounds. In 1916 this grew to 1,712,598; in 1917, 2,097,909, and hit the 4,500,000-pound mark in the eye in 1918.

Although great progress and enthusiasm marked the work from the start, Martin Burrell, Minister of Agriculture, in 1917 saw that things were not all they should be. There was a streak of haphazardness remaining in the wool business. Mr. Burrell had a vision, foreseeing the importance of centralizing the sale of all of Canada's wool, and that increased profit would accrue for every sheep herder as a result of having one central warehouse for all the county and provincial associations. Thus, a large warehouse was secured at Toronto, next door to the American wool buyer's market, and the experts of the Live Stock Branch soon were busy as bees classifying and grading shipments in the newly organized Co-operative Wool Growers' central agency, the name given to the Dominion-wide organization, to which all

Cooperative Associations Did the Trick in Canada. By Earle W. Gage

the local wool associations belong. Mr. Burrell is a man of action, not of words and ideals alone. He believes that it is better to come to the farmer with a constructive plan, under the leadership of a capable business man, than to shoot farmers in mid-summer with helpful bulletins by the ton, telling how to "winter sheep." Which is not to imply that Mr. Burrell does not believe in bulletins. He does, and his

the majority are in means that the system names the prices for their classified and graded wool, and that the grower who does not offer first-class graded wool does business at a loss.

"The first thing to be done in co-operative marketing of any kind," remarked C. H. Hodge, Secretary of the Pontiac, Quebec, Wool Growers' Association, "is to get in touch with those who have the articles for sale. We did



Neat, Attractive and Uniform Bales Bring Wool Profits.

department mails out tons of them annually, but they are mailed so as to reach the farmer in season, and the agricultural representative is also there with co-operative organization that aids the farmer in distributing the surplus produce and products he has been able to create as a result of adopting the suggestions contained in the bulletins. Increased production is very good. Helpful distribution, per-

this by means of demonstrations in shearing, rolling and tying of fleeces. A demonstration was held in each community in the county and all the neighbors and sheep owners were cordially invited to attend. Men who failed to attend were called upon personally, and the work explained to them, sacks and twine being left with them at the same time." In this manner, practically every alert wool grower



Washing and Grading Wool for Association Members.

mitting profitable farming is a whole lot more practical. That's why the Doubting Thomases soon knew that Burrell plan hitches the two horses to the same cart.

But you can't cooperate until you have something to do it with. Here lies the interesting story of how the team-work propaganda was carried to the far corners of Canada, until the county as their unit, electing officers, last sheep raiser was enlisted. There are some outside yet, but the fact that Each director gave an estimate of the

number of sacks and quantity of twine needed to handle the clip of his district and these were distributed either by the director or a local storekeeper.

Wool is delivered at local points on advertised days, Mr. Hodge being there to weigh and tag each farmer's lot, and keeping tab of the number of fleeces in each, as well as giving the farmer an advance of sixty or seventy per cent of the market value of wool at the time. The wool is then shipped or carted by the association to the nearest grading point, fees covering freight or cartage. This saves the farmer the long haul, and as an insurance policy covers each shipment from local point to grading house, the farmer takes no chance of loss.

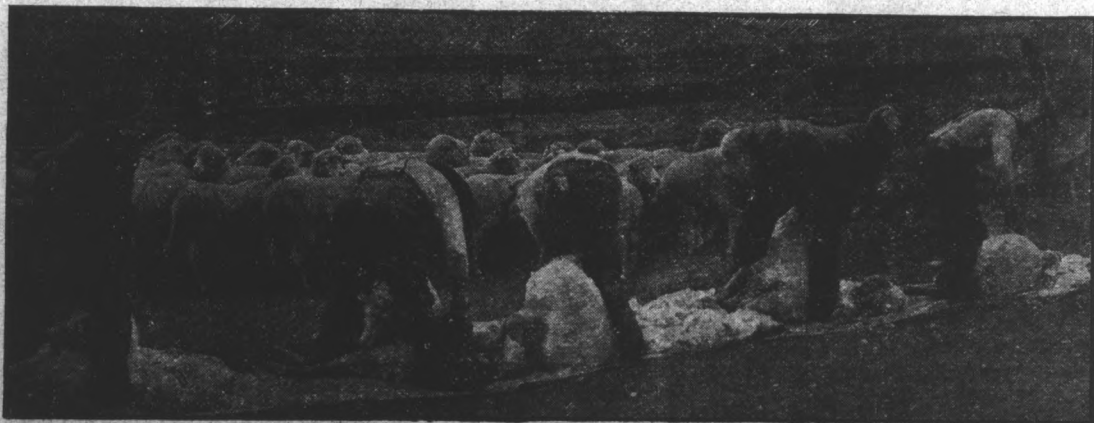
Care is taken with every farmer's shipment, a tag placed on it bearing the man's name, address and number of fleeces, gross weight, and number of sacks, notated on a slip placed inside the sack and on a tag fastened outside. The various shipments are assembled at the main grading shed, the Live Stock Branch supplying the grader, the association supplying men who place the various farmers' sacks upon the table. Each man's lot is graded separately, and the weight and number of fleeces in each grade entered on the grading sheet, while in a ledger is listed the member's name, the total weight of wool, total number of fleeces, and amount of his first check. As each man is given a reference number at the time his wool is received, it is easy, by using this number, to trace all lots through the various processes.

"The Pontiac association has always packed the wool into the sacks, as fast as it was graded," said Mr. Hodge, "as this saves extra handling and there is less danger of the grades becoming mixed. The packing table should have spaces enough to permit a sack for each grade to be hung up at the same time, and, if possible, the name of each grade should be posted above the sack. In hanging up the sacks, we have not been able to find anything any better than the iron hoops, but these may be taken off more easily when the sacks are full, if a bend is placed in the hoop in which to insert the hand when loosening; better still, however, is the use of a truck, to run underneath the bottom of the sack, and raise the weight from the hoop. All sacks are stenciled with the name of the association, and the grade of wool before filling and when filled each sack has the number and the gross weight stencilled upon it and is then ready for shipment."

The Pontiac association did a nice business in 1918, and anticipate an even better wool trade this season. The 1918 clip handled cooperatively, assigned to the various grades and amounts, follows: Fine medium combing, 5,017 lbs.; medium combing, 16,587 lbs.; low medium combing, 5,614 lbs.; fine medium clothing, 421 lbs.; medium clothing, 392 lbs.; coarse, 13,860 lbs.; dead wool, 242 lbs.; gray, 159 lbs.; black, 156 lbs.; rejections, 612 lbs.; tags, 240.

All Pontiac wool was sold through the Canadian Co-operative Association, and shipped direct from the grading shed at Shawville to the mills. Settlement was secured by the Canadian organization, who forwarded the amount, less sales fees, to Mr. Hodge for distribution among the members.

"There has been a decided increase in the number of sheep owners who market their wool through the Co-operative Wool Agent, Manitoba



From the Sheep to the Textile Mill Cooperation Insures More Profit.

Department of Agriculture," said P. G. Coop, the agent, in speaking of the development of sheep raising and wool production in his section, as a result of team work. "In 1915 we received but 69,000 pounds as against 362,000 pounds for 1918. In 1917, 465 sheep owners participated, whereas, in 1918 there were 917 shipments received. These figures show cooperative wool sales to be popular and profitable with our farmers.

"The grading system has had a very marked effect upon the quality of the wool, and graders, as well as grades, uphold the belief that the educational work in this connection is doing an incalculable amount of good and increasing the revenue derived by the sheep owner from the sale of his wool. In former years when wool was sold at a flat rate, the importance of keeping the

wool in a clean condition and avoiding tying with binder twine, as well as mixing the black and tan with the white and tags, locks and pieces, seedy and dead, with the higher grade wool, was not appreciated and resulted in a serious loss in revenue to the farmer and a serious wastage of a product so much in demand at the present time.

"It cannot be gainsaid that wool sold under the cooperative system has on the average brought a very much higher price than could have been obtained by the farmer selling to the local buyer," continued Mr. Coop. "This fact is quite evident to the sheep owner, as evidenced by the increasing number of patrons this year."

W. R. Beach, of the famous and historic district of Bedford, Quebec, was asked how cooperation benefited sheep raisers of his section. "The coopera-

tive selling of wool is yet in its infancy here," he replied, "and although it is a new system and the farmers have been very cautious and slow to fall in with the new system it has proved very successful.

Farmers Are Benefited.

"That our farmers are benefited is particularly noticeable at the grading stations when the wool is going through. Wool from one particular flock three years ago had to be put among the rejections on account of the seed and straw it contained, but the wool from the same flock last season graded medium, which meant a difference in price per pound of about thirty-five cents, this being due to a little extra care being taken at feeding time and proper feeding racks used. From a small beginning, we now have one hundred and seventy-five members,

who, in 1918, cooperatively sold 14,702 pounds of wool."

Thus, by and through the local cooperative wool growers' organization, is the sheep industry of Canada being revolutionized. No longer can it be said with truth that "no country in the world handles its wool in a more unsatisfactory manner." To the contrary the breeder has been quick to get into the organization of his section and to learn the oft-repeated lesson that to secure the best prices the best article must be distributed. In the old days wool was sold in bulk for what buyers offered; today, sorted and inspected grade values become apparent, and sheep raisers have learned to recognize the importance of care in selection, industry in keeping, and the exercise of intelligence in shearing, packing and shipping.

Sheep Trade Holds Meeting

THE conference of the More Sheep More Wool Association of the United States, held in the assembly room of the Philadelphia Chamber of Commerce, Wednesday, April 30, was attended by large delegations of representative farmers, wool growers, agents of various national and state departments of agriculture, experts from colleges and experiment stations, wool merchants and worsted manufacturers from all parts of the country.

One of the most prominent questions before the meeting was that of presenting the misrepresentation in the sale of wool fabrics to the public and a recommendation was unanimously passed urging that the federal government establish standards and put in operation a system of inspection similar to the pure food regulations. The resolution reads: "We recommend that the bureau of standards of the Department of Commerce be requested by this conference to undertake the development of standards for testing wool fabrics which will protect the public against misrepresentation. We recommend that the bureau of standards take up this matter for investigation at the earliest date convenient.

Affirmation was made that fair play requires that live stock buyers should pay a premium on market sheep, according to their condition and quality, and that better business methods be observed to insure each grower a full and fair return for the value of his clip. The final item was "there appears to be nothing in the situation to cause the growers to be hasty in selling their wools."

Imperative need that the United States should produce more wool as a matter of national safety in the uncertain condition of world affairs was asserted by Professor Paul Cherington, of Harvard University.

"The war has turned the wool question from a passive to an active form," he said. "It is now a vital military and economic necessity that the United States produce such quantities and qualities of wool as will make this country more nearly self-contained. So long as there is even a remote danger of any more war, it is imperative that more wool should be grown at home. The one open problem is, 'Who will grow it?'"

"Four sources of capital and energy for greater development of the sheep industry are: The farmers and sheep men who already know the business, new combinations of capital undertaking the enterprise for profit, the great meat packers and the federal or state governments."

A. C. Bigelow, head of the association and president of the Philadelphia Wool and Textile Association, in his review of the work of the organization said that in spite of poor financial

support sympathy for the educational campaign had been great and the results satisfactory, showing a changed situation in favor of the sheep industry in this country.

"The greatest cause of the increased prices of wool, as of every other product," he said, "is the decrease in per capita production, and the relief must come from increased production under more efficient methods. An increased margin over cost of production is a vital necessity for meeting the taxes of the future and paying off the enormous war debts.

State Board Criticized.

"A farmer who has space for sheep should raise them if he is to handle his farm on the best basis. More sheep and better wool are essentials of the greater educational campaign before us. The government institutions have done much, but all have room for improvement, especially the Department of Agriculture in this state, which is usually more interested in politics than in anything else."

Educational campaigns by the sheep growers' associations toward the use of more virgin wool in clothing and increased consumption of lamb and mutton by Americans were advocated as the best means of booming the sheep industry by Prof. L. D. H. Weld, manager of the research department of Swift & Co., Chicago. He gave figures asserting that his company's profit is eighteen cents a head on sheep killed for meat. He declared that the report of the Federal Trade Commission, issued some months ago, was unfair in its findings that the meat packers had any agreement as to prices. A detailed

counter-statement would be issued soon, he said, to prove that the commission's charges were based on prejudiced and selected evidence.

F. R. Marshall, of the bureau of animal industry, United States Department of Agriculture, said that in the sixty-five land grant colleges the sheep-raising instruction does not compare very favorably with that offered for other classes of live stock, only twelve of the institutions having specialists in sheep husbandry. He praised the work of the More Sheep-More Wool Association, especially its efforts for better state laws regarding dogs. The fact that the organization represents manufacturing interests enables it to obtain a hearing that might not be accorded other persons, he said.

Expects Continued Increase.

Regarding after-war values in the sheep industry, Mr. Marshall said: "Sheep raisers went their limit in supplying the country's war requirements. Range flocks were kept at the maximum safe size and many new farm flocks were established. The 2.7 per cent increase in the number of sheep for January 1, 1918, as compared with the year previous, and the 2.6 per cent of further increase estimated for 1919, do not fully represent the development of the business during that time. I believe we will have a continued increase, though it may not be rapid for every single year."

W. M. K.

SELLING WOOL.

THE greatest single advance step in marketing farm wools was recently taken when twenty-five county

agents of Illinois met with Mr. D. O. Thompson, Secretary of the Illinois Agricultural Association, and Prof. W. C. Coffey of the University of Illinois, and perfected plans for the cooperative marketing of Illinois wools. Arrangements were made for collecting the wool in car load lots to reduce the freight charges and for business-like marketing of the wool.

Fleece wools have been handled as junk rather than a high-priced commodity often passing through half a dozen hands before they reached the manufacturer. Each middleman took his bit out and consequently the farmer only got a small part of the actual value of his wool. Being so far removed from market connections the farmer had no means of knowing trade preferences and requirements, consequently he often could not work improvement in his wool. Even if he did know something of quality, shrinkage, character and length the most abundant measure of these, his clips possessed availed him little because of the one price or blanket system of buying in the neighborhood. Sporadic attempts have been made by farmers to accomplish a more satisfactory method of sale, but a great trouble has been to make the proper market collections. This is actually more difficult than getting the wools together in salable quantities.

The Illinois Association made arrangements with a wool-selling agency owned and controlled by western sheepmen. This organization has already had more than ten years' experience in successful marketing of wools and the arrangements made should be satisfactory to the growers.

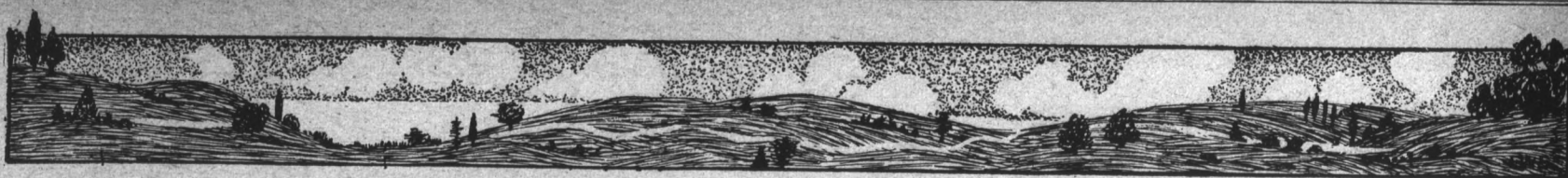
A handling charge of two and a half cents a pound covers grading, storage, insurance and selling, if the wools are sold within four months of their time of arrival. For each month or fraction of a month over four months an additional storage charge of fifteen cents per bag and insurance will be added. A bag holds from three hundred to three hundred and fifty pounds.

Liberal advances will be made on the wool and the association is requested by the company to send one or more representatives to oversee the handling, grading, and selling of its wools. This privilege is extended to single shippers. Each clip will be given individual attention, no difference how small and a complete report of sale furnished, showing the amount of each grade and its selling price will go to each grower. The time and conditions of sale of the wool were placed entirely in the company's hands although the association had the privilege of making other arrangements. The spirit of the meeting was that these delegates did not think themselves well enough versed on wool markets to enter the

(Continued on page 751).



Mr. Farm Bureau Serves the Whole Agricultural Family.



Clean Milk at Fair Prices

For years and years the farmer has had it dinned into his ears by college professors, institute speakers, city business men, boards of commerce, farm papers, railroad officials and progressive farmers that he must give up his old selfish, independent ways and cooperate. He has heard and seen the word so often that it is a wonder that he is not sick of it. But he isn't. He has taken the advice so freely given and made good use of it. How the idea has taken root in the farmer's mind is well illustrated in the efforts being made by fifty dairy farmers in Niagara county, New York, to secure a better price for their milk.

I will take these fifty milk producers as an example and tell you what they are doing for themselves and the people of Lockport, a city of about twenty-four thousand people. It has taken these men more than two years to organize and put themselves in a position to put a price on what they have to sell; but now that they can see the light they are going about the problem in a sane and practical way. "About two years ago," says B. F. Barnett, a director of the new organization, "the dairy farmers who were producing milk for the city of Lockport became very discouraged and many of us faced the proposition of selling our cows or securing a living price for our milk. We were partly shut off from furnishing the milk which our contracts called for because the city dealers refused to furnish enough cans for shipment to the city. This loss of milk coming at a time when prices were so far below the cost of production proved the last straw, and we called a meeting and appointed a committee to visit Mr. Peets, the manager of our Niagara County Farm Bureau, and tell him that he would have to do something for us. We had our money invested in dairy buildings, equipment and cows and could not afford to go out of the business and see our property lie idle and depreciate in value. At that time we were getting only sixteen cents per gallon for our milk. Most of us had invested several thousand dollars in sanitary buildings, equipment and cows in order that we might produce good milk and conduct a legitimate business.

Our Farm Bureau Helped.

"Mr. Peets told us that there was an organization known as the Dairymen's League operating in the eastern part of the state and advised us to get in touch with some of its leaders and have them aid us in organizing our producers. We lost no time in following his advice and joining the League, and I want to say that this has proved the best little investment we have ever made. The League has not only kept us informed as to prices, market conditions and cost of production figures, but it has proved a potent factor in holding our members together and giving us courage to go out and get what we were rightfully entitled to from the powers who refused to listen to us before we became a part of this great organization.

"Our local organization had a hard time getting on a working basis with the Lockport distributors, and all we could get for our milk was eighteen cents a gallon, while they were getting fifty-two cents per gallon, or thirteen cents a quart from the consumers. We proved by the best of evidence that we were conducting a business that was

New York Dairy Farmers Endeavoring to Put Milk into Consumers' Homes at Minimum Cost and Save Industry from Going on the Rocks.

losing us money, but we could get but little satisfaction from the powers that existed at that time. And all the time we were suffering these heavy losses no effort was made to curb the distributors from demanding their outrageous profits. The milk distributing business paid such fine profits that new men got into the game and there became such a duplication of milk routes that some dealers were chasing from one end of the city to the other to deliver less than one hundred and fifty quarts of milk a day. And all the time the producers were being cursed and abused because they balked at furnishing am-

presented problems almost identical with ours.

Handling the Surplus.

"One of our first problems was to find an outlet for our surplus milk. This has been solved by selling it to a large ice cream company which has facilities for preserving it in condition for use for several weeks. This arrangement will enable us to conduct our business without expensive manufacturing equipment and we know exactly what our surplus is worth during the different months of the year. We are quite sure that such an arrangement is preferable to having expensive

nish the machinery for distribution and assume some of the risk of loss. We owe a debt of gratitude to our county farm bureau and its manager, Mr. Peets, for assisting in perfecting our organization and keeping some of our backsliders in line. You know that every cooperative organization has a few weak-kneed brothers who need cuddling and petting to hold in line. They are like the old gentleman who, when asked if he believed in God, replied, 'Why, certainly I do, but not a living God.'

Other Cities Interested.

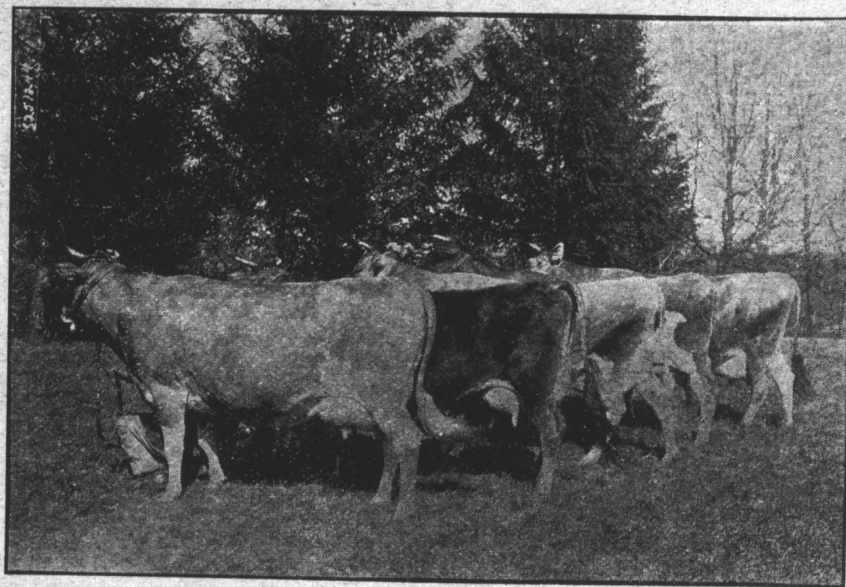
Lockport is only one of the cities in New York that is seeking to put the milk distributing business on a safe and sane merchandising basis. Olean, a city of about eighteen thousand people, is delving into distribution problems and plans are on foot to make a sweeping investigation and put in a city plant and distributing system, unless the producers and dealers can get together and devise means to put milk into the consumers' homes at less cost than they are doing it at present.

In a recent interview Chairman Hart of the Rochester Public Safety Committee of the Common Council, said: "Announcement of our plans for a complete investigation of the feasibility of the city assuming direct charge of the production and distribution of the milk being handled in this city will be made shortly. We have been entrusted to make this investigation as soon as we can secure a competent expert to make an analysis of the situation. The report of this expert will to a large extent govern our action in determining a permanent policy. The people of Rochester are entitled to an adequate supply of pure milk at a reasonable price; and we purpose to devise means to encourage production and compel more economical distribution of milk.

"Just when a report may be anticipated upon the inquiry is uncertain, the scope of the investigation being so broad that collection of the necessary data upon which any decision of the city is based will be a matter of some time. One thing is certain, however, we do not aim to put the price of milk so low that the producers cannot afford to furnish the city with good milk and make reasonable profit from their business. We are convinced that public health depends as much, if not more, upon an abundant supply of good milk at reasonable prices, as it does upon the supply of pure water. Our first efforts will probably be to standardize the milk used in the city in an effort to avoid duplication of routes and unnecessary charges in handling and delivering it to the consumer."

The Consumer Should be Considered.

A careful study of the retail prices for milk in various cities in New York shows that the method of price determination has largely been to charge the consumer every cent that the traffic would stand. The variations between cities in the same locality are too great to be explained by any cost of production figures. Why should it cost distributors in one city two or three cents per quart more than in another city of the same size one hundred miles distant? For many years the distributor and the consumer have generally been able to subdue any profiteering designs on the part of the producer; but it is no less the duty of the producer to join with the consumer in holding the distributor down to a just profit and demanding that he conduct his busi-



munition for these inefficient profiteers. Business and Not Patriotism the Question Today.

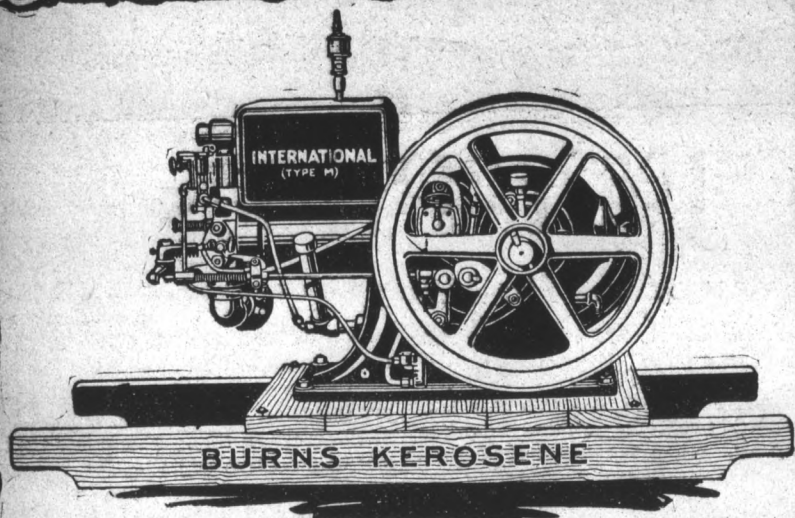
"Finally, when the armistice was signed, our duty as milkanthropists ceased, we got together and decided to distribute our own milk to the consumers. At our first meeting we raised \$27,000 capital and made plans to secure options from every milk dealer in the city for their milk routes and business. Most of the smaller dealers sold us their routes rather than face the competition and we have hired them to work for us until we get our business organized and secure competent drivers. We made an offer of \$15,000 to the largest distributor in the city for his plant and routes, but he placed a valuation of \$35,000 on the outfit, so we decided that peace at that price was too expensive and are building a new plant. One of the dealers we bought out is a young fellow named McGrath, who knows the business thoroughly, and we have hired him for our general manager.

"After perfecting our organization and arranging with one of our banks to carry our business we got in touch with the Farm Bureau of Clearfield county, Pennsylvania, and as a result of our correspondence we invited the county agent of that county to come up to Lockport and explain how the milk producers of that locality succeeded in getting their milk into the consumers' homes at Du Bois for less than three cents per quart. He told us about their early trials and perplexities and how they had prospered since they had put the distributing business on a merchandising basis. Their city

equipment standing idle for several months during the year; besides the ice cream manufacturers are in a position to use the most milk at times when our surplus is the greatest. Many a cooperative business undertaking has failed because of too expensive equipment for the volume of business conducted, and we have made a special effort to keep down our overhead until the business is put on a sound basis.

Tell the Consumers the Truth.

"We are going to put the facts before the people of Lockport, by paid advertising if necessary, and show them who is getting the profits in the milk business, and who is conducting the business along constructive lines. We can play the game square and put the milk produced by farmers in our home territory into the consumers' homes at from two to three cents less per quart than has been the practice during the past three years. We do not pose as philanthropists or charity workers, but as common-sense business men who refuse to let middlemen set a price on what we have to sell and then tell the consumer what he must pay for it. I have invested several hundred dollars in this business in order that I may find a market for my milk. In these days a man who has from fifteen to twenty thousand dollars invested in a business should not begrudge an expenditure of only a few hundred dollars for marketing charges. There is no use in talking cooperation until we have made up our minds to pay the expenses of finding better markets for our products. If we succeed in cutting out middlemen we must fur-



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IN the olden days folks put the world on the back of a fabled giant called "Atlas." To-day progressive farmers put a world of work on the shoulders of an

International Kerosene Engine

This sturdy, reliable, willing, inexpensive servant is doing more today to take drudgery out of farming than any other one factor. It tackles scores of jobs about the farm—such as sawing wood, pumping water, cutting feed, running the fanning mill, etc., and disposes of them swiftly and satisfactorily.

Rations for the smallest size cost less than 3c per hour—pretty cheap board for a "jack-of-all-trades" that does the work of a dozen men. Stop working so hard. Slip all the pesky little jobs to an International. It conserves your time and labor and fattens your purse. There are three sizes, 1½, 3 and 6-H. P., all operating on kerosene or gasoline.

An International dealer nearby will go over this work wizard, point by point, and explain why its "credentials" are gilt edge. Or write the address below and full information will be supplied.

International Harvester Company
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Chicago



U S A

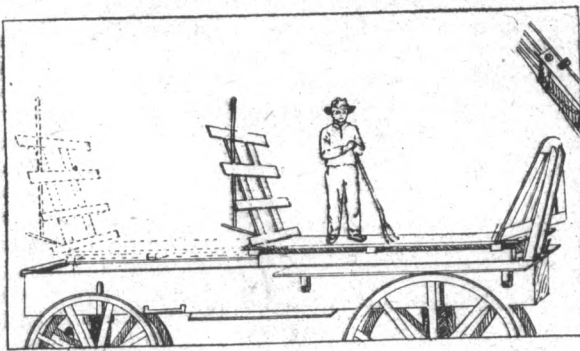


HAY IT ALONE

WITH THIS

ONE MAN HAY RACK

You work no harder and save the expense of an extra man.



HOW IT WORKS

1. Front half of rack moves back and locks over rear half where it is easily loaded.
2. Tripping a lever at the standard permits the loaded half to move forward by gravity where it is locked at the front of box.
3. The operator then loads the rear half.

NOTE THESE FEATURES

Rack may be used on any wagon box of the right length.
One can use either slings or fork.

Operator remains on load until it is completed.

Hay loaded on this rack mows away easily as it is not tangled.

Rack being flat it is suited to every job that hay racks are useful for.

One man can put on as large loads as two men with the old style rack.

The price of the rack and box complete, is \$65.00 or rack complete at \$50.00, f. o. b. New Haven for either 14 or 16 foot lengths.

For particulars hustle a postcard to

SCHEUNEMANN & CO.

New Haven, Mich.

CULL BEANS

Can be fed at present costs with a big profit to the feeder. Our culls are clean and dry. Special price \$40 per ton, delivered Michigan points, sacks included. Order today. Higher prices probable.

PORT HURON STORAGE & BEAN CO.,
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Faster Shearing

Shear with a machine—save time and money. You can shear at least one-half faster. Get 15% more of longer, better wool and not scar the sheep. Get a Stewart No. 9 Ball Bearing Shearing Machine. Fine for flocks up to 300 head. Price \$14. Send \$2—pay balance on arrival. Write for catalog.

CHICAGO FLEXIBLE SHAFT COMPANY
Dept. B127, 12th St., and Central Ave., Chicago, Ill.

ness in an efficient, business-like way. Simply charging the needless high cost of distribution to the consumer is befogging the issue, for such tactics inevitably cut down the use of milk, for milk is not yet classed as a food necessity, and forced prices still react the same as is the case with non-essential luxuries. Far-seeing milk producers' organizations will be alive to the importance of developing a demand for milk at living prices rather than feeding a giant octopus that is curtailing consumption. In any comprehensive plan to maintain milk prices the place for the dairy farmer is on the side of the public rather than in an unholy combination with distributors.

The time is past when dairy farmers dare to think they have gained a victory against the distributors when that crowd raises the price one cent to the producers and two cents to the consumers. Such an advance may put the business on a paying basis for a time, but it is bound to prove disastrous in the end. It not only cuts down consumption in the cities, but it is likely to develop into price-fixing and regulations which will eventually wreck both producers and distributors. The dairy farmers cannot afford to ignore the public, and no amount of advertising propaganda can justify such business methods in the eyes of the public.

A Sixteen to One Shot.

In order to give the reader a concrete idea of a just and equitable distribution of the profits from the pro-

duction and distribution of milk, I am going to give figures showing the amount of capital represented in the two branches of the industry. According to Dr. Charles E. North, the well-known milk authority of New York City, there are forty thousand farms selling milk to New York City dealers. These farms represent an investment of \$400,000,000 on the part of the milk producers. The distributors in New York City who sell this milk have about \$25,000,000 invested in plants, machinery and equipment necessary for distribution. The consumers in New York City pay each year to the producers about \$100,000,000, and to the distributors \$100,000,000, making a total for liquid milk for the city about \$200,000,000 per annum.

I believe that these figures are approximately correct, at least in their relation to each other. The point I am getting at is that \$25,000,000 invested by the distributors brings in a total of \$100,000,000 annually, whereas the \$400,000,000 investment of the producers brings in the same amount. In other words, a dollar invested in the distributing business goes as far as \$16 invested in the producing business. The real truth of the matter is that the distributors are about sixteen times better off, so far as profits are concerned than the producers. Can any fair-minded man question the motive of producers in balking at this sixteen to one proposition and demanding a larger share of the selling price of milk?

W. M. K.

Agricultural News

THE EASTERN MILK SITUATION.

IT is agreed on all hands that the price for May milk as received by the members of the Dairymen's League is the most favorable of any that has been realized in the past. Based on the price of butter and cheese for the previous month, the dairymen of the two-hundred-mile zone will receive \$3.06 for three per cent milk. Spurred by this profitable price, the dairymen are putting themselves in shape to continue conditions which shall bring them the same good returns. All depends upon the future of the butter and cheese market. Will present prices be maintained? This is what the farmers are asking with a great deal of interest.

And while watching and waiting developments in the butter and cheese market, our farmers are going right ahead to put themselves into shape to take care of their own milk if further conflict should arise between them and the distributors. A good many places have been designated as the location of local units for the reception of milk and its manufacture into butter and cheese, independently of the big dealers. Very few if any of the local branches but have now adopted the plans outlined at Utica.

In the meantime a systematic effort is being made to stress the value of milk as an article of food. The people of New York have not in the past understood that at any price which may be demanded, milk is worth more than anything else they can buy for the same money as an article of food.

The best part of the present situation is that although the price of milk is so favorable for the farmer, still the price to the consumer has not been advanced for the current month. We learn of propositions to lessen the cost of distribution by the use of trucks. If these materialize, the consumer should still further profit by it. E. L. V.

WESTERN NEW YORK FRUIT PROSPECTS.

UNSEASONABLE weather during the late winter and spring months has been a cause of much worry to the orchardists in the western New

York fruit belt. Investigations of orchard conditions following the severe storm and extremely cold weather of the last week in April, however, led to the conclusion that present indications are favorable for a fairly good crop of most tree fruits.

Professor U. P. Hedrick, horticulturist of the Geneva Experiment Station, after examining the buds in the station orchards and receiving reports from many points in the fruit districts, says he does not consider that the fruit prospects of western New York have been seriously injured by the weather. Peach and early cherry orchards in warm situations and in full bloom when the cold spell came, suffered severely. It has been found that the sour cherries, which are generally considered hardy, have suffered severely. While the frost injury is considerable, Professor Hedrick thinks it is not severe enough for fruit growers to relax their spraying and cultural programs, as it is likely that enough buds remain uninjured to assure fair-sized crops.

Farm Bureau Manager L. J. Steele, and Entomologist F. Z. Hartzell, of the Geneva station, after making tests in orchards throughout Orleans county, report that the examinations show that there has been little injury to peaches. These experts say the trees were too full of buds, and the killing of a small percentage by frost is a benefit to the grower, as a better quality of fruit will result. No injury to apple buds is noted. Plums, quinces, prunes and berries show no damage from the cold snap.

In Seneca and Schuyler counties bordering on Seneca Lake, heavy damage was done to the peach crop as a result of frost. One grower, who had estimated his crop would be three thousand baskets, finds that not enough buds are left alive to supply peaches for his own use. The early cherries and apricots met the same fate.

David C. Vann, manager of the Monroe County Farm Bureau, says that considerable damage was done to fruit in his county. From examinations that have been made there are indications that Elberta peaches came through with not more than twenty-five per cent of the buds killed. In the case of (Continued on page 751)



World Supply of Dairy Products

ACCORDING to a special investigation by the United States Department of Agriculture into the prospects for American export trade in dairy products, virtually all the exportable surpluses of butter and cheese are in the United States and Canada, Australia and New Zealand and Argentina, the only large exporter in Europe being Denmark.

The principal foreign markets for American dairy products are the United Kingdom, Panama, Mexico, Jamaica, Cuba, Haiti, Peru and China. The exportation of cheese to Cuba in 1917 amounted to 1,540,000 pounds, and there was an increase for the calendar year of 1918 to 3,121,000 pounds.

Except for negligible quantities, the only European country taking American dairy products is the United Kingdom. In 1913 the exportations of butter to England were small, the exports of cheese amounting to 634,000 pounds. In 1917 the United Kingdom imported from the United States 20,589,000 pounds of butter and 51,000,000 pounds of cheese, compared with 22,250,115 pounds of butter and 38,967,000 pounds of cheese for the calendar year of 1918. The United Kingdom is now by far our largest foreign market. This is largely the result of the war.

The latest official statistics of importations of butter into the United Kingdom for a period of eleven months ending with November 30, 1918, show the following sources of supply:

Country.	Value.
Denmark	\$ 3,686,480
France	360,067
Netherlands	799,649
United States	10,030,533
Argentina	14,953,752
Victoria (Australia)	13,263,378
New South Wales	12,742,833
Queensland	7,395,567
New Zealand	20,335,972
Canada	2,542,654
Other countries	3,616,174

Total\$89,617,059

The British Government bought the entire export surplus of both butter and cheese from Australia for the last two years at a fixed price ranging from \$36.36 to \$39.45 per hundredweight of 112 pounds for butter and twenty cents per pound for cheese f. o. b. steamships at Australian ports. The government also bought the entire export surplus of New Zealand for 1917 and 1918 at a fixed price of \$38.23 per hundredweight for butter and twenty cents per pound for cheese, f. o. b. steamships, the producer to receive fifty per cent of the profit derived from the price at which the products were disposed of in the markets of the United Kingdom. A recent report indicated that the producers received as their share of the profit on the sale of last season's surplus of butter 17s (\$4.12) per hundredweight. The imperial government has offered to purchase the output for the season 1918-19 at \$34.04 per hundredweight for butter and twenty-one and one-half cents per pound for cheese.

Denmark, prior to the war, exported large quantities of dairy products, a considerable portion of which found its way to the English market. The production of butter in Denmark in the calendar year 1914 amounted to 257,400,000 pounds. For the twelve months from October, 1917, to October, 1918, the production was only 130,900,000 pounds. Of this quantity 92,400,000 pounds were absorbed by the home

markets leaving only 38,500,000 pounds for export. The total cheese produced in Denmark for the year ending October, 1917, was 53,900,000 pounds, while for the year ending October, 1918, the amount fell off to 41,800,000 pounds.

The principal countries from which the United States imports dairy products are Italy, France, Switzerland and Argentina. In the fiscal year 1915 Denmark exported 1,620,000 pounds of butter to the United States, but in the fiscal year, 1917, America's total imports consisted only of small consignments from Australia and New Zealand.

The total importations of butter during the calendar year 1918 amounted to 1,655,000 pounds. The importation of cheese from Italy in the fiscal year 1917 amounted to 8,432,000 pounds; from France, 1,937,000 pounds; from Switzerland 1,640,000 pounds and from Argentina 1,841,000 pounds. Importations of cheese for the calendar year 1918 amounted to 542,000 pounds from France, 5,044 pounds from Italy, and 6,589,000 pounds from Argentina. The rapid increase of importations from Argentina is noteworthy.

BEST RESULTS ON POOR LAND.

MANURE gives more satisfactory results and yields most if used on poor soil. Greatest profits may be expected from a ton of manure when it is used on the poorest soil on the farm. The richer the land the less will be the increase in crop yields from the same application of manure if other conditions are the same.

The value of a ton of manure when used on soils of different fertility is illustrated by two series of plats on an old farm in this town. Corn without any fertilizer or manure has yielded forty-two bushels per acre for five years in a rotation of corn, oats and clover. In another series not more than forty-five rods distant the corn crop for several years has been only about fifty-six bushels, the other crops of the rotation being wheat and clover and sometimes a crop of rye. Originally the land was the same but its treatment previous to the time these experiments began made this difference in fertility. Eight loads of barnyard manure with one and twenty pounds of rock phosphate per acre has produced an increase of thirty bushels. On the poorer soil, and on the rich land, the same application with four hundred pounds of raw phosphate rock has increased the corn crop only about eighteen bushels per acre, even though three times as much phosphorus was added. The total yield of the manured land has been nearly the same in both cases.

Lapeer Co. M. A. CRAWFORD.

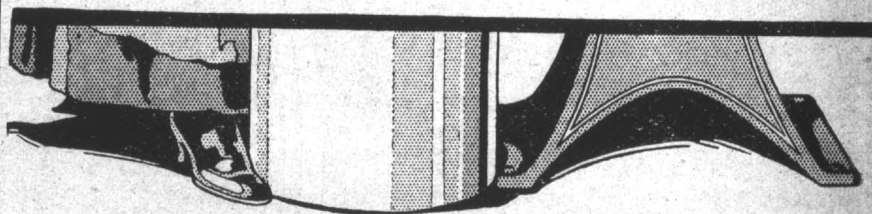
POISONING GRASSHOPPERS.

NOTICED a short time ago the poison bran mixture for killing grasshoppers. We had a scourge of the hoppers last season and used the bran mixture until we could get no more bran. We then used dry sawdust (or old dust) salt, Paris green and a little water to moisten the mixture. With this we got as good results as with the bran. Hoppers will eat anything that has salt mixed in it. We killed them by the thousands.—H. C. England.



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Many users make the mistake of "saving" \$10 or \$15 in the first cost of a cream separator. More of them continue the use of an inferior or half-worn-out machine simply because it still separates.

These users fail to consider what it means if the separation is not complete; if the capacity of their separator is so small that it needs to be run longer; if it is out of order a good part of the time, or if the quality of the product is not the very best it could be.

They fail to realize what a very little difference means in the use of a cream separator twice a day every day in the year, and what a difference it makes in first cost whether a machine lasts three years or fifteen years.

All these differences led to the great majority of experienced users buying De Laval machines when butter was worth 20c. a pound, and they mean just three times as much when it is worth 60c. a pound and when every minute of time saved is worth so much more than it was a few years ago.

De Laval superiority over other cream separators is no uncertain quantity that cannot be seen or measured. On the contrary, it is capable of demonstration to every separator user, and every De Laval agent is anxious for the opportunity to demonstrate it.

If you don't know the local De Laval agent, write to the nearest De Laval office as below and we shall be glad to put him into prompt communication with you.

THE DE LAVAL SEPARATOR COMPANY

165 Broadway, New York

29 E. Madison St., Chicago

OVER 2,325,000 DE LAVALS IN DAILY USE

Until All Roads Are Concrete—

—ruts will continue to send thousands of tires to the junk pile before their time.

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No motorist should drive in ruts habitually. They act like grind-stones on the sides of his tires. But he cannot always avoid them—therefore, extra care is taken to make the walls of Horse-Shoe Tires as tough and durable as possible without undue stiffness.

So if you have to drive over rutted roads a good deal—

"Remember the Horse-Shoe Tread"

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Our Service Department

HANDLING FARM MANURES.

Can you tell me what is the best way to handle manure, whether to spread it on the plowed ground or to put it on the ground before plowing, the spreading to be done with a manure spreader. The crops this manure is for will be beans and corn.—G. C.

The best result in the use of manure will be obtained by applying it as far in advance of the planting of the crop as possible. Fall and winter is a good time to manure for spring crops. The fertilizing elements in fresh manure are not in a form to be readily absorbed by the crop but only become so when decomposed or rotted. Hence the earlier it is applied the more available it becomes and also the better dissolved in the soil.

Manure which has accumulated during the winter will materially benefit beans or corn if applied as early in the spring as the ground will permit. However, if it is of a coarse nature like straw or cornstalks and not well rotted it should not be applied too heavy, or one is apt to destroy the capillary action of moisture, between the soil and subsoil so necessary for the growth of the crop. It is not a common practice to top-dress a cultivated crop, either before or after planting. It will quite likely interfere with the cultivation. If the manure is very fine and well rotted it is, of course, entirely practical to do so, but in most cases it is best to apply before plowing.

W. J. R.

BUILDING UP SANDY LOAM.

I have an eighty-acre farm of sandy loam which is rather light. How would you build this soil up, also how would you work it to get clover started? Would alfalfa do well?

Isabella Co.

A. N.

A man's success in creating a fertile productive soil from the light sand in central Michigan will depend on his willingness and ability to invest some money and sacrifice a crop or two for the benefit of better future crops. Such soils are invariably sour, the humus content is low, and they generally lack sufficient amounts of all of the essential plant foods—nitrogen, phosphorus, and potash. These conditions being appreciated however, one is ready to proceed with a practical plan for soil building; and if a clay subsoil comes reasonably close to the surface, the sandy loam soil thus secured will be even more productive and satisfactory than heavy clay soils in the same latitude.

If time permits this spring, we suggest the application of two tons per acre of ground limestone or marl on the fields selected for improvement. Work the lime into the surface soil after plowing. This will take care of the soil acids for several years. To supply the necessary humus, sow oats and sand vetch or oats and peas. The oats and vetch may be sown at one operation, using twenty to thirty pounds of the vetch, inoculated, and a bushel and a half to two bushels of oats. The peas will do better if drilled in quite deep and the oats drilled in at another operation more shallow. In the latter mixture a bushel and a half of each will be about right. Before the oats are ripe this crop should be broken down by disking and then plowed under as green manure. The cost per acre for lime and seed will be about \$11.

After plowing down the green manure work the soil until a good seed-bed is secured. Then, before the end of August, sow Rosen rye, one bushel, and fifteen pounds of sand vetch per

acre. To insure inoculation, use pure culture again on the vetch seed. This combination will do well on light soil, but acid phosphate or a high-grade complete fertilizer may be used with it to advantage, drilling in about two hundred pounds per acre. This crop can be harvested for the grain next year, separating the vetch from the rye with a vetch separator. Next spring sweet clover may be seeded in with the vetch and rye. The sweet clover may be used for pasture, hay, or seed. It should be followed by a cultivated crop, preferably corn, as it will permit seeding again in August with vetch and rye.

The crops suggested are all safe ones; and, if this plan is carried out, one can soon put the soil in a productive condition. The rotation of corn, rye and vetch, and sweet clover provides two soil-enriching legumes during the three years. With lime applied once every six years and commercial fertilizer used with the grain crops, this soil should respond with good returns of red clover or alfalfa after one rotation.

H. L. BARNUM.

HATCHING GOOSE EGGS.

Can geese eggs be set in an incubator, and if so, how do they have to be cared for and how long set, also is it all right to turn on rye in spring?

Van Buren Co.

G. W. B.

Goose eggs can be set in an incubator and it requires thirty days to hatch them. However, it is best to hatch geese with hens, giving five eggs to a hen. It requires a great deal of skill and attention to incubate goose eggs artificially and we have never found any breeder that did not prefer to hatch them with hens. Three hens can be given eggs at the same time and then all of the goslings that hatch turned over to one hen to brood. Geese seem to like any form of pasture and could be turned on rye but they are heavy feeders and would doubtless severely injure a field of rye if a crop of grain was expected from that field. Farmers seem to make the most profit from geese when they can be pastured on low or waste land that is of little value for other purposes. Most farmers do not like to pasture geese in fields where other stock are to be grazed as cattle do not like to feed where geese have been.

K.

GROUND OATS AND ALFALFA HAY FOR DAIRY COWS.

Kindly give me a dairy ration. I have nothing but ground oats and alfalfa and clover hay. Little alfalfa hay but plenty of clover hay. We have registered Holsteins, all freshened since January. I want a good milk-producing ration as cheap as possible.

Grand Traverse Co.

W. C. S.

Either alfalfa hay or good clover hay with ground oats for grain make a splendid ration. I don't know how you would get any better ration, both for economy and for results. About the only criticism that one could give would be that it lacks variety but good clover hay and good ground oats are so delicious that cows rarely if ever tire of either one of them, and at the present price of other grains I do not believe that you can get a much cheaper ration. If you have plenty of oats and plenty of clover hay and will feed all the clover the cows will eat up clean, and a sufficient amount of ground oats so that each cow gets one pound of ground oats for every four pounds of milk she produces in a day, I believe you will get as good results as you can with any other combination.

C. C. L.

Ladder-Hinge Door Stave Silos

Door forms a perfect ladder—steps 15 inches apart.
Safe, easy—any boy can operate.
Door always in place—no lost doors.
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Keeps ensilage perfectly next to the door.
Does not sag, bind or stick.

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You can also secure the Ladder-Hinge Door with our Lusco Vitrified Tile Silo.
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ONE YEAR
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\$38 Buys the New Butterfly Jr. No. 2.
Light running, easy cleaning,
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Separators are guaranteed a life-time against defects in material and workmanship. Made also in four larger sizes all sold on 30 Days' FREE TRIAL and on a plan whereby they earn their own cost and more by what they save. Postal brings Free Catalog Folder. Buy from the manufacturer and save money.

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Binder Twine Get our low 1919 prices. Farmer agents wanted. Sample free.
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SELECTION OF DISEASE-FREE SEED CORN.

MANY fields of corn do not give the yields which their fertility and the attention given them in cultivation would justify. Considerable care may be used in selecting seed for planting, but too many missing hills and slow-growing stalks result. This has often been attributed to injuries from birds, root insects, and rodents, but recent studies on these troubles by the Department of Agriculture and the Purdue, Indiana, University, Experiment Station show that while these injuries are important, there are other definite, harmful organisms which are the cause of unprofitable yields.

The effects of certain fungi on the corn plants may be very marked. They may be observed readily in the form of smut, rust, broken ear shanks, broken stalks, and down-stalks which may be distributed irregularly through a field. Other harmful organisms may cause less striking effects on the plants. Inconspicuous rotting of the stalks, of the ears, and of the roots, may take place with no apparent injury. The ears, however, which are borne on such diseased plants are weakened. Perhaps the weakness is not enough to show decreased vitality on the germinator, but is evident in the field performance of the seed when taken from the ear and planted the following season. The planting of seed infested with these organisms is, in a great measure, responsible for missing hills, slow-growing stalks, barren stalks, down-stalks, nubbins, early blighting of plants in the field with the large reduction in yield which these conditions bring about. The same organism which causes scab of wheat also causes rot of the stalks, ears, and ear-shanks of corn plants. Wheat planted in fields of diseased corn has more scab than occurs when the corn fields are free from scab-producing organism.

For permanent corn improvement, only ears from disease-free stalks should be used for seed purposes. There are two methods of selection of good seed ears, both of which, from the present state of knowledge, should be followed to insure freedom from disease. Mature ears on disease-free stalks should be selected for planting. It is assumed that the variety of corn is one which is adapted to the soil and climatic conditions of the locality where it is grown and that it will mature in a normal season. Ears should never be selected from smutted stalks, or from stalks which are rotted or whose roots are rotted. Neither should ears be selected which have rotted, broken shanks. Many root-rotted plants die prematurely. The rotting of the stalk can be observed by cutting down through the plant and splitting it open. If the inner portion of the stalk, especially at the lower nodes or "joints," at the base of the stalk, shows a brown discoloration the presence of a harmful organism in the plant is indicated. A mature ear on a living green stalk is always best for seed purposes.

A more critical study of the results of the germination test can be made than has been the habit of the past. It has been found that ears may have perfect germination and yet give low yields in the field; such ears have an unusual susceptibility to rot-causing organisms on the germinator. The seedlings from such ears may develop molds upon them and if they are cut through with a sharp knife at the time the normal seedlings are three or four inches in height, the rot will be noticed developing in the embryos of infected seedlings.

(Continued on page 731).



When Weaning Time Comes

WEANING time is a critical time in a pig's life—it is a critical time, too, for the hog raiser because the future cost of getting the hog ready for market depends very largely on proper care and feeding at weaning time—stunted growth, due to lack of proper food elements or sudden change of diet are apt to occur during this period.

If your pigs become stunted or seem to be at a standstill in growth just after weaning, it is going to take a great deal more feed to develop big, strong, healthy frames later on. See to it that your young pigs have free access to SCHUMACHER FEED both before and after weaning and they will pass thru the weaning period without any standstill period. In addition to SCHUMACHER FEED, provide them with some mineral matter—plenty of clean, fresh water and skim milk—if you have it—and good pasturage, and you can just "see them grow."

SCHUMACHER FEED

is a combination of the by-products of corn, oats, wheat and barley and linseed meal. Fed in self-feeders, young pigs thrive and develop big frames and heavy bone. Its variety of grains makes it unusually palatable. Being finely ground it is easily digested; being high in digestibility it quickens the growth. Its oil meal content keeps the bowels just right. You will find it an ideal feed for growing pigs or mature hogs. For fattening hogs in connection with corn and tankage it will help to shorten your feeding period and save you a lot of labor and money.

FREE HOG BOOK

Write for our new FREE Hog Book. Farmers tell us it is the most interesting and valuable hog book they have ever seen. Tells how we fitted and fed the Champion Barrows we exhibited at the International; also the National Swine Shows. In the meantime, ask your dealer about SCHUMACHER. If he can't supply you, write us.

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THE QUAKER OATS COMPANY
Hog Feed Department, Address: Chicago, U. S. A.

Send me your book "Big Pigs and How to Raise 'em."

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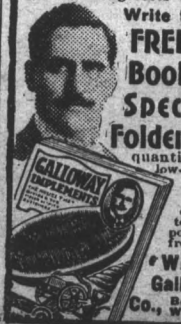
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Your Veterinarian can stamp them out with Cutter's Anti-Calf Scour Serum and Cutter's Germ Free Blackleg Filtrate and Aggressin, or Cutter's Blackleg Pills.

Ask him about them. If he hasn't our literature, write to us for information on these products.

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Binder Twine Standard 500 ft. to the lb.
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Write for Circular Louis Lusse, Dep. V, Milwaukee, Wis.

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Bickmore's Gall Cure is guaranteed to do all we claim for it. If it doesn't, you get your money back. Successfully used on over a million horses each year all over the world! Cures while the horse works! Wonderful for collar and saddle galls, broken skin, rope burns, sore shoulder, mange, and other skin diseases, bruises, cuts, chafes, mud scalds, grease heel, chapped teats on cows and other wounds on horses, cattle, pigs, and poultry. "Your Gall Cure," says C. A. Tripp, of Marshfield, Wis., "is wonderful stuff. Had a mare could not get her shoulder healed all summer. Got a small box of Bickmore's and did not use it all up before her shoulder was healed. Worked her every day in the meantime." Ask for Bickmore's at any druggist's, harness dealer's, general or hardware store. Accept no substitute. Watch for the "Old Gray Horse" trademark—for 34 years the identifier of the best. Or send 10c for liberal trial size box of Gall Cure and valuable Farm Account Book, showing how to keep track of your expenses and receipts. Don't forget—Bickmore's Gall Cure is guaranteed. Your dealer will give you your money back if you are not satisfied after using it. Bickmore's is now being refined and put out for human use. It is called, "Bickmore's XYZ Skin Ointment" and is going to make as big a reputation as Bickmore's Gall Cure. At your dealer—or write direct to us. The Bickmore Company, Dept. 155 Old Town, Maine.

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ATTEN-SHUN FARMERS Ship your own the profit yourself. We pay top prices and mail check promptly. Write for our proposition.
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save you money**

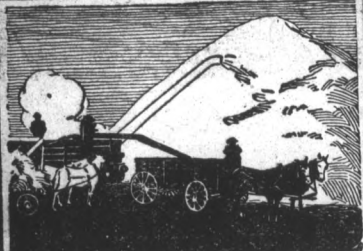
Time is money to the farmer—enough time can be saved with a Leader Water System to quickly repay its cost. Just think of the dozens of times every day someone has to pump and carry water! All that could be saved by the installation of a Leader Water System

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In these days of \$2.20 wheat and other prices in proportion, there is no possibility of an immediate reduction in the cost of Leader Water Systems. Don't deprive yourself of the economies and comforts of the Leader Water System, hoping that the price will drop. Leader Water Systems are made under the most efficient conditions and are remarkably low priced for the service rendered.

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Full Sacks— Empty Stacks

You worked hard for your grain crop. Don't let the thresherman waste it. You can't afford to let a single bushel of it be lost to the straw stack.

You insure your grain crop when you hire the man with the

Red River Special

He has the thresher with the famous "Man Behind the Gun" that beats the grain out of the straw. Doesn't wait for it to drop out as in other threshers but goes after every kernel and saves it for you. That's why the Red River Special saves the farmer's thresh bill.

O. J. Kindig and three others of Roanoke, Ill., write Nov. 25th:

"In 1916 we purchased one of your 30x46 Red River Specials and it has done more and better work than we expected. We threshed as high as 3,500 bushels of oats in one day and it saved all the grain. It beats them all."

Saving grain costs less than growing it. Look for the man with the Red River Special. It will pay you.

Write for Circulars

Nichols & Shepard Co.
In Continuous Business Since 1848
Builders exclusively of Red River Special Threshers, Wind Stackers, Feeders, Steam and Oil-Gas Tractor Engines
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Sir Walter Raleigh's Late seed potatoes at \$1.25 per bushel. Grown from hill selected seed and free from disease. Walnut to egg size. Price f. o. b. bags included.
DAVID LEENHOUTS, R. 2, White Cloud, Mich.



NURSERIES STOCK PRICES SOAR IN THE EAST.

NURSERIES stock, including apples and other fruit trees, have touched a new top notch price in the east. This probably means that there will be extremely small plantings this year and in fact for several years to come or until prices become better adjusted. Today, agents of nursery concerns are selling the ordinary standard Baldwins and Greenings at \$1.00, two to three years of age. The popular varieties of Delicious and Winter Banana are regularly quoted at \$1.25 each. Again standard pear trees, including Bartlett and other common varieties, are selling at \$1@1.10 each. Plums and prunes are listed at about the same prices as pears. Cherries are selling at \$1@1.25 each. Peach trees including Elbertas and Crawford's are listed at \$1. It is to be appreciated that this does not represent the prices charged for large lots, but the regular retail price, with the trees distributed through the agency system all over this territory.

The present prices are the natural outcome from the extremely low prices that have been charged for the last five years. Apple trees have sold within that time for ten cents each, a nominal price. Naturally discouragement followed business on such a basis and hundreds of small nurserymen went out of business. Incidentally hundreds of acres of nursery stock were plowed up and thousands of trees thrown on the brush pile. This has cut the available supply of trees to the lowest point in twenty-five years.

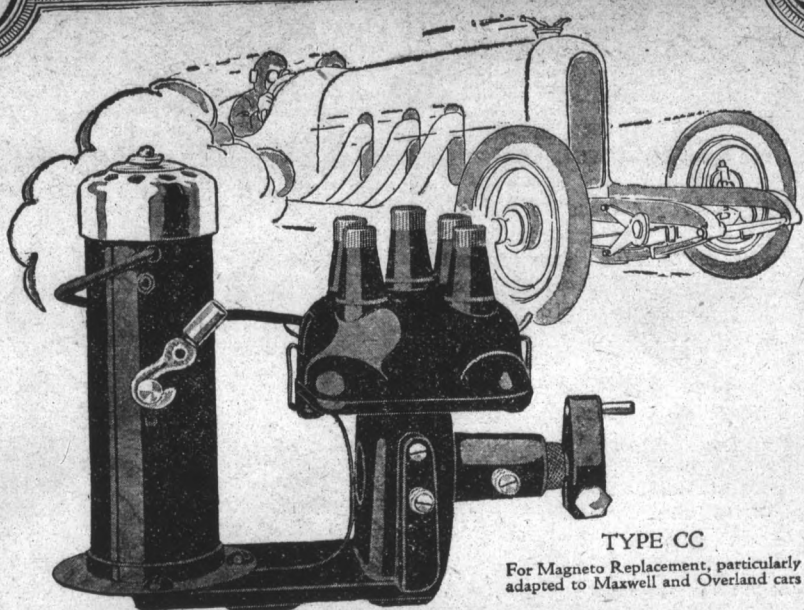
This in itself was enough to have boosted prices, but added to all this was the extremely hard winter of 1917-18, which killed hundreds of acres of peach trees and seriously injured many young apple trees. Then, too, young trees in the nursery rows were injured. Now comes the need of replacing so far as practicable these orchards along with the normal amount of setting required to maintain the orchard acreage in the fruit belt, aside from the damage described.

In addition to being largely a matter of supply and demand, it is rather openly asserted that the bigger firms, now that the small nurserymen are out of the way, have come to an understanding through their national organization, and that prices will be fully maintained indefinitely or until something breaks.

Under present conditions, the disposition is to restrict plantings. There is also the belief in some quarters that the present nursery stock is risky stuff to set on account of the winter injury a year ago. W. P. Rogers, former president of the New York State Fruit Growers' Association, said that he would not advise anyone to set trees this year on that account because he considered the stock lacking in vitality and possibly seriously injured.

Many of the nurseries are about all sold out. One dealer in reply to a query as to what price he would quote on five hundred peach trees, said: "I wouldn't quote; we haven't got them."

What is at least evident at the present time is that the war has accelerated the business evolution of farming, and it is reasonably to be assumed that a considerable part of the agricultural population of this country, estimated at 6,000,000, is giving thought to the larger use of business methods as a means of preserving their present prosperity. It is to be hoped that, individually and through their organizations, they are gearing their plans not only to the idea of profits, but to that of meeting a responsibility as purveyors to a continually hungry world.



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ATWATER KENT SCIENTIFIC IGNITION

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Built in individual outfits—"two or three-men" machines—big enough to take care of all your own work. Variety of sizes, 4 horsepower up to 40 to 300 tons a day.

All with big "Ohio" features—direct drive, friction reverse, single lever control, etc. Automatic beater feed on larger sizes. **Silverized Silage**—packs air tight—ferments properly—makes better food for stock. Write for catalog.

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Box 390
"Modern Silage Methods,"
264-page text-book,
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Sow genuine hardy Dakota Seed. Write for sample and price. Also Sudan Grass, the new drought resistant hay crop, sample free.

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CABBAGE PLANTS

Well hardened, ready for transplanting. Varieties: Flatdutch and Surehead. By parcel post prepaid 100 for 40 cents; 500 for \$1.40; 1000 for \$2.50. By express collect \$1.25 per 1000; 5000 \$5.00. Address: **THE W. L. BEARDIN PLANT FARM, Tipton, Ga.**

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We have some extra good Belgian Stallions for sale, coming three and four years old. They are heavy, of good conformation and sound. You can see their sires and dams. They are raised in Michigan and acclimated. We have no agents on the road for which you or we would have to pay. You cannot buy them any better nor cheaper in the world. Our studs and mares carry the best blood Belgium has produced. We prove this by their pedigrees. We invite you to see our stock before buying. You can see them any day of the week Except Sunday. Write for particulars and catalog to the OWOSSO SUGAR COMPANY, Prairie Farm, Alicia, Mich.

For Sale Registered Percheron stallion 3 years old. Champion stallion bred and owned by exhibitor at the West Michigan Fair in 1918. Fine disposition; broke double. Also one 2 yr. old own brother to above. Horace H. Walcott, Coopersville, Mich.

Percherons, Holsteins, Angus, Shropshires, Durocs
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Percheron Stallions and mares at reasonable prices; inspection invited.
F. L. KING & SON, Charlotte, Mich.

SHEEP

MORE to the Kids of Mich: I have sold all the ewes that I care to sell, but judging from the many inquiries I have received there are many of you kids who still want to get started in registered ewes. Now then, here is a new proposition: I have selected one beautiful Shropshire ewe, she will lamb in the course of the next month; she is worth at least \$50.00. I will give this ewe, absolutely free, to the boy or girl who gives me, in my opinion, the best reasons why they should be the one to get her. I may give away more than one.

S. L. WING, Kope-Kon Farms, Coldwater, Mich.

SHROPSHIRE SHEEP

We have about 50 ewes in lamb for sale, of best breeding. Registered.
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BUY A SHEEP

Wait a minute, buy Hampshires. The American Hampshire Sheep Association wants to send you a dandy little booklet with list of breeders. Some near you. Write COMFORT A. TYLER, Secretary, 22 Woodland Ave., Detroit, Mich.

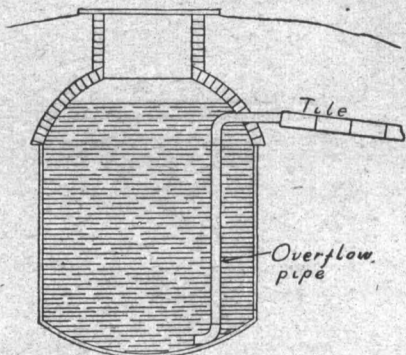
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Keeping the Cistern Clean

THE accompanying drawing shows a cistern with an overflow pipe, the object of which is to keep the bottom of the cistern free from sediment and to keep the water from becoming foul smelling.

The pipe extends from the bottom of the cistern up to as near the top as it is desired to have the water rise, where it is made to pass through the wall of the cistern and into a pipe or tile drain to carry it away. That the water may readily enter the pipe, an elbow should be attached to its lower end; and another elbow will be needed at its upper end that the pipe may pass through the wall of the cistern. Probably in most cases, the pipe would be made to pass out through the cistern's



arch, as shown. As the water rises above the upper elbow, it necessarily flows out of the pipe, but to do so must enter the pipe at the bottom of the cistern. By this means, all foul stuff that is not too heavy will be carried away, and the old cistern water will be replaced by the new that enters at the top of the cistern.

This idea has been published before, but is well worth repeating. Since putting this device into my own cistern, the water has been ninety per cent better than it was before. I might say one hundred per cent, but the roof space from which my cistern is filled is not large, and sometimes through the summer not enough water runs into it to overflow it for a long time, and the water may become somewhat tainted. I have heard of a cistern not far from here that was emptied out after twenty years of continuous use with an overflow pipe, and no sediment was found in the bottom of it. The more water that runs into or through a cistern with this device, the purer it will be. A three-inch pipe is about the right size to use.—L. B. Avery.

SELECTION OF DISEASE-FREE SEED CORN.

(Continued from page 729).

ed seedlings. This infection caused by harmful organisms, actually upon or within the seed-kernels, is called primary infection. This early rotting of the seedling, the result of primary infection, is a germination characteristic by which the infested weak ears may be discarded before planting.

Ears from diseased stalks may have kernels bearing harmful molds and bacteria in a relatively inconspicuous manner. The kernels may germinate, but at germination time, the young seedlings may be invaded readily because of this close relation. Then again, some ears may be free of any harmful organisms, but having been formed on a diseased parent-stalk, the seedlings growing from these ears are less resistant to infection and may, therefore, become infected readily on the germinator and in the field. Conspicuously moldy ears should never be considered for seed purposes.

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MR. V. W. CHERVEN
Chief Heating Engineer of the
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Formerly Superintendent and General
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DON'T let a furnace be "guessed" into your home. Do you know that millions of tons of coal are wasted annually in improperly installed furnaces? And do you know that over half the sickness, coughs, colds, etc., can be traced to poor home heating? Here is the furnace that is not sold on a hit-or-miss plan. It is installed only after its plan of installation has been prepared or approved by our chief heating engineer, Mr. V. W. Cherven, admittedly America's foremost home-heating engineer. During the war, the United States Government selected him as Superintendent and General Inspector of Heating and Ventilating of all its Industrial Housing projects. He designed and supervised the installation of over 3000 warm-air heating systems. His services are now given free to users of the

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The Furnace With the Cone Center Grate

Write and let us tell you about this service. If your home needs a new heating plant you will find exactly what you want in the HOLLAND. This furnace has made warm friends out of over 100,000 satisfied owners. It is now outselling every other furnace in America. Its increasing sales during the past few years have built up the largest furnace factory in the world. The big reason for its unusual success is found in nothing else than HOLLAND Construction and HOLLAND Service.

Cone Center Rocking Grate—All One Piece

Instead of a lot of parts, our grate is in one piece. Instead of sagging in the center, it is cone shaped. Instead of allowing the fuel to burn up through the center, like a volcano, it throws the fuel to the outside, where it burns from the sides and over the top. Air is mixed with the gas. Soot and gases are burned. You get all the heat from the fuel, not just in the center of the fire-pot, but out near the walls, where you get 100 per cent radiation. If you could talk with any of the warm-friend owners of a HOLLAND, you would know what a big saving in fuel this means. This cone center rocking grate is the easiest operating grate in the world. It

Rests On a Center Pivot

shakes so easily that a ten-year-old child can operate it. You can burn any kind of fuel in a HOLLAND Furnace without changing the grate.

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No matter what kind of a heating plant you want, get in touch with us. There has been too much "guessing" about furnaces. Don't guess about yours. The best furnace in the world will not give good service without the right kind of installation. Write and learn about the service that helps HOLLAND Furnaces make warm friends. Ask for Catalog No. F

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All Shelled Corn 56 lbs. In Grain Bags 50c Each. Cash With Order.
"MARQUIS" Spring Wheat at \$3.25 Per Bushel.

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Immediate or future shipments any quantity highest quality. Prices will not come down, so get in your order now and save money. Quotations made immediately on request. Address

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Reid's Yellow Dent; Leaming; Pride of the North; White Cap Yellow Dent and Early Butler. Write for Price List.

THE PAGE-PHILLIPS SEED CO.
Dept. G, Toledo, Ohio.

SEED CORN FOR SALE

Golden Dent long grown and acclimated in Michigan. Deep kernels, large ear and stalk. A heavy cropper. In ear 70 lbs. \$5.00 Shelled per bu. \$4.00. C. B. COOK, R. 1, Owosso, Mich.

Seed Corn for sale. Mich. Yellow Dent; this corn been grown on my farm for the last 25 years and will mature at \$4.00 a bu. including bags and also Plymouth Rock eggs at \$1.00 per setting of 13. JOHN LOHMAN, R. 3, Hamilton, Mich.

Seed Corn for sale. White dent, large ear and stock heavy cropper and very early. Planted on bottom land the past season June, 15th and matured before frost stuck it. \$3.50 bushel. I. R. NEHER, Ross, Mich.

SEED CORN. Old reliable Mich. Yellow and tested. Also regenerated Swedish Select and Scottish Chief Oats. Circular and samples on request. F. A. BYWATER, Memphis, Mich.

Northern Grown Choice Michigan Pea Bean Seed for sale. These beans yielded 34 bus. per acre for last season. It pays to plant the best. Only \$5 per bushel. Order early. J. P. SEILER, East Jordan, Mich.

MICHIGAN GROWN SEEDS for Michigan growers. Ask for catalog. Harry E. Saier, Seedsman, 115-119 E. Ottawa St., Lansing, Michigan.

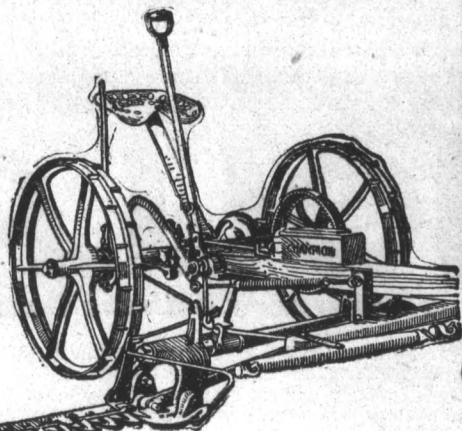
Seed Corn carefully selected; very early white dent also yellow dent; germination over 97%. CHAS. SCHNEITZLA, R. 2, Clinton, Mich.

B. F. AVERY AND SONS

"Champion" Hay Tools

give you a wide range of choice. They include Mowers, regular or vertical lift $4\frac{1}{2}$ to 7-foot cut; Tedders, 6 and 8 fork; Self Dump Rakes in six sizes; Side Delivery Rakes; Combined Side Delivery Rakes and Tedders.

"Champion" Mowers



have many features that have made them first choice of discriminating farmers, for example:

Pitman connection is self-adjusting to take up wear.

The knife head is unusually long, giving added strength just where breakage is likely to occur.

Outer end of crank box is closed and has an oil-tight chamber that holds enough oil for several hours.

Fly wheel shield is made of malleable, rendering breakage unlikely. If broken, it can be replaced at small cost because it is a separate piece—not a part of main frame.

Coupling yoke is unusually wide, giving great leverage and holding cutter bar in alignment.

B. F. AVERY & SONS, Founded 1825, Incorporated 1877, Louisville, Ky.

The Rural Motor Express

(Continued from first page).

degree the shortage of man power owing to war conditions."

Herbert C. Hoover awoke the people of this country to the urgent necessity for some kind of service such as would be rendered by the establishment of the rural motor express lines. Mr. Hoover called to our attention, after a nation-wide survey, that approximately fifty per cent of the perishable food products of the country was annually wasted for want of efficient transportation facilities. He pointed out that with motor express lines the farmer need not maintain so many horses and that horses that eat the crops of millions of acres might be largely dispensed with and the land used to produce food crops. Mr. Hoover believes that a developed motor express system will lead to the establishment of public markets and give them a basis of economic success with resultant lower prices to the consumer and greater profit to the producer.

Hon. William C. Redfield, Secretary of Commerce, points out that in order to secure a perfect transportation system, railways, waterways and rural highways must be linked together. He advises that even if we had an abundance of railways and waterways and lacked the use of highways, we should still have imperfect transportation; that we should fail to bring goods to every man's door, and that the system must bring the goods to every man's door in order to be perfect. "I told the Director General of Railways," said Mr. Redfield, "that two-thirds of the job was fairly well in hand, but that he had left out one-third and that he would not get his unity complete until he had made it a trinity by taking in the rural highways. I told him that the highways, as a transportation system, and their development, both as to

of road in the United States at the rate of \$5,000 per mile. Don't try to do it all at once. Let the State Highway Commissions, the federal government, motor car owners, brick manufacturers, concrete, cement and supply firms confer and cooperate and proceed to organize a system where sooner or later the two million one hundred and ninety-nine thousand miles of highway receive ample and honest treatment, and in doing so let us build a highway that is going to be useful in the distribution of our commodities, merchandise and products of the farms, and other necessities of life.

"In advocating the extended use of motor-driven vehicles over the highways of the nation I am endeavoring to provide for the commercial conveniences of the public. In 1916, following an appeal for increased food production, farmers raised many tons of food stuffs which decayed in the fields due to inadequate means of conveying the same to market. It is proposed through the establishment of motor vehicle truck routes to partially eliminate such waste. It is, nevertheless, important in essential occupations to use modern mechanical devices to encourage the construction and improvement of highways, to let the producer produce, the consumer consume, and the conveyor convey.

"Thus thousands of individuals who may be encouraged to take up land and improve it at the public expense, and to utilize moneys provided by the farm loan boards for production thereon, and thousands of individuals who may be encouraged to accept employment in industrial enterprises in great cities, in order that manufactured articles and commodities may be produced more cheaply through greater quantity of production, may be supplied with an

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Much is said and printed about silos that will not bear the Notary's seal, but Kalamazoo Silos require no misrepresentation to sell them. They are just what we say they are and the reputation of the largest factory of its kind—established thirty-five years ago—is back of every statement we make. Here are facts about

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They are scientifically designed; constructed of highest grade materials; built to withstand the ravages of time and sold at a fair and reasonable price. They give absolute, lasting, positive satisfaction and increase the selling value of the farm far more than their cost.

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"Permanent as the Pyramids"—fire-proof, frost-proof, storm-proof, moisture-proof, acid-proof, decay-proof, vermin-proof. Galvanized reinforcing. Require no paint, no upkeep expense or repairs. First cost is the last cost. Easy to build—and once built your silo problem is solved forever.

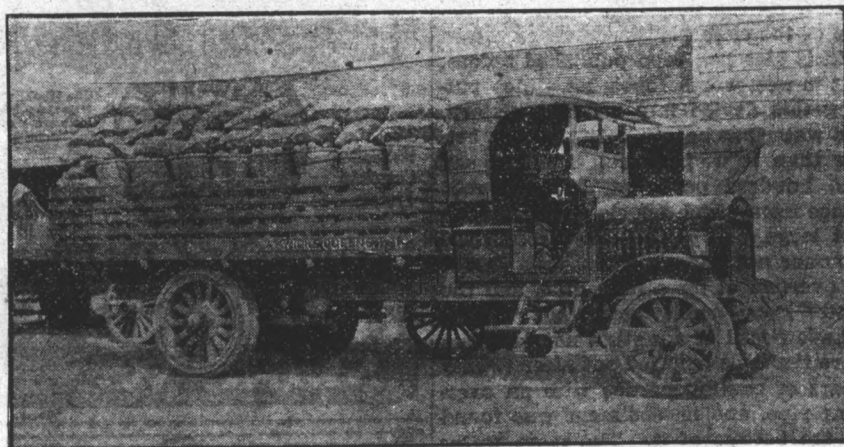
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We offer special inducements to early buyers and easy terms to those who can not pay cash. Write for illustrated catalog at once. The time to get posted is before you get busy with other farm work.

Kalamazoo Tank & Silo Co.
Dept. 223 Kalamazoo, Mich.



roads and means of using the roads, were quite as essential as the other two. I am convinced that neither will reach its normal place as a servant of the people unless linked with motor truck routes."

Hon. Jas. I. Blakslee, Fourth Assistant Postmaster-General, who is in charge of rural postal delivery, is one of the most enthusiastic supporters of the rural motor express idea. Mr. Blakslee has made a large study of this subject, and because of the existing motor routes, has facts and figures to give in support of his belief.

"There are two million one hundred and ninety-nine thousand miles of highways in the United States," Mr. Blakslee recently said. "Why, there is more highway in one state than there are railroads in the whole country. Consequently, it is time that the country forthwith take notice of what shall be done with those two million miles of highway. If we were to decide to improve all this mileage right now, we would expend an average of not less than \$5,000 per mile, or a grand total of more than ten billion dollars.

"Let us look at facts. Ten billion dollars! We would have to go into debt in order to improve every mile

avenue whereby the increased production may be distributed and sold, whether such production originates on the farm or in the city.

"Transportation by motor truck routes is now in daily operation from Portland, Maine, to Richmond, Virginia, from New York to Chicago, from Indianapolis via Atlanta to Montgomery, and with a total annual appropriation of \$300,000 the gross postage revenue of this highway and adjacent roads leading to the same averages over \$2,000,000 per year. In fact, these revenues are sixty-two cents per mile at a cost of eighteen cents per mile.

"I have prepared a definite program to include the establishment of means of conveyance between any two large markets, through producing territory not adjacent to rail or water transportation in order that individuals domiciled therein or thereon might trade directly with one another. I have presented a specific proposition for the improvement of our highways. I have interested myself in the disposition of products transported in motor trucks over the highways so that merchants or manufacturers, farmer or dairyman,

can easily and quickly communicate with and do business with one another. Many of the patrons of motor truck

HARROWS

Flexible wood beam and Spring tooth harrows direct from factory to you at wholesale prices.
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2190 E. 10th St., Pittsburg, Pa.



routes in the city of Washington have not paid more than an average of sixty cents per dozen for their strictly fresh eggs in the past six weeks, during which time the average retail price has been seventy-five cents. How to extend this advantage, which certain citizens of Washington enjoy because of their familiarity with the avenues of communication and the location of the cheapest sources of production, to the general public is the question that is under consideration at this time. Naturally it will require months of study and investigation.

"We have twenty-six million producers in this country attempting to feed themselves and seventy-four million more of people, and the proportion of producers to consumers is lowered daily. There is a tendency of producers to leave the farm and go to the city. This indicates that in the future the cost of living is not going to be reduced because of the greater supply of producers. Consequently we must introduce some form of service, some form of conveyance, whereby one producer or five producers double their production and thus offset the tendency of individuals to leave the farm and go to the city.

"We have a string around our throats. We haven't the capacity on three hundred and forty thousand miles of railroads to transport all that you would like to ship. We may transport all we must ship but we can't afford all we want to ship. There are three thousand miles of canals nine months of the year doing business in another territory, the other three months waiting for the ice to thaw out."

The opinion among the leading men of the country, who have made a study of this rural express proposition is that it will be the quickest way to end the troubles of transportation and to make the farming sections efficient in food production and give the farmer a larger share of the consumer's dollar.

A POINTER ON TYING FLEECES.

SOME weeks ago a party of county agents were being shown through a wool-scouring mill in one of the large middle-west cities. They wanted to learn things that they could take back to help their home folks. At one point the manager of the mill called their attention to the kind of twine to use in tying the fleeces. He picked up a handful of partly scoured wool and pointed out dark fibres. These, he said, were the fibres from binder twine which were left in the fleece when it was unbound at the warehouse or mill.

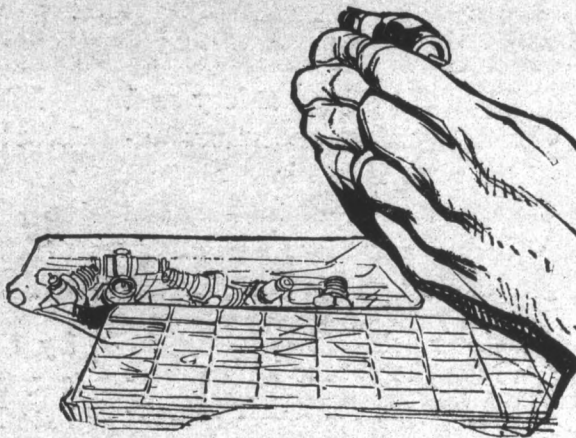
It is the custom of the fleece handlers to cut the cord holding the fleece together and pull it out. If common binder twine is used some of the fibres are sure to catch in the fleece and be left there. They do not take the dye and so are very objectionable to the woolen manufacturer. He will not pay the price for such fleeces that he will for those which do not have the fibres mixed with the fleece. The manager of the mill said it did not pay to pick out the fibres, and showed how a good cotton or paper string pulls out of a fleece without leaving fibres. If a few cotton fibres should be left it should not be harmful, as the cotton takes the dye.

The paper twine has a hard, smooth surface and is best from all standpoints. It probably costs no more than any other kind of tying material, probably less than binder twine since it has soared to present prices.



Champion Dependable Spark Plugs

Rigid Inspection Insures Dependability



AFTER all the severe tests, such as those that show Champion spark plugs to be 100% leak-proof and 100% in durability—

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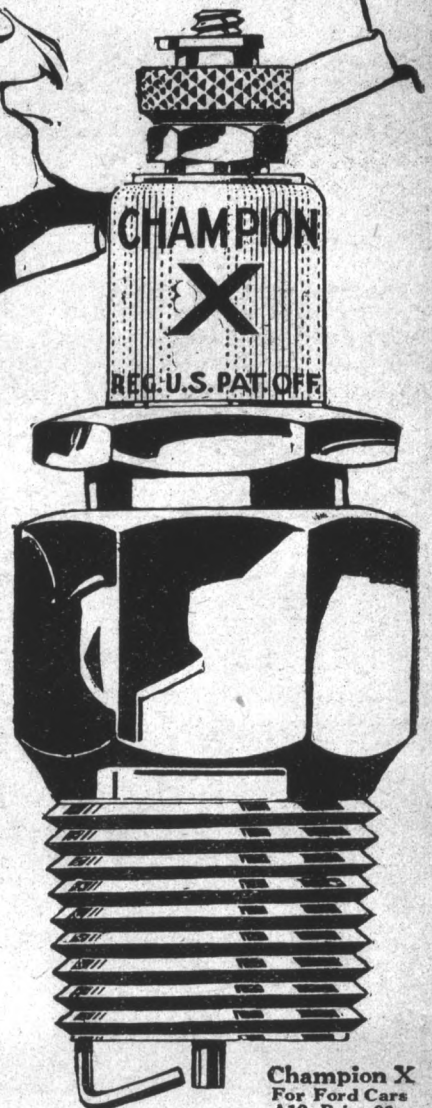
Long trained experts go over the plugs to make sure that every detail is right, and that there are no imperfections.

This care and thoroughness, coupled with our No. 3450 Champion Insulator and our patented asbestos gasket construction,

are responsible for the better performance of Champion spark plugs, and their greater resisting power to temperature changes and to shock and vibration.

Look for the name "Champion" on the Insulator and the world trade-mark on the box. This is your safe way to avoid substitutes.

There is a Champion Spark Plug for every type of motor car, motor truck, tractor, motorcycle and stationary engine.



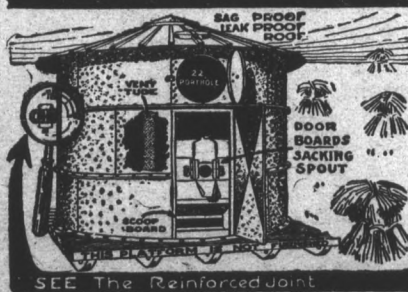
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High efficiency, low price; entirely automatic—no levers or clutches; starts separator slowly; increases its speed gradually; offsets jerk of wooden engine starting. Saves machinery, saves cream, saves money. Guaranteed 5 years; \$8.50 cash; from dealer or direct, get catalog.

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STANDARD REMEDY

Cures Heaves by correcting the cause—Indigestion. Prevents Colic, Stagnation, etc. Heat Conditioner and Worm Expeller. 25 years sale. Three large cans guaranteed to cure Heaves or money refunded. The 1st or 2nd can often cures. \$3.00 and \$1.00 per can at dealers or prepaid by parcel post. Booklet free.

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A horse with heaves can't do its full share of work. Cure the heaves and you have a horse worth its full value in work or in money. Send today for

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\$1.04—war tax paid—per pkg. Satisfaction or money back
Fleming's Vast-Pocket Veterinary Adviser.
Helps you distinguish heaves from other ailments. Write for the Adviser. It is FREE.

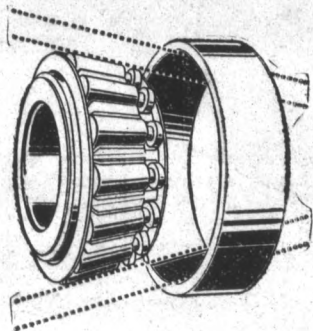
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TIMKEN TAPER



Dotted lines show how the inside of the "cup" of a Timken Bearing is tapered to fit over the tapered rollers.

Does It Really Cost More?

Does the added safety and durability that the manufacturer puts into his car when he specifies Timken Tapered Bearings actually mean a bigger outlay on his part for the item of bearings?

Does the protection that he thus secures for other important parts add to manufacturing cost?

Yes, Timken Bearings *do* cost more. For they are not the kind that are built to meet a price.

Like the best known and best built axles, springs, transmissions, electric starters and so on they add far more *value* than they do to *price*.

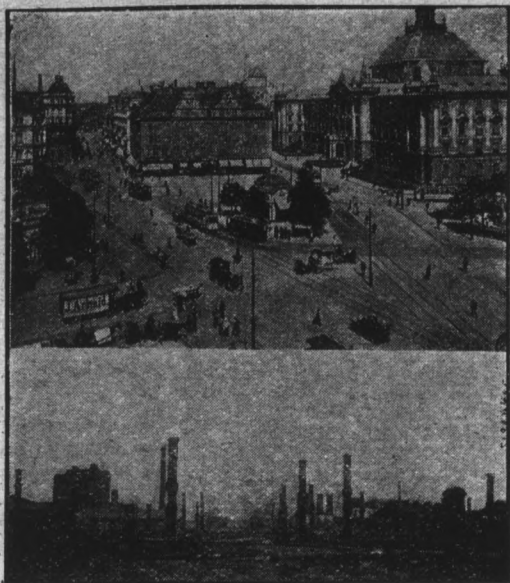
The foregoing is borne out by the names of the motor car, truck and tractor builders listed in "The Companies Timken Keeps." These builders would not pay more for Timken quality, if they did not know from experience that they thus add value to their product.



THE TIMKEN ROLLER BEARING COMPANY
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WORLD EVENTS IN PICTURES



Munich now Under Control of the Bavarian Anarchists, and Yafaslave, a Russian City, Ruined by Bolsheviki.



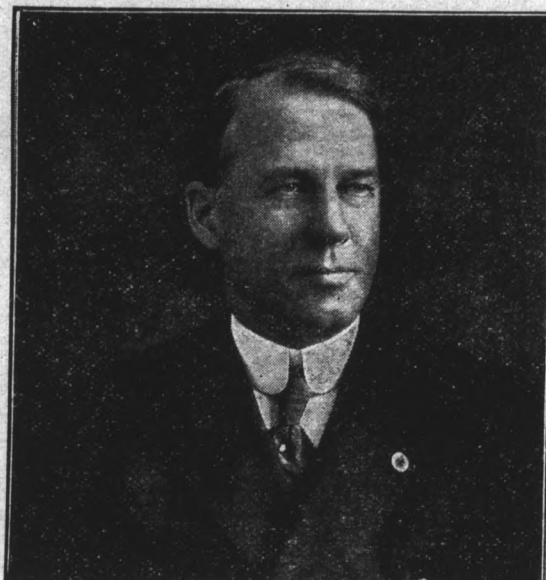
The Smiling Quartette are "Yeomanettes" Stationed at Mare Island, California, the only Training Camp for Women Sailors in the U. S. Kitchen Police doesn't seem to worry them. They are Ready for any Service.



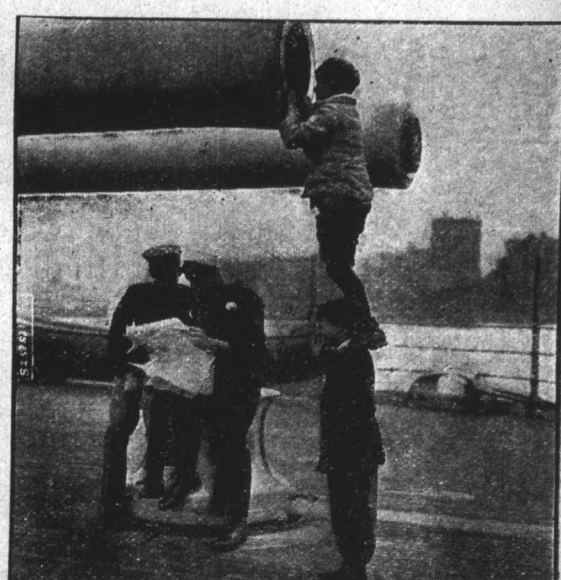
Private Kent returns with everything in the line of Souvenirs but Bill.



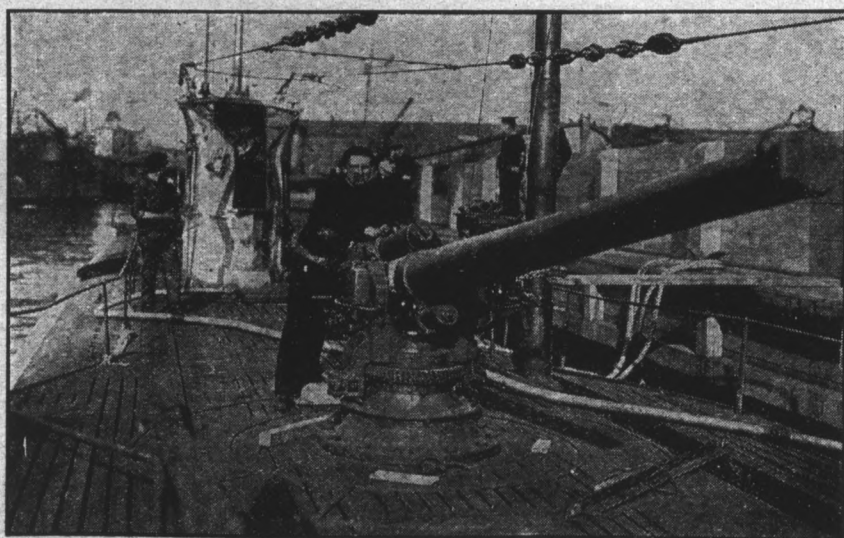
Peeling Potatoes in the United States Navy. The Machine peels a Barrel of Potatoes in a Few Minutes.



Julius H. Barnes, Named by President Wilson as United States Wheat Director.



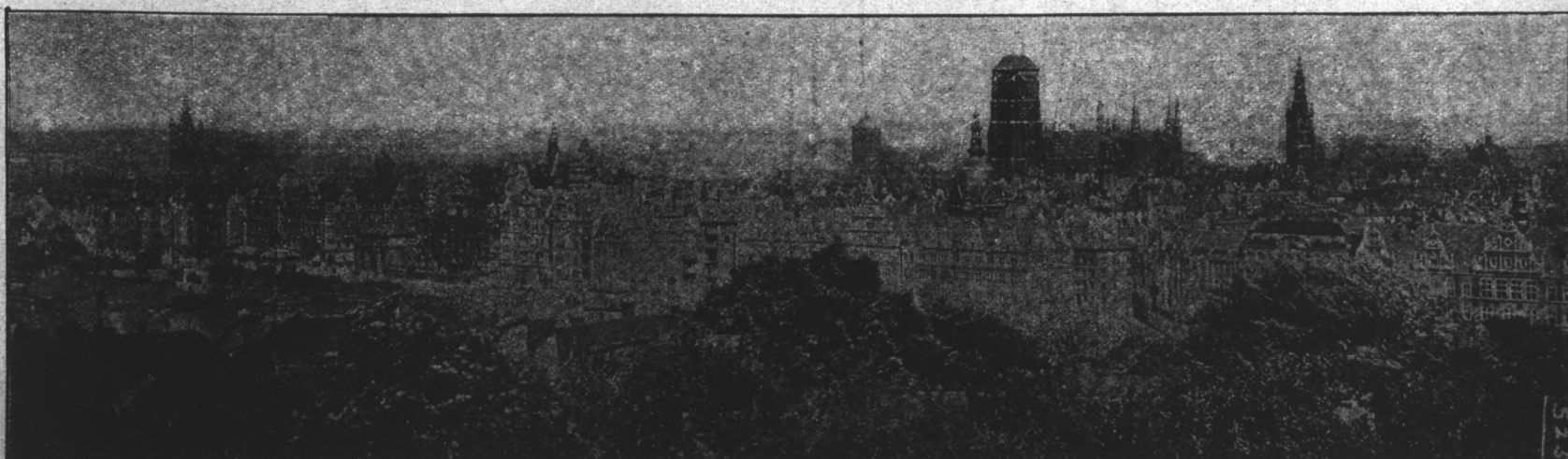
Looking Into One of the Big Fourteen-inch Guns Aboard the U. S. S. New York.



The U-III, the First of Four U-boats Turned over by Germany to the United States, Arrived in New York Recently.



Belgian Soldiers Recently Arrived in the United States to Aid in Putting Over the "Victory Loan."



A Bird's-eye View of the City of Fiume, on the Eastern Shore of the Adriatic, which the Peace Conference Refuses to Give to the Italians.

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If you've never worn them get one today. They'll be in service when three ordinary suits have gone to the rag-bag.

Over 2,000,000 satisfied wearers. The ideal work-garment for the farm.

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Her One Hundredth Birthday

By J. H. Brown

A WELL-KNOWN and supposedly sensible farmer of Calhoun county, one day last spring took his wife out for a ride to Albion and back to Battle Creek. He drove to a certain house in Albion and asked his wife to get out. Then he went in and asked a certain widow lady to go out with him for a ride. This lady accepted the invitation, took his arm and walked out to the car and got into the front seat. The farmer's wife stood on the lawn and watched the proceedings with considerable interest. It was a rather unusual thing, to say the least, and the reader will immediately decide that the farmer's wife had grounds for starting something. In fact, she was already grounded.

Now, what do you think o' that?

But, wait a minute! That isn't all of it. And, if you will promise not to say a thing about this to a single soul, we'll tell you all about it. Then you can fix up your own moral to adorn this tale.

The widow referred to was just one hundred years old that very day, May 13, 1918. A big celebration was being held in her honor in her own home and in the first Methodist Episcopal church of that city.

Being an officer of the Calhoun county historical and pioneer association, we wished to take a picture of this woman on her one hundredth birthday. And, instead of using some portrait picture that had been taken some time previous, we wanted one that was up-to-date and showed some action. And we got it, as the accompanying picture shows.

We drove our car to Albion that day early in the afternoon and pulled up at the curb in front of the fine home of Mrs. Juliet Calhoun Blakeley. Then we went in and paid our respects to "Grandma Blakeley." The house was well filled with friends and relatives. The day previous was Sunday, and "Mothers' Day" had been celebrated in the fine church in that city. Grandma Blakeley is considered the originator of "Mothers' Day" and the day is nationally set for the second Sunday in May.

When we asked this one-hundred-year-old lady to go for a ride with us, she took our arm and walked through the rooms of the spacious house to the front porch, down the high steps and walk to the curb, as easily as some girls half her age. We opened the car door and assisted her in just as we used to do to girls considerably younger in the days before we had a girl of our own for keeps.

We'll never forget that day we took our oldest girl out for a ride. And we took her picture in the car to remember her by. We doubt whether there

are many farmer readers of this paper who ever took girls out on such a stunt on their one hundredth birthday. Next Tuesday, May 13, Grandma Blakeley, if she lives, will be one hundred and one years old.

Farming in Michigan was somewhat crude when Juliet Calhoun was married and came with her husband to Calhoun county, Michigan territory, just before it was admitted as a state in 1837. Just think of it! She was nineteen years old and they settled in the wilderness near where Homer stands. A little later they moved to "The Forks," as Albion was then known, consisting of only five buildings. Mrs. Juliet Blakeley from that time to the present has seen more of the kinks and problems of pioneer farm life and practice than almost any other reader of the Michigan Farmer. It is now eighty-two years since she was married and came to Calhoun county, yet this woman has more than kept up with the times. She owns a fine automobile and can drive it herself. She can see without glasses and hears as well as anyone.

She joined the local organizations in war work, and registered for active service. She donated her car for one-half the time during the past year for war service. She was one of the first to register her experience in farming, gardening, care of children, cleaning, cooking and general housekeeping.

"Have you anyone who is dependent upon you?" she was asked.

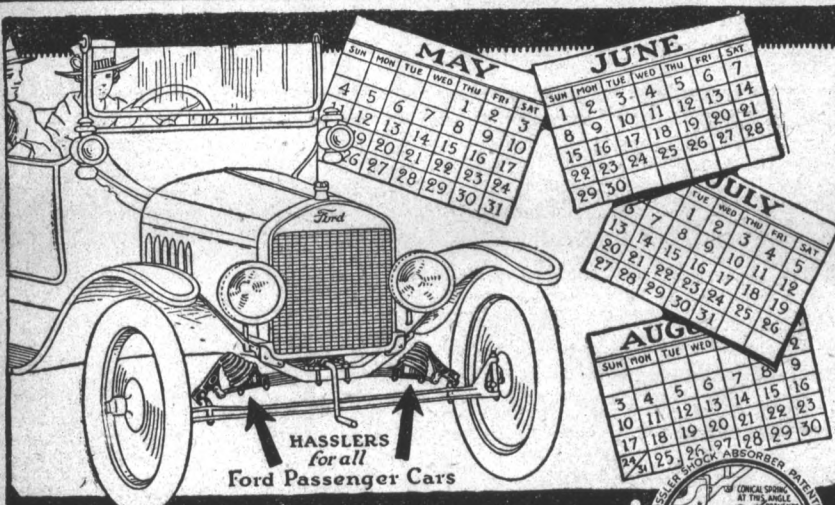
"Oh, yes, I have one son, and he needs me just as much as he ever did," she replied.

When it is well known that her son is a strong, healthy boy of fine physique, good looking, only three-quarters of a century along and thoroughly domesticated, one fully appreciates Grandma Blakeley's solicitude concerning him. It has been quite a spell since he went in swimming without her consent, and he is called a pretty good boy to mind, generally speaking; still, his mother continues to feel her responsibility for his conduct as the days go by.

The son, Charles C. Blakely, is a widely prominent and eminently successful business man of affairs at home and elsewhere. For about half a century he has been traveling over the country and has a large acquaintance among the business men of the larger cities.

Everybody knows Grandma Blakeley is a Methodist. Albion College and the church observed "Mothers' Day" and her one hundredth birthday by printing a fine memorial program for the day. A full-page picture of her adorned the front page, with this caption un-

(Continued on page 741).



4 months Free driving!

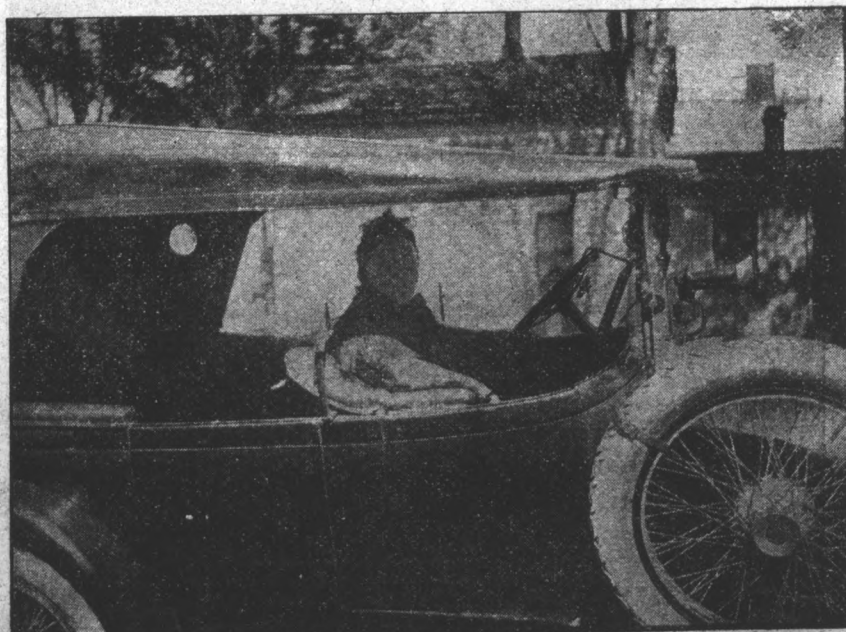
FOUR whole months of driving at no expense to you for repairs or tires. Four whole months in which there will be no depreciation in your car. This is exactly what will happen when you equip your Ford Car or Ford One Ton Truck with Hassler Shock Absorbers. They mean a saving of at least 30%—in all of these costs—the equivalent of four months of driving. Hasslers accomplish these things so easily because they protect the vital parts of the machine from road shocks and vibrations. It doesn't seem like the same car—and you'll say that Hassler Shock Absorbers far more than pay for themselves in improving the riding qualities. They will convert your Ford into an easy-riding, comfortable car for any purpose—more economical—a machine that will last two or three years longer. You can satisfy yourself regarding the value of Hasslers without risking a penny.

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The Hassler Guarantee:
"Absolute satisfaction or your money back."

10-DAY TRIAL OFFER
Don't ride without Hasslers because someone tries to discourage you. They are a quality product—worth their price. The Hassler dealer in your vicinity will put them on for 10-days' trial. Your money refunded if you say so. Write for name of dealer and Trial Blank.

ROBERT H. HASSLER, Inc.
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Indianapolis, Ind.
Canadian Factory, Hamilton, Ontario



We Took Her Picture in the Car to Remember Her By.

Please Mention this Paper When Writing to Our Advertisers



Lee Union-ALLS

Not a genuine UNION-ALL unless this design is embossed on the buttons. Look for it. Remember there is only one UNION-ALL, the LEE

No Belts—No Suspenders

LEE UNION-ALLS are all in one piece—so easy and comfortable you'll be glad you own a suit every time you put it on. Remember too that LEE UNION-ALLS cover your body from head to foot, protecting your skin from dirt, grime and chaff. Superior quality features make LEE UNION-ALLS the most economical work garments manufactured. All seams are triple-stitched, all strain points are reinforced; buttons are riveted to the cloth; button holes are rip and ravel proof. Many other features insuring long, satisfactory wear. If your dealer does not handle LEE UNION-ALLS, write for further information and tell us his name.

DEPARTMENT 2235

The H.D. Lee Mercantile Company

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Stop those Leaks

THE easiest and quickest way to repair leaks in radiators, pumps, water jackets, hose connections, etc., is to use Johnson's Radiator Cement. This will stop the leaks instantly without laying up the car. No mechanical experience is required—all you have to do is remove the cap and pour the liquid into the radiator.

No tool kit is complete without a can of Johnson's Radiator Cement. It overcomes the inconvenience of laying up one's car. A half-pint is ordinarily sufficient for a Ford or other small radiator—for larger cars use a pint.

JOHNSON'S RADIATOR CEMENT

Johnson's Radiator Cement blends perfectly with the water until it reaches the leaks—just as soon as it comes in contact with the air it forms a hard, tough, pressure-resisting substance which is insoluble in water and consequently makes a permanent seal.

Quick—Efficient—Harmless

Johnson's Radiator Cement contains no powder, cement or anything which can coat, clog or interfere with the efficiency of the cooling system. It will ordinarily seal a leak in from two to ten minutes.

Use Johnson's Radiator Cement for Automobile and Tractor radiators and for sealing leaks and cracks in boilers and water jackets of all kinds.

Insist upon your dealer supplying you with Johnson's Radiator Cement. Write for our folder on "Keeping Cars Young"—it's free.

S. C. JOHNSON & SON, Dept. MF Racine, Wis.

"Beyond the Frontier"

"Do you love me, Monsieur?"

"Mon Dieu—yes."

"Then there is no sacrifice. My heart would break here. God! Would you doom me to live out my life with that brute—that murderer? I am a young woman, a mere girl, and this is my one chance to save myself from hell. I am not afraid of the woods, of exile, of anything, so I am with you. I would rather die than go to him—to confess him husband."

"The lady is right, Rene," Boisron-det said earnestly. "You must think of her as well as yourself."

"Think of her! Mon Dieu, of whom else do I think. Adele, do you mean your words? Would you give up all for me?"

"Yes, Monsieur."

"But do you know what your choice means?"

I stood before him, brave in the darkness.

"Monsieur, I have faced it all. I know; the choice is made—will you take me?"

Then I was in his strong arms, and for the first time, his lips met mine.

CHAPTER XXXI.

We Reach the River.

IT was the voice of Boisron-det which recalled us to a sense of danger.

"It is late, and we must not linger here," he insisted, touching De Artigny's sleeve. "The guard may discover your absence, Rene, before we get beyond the stockade. Come, we must move quickly."

"Ay, and with more than ever to give us courage, Francois. Yet how can we get Madame safely over the logs?"

"She must venture the same as we. Follow me closely, and tread with care."

So dark was the night I was obliged to trust entirely to De Artigny's guidance, but it was evident that both men were familiar with the way, and had thoroughly considered the best method of escape. No doubt De Tonty and his young lieutenant had arranged all details, so as to assure success. We traversed the flat roofs of the chain of log houses along the west side of the stockade until we came to the end. The only light visible was a dull glow of embers before the guardhouse near the center of the parade, which revealed a group of soldiers on duty. The stockade extended some distance beyond where we halted, crouched low on the flat roof to escape being seen. There would be armed men along that wall, especially near the gates, guarding against attack, but the darkness gave us no glimpse. There was no firing, no movement to be perceived. The two men crept to the edge, and looked cautiously over, and I clung close to De Artigny, nervous from the silence, and afraid to become separated. Below us was the dense blackness of the gorge.

"This is the spot," whispered De Artigny, "and no alarm yet. How far to the rocks?"

"De Tonty figured the distance at forty feet below the stockade; we have fifty feet of rope here. The rock shelf is narrow, and the great risk will be not to step off in the darkness. There should be an iron ring here somewhere—ay, here it is; help me draw the knot taut, Rene."

"Do we—do we go down here, Monsieur?" I questioned, my voice faltering a little.

"Here, or not at all; there are guards posted yonder every two yards. This is our only chance to escape unseen." Boisron-det tested the rope, letting it slip slowly through his hands down into the darkness below, until it hung at full length. "It does not touch," he said, "yet it cannot lack more than a foot or two. Faith! We must take

the risk. I go first Rene—hush! tis best so—the lady would prefer that you remain, while I test the passage. The devil himself may be waiting there." He gazed down, balancing himself on the edge, the cord gripped in his hands.

"Now mind my word; once on the rock below I will signal with three jerks on the cord. Haul up then slowly, so as to make no noise; make a noose for the lady's foot, and lower her with care. You have the strength?"

"Ay, for twice her weight."

"Good; there will be naught to fear, Madame, for I will be below to aid your footing. When I give the signal again Rene will descend and join us."

"The rope is to be left dangling?"

"Only until I return. Once I leave you safe beyond the Iroquois, 'tis my part to climb this rope again. Some task that," cheerfully, "yet De Tonty deems it best that no evidence connect us with this escape. What make you the hour?"

"Between one and two."

"Which will give me time before daydawn; so here, I chance it."

He swung himself over the edge, and slipped silently down into the black mystery. We leaned over to watch, but could see nothing, our only evidence of his progress, the jerking of the cord. De Artigny's hand closed on mine.

"Dear," he whispered tenderly, "we are alone now—you are sorry?"

"I am happier than I have ever been in my life," I answered honestly. "I have done what I believe to be right, and trust God. All I care to know now is that you love me."

"With every throb of my heart," he said solemnly. "It is my love which makes me dread lest you regret."

"That will never be, Monsieur; I am



of the frontier, and do not fear the woods. Ah—he has reached the rock safely—'tis the signal."

De Artigny drew up the cord, testing it to make sure the strands held firm, and made careful noose, into which he slipped my foot.

"Now, Adele, you are ready?"

"Yes, dear; kiss me first."

"You have no fear?"

"Not with your strong hands to support, but do not keep me waiting long below."

Ay, but I was frightened as I swung off into the black void, clinging desperately to that slight rope, steadily sinking downward. My body rubbed against rock. Once a jagged edge wounded me yet I dare not release my grip, or utter a sound. I sank down, down, the strain ever greater on my nerves. I retained no knowledge of distance, but grew apprehensive of what awaited me below. Would the rope reach to the rock? Would I swing clear? Even as these thoughts began to horrify, I felt a hand grip me, and Boisron-det's whisper gave me cheerful greeting.

"It is all right, Madame; release your foot, and trust me. Good, now do not venture to move, until Rene joins us. Faith, he wastes little time; he is coming now."

I could see nothing, not even the outlines of my companion, who stood holding the cord taut. I could feel the

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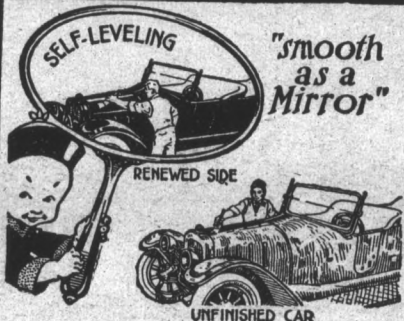
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jagged face of the rock, against which I stood, and ventured, by reaching out with one foot, to explore my immediate surroundings. The groping toe touched the edge of the narrow shelf, and I drew back startled at thought of another sheer drop into the black depths. My heart was still pounding when De Artigny found foothold beside me. As he swung free from the cord, his fingers touched my dress.

"A fine test of courage that, Adele," he whispered, "but with Francois here below there was small peril. Now what next?"

"A ticklish passage for a few yards. Stand close until I get by; now cling to the wall, and follow me. Once off this shelf we can plan our journey. Madame, take hold of my jacket. Rene, you have walked this path before."

"Ay, years since, but I recall its peril."

We crept forward, so cautiously it seemed we scarcely moved, the rock we traversed so narrow in places that I could scarce find space in which to plant my feet firmly. Boisrondet whispered words of guidance back to me, and I could feel De Artigny touch my skirt as he followed, ready to grip me if I fell. Yet then I experienced no fear, no shrinking, my every thought centered on the task. Nor was the way long. Suddenly we clambered onto a flat rock, crossed it, and came to the edge of a wood, with a murmur of water not far away. Here Boisrondet paused, and we came close about him. There seemed to be more light here, although the tree shadows were grim, and the night rested about us in impressive silence.

"Here is where the river trail comes down," and Boisrondet made motion to the left. "You should remember that well, Rene."

"I was first to pass over it; it leads to the water edge."

"Yes; not so easily followed in the night, yet you are woodsman enough to make it. So far as we know from above the Iroquois have not discovered there is a passage there. Listen, Rene; I leave you now, for those were De Tonty's orders. He said that from now on you would be safe alone. Of course he knew nothing of Madame's purpose."

"Monsieur shall not find me a burden," I interrupted.

"I am sure of that," he said gallantly, "and so think it best to return while the night conceals my movements. There will be hot words when M. Cassion discovers your escape, and my chief may need my sword beside him, if it comes to blows. Is my decision to return right, Rene?"

"Ay, right; would that I might be with you. But what plan did M. de Tonty outline for me to follow?"

"'Twas what I started to tell. At the edge of the water, but concealed from the river by rocks, is a small hut where we keep hidden a canoe ready fitted for any secret service. 'Twas Sieur de la Salle's thought that it might prove of great use in time of siege. No doubt it is there now just as we left it, undiscovered of the Iroquois. This will bear you down the river until daylight, when you can hide along shore."

"There is a rifle?"

"Two of them, with powder and ball." He laid his hand on the other's shoulder. "There is nothing more to say, and time is of value. Farewell, my friend."

"Farewell," their fingers clasped. "There will be other days, Francois; my gratitude to M. de Tonty." Boisrondet stepped back, and, hat in hand, bowed to me.

"Adieu, Madame; a pleasant journey."

"A moment, Monsieur," I said, a falter in my voice. "You are M. de Artigny's friend, an officer of France, and a Catholic."

"Yes, Madame."

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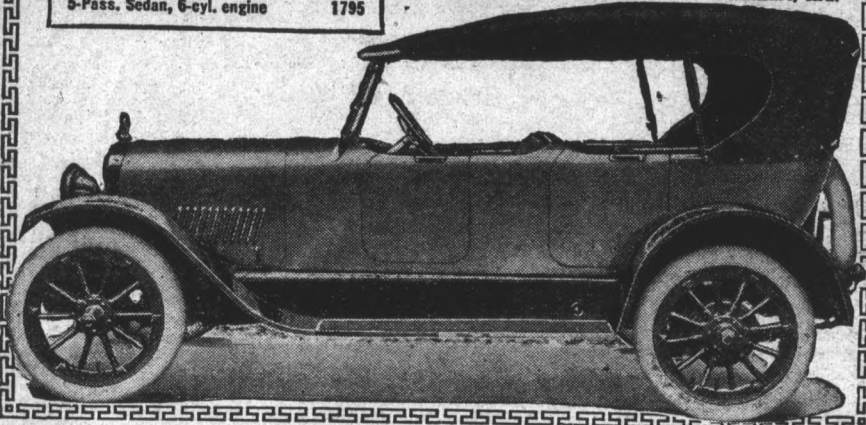
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"And you think that I am right in my choice? that I am doing naught unworthy of my womanhood?"

Even in the darkness I saw him make the symbol of the cross, before he bent forward to kiss my hand.

"Madame," he said gravely, "I am but a plain soldier, with all my service on the frontier. I leave to the priests the discussion of doctrines, and to God my punishment and reward. I can only answer you as De Artigny's friend, and an officer of France. I give you honor, and respect, and deem your love and trust far more holy than your marriage. My faith, and my sword are yours' Madame."

"I felt his lips upon my hand, yet knew not he had gone. I stood there, my eyes blinded with tears at his gallant words, only becoming conscious of his disappearance when De Artigny drew me to him, his cheek pressed against my hair.

"He has gone— we are alone."

"Yes, dear one; but I thank God for those last words. They have given me courage, and faith. So my old comrades believe us right the criticism of others does not move me. You love me, Adele? you do not regret?"

My arms found way about his neck; my lips uplifted to his.

"Monsieur, I shall never regret; I trust God, and you."

How he ever found his way along that dim trail I shall never know. Some memory of its windings, together with the instinct of a woodsman, must have given guidance, while no doubt his feet, clad in soft Indian moccasins, enabled him to feel the faint track, imperceptible in the darkness. It led along a steep bank, through low, tangled bushes, and about great trees, with here and there a rock thrust across the path, compelling detour. The branches scratched my face, and tore my dress, confusing me so that had I not clung to his arm, I should have been instantly lost in the gloom. Our advance was slow and cautious, every step taken in silence. Snakes could not have moved with less noise, and the precaution was well taken. Suddenly De Artigny stopped, gripping me in warning. For a moment there was no sound, except the distant murmur of waters, and the chatter of some night bird. Yet some instinct of the woods held the man motionless, listening. A twig cracked to our left, and then a voice spoke, low and rumbling. It sounded so close at hand the fellow could have scarcely been five yards away. Another voice answered, and we were aware of bodies, stealing along through the wood; there was a faint rustling of dead leaves, and the occasional swish of a branch. We crouched low in the trail, fairly holding our breath, every nerve tense. There was no sound from below, but in the other direction one warrior—I could see the dim outline of his naked figure—passed within reach of my outstretched hand.

Assured that all had passed beyond hearing De Artigny rose to his feet, and assisted me to rise, his hand still grasping mine.

"Iroquois, by the look of that warrior," he whispered, "and enough of them to mean mischief. I would I knew their language."

"'Twas the tongue of the Tuscaroras," I answered. "My father taught me a little of it years ago. The first words spoken were a warning to be still; the other answered that the white men are all asleep."

"And I am not sure but that is true. If De Tonty was in command the walls would be well guarded, but De Baugis and Cassion know nothing of Indian war."

"You believe it to be an assault?" "It hath the look; 'tis not Indian nature to gather thus at this night hour, without a purpose. But, pouf, there is little they can do against that stockade of logs for all their numbers. It is our duty to be well away by daylight."

The remaining distance to the wa-

ter's edge was not far—a direct descent amid a litter of rocks, shadowed by great trees. Nothing opposed our passage, nor did we hear any sound from the savages concealed in the forest above. De Artigny led the way along the shore until we reached the log hut. Its door stood open; the canoe was gone.

CHAPTER XXXII.

We Meet Surprise.

NOT until we had felt carefully from wall to wall did we admit our disappointment. There were no overshadowing trees here, and what small glimmer of light came from the dull skies found reflection on river and rocks, so that we could perceive each other, and gain dim view of our surroundings.

Of the canoe there was absolutely no trace, and, if arms had been hidden there also, they had likewise disappeared. The very fact that the door stood wide open, its wooden lock broken, told the story clearly. I remained silent, staring about through the semi-darkness of the interior, rendered entirely speechless by a feeling of utter helplessness. De Artigny, after an utterance of disappointment, felt his way along the walls; as he came back to the open door our eyes met, and he must have read despair in mine, for he smiled encouragingly.

"Swept bare, little girl," he said. "Not so much as an ounce of powder left. The savages got here before us, it seems. Never mind; we shall have to travel a ways on woodcraft, and it will not be the first wilderness journey I have made without arms. Did De Tonty mention to you where he believed the Illini were in hiding?"

"No, Monsieur—are they Indians?"

"Yes; the river tribes, the most loyal of all to La Salle. It was one of their villages we saw on the bank of the stream as we approached the fort from the west. I told Boisronnet that it stood there deserted, but not destroyed, and it was our judgment the inhabitants were hiding among the river bluffs. Without canoes they could not travel far, and are probably concealed out yonder. If we can find them our greatest peril is past."

"They are friendly?"

"Ay, and have never shed white blood. I know them well, and with leadership they would be a match even for the Iroquois. De Tonty led them once against the same warriors, and they fought like fiends. Come, we will follow the stream, and see if we cannot find trace of their covert."

It was but a cluster of rocks where the hut stood, and a few yards below we found the forest creeping down to the very bank of the river. The sky had lightened above us, the obscuring clouds opening to let the silver gleam of stars through, and we paused a moment gazing back, and upward at the vast rock on which perched the beleaguered fort. We could dimly perceive the vague outline of it silhouetted against the lighter arch of sky. In massive gloom and silence it seemed to dominate the night, the grim forest sweeping up to its very walls. Not a gleam of light appeared; not a sound reached us. I felt De Artigny's arm about me.

"I would that I knew what was going on yonder 'neath the screen of trees," he said gravely. "Some Indian trick, perchance, which it might be in my power to circumvent—at least bear to the lads fair warning."

"You would risk life for that?"

"Ay! my own readily. That is a lesson of the wilderness; the duty of a comrade. But for your presence I should be climbing the hill seeking to learn the purpose of those savages—else I was no true soldier of France."

"What think you their purpose, Monsieur?"

"An attack in force at dawn. Those who passed us were heavily armed, and crept forward stealthily, stripped and

painted for war. There were other parties, no doubt, creeping up through the woods from all sides. 'Tis my thought the hour has struck for them to make their great effort. They have scattered the friendly Indians, killed them, or driven them in terror down the river. Their villages have been destroyed. Now all the warriors who have been at that business have returned, filled with blood lust, and eager to strike at the French."

"But they cannot win? Surely they cannot capture the fort, Monsieur? Why it is all rock."

"On three sides—yes; but to the south there is ample space for attack in force. Those woods yonder would conceal a thousand savages within a few hundred yards of the fort gates. And what of the defense? Opposing them is one hundred and fifty feet of stockade, protected at best by fifty rifles. There are no more in the fort, officers, Indians, and all; and Boissonnet says scarcely a dozen rounds of powder and ball to a man. If the Iroquois know this—and why should they not?—'twill be no great feat of arms to batter their way in. I would do that which is right, Adele, if I saw clearly."

(Continued next week).

HER ONE HUNDREDTH BIRTHDAY.

(Continued from page 736).
derneath: "Mrs. Juliet Calhoun Blakeley, was born May 13, 1818.

We wonder if there is another man or woman living in the entire world whose first birthday was in the year that had two eights in it, and is now celebrating the one hundred and first birthday in the year with two nines, like Grandma Blakeley.

In May, 1908, Miss Ann Jarvis, of Philadelphia, invited a friend to spend Sunday with her in memory of her mother's death; and out of that meeting the idea of a national "Mothers' Day" was born. In 1913 a resolution was introduced in the senate in favor of the appointment of such a day; and in 1914 President Wilson officially appointed the second Sunday in May as "Mother's Day." But for years before that Albion was observing the second Sunday in May as Mothers' Day in honor of the birthday anniversary of the church's oldest member, Mrs. Juliet Calhoun Blakeley.

MOTHER.

BY L. W. SNELL.

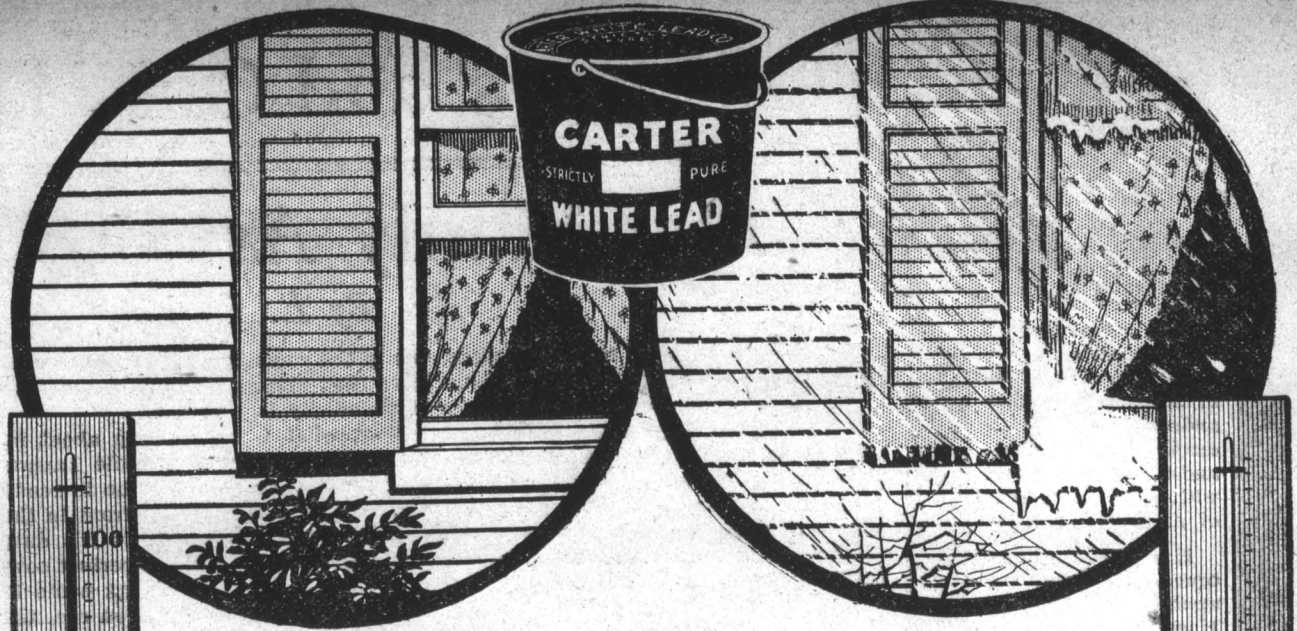
When home from school us children
Came scamp'ring down the street,
We'd never mind the apple tree
That begged us stop and eat.
We'd never mind the ball bat
That lay beside the gate,
Nor stop to see why Jimmy
Was a-whistling us to wait.

We never thought we's home, then
'Till we'd seen mother's smile
Of welcome at the window.
It seemed the longest mile
Until we reached the corner,
That turned into our lane
But soon's we saw her smiling
We'd feel we's home again.

Our mother at the window
Just smiling at us there,
Was 'bout the sweetest picture
You'd find most anywhere.
And if as seldom happened
She wasn't there, well, then,
We'd have to hunt and find her
'Fore we'd feel we's home again.

Of times I get a thinking
Of boyhood days of yore,
Of scenes and home-town faces,
And yearn for them once more.
The village streets so shady,
The kindly people, too,
Who always took an interest
In the things I used to do.

So I travel to the village
I loved when I's a kid,
And I look the old town over
But it don't seem like it did
'Till at last I turn the corner,
And get started up the lane,
See mother at the window,
Then I feel I'm home again.



The Paint of Greatest Endurance

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F-R-E-E

map, price and typewritten description of exceptionally well located tracts of clover land in Marinette County. In writing be sure to state what acreage you might want and whether you have any property that would have to be sold before you could purchase land. The special bargain tracts are going fast. Write today. SKIDMORE LAND CO., 381 Marinette, Wisconsin.

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Our Boys' and Girls' Department

The Manly Art of Giving Up

By E. L. Vincent

A BIG scrap-book might be made of the stories which come to us in these days of fine things done by the soldier boys over in France. It may be some of the Michigan Farmer boys have for a long time been keeping such a record. If they have, the day will come when it will be worth its weight in gold as a source of inspiration to boys and girls of a future generation.

And surely whether the accounts of the many heroic deeds done have been preserved in scrap-books or files for reference after the war is over, thousands of our young people have stored these stories away in memory, so that they will never be forgotten. Don't you like to tell them over when you are in company with other young folks? And if the one who does some daring thing is a brother or in some way related to you, how much more in-

one of their number, not one but would have been just as ready as were those of whom my boy writes.

Now, what I am thinking about is, that it does once in a while happen that the boy or the girl who is ready and willing to step to the front in the time of great crisis and do his duty like a man, will fail like a perfect coward when far smaller things come to him on the farm to do. You see, the incentive of companionship is gone. Nobody will ever know anything about it if we do or do not perform the thing that is placed before us to do. What is the use of being true and brave and responsive to the call of duty, as long as it is away back here on the farm out of sight? So we dread to do the little things, and it may be we beg off and shirk when father asks us to help him in some unpleasant or difficult task.

is looking. Back lot or out by the side of the road, character says: "Do it because it is right." Not because it will make men praise us and write the story for all the world to read, but because this is the thing we ought to do just now.

Rolling big snowballs is fine sport in winter. We begin with a ball no larger than one's head; but as we roll it along on the white snow-covered earth, it gathers up thick flakes, layer upon layer, until at last we have a miniature mountain that can scarcely be moved an inch farther.

Character making is quite like that. As we go along, life gathers up all the things we do, good, bad and indifferent; and the sum total of them all is character. The more good and clean and pure things we bring into our ball, the finer is our characters. Sticks and stones and all sorts of unclean things sometimes roll up on our snowball if we go where they are and do not take pains to throw them out. To keep the great snowball of character spotless by shunning the base and the unworthy things is one of the grandest things any young man or woman on the farm can do.

That means loyalty to the right, always and everywhere. It means speaking well of one's work and loving it to the limit. It means trusting father and mother to guide us out into the field of right endeavor. It means unswerving obedience when the call comes to serve. It means sympathy for others, even to giving the best there is in one. It means a high ideal and a determination never to let that ideal be dragged in the dust. It means putting the very best there is in one into the humblest task of life, and doing it cheerily and with a song. It is a great thing to give of one's very life blood for another. It is a greater thing to learn how to give up selfishness and meanness and unworthy ambition for the sake of the greater good of others. That makes a man a man in the best sense of the word. It is the only thing worth while.



Off For a Ride with Billy.

terest you have, and how proud you are to repeat the tale everywhere you may go.

And how sure you are that if you had been across seas, and the chance had come to you that came to the boys whose heroism you love to recount, you, too, would have been as brave as the bravest. You would have "gone over the top" in the very first rank. You would have distinguished yourself everywhere and won the distinguished service cross with the rest. And it sometimes seems a good deal easier to do some extra good thing when others are proving themselves courageous. Then there is an inspiration that carries us over the most difficult places.

I have a boy who has been serving as captain in a hospital in battle-scarred France. Among the many sick and wounded boys who have come under his care was one who had been stricken with a fatal disease. As a last resort it was decided to try transfusion of blood in the hope that this would bring back the tide of life that was fast drifting out. This is the way my boy writes us about it:

"When I was wondering who would be willing to make the sacrifice of giving up some of his blood for the sick soldier, I stepped to the entrance of the ward where the convalescent influenza patients were, and called out: 'Who will give some of his blood for Gibson?' Almost to a man they stood up and shouted out, 'I will!'" And then the captain paid this tribute to the soldier boys who were so ready to make this supreme sacrifice for their fellow: 'I tell you, there are no such boys anywhere else in the world.'

But I think if any of the boys who read this story had been there and had had this chance to do a fine thing for

And yet, right here is a chance to prove just what is deep down in our natures. Are we just as true, just as earnest, just as faithful in the everyday life of the farm as we would be on the field of battle over in Flanders?

Have you ever thought about the wonderful thing we call character? That is the thing we are a thousand miles out in the country, when no one

A Simple Flying Machine

WELL, boys, suppose we try making a flying machine this week. Sharpen up the big blade of your pocket knife, get a gimlet from the tool house, then come with me out by the wood pile and I'll show you how it's made.

First, we get a piece of wood about five inches long, one inch wide, and half an inch thick. Soft wood is best as it is more easily worked. Right in the middle of it and on the flat side we bore a hole about a quarter of an inch in diameter, taking care not to split the wood, and making the hole right through from side to side, as shown in

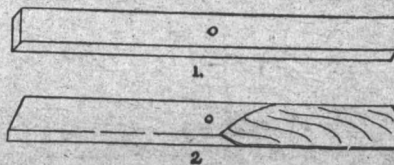
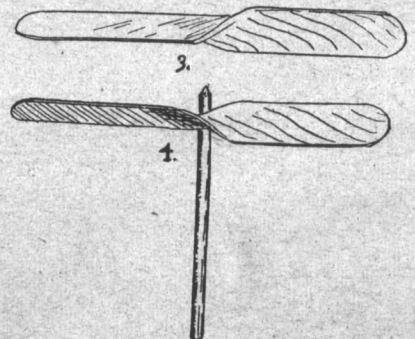


illustration No. 1. A little distance from this hole at one side we cut away the corner until we get it down to look like illustration No. 2. Now we begin at the opposite corner at the same end of the wood, and cut it away also

ship propeller or that of an airplane.

Now round the corners of the blade to improve the appearance. This finishes one end of the blade. We do the same with the other end of the piece of wood, except that we cut away, not the same corners as we have cut away in the first end, but the opposite corners. Then we shall have the two ends cut away to this form of thin blades, but the slope of the one will be opposite from that of the other, as shown

in illustration No. 3.

Now we must fix a stem firmly into the center hole. A butcher's meat skewer, a wooden penholder, or even a thin lead pencil, will do for the stem. The stem may be any length from six to nine inches. We may glue the stem into the hole, but it is not really necessary. If we push it in firmly, taking care not to split the blades.

Now hold the toy upwards with the stem between the palms of the two

hands, then rub the hands together quickly, and release the machine as we make it spin. It should soar aloft as high as the roof of a house if we have done it properly. If not, we may find that the toy strikes the ground at once instead of flying. If so we may know that we have spun it in the wrong direction before releasing it and must try again. A little practice will enable us to release it properly and make it soar high every time. L. W. S.

Prize Contest Letters

The first prize in our letter contest, "How I Earned my First Dollar," was won by Anna McCully, Pittsford, Mich.

Her letter appears below, with two others which, in our opinion, deserve honorable mention.

The winning letter entitled, "The Best War Story I Ever Heard," will be published next week.

FIRST PRIZE.

How I Earned My First Dollar.

LAST summer I decided that I wanted to raise some poultry and earn some real money for myself. I wanted some turkeys but my mother was raising them and she said she would rather I would raise ducks. So I bought one dozen and a half duck eggs with money borrowed from my brother, who was interested.

Out of the eggs I hatched fourteen ducks, but two of them were trampled to death in the nest.

I put the ducklings in a box with an old hen for a mother, and beginning with the second day I fed them every two or three hours. The second day I gave them nothing but water or milk and then on the third day I gave them a little bread soaked in milk.

On the morning of the fourth day one of my ducks was dead and a couple of the others did not look very well.

I wrote to the Michigan Farmer at once to find out the trouble and they told me that my feed must have become sour.

After this I fed them very carefully and was rewarded by the rest of them living.

After two or three weeks I began giving them a little bran and decreased the amount of bread and milk. In a week's time I was giving them pure bran and a little grain.

They grew very rapidly but one night I lost two of them by a weasel breaking into the pen. This left me ten ducks which I sold in the fall.

After paying my brother back I found I had about eight dollars left. I was greatly pleased with my success and decided to try again next year. —Anna McCully, Pittsford, Mich. Age fourteen years.

HONORABLE MENTION.

How I Made My First Dollar.

A few years ago when prices were lower than at present, I decided that I would buy a dollar watch, but I did not have the money so I set out to earn it.

The first thing I did was to kill ten dozen house flies, for which mother gave me one cent per dozen, which amounted to ten cents.

My father had a patch of tomatoes where the tomato worms were very thick. He asked me if I wanted to earn some money which I readily consented to do. I worked away for nearly two days picking those nasty green worms for five cents per dozen. When I was through I received fifty cents, which I was more than pleased to get.

In a few days I weeded the garden which was a very long and tiresome task, although I stayed by it until I had it done, when I received fifteen cents to add to my fund.

Later in the season our neighbor wanted me to pick cucumbers for him.

I went and helped him, which was a very tiresome and back-breaking task and I was glad when I was through and could go home. He gave me twenty-five cents for my work, which with the other I had saved, made a dollar, and if every dollar came as hard as this one I would hate to be a millionaire. Then how happy I was, for in a few days father went to town and bought me a watch for my dollar. —R. D. Layman, Berrien Center, Mich. Age fourteen years.

HONORABLE MENTION.

How I Earned My First Dollar.

When I was a little girl, about seven years old, my mother promised me that if I would gather the eggs every evening for her, she would give me one egg out of every dozen. I agreed to do this and every night after I came home from school, I would go all around to hunt the nests, which I found in the barn, wagon shed, cow stable, under lumber piles, and in the pig pen. From these nests I gathered from eighteen to twenty four eggs each day. So I averaged about one dozen eggs of my own each week. These sold for thirty cents a dozen, and at the end of four weeks I had earned one dollar and twenty cents.

This was not hard work, but a great help to mother, and helped me to earn my own pin money, which I saved to buy War Savings Stamps to help Uncle Sam through this great world war. —Helen Florence Bullock, Mesick, Michigan. Eleven years of age.

Our Prize Contest

TO the boy or girl writing the best letter, of less than 250 words on each of the following subjects, the Michigan Farmer will give a cash prize of \$1.00.

Subject of letter to be mailed by May 12:

"The worst bargain I ever made."

Subject of letter to be mailed by May 19:

"The best teacher I ever had."

Subject of letter to be mailed by May 26:

"Why I joined our Boys' or Girls' Club."

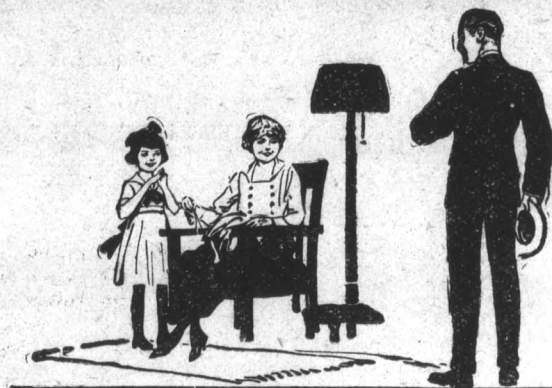
Subject of letter to be mailed by June 2:

"Why I think 'Dad' is the best man on earth."

We desire to make this contest a permanent feature of our Boys' and Girls' Department. A new subject will be added each week.

Write neatly with ink on one side of the sheet only. Give your age, full name and address.

Address your letters to The Boys' and Girls' Dept., Michigan Farmer, Detroit, Mich.



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Woman's Interests

A Substitute for the League of Nations



IN these days of chaos and self-seeking, probably everyone who thinks has a panacea for existing ills, i. e., their own individual ills. The Bolsheviks certainly think they have the cure, and are proceeding to apply it in so far as they are able without regard to the other fellow's opinion. President Wilson thinks he has the right way and is doing his best to convert other leaders to his views, though up to the time of writing, without much noticeable success. The North Dakota farmer has made a strong attempt to get things as he wants them, while Mr. Herbert Quick, of the Federal Farm Loan Board seems to think America will be saved by a back-to-the-land movement, and "passes the buck" up to the farm women, who, he says, are responsible for the present cityward migration.

Things are pretty well muddled up, we all admit, though not all of us will agree with the eastern college president who says the world came to an end in 1914. Something has got to be done, and certain journals will tell us it has got to be done almost overnight or the Bolsheviks will get us. Few real Americans admit that, we are too fond of our own institutions and too sure of the American people when it comes to a real show-down. But none of us like things just as they are now, and all of us are wishing, and a great many of us praying, that things may get back to normal and we may once more be able to give a good and sufficient reason for the hope that is in us.

While everybody else is advancing a cure for the sick world's ills it could do no harm for one more to be advanced. Suppose everyone in the whole wide world should get up tomorrow and begin to live the golden rule:

"Therefore, all things whatsoever ye would that men should do to you, do ye even so to them."

Could anything be simpler? And can't you just picture what a glad world this sad world would become if

well, we wouldn't need any peace conference nor any appropriations for armies or navies nor any neutral zones nor any mediation boards, nor any League of Nations. Things would automatically right themselves and keep righted.

Can't you just see inflated prices getting back to where they really belong, and wages coming up to what they should be and profiteering become one of the seven deadly sins, with child

and simple one. Think of the schools and parks and public baths and playgrounds we could have with that money! And think of the joy of living in a world where we know that, barring accident, fire, flood or earthquake, we are not going to be harmed.

Can you imagine a horse trade under those conditions? It probably would become a lost art, for all the spice would be taken out of it. The other fellow would tell you the exact truth about his nag, and you'd have to do the same, so you would probably both keep what you had. Buying would become a simple process of getting a fair price and taking it or leaving it. You could go out and buy a piece of silk and know it was really silk, not cotton doctored. And when you paid for a linen tablecloth you'd know it would be linen, not mercerized cotton gotten up to fool the unwary.

People would be courteous, too. It would be a smiling world all over, instead of in spots where one or two happened to be sunshine makers. Glooms would depart because injustice would be no more.

It's a fine picture, though far from true to life. But it isn't too much to hope for and to look forward to and to help along by doing the thing ourselves. We'd all be willing to try it if we were not afraid the other fellow wouldn't. Let's drop that modern idea, "Do the other fellow and do him first." So long as we cling to it the world will continue a place of chaos and unrest.

DEBORAH

Two Women

She kept her dwelling as spic and span
As the shining sides of a nice new pan.
And prided herself she had done her best
Though she never sat in the shade to rest,
Her children's clothing was always clean
And never a hole by chance was seen
She thought she surely was doing right
Though she never sang them love-songs at night.
Her husband's wish was her law and creed,
She ne'er neglected his slightest need.
Though she felt too weary to talk with him

And her form grew stooped and her eyesight dim.
Now her shiftless neighbor across the way
Would leave her dishes to talk or play.
Her babies' rompers were plain and cheap
But she held them close when they went to sleep
And her husband found her, companion, friend,
Sweetheart and wife at the long day's end.
Which of the women do I admire?
Which in your home would you desire?
Martha, the toiler, was not denied
But Mary sat at the Savior's side.

L. M. THORNTON.

everyone should put that very simple rule into actual working order? If we should live the golden rule, instead of making our children commit it to memory—all the time wondering why they have to learn it when we never do it—labor, unsanitary housing, sabotage and half-done work for its fellows. Prisons would be emptied and legislators would lose their jobs, because they would not need to make laws if everyone should obey just one very old

Preserving Eggs with Water Glass

DURING the spring months many housekeepers serve eggs because they are cheap, until their families are tired of an egg cooked in any form. Later, when eggs soar to fifty cents a dozen, few are found on the table of the average family.

When the hens are laying freely and eggs are abundant and cheap the thrifty housewife makes provision for the future by preserving some for the winter months.

Fresh clean eggs properly preserved can be used satisfactorily for all purposes in cooking and for the table. When eggs preserved in waterglass are to be boiled, a small hole should be made in the shell with a pin at the large end before placing them in the water. This is done to allow the air in the egg to escape, when heated, and it prevents cracking.

Fresh eggs properly preserved may be kept from eight to twelve months in excellent condition and used with good results. Eggs laid during April, May and early June have been found to keep better than those laid later in the season. If satisfactory results are to be obtained, the eggs should be fresh and clean and, if possible, infertile.

Eggs that float when placed in the solution are not fresh and therefore cannot be preserved. When an egg is only slightly soiled, a cloth dampened with vinegar can be used to remove such stains. Under no circumstances should badly soiled eggs be used for

preserving; if put into the jar while dirty they will spoil, and washing removes a protective coating which prevents spoiling.

A good method for the preservation of eggs is the use of sodium silicate, or waterglass. If the price of sodium silicate is about thirty cents a quart, eggs may be preserved at a cost of approximately two cents a dozen. It is not desirable to use the waterglass solution a second time.

Use one quart of sodium silicate to nine quarts of water that has been boiled and cooled. Place the mixture in a five-gallon crock or jar. This will be sufficient to preserve fifteen dozen

eggs, and will serve as a guide for the quantity needed to preserve larger amounts of eggs.

First select a five-gallon crock and clean it out thoroughly, after which it should be scalded and allowed to dry.

Second, heat a quantity of water to the boiling point and allow it to cool.

Third, when cool, measure out nine quarts of water, place it in the crock and add one quart of sodium silicate, stirring the mixture thoroughly.

Fourth, the eggs should be placed in the solution. Be careful to allow at least two inches of the solution to cover the eggs.

Fifth, place the crock containing the

preserved eggs in a cool, dry place, well covered to prevent evaporation. Waxed paper covered over and tied around the top of the crock will answer this purpose.

WILL THE LESSON STICK?

BY ELLA E. ROCKWOOD.

WE have recently passed through a trying time, which brought new experiences and which taught us many things in the way of economy and thrift. Now that the war has been won many people seem to think there is no longer any necessity for self-denial and are speedily falling back into old habits of extravagance. In such cases the lesson has surely been in vain so far as the individual is concerned.

Quickly, indeed, do we forget. Never again will a similar opportunity present itself for getting a start in the right direction. At least it is hoped and expected that the terrible experiences in battle-torn Europe will never be repeated. The hope of the nations lies in the direction of peace for all future years to come. So prone are we all to follow along the beaten path of habit that it requires something very much out of the ordinary to arouse us to make an effort in a different direction.

So with the self-denial made necessary by the war, with everything possible done to encourage economy in food and in dress, with thrift stamps



and bonds to the limit of our ability as a means of gaining the victory, it gave us a splendid start on the right road. Shall we allow ourselves to profit nothing by the lesson and drift back into our old habits of extravagance and selfishness? Shall we not rather, with our newly acquired mental equipment for service, determine from now on to devote less thought to self and more to the great Brotherhood of Man? Shall we not be broader-minded, more sympathetic and charitable, less ready to criticise and find fault, more generous with time and means toward the unfortunate of all lands, and less inclined to limit our efforts to those with whom we are more intimately associated?

"Lord of God of Hosts, be with us yet, Lest we forget—lest we forget!"

RENEWING SHABBY FURNITURE AND FLOORS.

A GOOD deal of new furniture is bought merely because the old pieces have become shabby. Oftentimes a little of the right kind of finishing material would restore the old furniture at a very small expenditure. Shabby floors can also be made spic and span with paints or wood finishes.

To renovate old furniture, first clean the surface thoroughly, removing all grease and dirt. Use soap and water. If the varnished surface is merely scratched or marred, sandpaper lightly and apply one or two coats of furniture or interior varnish. If, however, it is desired to change the color of the furniture to a darker shade, apply one coat of varnish stain and when dry finish with one coat of varnish. If it is desired to change from a dark to light color, apply one coat of ground coat and finish with two coats of varnish stain of the desired color.

For floors which have not previously been finished, a paste wood filler should first be applied. Then finish with two coats of good floor varnish or floor wax.

To refinish old floors, first clean them thoroughly. Then sandpaper smooth. Finish with two coats of floor paint or floor wax. If a colored effect is desired, apply one coat of varnish stain of the desired shade and finish with one coat of floor varnish. If cracks between the boards are in evidence, these should be filled with special crack and crevice filler before applying finishing materials.

For floors that are in a very bad condition, the only resort is to paint them. First fill cracks with special crack and crevice filler and apply one or two coats of floor paint. A coat of good floor varnish over the paint will add to the appearance and durability.

Bear in mind that quality goods are essential to best results. Not only that, but they will give you the lasting satisfaction that means true economy.

VALUABLE BULLETINS.

If you are looking for advice as to how to feed the family wisely, write for the following bulletins:

To the Michigan Agricultural College, East Lansing, Mich.: "Feed Your Body Wisely," and "Rules for Planning the Family Dietary."

Write the Department of Agriculture, Washington, D. C., for the following: "What the Body Needs," "Cereal Foods," and "Foods Rich in Proteins."

When you write the Agricultural College for the food bulletins, ask also for their sewing bulletins which you will find helpful.

Household Editor:—Some time ago in the Michigan Farmer an article named an acid which would remove the screen rust from window glass. I have mislaid the article and wish to know if it would be possible for you to inform me what to use?—Mrs. L. M. G.

Hydrochloric acid.

News of the Week

Wednesday, April 30.

GERMAN peace delegation arrives at Versailles.—Premier Orlando of Italy declares in his address to the Italian Chamber of Deputies that Italy must have Fiume.—An address of homage to the former kaiser Wilhelm of Germany bears the signatures of 500,000 friends in the Fatherland.—The military position of the Bolsheviks in northern and eastern Russia appears to be rapidly crumbling.—Aerial express service between New York and Chicago will be inaugurated at an early date.

Thursday, May 1.

THE first meeting of allied and German peace representatives is held at Versailles.—Chinese parliament protests to the five world powers against granting Kiaow Chow to Japan.—Government troops recapture Munich in Bavaria.—Italy receives a new loan of \$50,000,000 from Washington.—The Rumanian forces continue their advance against the Soviet troops of Hungary.—One of the most violent earthquakes in San Salvador results in a large number of persons being injured.—Secretary of the Navy Daniels points out need for a large naval international police force.—Many strikes are reported in various cities throughout the world.—A fire on Coney Island destroys property valued at \$1,000,000.

Friday, May 2.

TROTZKY'S Russian government appears to be near an end with the advance of the Finns on the west, the allies from the north and Kolchak's troops from the east, together with successful operations by the Rumanians and French to the south.—It is reported that sixty American soldiers were beheaded by the Bolsheviks following the capture of Shenkursk in northern Russia.—Citizens of Porto Rico are preparing to oppose the Tinoco government with arms.—Sixteen men were lost when an American naval tug strikes a rock and sinks off the coast of France.

Saturday, May 3.

THE Russian Soviet government sends an ultimatum demanding that Rumanian troops evacuate Bessarabia, a former Russian province populated largely by Rumanians.—It is reported that Italy is disposed to re-enter her delegates in the peace conference.—The Treasury Department reports payments of \$30,500,000,000 since America entered the war, of which amount \$10,000,000,000 consists of loans to the allies.—President Wilson plans on returning to this country by June 1.—Spanish parliament is dissolved by King Alfonso.—Germany is planning on making heavy purchases of meats, cereals and other food stuffs in Argentina.—Monthly service between New Orleans and the west coast of South America will start in June.

Sunday, May 4.

GERMANY notifies Chili of the acceptance of a proposal to buy all shares of German saltpetre companies in Chile.—A report from Paris intimates that a special session of congress will be called by June 1.—Three piers of the Hamburg-American steamship line in Hoboken are purchased by the government for \$2,500,000.—The War Department announces that 1,942,391 men have been discharged from the army since the armistice was signed.—It is now believed that Italy will be back in the peace congress in time to sign peace with Germany.

Monday, May 5.

THE Belgian council calls her peace envoys to decide whether or not the conditions offered Belgium in the peace terms are acceptable.—Siberian troops force Russian reds to evacuate Orenburg and considerable contiguous territory in southeastern Russia.—Munich falls to German government troops and the collapse of the Soviet organization in Bavaria is seen.—Bread prices in Chicago advance twenty per cent.—The war is still costing the United States \$14,000,000 daily.—The first aerial postal service in the south is inaugurated between Montgomery Alabama, and Macon, Georgia.—The Australian government assures an advance of \$3,125 for every returned soldier who settles on land.

Tuesday, May 6.

THE Adriatic question apparently has been settled in full agreement with the Italian government.—Confirmation of the unconditional surrender of the Hungarian government is received in a dispatch from Vienna.—Delay in the submission of the peace terms to the German delegates results in the German assembly threatening to recall her representatives.

Postum First Found Favor

In the Small Communities

then in the cities, then in the nation's great metropolitan centers, until today it is demanded everywhere, and sold everywhere, as America's greatest health drink for table use. You can get from your grocer

The Original POSTUM CEREAL

Boil it just like coffee—15 minutes after boiling begins.

It doubles the enjoyment of the meal with its rich, invigorating flavor; and, unlike coffee, it never upsets nerves, stomach or heart. Children as well as grown folks can drink Postum freely.

"There's a Reason"

Two Sizes, usually sold at 15c and 25c.



Not So Bad this Month

"Now, that's better! It's the first time the expense figures haven't given me a horrid feeling.

"Why didn't I know sooner about Jell-O and some of the other money-savers?"

It doesn't matter whether you live in the city or country, whether you keep an account book or not,

JELL-O

will help you out, for it is cheap as to cost and it can be made up into more different kinds of good things to eat than anything else.

Every woman who wants to know how Jell-O can help her out will find the information she desires in the Jell-O Book, which will be sent free to all who send name and address.

Jell-O is made in six pure fruit flavors: Strawberry, Raspberry, Lemon, Orange, Chocolate, Cherry, and is sold two packages for 25 cents by all grocers and dealers.

THE GENESEE PURE FOOD COMPANY,
Le Roy, N. Y., and Bridgeburg, Ont.

SALTED FISH

Low Prices. Low Freight Rates

Net weights	100 lb.	50 lb.	20 lb.	10 lb.
Lake Herring	\$6.00	3.80	1.65	.96
Round Shore Herring	6.25	3.93	1.70	1.00
Split Ocean Herring	6.50	4.05	1.75	1.03
Alaska Herring	10.00	5.80	2.45	1.38
Whiting (Sea Pike)	6.00	3.80	1.65	.96

WISCONSIN FISHING CO.

Dept. Y. Green Bay, Wis.

WALL PAPER

1,000,000 ROLLS

1c Per Roll { Write for sample catalog of 50 new designs and colorings.

SAMPLE BOOK MAILED FREE

Martin Rosenberger, 1855 VINE STREET, CINCINNATI, OHIO

Mention The Michigan Farmer When Writing Advertisers

DR. HESS Instant Louse Killer Kills Lice on Poultry and Stock

Use it on your lousy hens and chicks—your lousy colts, horses and cattle. You'll get better chicks—bigger, better fowls—more eggs—better contented stock.

Chicks are apt to be lousy now. Give them a chance. Sprinkle Louse Killer into the feathers, about the coops, on roosts, in nests of laying and setting hens. Always keep Louse Killer in the dust bath. For lousy horses and cattle, colts and calves, stroke the hair the wrong way and sift in Louse Killer.

We authorize dealers to return your money if it does not do as claimed.

1 lb. 30c, 2 1/2 lbs. 60c (except in Canada)

Dr. HESS & CLARK
Ashland, Ohio



Ring Necked Pheasants

Lay 40 to 50 eggs each per year. Why raise chickens to eat when these are much more profitable and raised as easily? Weigh 3 pound at six months, and bring \$1.00 a pound in the market. Set the eggs under chickens—feed and care for the young the way you would chickens. Are economical as they only require one-half as much food. Are very hardy and not subject to disease. Best eating bird in America. Eggs guaranteed from vigorous, healthy unrelated stock.

\$ 6.00 for 15 eggs
\$5.00 for 100 eggs

Genuine Wild Mallard Ducks

Lay 50 to 60 eggs per year. We guarantee our breeding stock to be the best in the country as they are entirely wild trapped Mallards and not the coarse semi-wild strain.

\$ 5.00 for 15 eggs
\$25.00 for 100 eggs

Giant Bronze Turkeys

Have a wonderful flock, headed by prize-winning 55 lb. tom.

\$1.50 per egg

Bloomfield! S. C. Rhode Island Red Chickens

Fine laying strain of prize birds

\$ 5.00 for 15 eggs
\$25.00 for 100 eggs

Get order in early and send check with it. Send for free booklet and instructions.

Bloomfield Farms

1714 Penobscot Bldg.
Detroit, Michigan



POULTRY

CHICKS CHICKS CHICKS

350,000 FOR 1919

By Parcel Post Prepaid. Delivered To Your Door. Guarantee Live Delivery.



Strong chicks from pure bred farm stock that are hatched right. Have chicks of Utility and Exhibition quality. Bred to Lay. S. C. White and Brown Leghorns \$16.00 and \$14.00 a 100; Barred Rocks, \$18.00 and \$16.00 a 100; Rose and Single Comb Reds, \$18 and \$15.00 a 100; White Wyandottes, \$20.00 a 100; S. C. Anconas, \$18.00 and \$15.00 a 100; S. C. Buff Orpington, \$21.00 a 100; S. C. Black Minorcas, \$20.00 a 100; Odds and Ends, \$14.00 a 100. Eggs for hatching, \$8.00 to \$9.00 a 100. Combination offer on chicks. Hovers and brooder stove. Give us your order and we will make you a satisfied customer the same as hundreds of others. Before ordering elsewhere get our free illustrated catalog. Get your order in early.

HUBER'S RELIABLE HATCHERY
EAST HIGH ST., FOSTORIA, OHIO.

CHICKS 100,000 This Season. 10 varieties, best pure blood stock hatched right and guaranteed to reach you in right condition, hatching eggs prepaid. Pekin duck eggs, illustrated catalog free.

STANDARD POULTRY CO., R. 7, Nappanee, Ind.

Baby Chicks S. C. White and Brown Leghorns and Barred P. Rocks, by parcel post or express, safe delivery guaranteed. Knoll's Hatchery, R. 3, Holland, Mich.



The Farm Flock in May

At this time many farmers have plenty of setting hens and the weather is good enough to stimulate interest in poultry. There are too many eggs from pure-bred flocks being marketed that might find a ready sale as hatching eggs at a higher price. Strong parcel post egg carriers can be purchased at a moderate price and it takes little time to pack and mail such a box. Of course, only the best eggs should be sold for hatching. During May when egg prices fall the farmer should not neglect the opportunity of selling hatching eggs as this helps to bring up the average income per year of each hen in the flock.

The poultry business should be placed on a higher plane by cooperation and more communities specializing in one breed. Among dairymen we have certain centers where the Holstein or Guernsey cattle are largely bred and the farmers living in such sections receive more profit from their stock because of that fact. The other breeds, such as the Brown Swiss, Ayrshire, Dutch Belts, etc., all have their friends but the herds are more scattered. Among poultrymen this community idea should spread. In some sections there are now many fine flocks of Leghorns or Rhode Island Reds located within the radius of a few miles. Other breeds, such as the Plymouth Rocks and Wyandottes, are worthy of a lot of community specialization. When one section is noted for birds of one breed many buyers will learn that fact and know the part of the country they should visit when purchasing breeding stock.

Order Eggs Early.

When ordering eggs for hatching it pays to place the order early, for unless the breeder has a very large flock or a large number of special matings he will not be able to sell a large number of eggs at any one time and the rule of "first come, first served" must be followed. There is a time in late April and early May when the poultry "fever" attacks many who have formerly been immune and then there is a rush to obtain hatching eggs and much disappointment when the orders are not filled promptly. By placing the order early in the season this delay is avoided and the breeder is able to gauge his business and fill orders at the desired time.

Chicks Need Green Food.

Plan on an abundance of green food for the chicks during the growing season. This crop they harvest for themselves and gather many bugs, worms and weed seeds at the same time. A clover pasture furnishes fine green food for growing chicks. If the yards are fenced and bare, it will pay to plow them up and plant oats. The plowing turns up fresh clean soil and places the manure from the flock in the ground and the oats will furnish many healthful meals to the growing chicks.

One of the main reasons for early hatching is the abundance of tender green food and large worms that the birds gather early in the season. Of course, they need much protection from the wind and rain early in the season but the birds that live through the bad weather have reached a size when good days come so that they can forage for themselves and grow rapidly. Many late hatched chicks grow into fine fowls but if the summer is dry and hot,

the birds do not get as tender green food or as many worms and they do not grow like the early spring birds.

A hatch from a small-sized incubator can often be given to broody hens. This takes up the time of the hens and reduces egg production, but it may save a little time and worry for the poultryman who does not wish to manage a brooder for less than a hundred chicks. Give the hens a few china eggs for several days before the incubator hatch comes off and then place chicks under the hens at night. Have a few extra setting hens ready as a surplus if any of them act ugly and refuse to mother the chicks. The next morning examine the hens early and if they are clucking and talking to the chicks and the chicks are peeping in a contented manner they have been successfully adopted and undoubtedly the hen thinks she hatched them out during the night. If chicks are given to hens during the day, the brood coop should be darkened.

It is important to leave the chicks and the hens in the darkened brood coop until they have become thoroughly acquainted with each other. It is necessary for the chicks to accept their foster mother as well as for the hen to take the chicks. Otherwise the chicks may leave for another hen and it is no uncommon experience to have chicks leave two or three of the hens and congregate under one hen, giving the popular hen a brood of forty or fifty chicks. Then the hen tries hard to cover them but if the night is cold some of the young birds will become chilled and trampled and killed. It frequently pays to examine the hens at night and note if some of the brood coops are nearly empty while others are overcrowded.

Little chicks know more ways of committing suicide than any other farm animal. Leave a pail of water in the yard and a couple of them will try to drink from it and fall in and drown. Never dump any spoiled feed, spray dope or any material that will injure chicks, where they can find it. Do not provide any shelters for chicks that cannot stand plenty of wind and rain. If they seek protection from the sun under some shaky canvas and board structure, they will go there in a hard rain. Then it blows over and some of the chicks are drowned. R. G. K.

TRANSIT LITTER FOR CHICKS.

SOME litter is required in the boxes carrying baby chicks by mail or express. Fine cut clover has been extensively used by commercial hatcheries, but a better practice has now been originated. The clover litter was nearly always dusty, and such as the chicks consumed, while bulky, furnished little nourishment.

The new litter is wheat bran. It is fine and soft and contains very little dust. If the journey is lengthy, the chicks are sure to consume some, with the result that they arrive in better condition. Wheat bran is somewhat more expensive than cut clover, but its superior advantages much outbalance the difference in cost.

Successful delivery of baby chicks depends on attention to many little details. Based on the experience of big shippers, several definite facts have been established. For every one hun-

PILLING CAPON TOOLS

Double the Weight From the Same Feed

So great has been the demand for these practical, ready-to-use caponizing tools that most dealers exhausted their stocks. The fact that the Pilling factory was working 100% on Government orders for surgical instruments prevented us from refilling their shelves.

But next Spring we shall be able to supply dealers who order early. Get your order in now—any poultryman with Pilling caponizing tools and our complete illustrated instructions can make each dollar's worth of feed produce four times as many dollars as with roosters. Capon Book FREE.

G. P. PILLING & SON CO., Phila., Pa.
Est. 1814 America's Pioneer Maker of Caponizing Tools



BABY CHICKS

The average cost of producing a BABY CHICK under the hen is 22 1/2 cents. We will supply you with the breeds listed below at 12 1/2 cents to 20 cents.

Barred Rocks
White Rocks
Buff Rocks
Brown Leghorns
White Leghorns

Anconas
White Wyandottes
Rhode Island Reds
Black Minorcas
Assorted, for Broilers

Two millions for 1919, delivered anywhere by Parcel Post. Catalog free.

The Smith Standard Company
1967 W. 74th St., Cleveland, Ohio

100,000 BABY CHICKS

for 1919, sent safely everywhere by mail or express. Single Comb White and Brown Leghorns and S. C. Anconas. Grand laying strains. Strong, vigorous, hatched-right kind. Tenth season. Satisfaction guaranteed. Order now for spring delivery. Prices right. Free catalogue. W. Van Appledorn, R. 7, Holland, Mich.

Baby chicks from Bred-to-Lay S. C. White Leghorns \$12 per 100. Thompson Strain Barred Plymouth Rocks \$18 per 100. Safe delivery guaranteed. Send for chick folder and order early.

Russell Poultry Ranch, Petersburg, Mich.

Baby Chicks Superlative quality. 11 cts. each and up. 24 leading breeds. Satisfaction guaranteed. Catalog free. Springfield Hatcheries & Poultry Farms, Box K, Springfield, Ohio.

BABY CHICKS—11 Varieties, \$10 per 100 up, 2 weeks old 25c up, 4 weeks 45c up. Hatching eggs \$15.50 per 15 and \$8 per 100. Brd. White and Buff Rks. Buff and White Orp., S. & R. C. R. I. Reds, White Wyan., S. C. W. Leg., S. & R. C. Br. Leg., Airedale Pups, Clr. free. Sunny Side Poultry Farms & Hatchery, Blanchester, O.

Barred Rocks. Selected eggs from vigorous purebred stock of good laying ability. \$2 per 15; \$5 per 50; \$10 per 100. Prepaid by parcel post.

R. G. KIRBY, R. 1, East Lansing, Mich.

Barred Rocks egg contest winners, eggs from strain with records to 250 a year. \$2.00 per setting prepaid by P. P. Circular free.

FRED ASTLING, Constantine, Mich.

BARRED Rocks exclusively. Get your baby chicks Band hatching eggs on time by ordering now. Prices and folder free.

H. H. PIERCE, Jerome, Mich.

BARRED Fly. Rock eggs for hatching \$2.00 per 15. delivered by post from heavy laying prize-winning strain.

J. A. BARNUM, Union City, Mich.

Baby Chicks Hatching eggs, seven leading varieties, best quality. Lowest prices. Catalogue free.

Goshen Poultry Farms, R. 19, Goshen, Ind.

Baby Chicks: S. C. White and Brown Leghorns. Good laying strains of large white eggs. Guaranteed to reach you in first class condition by parcel. Catalogue with price list free.

WOLVERINE HATCHERY, R. 2, Zeeland, Mich.

BABY Chicks and Eggs. Barron English White Leghorns. "The Big Kind." 248 to 308. Egg stock. Write Mrs. E. L. GARLOCK, R. 7, Howell, Mich.

Buff Leghorns, and White Leghorns, eggs and baby chicks from great laying strains, satisfaction guaranteed.

Dr. WILLIAM SMITH, Petersburg, Mich.

Chicks Barron Strain White Leghorns. Pay a little more and get a good start next season. Early hatched chicks are always the best. My cockerels come from hens with an egg record of over 250 eggs their pullet year. March \$16, April \$15, May \$14 per 100. Circular free.

Folly Cove Farms, R. 1, Holland, Mich.

LOOK BABY CHICKS \$11 A 100 UP

By Special Delivery Parcel Post, postage paid 20 different thorough breeds. Utility & Exhibition grades. Live delivery guaranteed. Capacity 100,000 weekly. Catalog free.

Nabob Hatcheries, Gambier, Ohio.

CHICKS AND EGGS

Rose and Single Comb R. I. Reds. Barred Plymouth Rocks. Pure bred stock. Farm raised and of superior quality. Write for catalog.

INTERLAKES FARM, Box 39, Lawrence, Mich.

Barred Rock eggs. \$1.50 for 15. 62 hens laid 8667 eggs last year. Flock average 140 eggs. Parks strain.

Winter layers. LEWIS B. AVERY, Saline, Mich.

CHIX: S. C. W. Leghorns

\$18 per 100. Full count live chicks guaranteed. Pullets of same blood averaged 70+ yield through December and January. Morse White Leghorn Farm, Belding, Mich.

Chicks. We ship thousands, orders booked FREEPORT HATCHERY, Box 12, Freeport, Mich.

Blue CUSTOM HATCHING Hens

Fifteen dozen eggs incubated and chicks boxed and shipped prepaid \$6.75. Send eggs fresh well packed prepaid. Order May and June chicks now. Many varieties send for circulars. Crescent Egg Company, Allegan, Mich.

The Citizens Mutual Automobile Insurance Company

HOWELL, MICHIGAN

Makes the Following Statement for the First
Four Months of 1919

■ ■ ■

Paid 31 claims for fire.....\$6,249.65
Paid 56 claims for theft.....10,270.50
Paid 121 claims for liability..14,269.92
Paid 76 claims for collision.. 7,698.97
Total 284 claims.....\$38,489.04

■ ■ ■

5,209 new policies written the first
four months of the year.

The Company has on hand May 1st
a surplus of \$72,833.88.

FOR SICK CHICKENS

Preventative and curative of colds, roup, canker, swelled head, sore head, chicken pox, limber neck, sour crop, cholera, bowel trouble, etc. Mrs. T. A. Morley of Gallien, Mich. says: "Have used Germozone 17 yrs. for chickens and could not get along without it." Geo. F. Vickerman, Rockdale, N. Y., says: "Have used Germozone 12 years; the best for bowel troubles I ever found." Frank Sluka, Chicago, Ill., writes: "I have lost but 1 pigeon and no chickens in the 3 yrs. I have been using Germozone." C. O. Petrain, Moline, Ill.: "I never had a sick chick all last season." Bernard Horrel, Kirkville, Mo., says: "Cured my puniest chicks this spring." Ralph Wurst, Erie, Pa., says: "Not a case of white diarrhoea in 3 yrs. I raise over a thousand a year." Good also for rabbits, birds, pet stock.

GERMOZONE is sold generally at drug and seed stores. Don't risk a substitute. We mail from Omaha postpaid in new 25c, 75c and \$1.50 sizes. Poultry books free.

GEO. H. LEE CO., Dept. 480 OMAHA, NEB.

POULTRY

HOMESTEAD FARMS

Day Old Chicks sold out—except S. C. White and Brown Leghorns and few Black Minorcas. Eggs for hatching nearly all standard breeds. Belgian Hares. Send for new illustrated catalog.

BLOOMINGDALE FARMS ASSOCIATION,
Bloomington, Michigan

Laybilt S. C. W. Leghorn

Large, great layers, pure whites, strong day-old chicks. March 25c each; April 15c each. Parcel postpaid. Lots of 25 or over, guaranteed delivery alive and lively. Hatch every week after March 17th. No circular. Please check order direct from adv. and send orders early.

V. A. MORSE, Ionia, Mich.

EGGS From Brown also White China Geese at 30c each. Pekin and Colard Muscovy Ducks. Light Brahma, Silver Wyandotte, Black Langshans, Buff and Black Orpingtons, Spanish Andalusians, Anconas, Single and Rose Comb White and Silver Leghorns, Single Comb White Minorcas, S. S. Hamburgs, Dark Cornish, Single and Rose Comb Red, Buff, Barred, White and Silver Rock eggs. \$1.75 prepaid; also Pearl Guinea eggs \$1.25. Cedar Lawn Poultry Farm, Wapakoneta, Ohio

English Barron S. C. White Leghorn chicks at \$14.00 per 100; \$65 per 500 immediate special delivery. 6,000 chicks each week. Guarantee safe delivery full count of lively sturdy quality chicks that will mature into most profitable and persistent layers. Hatching eggs \$6 per 100. Write us your wants and send for valuable catalogue giving rearing & feeding methods.

DEVRIES LEGHORN FARM, Zeeland, Mich.

Chix 15c up 75,000 selected utility, exhibition, trap-nested chicks, always 3000 on hand. Some 10 days old, several varieties. Hatching eggs. Catalogue Beckman Hatchery, 26 E. Lyon, Grand Rapids, Mich.

Fenton Chicken Hatchery, Fenton, Mich. F.M. Milliken, Proprietor. Thoroughbred Day Old Chicks, 25 for \$5.50; 100 for \$18.00; Single Comb W. Leghorns Tom Barron English Strain. White, Buff and Barred Plymouth Rocks, Buff Orpingtons, Anconas, W. Wyandottes, R. I. Reds, B. Leghorns.

BABY CHICKS—Prices Reduced Send for circular. Bred-to-day S. C. W. Leghorns. Our stock produced the winners in the state demonstration farm work last year. Sunnybrook Farm, Hillsdale, Mich.

CHICKS S. C. W. Leghorns, Tom Barron strain \$17 per 100. Guaranteed layers in 4% months. Edgewood Poultry Farm, Brighton, Mich.

Fowler's Buff Rocks Cockerels \$4 up. Utility eggs for hatching \$2.00 for 15. R. B. FOWLER, Hartford, Mich.

For sale "Buy the Best" eggs for hatching from 200 Egg strain Barred Plymouth Rock \$2.00 per 15, \$5.00 for 45 eggs. H. B. PROCTOR, Grand Haven, Mich.

Hatching eggs Plymouth Rocks, all varieties. and Anconas. Illustrated catalog 3c. Sheridan Poultry Yards, R. 4, Sheridan, Mich.

John's Big Beautiful Barred Rocks are hen hatched, quick growers, good layers 30 eggs \$3, 100 \$8. Postage paid. Circulars, photos. John Northon, Clare, Mich.

Okah Poultry Farm. White Wyandotte's exclusively eight years breeding free range. 15 eggs \$2.00 prepaid. E. W. Banks, R. 3, Box 178, Lansing, Mich.

dred chicks shipped, three hundred square inches of floor space should be allowed, and no single compartment should contain more than twenty-five chicks. Depth of box should be over four inches, preferably five to six. The boxes nearly, but not quite, square, appear to carry best. Very narrow and very long containers are being discarded, as they increase in-transit hardships.

Ventilation is a most important matter. Most large chick shippers use boxes with different size holes, and when shipping select a size adapted to the season, the weather and the journey. In warm weather larger holes are required than in early spring. More chicks die from too little air than from too much. It is now a popular practice to band boxes at each end with narrow cleats. These prevent close packing and suffocation while in transit.

Baskets and boxes with cloth tops are sometimes used for containers. These are only safe in the very warm weather and when the journey is short. Admission of day-old chicks to postal privileges is a tremendous boon to this growing industry. Poor express service, under war-time handicaps, was proving a disastrous thing to producers.

MILK COMMISSION MARKS NEW EPOCH.

IT gives to the world a new vision of what real constructive endeavor, for which the Michigan Milk Producers' Association has from the first contended, can do to stabilize this vital industry; not for the good of the farmer only, but for all humanity, who must depend for the fullest mental, moral and physical development upon this product for which there is no substitute.

To the Detroit Milk Commission, composed of conscientious, broad-minded, public spirited citizens, who have given their best thought and time without compensation, and whose sole desire has been to so adjust these delicate matters that justice should be meted out to all, to producer, distributor, and consumer alike find themselves deeply obligated.

The farmer gets cost of production, plus ten per cent. The farmer gets back what was deducted from January, February and March milk price to help the distributor through that expensive and critical period to his business. And for the first time in the history of the milk supply of any great city has the producer and the distributor been assured a fair profit, and the consumer given the cheapest food product on the market. If we but continue steady to our purpose in our constructive campaign, the highest ideals of cooperation can be attained.

Price for May, \$3.25; June, \$3.10; July, \$3.40 per cwt.

All of 35-10 per cent milk, Detroit delivery.

We will be glad to furnish copies of the commission's findings if desired.

Address all communications to R. C. Reed, Howell, Mich., secretary and selling agent, Michigan Milk Producers' Association.

TESTIMONIAL TO F. R. FENTON,

AT a meeting in the state senate chamber at Lansing, Mich., attended by the men and women chairmen, and district organizers of the Michigan War Loan Organization, Frederick R. Fenton, director of sales for the state, a resident of Chicago, was presented with a set of resolutions commending his services on behalf of the people of Michigan in the five Liberty Loan campaigns. He also was presented with a chest of silver inscribed with the official seal of Michigan. The presentation of the silver chest was made by Arthur Vandenberg.

Governor Sleeper and other state officials were present at the meeting.

SCOTT'S SOY BEANS

The Most Economical Legume.
The Cheapest Source of Protein.
The Greatest Producer of Nitrogen.
The Most Profitable Catch Crop.

Should be planted with all corn for hogging off. Should be planted with all silage corn, because they add greatly to the production of fat; greatly increase the flow of milk; make a larger crop of corn; store up nitrogen and mellow the ground so that the following crop is larger.

The cost of planting with the corn is practically nothing.

The returns (for the above reasons) are greater than from any crop that is grown on the farm. For hay they can be planted until the fifteenth of July, producing a large quantity of nutritious and palatable feed, so well liked by stock that they will leave corn for it.

Many plant after oats and wheat have been removed. This means not only an additional amount of hay when the price is unusual, but builds up the ground for next year's grain crop.

Ask for our Soy Bean Catechism, catalog and prices.

Here are present prices. Immediate shipment can be made but please do not fail to give first and second choice.

	Per Bushel
Mammoth Yellow	\$3.75
Early Brown, Ito San, Elton	5.50
Hollybrook, Wilson, Haberlandt,	
Sable, Ebony and Morse	6.00
Manchu, Black Eye-brow, Medium Green	6.50
Ensilage and other seed corn	4.50

A nitrogen gathering crop is always the most profitable.

O. M. SCOTT & SONS COMPANY
763 SIXTH STREET, MARYSVILLE, OHIO

KNOWLEDGE EFFICIENCY SERVICE AMERICAN BREEDING AND HATCHING CO.

CERTIFIED DAY-OLD CHIX

Executive Offices: 1049 Otis Building, Chicago, Ill.

Owning and controlling over 500,000 incubator capacity, with a proven scientific expert in charge at each hatchery. Auxiliary hatcheries throughout central and western states.

ONE GRADE ONLY

No fear of substitution of low grade chicks. Every chick hatched a "Quality" chick, any one which may develop into an Exhibition Bird. Certified chix are the bright, perky, fluffy kind that live.

What you all look for and seldom get. Certified chix are from the best proven laying strain. Extreme care is exercised in our egg selection from approved flocks.

Send for Price List of Twenty Varieties Today for Chicks that Live and Thrive.

AMERICAN BREEDING AND HATCHING CO., Dept. T, 1049 Otis Building, Chicago, Ill.

FIRST-OLD DETROIT NATIONAL BANK

MEMBER FEDERAL RESERVE BANK

MICHIGAN'S largest commercial bank, with a capital and surplus of \$7,500,000, is able to render especially valuable service to firms, corporations and individuals desiring a Detroit connection.

DETROIT

R.C. Br. Leghorn eggs \$1.50 per 15, \$3 per 100. Pekin duck, \$1.50 for 8. W. Chinese goose eggs 40 cents each. Mrs. CLAUDIA BETTS, Hillsdale, Mich.

Rhode Island Whites for eggs and meat; 15 eggs \$2.50, 30 eggs \$4.00. Chicks for sale. H. H. JUMP, Jackson, Mich.

S. C. Brown Leghorns. Heavy laying strain. Farm range. Eggs \$1.25; 30 \$2.25; 45 \$3; 100 \$6. Postpaid. Floyd Robertson, R. 1, Lexington, Ind.

Snowy White Rocks Fishel Strain, dandy layers. Eggs \$1.50-15; \$4.50; \$7-100. All prepaid. Mrs. Earl Dehnoff, Vanburen, Ohio

S. C. B. Minorcas. Eggs from pen 1, \$3.00 per 15, from pen 2, \$2.00 per 15. Incubator eggs \$7.00 per hundred. B. W. MILLS, Saline, Mich.

Pine Crest White Orpingtons. Egg that will hatch good, strong chicks 3 and 5 dollars per 15. (No baby chicks or eggs by 100). Mrs. WILLIS HOUGH, Pine Crest, Royal Oak, Mich.

White Wyandottes. Free range flock 80 Dunston's Strain hens mated to 7 Martin's Royal Strain Cockerels, 15 eggs by Parcel Post \$2.00 by ex. \$8 per 100. VERN MOORE, Hartford, Mich.

White Wyandotte eggs for hatching \$5.00, \$3.00 \$1.50 per 15, \$7.00 per hundred. Pen No. 1, \$10 per 15. DAVID RAY, 709 Norris St., Ypsilanti, Mich.

Silver, Golden & White Wyandottes from fine quality stock. Eggs by P. post prepaid \$3.00 per 15, \$5.00 per 30, \$3.00 per 50. O. W. Browning, R. 2, Portland, Mich.

For Sale Mammoth Bronze Turkey eggs for hatching. Mrs. WALTER DILLMAN, R. 5, Dowagiac, Mich.

Great Hog Profits

MILKOLINE
For Hogs
2¢ A GALLON

Hustles Heavy Hogs to Market

Cuts your feeding costs. Have bigger pigs, fatter hogs. Get them ready for market in far less time. You can do it. Prove at our risk that Milkoline is the surest farm money maker known.

Guaranteed Trial Offer We will ship you ten gallons, half a barrel, or a barrel. Take 30 days—feed half to your hogs and poultry. If not absolutely satisfied return the unused part and we will refund every cent you paid us—no charge for the half you used.

Milkoline has a base of Pure Modified Buttermilk to which essential fats and acids are added. Milkoline comes in condensed form. Will keep indefinitely in any climate. Will not mould, sour or rot. Files will not come near it.

2c a Gallon For feeding mix one part Milkoline with 50 parts water or swirl and feed with your usual grain feeds. It helps keep hogs healthy, their appetites keen and makes more pork per bushel of grain. Stop buying buttermilk of uncertain quality. Use Milkoline and you will always be sure of uniform acidity, and at a cost of 2c a gallon or less when fed as directed. Many users say Milkoline saves them one-third on feed bills because it makes their hogs and poultry assimilate all their feed.

1400% Profit W. H. Graham, Middleton, Mo., writes that he got an extra \$420 worth of pork from \$30 worth of Milkoline in a sixty day feed. He made an actual test of this lot of hogs in comparison with another bunch. We could quote hundreds of testimonials, but the best proof is that we legally guarantee Milkoline to be satisfactory or refund your money. (You are the judge) and refer you to S. W. Blvd. Bank of Kansas City, Mo., and R. G. Dunn & Co. **MILKOLINE is just as good for Poultry as for Hogs.**

Order from Nearest Dealer or Direct from this Ad. Send check or money order and ask for free booklet, "Hustles Heavy Hogs to Market."

5 Gals. at Creamery	\$1.50 per gal.	\$7.50
10 " "	1.25 per gal.	12.50
15 " "	1.10 per gal.	16.50
32 " "	1.00 per gal.	32.00
55 " "	.90 per gal.	49.50

No charge for kegs or barrels. Prices F. O. B. Nearest Dealer or Kansas City, Mo.

THE MILKOLINE MFG. CO. 360 Creamery Bldg. KANSAS CITY, MO.

Distributors:
SCHWARTZ BROS., Saginaw, Mich.

BREEDERS' DIRECTORY

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

A bull calf, sired by our imported "EDGAR of DALMENY"

recently sold in Scotland at the Perth Bull Sale for the record price of 2,100 guineas, or \$10,584.00 in our money. This goes to show the quality of the

ABERDEEN ANGUS

that Mr. Scripps is breeding. He enjoys seeing good stock on "Wildwood" and believes that **THE BEST IS NONE TOO GOOD.**

"Edgar of Dalmeny" won the Michigan Grand Championship last September at the Michigan State Fair and was a winner in his class at the Chicago International last December.

We have a few females with calves at foot and re-bred to "Edgar of Dalmeny" that Mr. Scripps has consented to sell to reduce the fast growing herd. Write To

WILDWOOD FARMS

ORION, MICHIGAN

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

Registered Aberdeen Angus. Seven bulls from eight to twelve months old. Plenty of size best of breeding. Prices reasonable. Come and see them. Inquire F. J. WILBER, Chlo. Mich.

WOODCOTE ANGUS

Established in 1900.

TROJAN-ERICAS and BLACKBIRDS (Blackcaps). Breeders and feeders of many International winners.

Write For 1919 Bull Sale Catalogue

WOODCOTE STOCK FARM, Ionia, Mich.

Cloverly Angus Bred cows, heifers and bull calves of good breeding. GEO. HATHAWAY & SON, Ovid, Mich.

Purebred Angus bull, fifteen months old, extra good prospect; also will sell my herd bull Blackcap Model No. 216132. F. J. LYON, Homer, Mich.

Breeders of Registered Aberdeen Angus cattle. Several choice bulls for sale. LANG BROS., Davison, Mich.

REGISTERED

GUERNSEYS

Just two young yearling bulls left, ready for service. Come and look them over quick, or write. They are the good ones. Priced to sell.

AVONDALE STOCK FARM, WAYNE, MICH.

Something Extra May Rose Bull Calf. Sired by St. Austell Dreadnought 34671, by Don Diavolo of Linda Vista, 23565, and from Miss Bess of Yellowdale, A. R. 583 lbs. B. F., and average record for three years of 510 lb. B. F. and a calf. Price \$200. Also several fine A. R. bulls of serviceable age. BALLARD BROS., R. 4, Niles, Mich.

Registered Guernseys

Four Choice Registered Heifer Calves—\$150 each—or \$500 for the four. J. M. WILLIAMS, North Adams, Mich.

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



WESTERN CATTLE AND SHEEP CONDITIONS.

COLORADO and Utah have had two years of short hay crops and this last winter feeding season has been a long one. Hay is scarce and is bringing from \$20 to \$40 per ton. The great variation being owing to localities. In remote valleys the lower price. At freighting stations teams are being charged \$1.00 per head for over night at hay, which is costing \$50 per ton, after hauling and baling charges are considered.

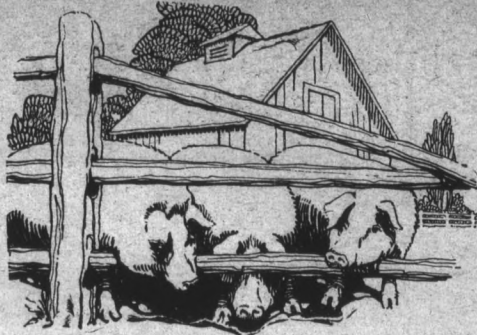
Cattle have gone through the winter on the very minimum of alfalfa, being estimated as low as one ton per head for cattle at feeding places. Cattle men are depending more and more on winter feed as insurance against winter losses. One feeder sustained the loss of but one animal out of seven hundred head wintered. The Indian River Cattle Company from Utah sold five hundred head of yearling steers to Colorado parties and were rebranded with the usual amount of noise near the hotel I was stopping at. These cattle were all full ages and brought \$45 per head. Considering their care and keeping, the eastern farmer could not compete, but when he sells a good Holstein male at fifty or sixty days for nearly that price he is doing the wise thing.

The city sentimentalist who disapproves of selling veals ought to have a first-hand knowledge of his country and the cattle business before he expresses opinions. Other cattle sales and prices on the range are as follows: Three hundred and fifty head of two-year-old steers, \$67; four hundred head of three-year-olds, \$85; one hundred native cows, with calves by side, \$90.

The Hereford blood is predominant as at least seventy-five per cent of the cattle are now white-faced. There is less of hostility between sheepmen and cattle men than formerly and many cattlemen have sheep, who will clean up weeds not eaten by cattle. The United States authorities are advising sheep to clean up certain weeds, poisonous to cattle but harmless to the woolled animals.

Shearing is already commenced and one clip sold at fifty cents with no real market establisher. The wool clip adjacent to Montrose will bring over half a million dollars. The prices for sheep are much lower than a year ago. Five thousand yearling wethers, delivery in Utah, wool off, have been offered at \$6.50 per head for June delivery; 1,200 yearling Cotswold ewes, wool off, at \$12.

One of the significant western facts is that the arid counties, like western Colorado and Utah, can winter more sheep than they can pasture in the summer. The Forest Service of the United States charges for government land used as pasture in the forest reserves and restricts the number so that the range is not overstocked. The dry valleys provide a vast amount of winter feed which cannot be used in the summer for lack of water. In the winter the light snowfalls on the foothills makes this dry feed available. The cut-over lands of Michigan are the reverse, hence the great interest sheepmen have in this subject. There is, however, a popular impression that these Michigan lands are great swamp areas and unsuitable to sheep. Also that the Michigan winters approximate conditions in the Arctic circle. That there are no coyotes or wolves nor poisonous plants seems like an overdrawn story which is taken with some mental reservations. Some of the Utah sheepmen have partnership arrangements with Nebraska feeders to finish their range lambs in or adjacent to the corn belt. This has been found to be



How could it help being fine for pigs!

DIAMOND HOG MEAL is a pure, straight, corn feed—made from the nutritious hearts of the corn kernels, which nature has filled full of protein, fat and carbohydrates in the highly nourishing forms she considers best for giving the corn plant its best start toward growth.

Diamond Hog Meal is guaranteed to contain not less than 18% protein and not less than 7% fat. Diamond Hog Meal is about twice as high in protein and fat as whole corn, and nearly as high in amount of carbohydrate material.

Compared with standard wheat middlings, Diamond Hog Meal runs much higher in everything.

Diamond Hog Meal makes the nicest slop of all feeds. Send today for a sample and printed matter. Please tell us who your dealer is.

CORN PRODUCTS REFINING COMPANY

H. CHRYSTAL, Selling Representative, 909 Ford Building, Detroit



MICHIGAN LIVE STOCK INSURANCE COMPANY

INDEMNIFIES Owners of Live Stock—Horses, Cattle, Sheep and Hogs Against Death by Accident or Disease

SAGINAW

GRAND RAPIDS

Guernseys Grade Heifer Calves Registered Bull Calves; write your requirements to WALTER PHIPPS FARM, 80 Alfred St. Detroit, Mich.

GUERNSEYS must reduce herd, so offer a few choice females of Glenwood breeding also bulls, all stock of A. R. breeding, herd tuberculin tested. T. V. HICKS, Battle Creek, Mich.

Guernseys—Registered Females For Sale GEO. N. CRAWFORD, R. 2, Holton, Michigan.



Holstein Cows Breed Regularly

You are certain of results when you choose Holsteins: their characteristics are fixed through centuries of selection and breeding by a race of dairymen whose object has been to produce the largest possible amount of beef and milk from the same animal. They breed regularly and true to type, and are the largest, most vigorous of dairy cattle, the greatest yielders and the most economical to feed.

If interested in

HOLSTEIN CATTLE

Send for our booklets—they contain much valuable information.

HOLSTEIN FRIESIAN ASSOCIATION OF AMERICA, Box 164, Brattleboro, Vt.

"Top-Notch" HOLSTEINS

The young bulls we have for sale are backed up by many generations of large producers. Buy one of these bulls, and give your herd a "push". Full descriptions, prices, etc. on request.

McPherson Farms Co., Howell, Mich.

Registered Holstein Bull calves from A. R. O. cows up to 29.32 lbs. butter in 7 days, grandsons of the \$50,000 bull. C. H. GIDDINGS, Gobleville, 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 80 lbs. Write for pedigrees and quotations, stating about age desired.

TRAVERSE CITY STATE HOSPITAL Traverse City, Mich.

CLUNY STOCK FARM

100--REGISTERED HOLSTEINS--100 When you need a herd sire remember that we have one of the best herds in Michigan, kept under strict sanitary conditions. Every individual over 6 mos. old regularly tuberculin tested. We have size, quality, and production records backed by the best strains of breeding. Write us your wants.

R. BRUCE McPHERSON, Howell, Mich.

"Winwood Herd"

REGISTERED

Holstein-Friesian Cattle

Sire in Service

FLINT MAPLECREST BOY

His sire is Maplecrest Korndyke Hengerveld. His three nearest dams each over 30 lbs. of butter in 7 days. His dam and granddam both made over 1232 lbs. of butter in one year. It is the yearly cow we are looking for to deliver the goods. Flint Maplecrest Boy's Dam is Gluck Vassar Bell, 30.57 lbs. of butter in 7 days and 121 lbs. in 30 days. Her butter fat test is 5.27. This looks about right to the man who goes to the creamery. We have bull calves from 2 weeks to 12 months old. From A. R. O. dams and sired by Flint Maplecrest Boy, which we will sell at a dairy farmers price breeding considered. Just think 40 more cows to freshen which means more bull calves. Let us know your wants. We will make terms on approved notes.

JOHN H. WINN, Inc. Lock Box 249, Roscommon Mich. Reference Roscommon State Bank.

BULL CALVES

Sired by Mapleside Korndyke No. 112849. The sire's dam at 2½ years, granddam at 3½ years, and great granddam have semi-official records averaging 842 lb. butter in 1 year. Dams of calves have A. R. O. records up to 19.28 lb. butter in 7 days. Write for breeding and prices.

PEACELAND STOCK FARM Three Rivers, Mich. Chas. Peters, Herdsman C. L. BRODY, Owner Port Huron, Mich.

615 lb. milk 26.97 lb. butter 7 days aver. for 2 nearest dams of 4 mo. ¼ white bull calf. Gadam 881 lb. butter 1921 lb. milk 40 mos. Also heifers bred to 26 lb. son Atkin's Maplecrest. M. L. McCaughy, Bedford, Mich.

Guarantee Quality Sale

Seventy head of High-Class Registered Holstein Cattle, mostly from Herds under Government and State Supervision.

Carefully Tuberculin Tested by Government or State accredited veterinarians, and Guaranteed to be Breeders if of Breeding Age.

What can the buyer ask more? Just note the Quality of the cattle consigned to this Sale.

Two 26-lb. cows and a 24-lb. cow bred to Glen Alex King De Kol, a 43-lb. Bull with a 42-lb. Grand Dam.

A daughter of a 30-lb. cow out of a 38-lb. Sire.

Six good young cows and heifers nearly ready to freshen, and in calf to the Mighty Ragapple, a \$10,000 Son of Ragapple Korn-dyke 8th, and the 38-lb. cow, Ormsby Jane Piebe Segis.

A 26-lb. three-year-old, a 23-lb. Senior two-year-old, a 23-lb. three-year-old, a 28-lb. four-year-old, and a son of a 26-lb. cow, and a High Record Sire from the noted Traverse City State Hospital Herd.

A number of good A. R. O. cows safe in Calf to Bulls from Dams with records from 30 lbs. to 43 lbs.

W. R. HARPER, Sale Manager

Good A. R. O. Cows and choice Heifers that will be fresh at time of Sale, or soon due to freshen and bred to Sires from High Record Dams.

Choice yearling heifers and heifer calves from well-bred Dams and high-class Sires.

Five choice heifer calves, all from one 32-lb. Sire and their Dams, all from one 32-lb. Sire.

A few choice bull calves of excellent breeding.

This is the Buyer's opportunity to purchase healthy cattle of good type and breeding.

Remember the date and place of this Sale, Wednesday, May 14th, 1919, at the West Michigan State Fair Grounds, Grand Rapids, Michigan.

If interested, write me for a Sale Catalog.

Buyers of Holstein Cattle from other States should note that this Sale follows The Mark Piper Dispersal Sale which will be held at Flint, Michigan, on Tuesday, May 13th, 1919, and where 77 head of High-Class Holstein Cattle will be sold.

Plan to attend both of these Sales where Good Healthy Holstein Cattle can be bought in carload lots, and easily shipped to destination by purchaser.

D. L. PERRY, Auctioneer

MIDDLEVILLE, MICHIGAN

The Fifth Annual Sale Of

The Livingston County Breeder's Sale Co.

will be held at

Howell, Mich. Wed., May 21st 1919.

At 12.30 o'clock P. M.

70 head of High Class Registered Holsteins will be offered

A large percentage of the offerings either have A.R.O. records or are from record dams.

Among the lot are three daughters of 32 lb. cows and a 25 lb. 3 year old daughter of a 28 lb. cow.

A few high class young bulls will be included.

Many of the females are bred to bulls whose dams have records from 30 to 35 lbs.

Col. J. E. Mack, Auctioneer.

(Catalogs ready May 10th).

P. M. TAFT, Secretary,

OAK GROVE, MICH.

HOLSTEIN BULLS

READY FOR SERVICE

Grandsons of the \$50,000.00 bull with 18 and 20 pound dams. Prices reasonable. Write for extended pedigree and tell us what you want.

C. P. REED - Howell, Michigan

HOLSTEINS FOR SALE

Having sold my farm, will sell my entire herd of registered Holstein cattle. 14 females and one high class bull from the Flanders Herd, an inbred King of the Pontiacs. Females consist of 8-two year old, 4 fresh; three heifer calves at side, four due soon; one 6 and 7 year old, fresh; one heifer 8 months old. Do not wait to write, but come at once, as they will be sold reasonable. Breeding and quality considered.

H. B. CLARK, Northville, Mich.

For sale a fine registered Holstein bull calf from large producing ancestors, born Dec. 18, 1913. Would make a fine sire for improving a grade herd. Price reasonable.

BULL CALF dropped April 29, 1919, about half white, a dandy at \$50 reg. and delivered. J. Bobt. Hicks, St. Johns, Mich.

THE HOLSTEINS

At Maple Avenue Stock Farm are under Government supervision. The entire herd have just been tuberculin tested and not one reactor. A good place to buy that bull you are looking for, and I have two very fine, richly bred, and splendid individuals ready for any amount of service. I want to answer any question you may ask about them.

L. E. CONNELL, Fayette, Ohio

30-Lb. Bull For Sale

His dam Uno Fearless Fannie Lady DeKol is a 30.19 lb. daughter of Fearless Fannie DeKol 27.44 lb. butter from 75 lb. milk and a sister of Trisy Stone who as a 4 yr. old made a world's record of 86.2 lb. butter in 359 days.

\$100 buys registered Holstein bull, large enough for service. 30 lb. breeding. Light in color. Good individual. B. B. REAVEY, Akron, 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.

JERSEY BULLS

Ready for service FOR SALE WATERMAN & WATERMAN, Ann Arbor, Mich.

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

Maple Lane R. of M. Jersey herd. Bull and heifer calves sired by a nephew of the new World's Champion, Sophie's Agates. Also R. C. Red eggs and chix. IRVIN FOX, Allegan, Mich.

LILLIE Farmstead Jerseys. Young bulls ready for service from R. of M. cows. A few bred heifers and cows. COLON C. LILLIE, Coopersville, Mich.

For Sale Jersey Bull, Goldie Foxhall Lad No. 170448, Sire Pogue Foxhall No. 129549 Dam Goldie Sophia No. 352783, this bull is solid color, black tongue and switch, dropped Mar. 10th, 1918, an extra fine individual, good enough that I will ship him C. O. D. Also a few bull calves. Address NEWMAN'S STOCK FARM, R. 1, Mariette, Mich.

The Wildwood Jersey Farm. Bulls for sale by Majesty's Oxford Fox 124214 and Eminent Lady Majesty 150934, and out of R. of M. Majesty dams. ALVIN BALDEN, Capac, Mich.

For Sale Registered Jersey bulls ready for service and bull calves. SMITH & PARKER, R. 4, Howell, Mich.

Registered Jersey cattle for sale. 7 milch cows, 2 fresh, 1 due to calf. Two 2-year olds; two yearlings; two 1918 spring calves, one 1919 calf. H. B. DARNELL, Lake Odessa, Mich.

HEREFORDS

Both sexes and all ages for sale also horned and polled. Bulls in service. Governor by Prince Donald by Prime Lad 9th, Militant Farmer by Imported Farmer, Fairfax Farmer by Militant Farmer. Dam by Perfection Fairfax.

ALLEN BROS., Paw Paw, Mich.

Herefords Polled and Horned blood lines embrace Fairfax. Polled Perfection and Prime Lad 9th breeding. Prices reasonable. COLE & GARDNER, Hudson, Mich.

Harwood's White Faces

KEEP ON 508019

A Ten Bull Heads the Herd

The beef cattle of the day. Only 2 yearling bulls left. My 1918 crop of bulls ready for sale. Will spare a few females. You can not make a better investment. I wish to thank my customers for past favors.

JAY HARWOOD, -- Ionia, Mich.

Herefords Bob Fairfax #24027 at head of herd. Stock for sale, either sex, polled or horned, any age. Priced right. EARL O. McCARTY, Sec'y. H. B. Ass'n. Bad Axe, Mich.

BIDWELL SHORTHORNS

For Beef and Milk.

Registered bulls, cows and heifers-Good Scotch and Scotch-Topped for sale. In prime condition. Modern sanitary equipment. Farm 10 minutes from N. Y. C. depot, 1 hour from Toledo, Ohio. Automobile meets all trains. Write

BIDWELL STOCK FARM, Box B, Tecumseh, Mich.

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

Richland Stock Farm

SHORTHORNS

HOME OF THE MICH. CHAMPIONS We offer for sale a few good dual purpose cows with calves at foot. Also two three year old bulls suitable for range purposes. We invite inspection. C. H. PRESCOTT & SONS, Office at Tawas City, Mich. Herds at Prescott, Mich.

Shorthorns Scotch and Scotch Topped cows and heifers, priced right. Come and see them or write W. B. McQUILLAN, R. 7, Howell, Mich.

Fairland Shorthorns. Bred for beef and milk. Three young bulls ready for service also bull calves for sale sired by General Claymore and Walgrove Star. Price \$100 to \$200. JOHN J. FOSTER & SONS, R. 5, Niles, Mich.

Milking Shorthorns Clay bred young bulls 3 to 10 months old. DAVIDSON & HALL, Tecumseh, Mich.

Rosemary Farms, Williamston, Mich. young bulls ready for service, Shorthorns bred for milk & beef. Herd estab. by Prof. C. H. Burgess, Mich. Agri. College.

For Sale Shorthorns of Quality Scotch and Scotch Topped descendants of Archers Hope, Avondale, Maxwellton Sulton and White Hall Sulton by the Oscola Co. Shorthorn Breeders Ass. JOHN SCHMIDT, Sec. Reed City, Mich.

Shorthorns Central Mich. Shorthorn Breeders Ass. offer 37 bulls all ages. 17 females for sale. Write Oscar Skinner, Sec., Gowen, Mich.

Shorthorn Breeder No stock for sale at present. CHAS. WARNER, Jr., Inlay City, Mich.

Shorthorns 100 head to select from. Write me your wants, price reasonable. Wm. J. BELL, Rose City, Mich.

Shorthorn Scotch bull 2 years old, 3 good bull calves 7 mos. old for sale. W. C. OSIUS, Hillsdale, Mich.

The Kent Co. Shorthorn Breeders have both males and females for sale. Ask about them. L. H. LEONARD Sec., Caledonia, Mich.

Milking Shorthorns O. I. C. swine. Bulls for sale 1 mo. to 1 year old. E. H. KURTZ, Mason, Mich.

Milking Shorthorns Two Clay bred bulls for sale. Red 14 mos. old, roan 9 mos. old. Corliss O. Blackman, Watervliet, Mich.

Roan Yearling Scotch Topped Short. V. E. MORRISH, R. 5, Flint, Mich.

HOGS

Registered Berkshire Boars: ready for service. A few gilts and sows bred for May and June farrow. Also spring pigs. CHASE STOCK FARM, Mariette, Mich.

Duroc Opportunity

What would the earning capacity of a Brookwater Boar be in your herd? A mid-west breeder states that the Brookwater boar he used added from \$75 to \$100 to every gilt bred to him. It paid this man to use one of our boars it will pay you.

We have several that we are offering at prices which appeal to the small breeder who must of necessity be a conservative buyer. We have a few that are good enough to be used in high class herds at prices in keeping with their individuality and breeding. Money invested in a good herd boar very speedily increases the value not only of what you sell but what you keep. Send for price list or better, visit the farm.

BROOKWATER FARM, Ann Arbor, Mich. HERBERT W. MUMFORD, owner, J. BRUCE HENDERSON, Manager.

OAKWOOD FARM

Nothing for sale, at present booking orders for spring pigs (Durocs). Tax Payer and Gold Medal breeding. RUSH BROS., Romeo, Mich.

For Sale Duroc Jerseys of the big boned type fall pigs of either sex and taking orders for spring pigs. CHAS. BRAY, Okemos, Mich.

DUROC JERSEYS

Fall pigs either sex also spring pigs pairs not akin. Sired by the Grand Champion and Junior Champion boars. F. J. DRODT, R. 1, Monroe, Mich.

REGISTERED DUROC BOARS-We have a choice lot of spring boars, sired by Michigan Cherry Col. No. 118473, Top Cherry King J. No. 102823, and Col. Defender 26th, No. 125705. Make your selection at weaning time and raise according to your own ideas. Write for pedigrees. The Jennings Farms, R. 1, Bailey, Mich.

SEVERAL GOOD

Duroc sows bred to Orion's Fancy King. Boar pigs ready for service. NEWTON BARNHART, St. Johns, Mich.

DUROC-JERSEYS

E. D. HEYDENBERG, Wayland, Mich. Jerseys. A few choice gilts bred to Brookwater King Special 111467. (A full brother to Brookwater Lass D. the grand champion sow at the 1918 International). Carey U. Edmonds, Hastings, Mich.

DUROC Jersey's A few extra good fall boars sired by Orion Cherry King Col. 2nd. Bred sows all sold. W. C. TAYLOR, Milan, Mich.

DUROC JERSEY-Two choice herd boars for sale: 1 Orion Cherry King, fall yearling; 1 Patfinder spring yearling. John Oronenwelt, Garleton, Mich.

Bred gilts and spring boars for sale now. JOHN W. SNYDER, R. 4, St. Johns, Mich.

Raise Chester Whites
Like This
the original big producers



I HAVE started thousands of breeders on the road to success. I can help you. I want to place one hog from my great herd in every community where I am not already represented by these fine early developers-ready for market at six months old. Write for my plan. More Money from Hogs. G. S. BENJAMIN, R. F. D. 10, Portland, Michigan.

Chesters March and April pigs in pairs or trios from prize winning stock prices reasonable satisfaction guaranteed. F. W. ALEXANDER, Vassar, Mich.

Breed The Best
THE WORLD NEEDS LARGE
FAT HOGS



Why lose money exceeding and feeding scrub hogs? Two of our O. I. C. Hogs Weighed 2806 Pounds. We are the most extensive breeders and shippers of pure bred hogs in the world. Write today for the true story of the real O. I. C. Hogs. All foreign shipments U. S. Government Inspected. We have bred the O. I. C. Hogs since 1863 and have never lost a hog with cholera or any other contagious disease. WRITE - TODAY - FOR FREE BOOK "The Hog from Birth to Sale" THE L. B. SILVER CO. 196 Heights Temple Bldg. CLEVELAND, OHIO

THE WORLD'S CHAMPION big type O.I.C's. Stock of all ages for sale. Herd headed by Oalloway 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 Grandell's prize hogs, Cass City, Michigan.

Shadowland Farm

O. I. C.'s

Bred Gilts 200 to 300 lbs. from prize winning stock. A few fall yearlings and 2 yr. old sows, big type, growthy boars of all ages, guaranteed as breeders. Everything shipped C. O. D. Express paid and registered in buyer's name. J. CARL JEWETT, Mason, Mich.

O. I. C.'s Serviceable boars of last summer and fall farrow. G. P. ANDREWS, Dansville, Mich.

O. I. C. Bred Gilts All Sold. H. W. MANN, Dansville, Mich.

O. I. C. gilts bred for summer farrow and spring pigs, any of them good enough to ship. C. O. D. F. C. BURGESS, R. 3, Mason, Mich.

O. I. C's 2 Choice Yearlings Boars and Spring pigs. Clover Leaf Stock Farm, R. 1, Monroe, Mich.

O. I. C's One very good yearling boar, a few last Sept. gilts, and this spring pigs to offer, registered free. 1/2 mile west of Depot, Citizens Phone 124. OTTO B. SCHULZE, Nashville, Mich.

O. I. C's One August boar and a few March pigs single or pairs not related. C. J. THOMPSON, Rockford, Mich.

FRANCISCO FARMS

SHORTHORNS-POLAND CHINAS Three choice heifers and a few young cows to offer. Also fine good gilts bred for late spring farrow. Prices are attractive. P. P. POPE, Mt. Pleasant, Mich.

For 25 Years We have been breeding Big Type Poland China hogs of the most approved blood lines. Our new herd boar "Michigan Buster" is a mighty good son of the great "Giant Buster", dam "Mow's Miss Queen 2". Some breeding! We are all sold except a few fall pigs. J. C. BUTLER, Portland, Mich.

BIG Type Poland Chinas. A litter by Gerstdale Jones (Carter), one by Gerstdale King (Gerst). A Big Bob sow booked for service to The Glassman. Pigs by Mammoth Ben, herd boar, unexcelled, Mammoth Ben at 12 mos. weighed 450 lbs. Nothing for sale. Visitors welcome. WESLEY HILE, R. 6, Ionia, Mich.

P.C. bred gilts sold. For sale herd boar prospect 17 mo. old, wt. 400 lb. with quality, sire Buster Giant, 28553, dam Nemo L. 54840 an 800 lb. sow in flesh. Sire sold for \$1500, priced reasonable. Free delivery from Parma. W. E. LIVINGSTON, Parma, Mich.

Big Poland Chinas with quality. For sale, summer and fall gilts, open or bred. G. A. BAUMGARDNER, R. 2, Middleville, Mich.

L. S. P. C. Bred sows all sold, 2 boars ready for service. L. also 1 fall boar, and fall gilts to breed for fall farrow. H. O. SWARTZ, R. 1, Schoolcraft, Mich.

Big Type Poland-Chinas pigs, sired by C. A. King Joe B. 29031, by King Joe 25157, Monster Big Bob 327623, by Luken's Big Bob 25777; Buster Half Ton 298225, by Great Big Half Ton 251243. Out of sows, whose pedigree, individuality and quality are of equal merit as my herd boars. Can furnish pairs and trios, not akin. C. A. BOONE, Blanchard, Mich.

MICH. Champion herd of Big Type P.C. Nothing for sale but fall pigs; orders booked for spring pigs. E. R. LEONARD, St. Louis, Mich.

Big type P. C. fall boars the big prolific kind, their breeding traces to the best herd in Ill. Iowa, & Neb. C. E. GARNANT, Eaton Rapids, Mich.

Large Type P.C. Nothing for sale now. Will be in market with better than ever this fall. If herd stuff counts. W. J. HAGELSHAW, Augusta, Mich.

Big Type P. C. boar and bred gilts. Choice Aug. pigs at a bargain. A. A. WOOD & SON, Saline, Mich.

Big Type P. C. Choice bred sows from Iowa's greatest herds, the big bone prolific kind with size and quality. E. J. MATHEWSON, Burr Oak, Mich.

Big Type Poland's all sold out, nothing for sale at present. Booking orders for spring pigs. Thanking my customers. L. L. Chamberlain, Marcellus, Mich.

Mammoth Poland Chinas all sold. General Jones No. 317249, son of Gerstdale Jones heads our herd. Clyde Weaver, Ceresco, Mich.

Big Type P. C. Will have better males than ever for fall trade, gilts in season. JOHN D. WILEY, Schoolcraft, Mich.

LATEST MARKET REPORTS

SECOND EDITION.

The markets in this edition were revised and corrected on Thursday afternoon, May 8.

WHEAT.

Wheat trading has held steady in the face of wide fluctuations in corn prices. Receipts have been comparatively small and the mills are ready to buy everything offered. The entry of Canadian wheat into this country will hold down prices to growers but the event is welcomed by the milling fraternity. Both flour and feed are in active demand. No change in crop prospects is reported, and the outlook is very promising. A year ago the local quotation for No. 2 red wheat was \$2.17 per bushel. The visible supply of wheat decreased 11,821,000 bushels last week. Present Detroit prices are:

No. 2 red	\$2.70
No. 2 mixed	2.68
No. 2 white	2.68

CORN.

The government seems determined to prevent grain prices advancing far above the present level. When quotations began an upward course early this week the U. S. Grain Corporation announced that preparations were being made to increase the shipments of corn from Argentine and also to import wheat from Canada. This naturally had a bearish effect upon the market, and declines followed. Planting will be generally delayed by the recent rains. The American visible supply shows a decrease of 664,000 bushels. One year ago No. 3 corn sold locally at \$1.40 per bushel. Present prices are as follows:

No. 3 corn	\$1.67
No. 3 yellow	1.70
No. 4 yellow	1.67
No. 5 yellow	1.64
No. 6 yellow	1.61
No. 3 white	1.70

Chicago has had an irregular market with prevailing prices for No. 3 yellow at \$1.72@1.73; No. 4 yellow \$1.71; July corn \$1.65½; September \$1.60.

OATS.

The new crop of oats in the southern producing states is progressing fairly satisfactorily, while to the north excessive rains will no doubt reduce the acreage and result in a more discouraging outlook through late seeding. Supplies of oats on the market are ample, and this allows trading to follow closely the changes in the corn prices. A year ago standard oats sold on this market at 76½c. The visible supply has changed but a few thousand bushels since a week ago. Present Detroit prices are:

Standard	73
No. 3 white	72½
No. 4 white	71½

RYE.

An easier tone obtains in rye circles with the volume of trading only fair. The price has declined on the local market and cash No. 2 is now quoted here at \$1.72 per bushel.

BARLEY.

This trade holds about firm with a moderate amount of business being transacted. Local prices are unchanged with cash No. 3 at \$2.30@2.40 per cwt.

BEANS.

Michigan pea beans are holding a stronger commercial position than they occupied a week ago. In practically all of the leading consuming centers values have advanced. At Detroit the market is steady with good to choice hand-picked pea beans moving at \$8 and only a moderate volume of supplies on hand. The Philadelphia market is active and strong with prices for Michigan pea beans marked up to \$8 per bushel. In New York a firm tone is reported with pea beans at \$7.50@7.75; best red kidneys at \$12.25@12.50, and Michigan white marrows at \$10.50@11.75. The trading in Boston is on a basis of \$7.75@8 for Michigan choice pea beans. The price for this variety in Chicago has advanced to \$8.40@8.60 per cwt. Over a thousand tons of beans are exported from New York City to England and the West Indies the past week.

FEEDS.

Market is strong with prices unchanged as follows: Bran \$45; standard middlings \$48; fine middlings

\$52; coarse corn meal \$64; cracked corn \$65; corn and oat chop \$53 per ton in 100-lb. sacks to jobbers.

SEEDS.

Trading is very light and the market firm with prime red clover at \$26.50; October \$19.75; alsike \$26; timothy at \$5.25.

HAY.

Some improvement is noted in the supply of hay on the local market, but prices continue firm as follows: No. 1 timothy \$36.50@37; standard timothy and light mixed \$35.50@36; No. 1 clover \$32.50@33. Pittsburgh.—Receipts are very light and the demand strong at an advance over last week's prices. Current quotations are: No. 1 timothy \$39.50@40; No. 2 timothy and No. 1 light mixed \$38.39; No. 1 clover mixed \$37@38; No. 1 clover \$36@36.50.

POTATOES.

Bearish sentiment has crept into potato markets and a weaker situation prevails. At Michigan points growers receiving \$1.75@1.90 for round whites at warehouses. Haulings are very few. At Detroit Michigan whites U. S. grade No. 1 are selling at \$3@3.25 per 150-lb. sack. The same grade is selling at Cleveland at \$3.50@3.65 per sack, and in Pittsburgh at \$3.40@3.50 per sack. In Buffalo the trade is paying \$2.40@2.50 per cwt; in Philadelphia at \$2.35@2.50; in Cincinnati \$2.30@2.35; Indianapolis \$2@2.15. The Chicago trade is weak at \$1.75@2.

BUTTER.

Butter values have declined during the past week. Increased production is already being noticed on the markets. At Detroit fresh creamery stock is jobbing at 54½@55c per pound. The Chicago market is unsettled with creamery at 50@55½c. New York trading is reported on a steady basis with the range of creamery prices at 56@59½c. Extra western creamery is quoted in Philadelphia at 56c. According to the Bureau of Markets, stocks of butter increased 416,000 pounds during the week.

CHEESE.

A considerable volume of trading in cheese is going on, with prices holding about steady. At Detroit Michigan flats sell to jobbers at 30½c; single daisies 31c; brick at 30@30½c. Chicago market is active with young Americas at 32@32½c; single daisies at 31¼@32c. The New York market rules firm and increased offerings are being readily absorbed. State whole cream flats, current make specials, are quoted there at 32@32½c; do average run at 32c. Full milk cheese brings 36@36½c for new and 36@39c for old in Philadelphia.

EGGS.

Values are slightly higher. The demand is broad and production in many sections appears to be easing off. At Detroit fresh firsts are selling to jobbers at 44½c; extra firsts in new cases

at 45½c; storage packed firsts and extras in new cases 45½@46c. Quotations are higher in Chicago with firsts at 42@44c; ordinary firsts 40½@41½c per dozen; storage packed firsts and extras 44½@45½c. The New York market continues firm with the nearby western stock at 44@53c. The Philadelphia trade is jobbing western extras at \$13.95, and do firsts at \$13.65 per case.

WOOL.

Increased strength is noted in the wool market. Prices are advancing in producing sections. In Montana some dealers are paying as high as 60c; while fleeces of fine wools in Michigan have been recently purchased from the producers at 55@57c. In Ohio and New York good wools bring 58@60c. The auction of navy wool in Boston was conducted at unexpectedly high prices and even outshone in results the recent auctions of army wools. Shearing operations are well under way and the 1919 clip is already moving. The organization of selling associations by producers is developing rapidly all over the country due to advantages over the old method of handling this product.

CANNED FRUIT

There is a fairly satisfactory market for canned goods. This market will be pretty thoroughly cleaned up of old stock before new products are available. Distributors, however, are buying in a hand-to-mouth fashion and retailers complain that the prevailing high prices make it somewhat hard to move stock. Notwithstanding these drawbacks, holders of canned goods consider they have good property.

GRAND RAPIDS

Dealers in beans advanced the price to growers last week to \$7 per cwt. for Michigan whites, a \$1 advance over last week. The demand is strong and practically what is left of the 1918 crop is now in the hands of elevator men. Beans for foreign shipment are sought and during the week 350 cars of Michigan grown were checked over for export according to report for one of Michigan's heaviest operators on returning from New York. Farmers are asking \$40 per ton for hay. They sold on the city market last week at \$37@38. More potatoes were brought to the city market last week than could be readily absorbed. Price range was \$1.10@1.15 per bushel. At most outside points the price is \$1.25. The wheat situation is acute, with milling companies. At some points bids were made as high as \$2.85 per bu. Grand Rapids companies are paying \$2.60 for No. 1 red and \$2.58 for No. 1 white. Scarcely any is in the farmers' hands in this section of the state.

DETROIT CITY MARKET

Potatoes are moving freely on the city markets at \$1.25@1.35 for No. 1 stock and about 75c for culls. Apple prices range from \$1.50@3.75 per bu; navy beans 8@9c per pound; dressed pork 24@25c; fresh eggs 43@45c per dozen; country butter 65c.

WESTERN CATTLE AND SHEEP CONDITIONS.

(Continued from page 748).

a profitable arrangement for both parties.

Sooner or later the up-to-date sheep-raising proposition will be for example a Michigan hardwood land farm where a breeding flock to raise rams for the west, and the adjacent cut-over range lands for summer feed for the western surplus, particularly of stuff going to the block. Western men seem to feel that a ewe, up to the time she is ready to drop a lamb as a two-year-old can be raised cheaper and better in the west. The western sheep man as a rule concedes that a grain-fed ewe and the ram lamb that this ewe raises is an essential factor in flock maintenance. This Michigan can do to advantage. A partnership or stock company combining the mutual advantages would prove profitable.

J. Mc. B.

Live Stock Market Service

Reports for Thursday, May 8th

BUFFALO.

On this market today pigs brought \$20.50, top hogs \$21.50 or 25c lower than yesterday's prices. Lambs sold up to \$17.25 and calves to \$16.50.

DETROIT

Cattle.

Receipts 1,930. Market strong at Wednesday's prices. Best heavy steers \$14.00@15.00 Best handy wt bu steers.. 11.50@13.50 Mixed steers and heifers.. 11.00@13.00 Handy light butchers 9.50@11.50 Light butchers 8.00@ 9.00 Best cows 10.00@11.00 Butcher cows 7.50@ 9.75 Cutters 6.75@ 7.00 Canners 6.00@ 6.50 Best heavy bulls 11.00 Bologna bulls 9.00@10.00 Stock bulls 8.00@ 9.00 Feeders 10.00@12.00 Stockers 8.00@10.00 Milkers and springers.... \$ 65@ 140

Veal Calves.

Receipts 1,956. Market today strong. Best \$15.00@16.00 Others 10.00@13.00

Sheep and Lambs.

Receipts 765. Market strong. Best wool lambs \$16.00@16.50 Fair lambs 14.00@15.50 Light to common 11.00@13.50 Fair to good sheep 11.50@12.00 Culls 6.00@ 8.00

Hogs.

Receipts 6,694. Pigs 50c lower and other grades 15@25c lower than Wednesday. Pigs \$ 19.50 Mixed 20.75@20.85

CHICAGO.

Hogs.

Estimated receipts today are 50,000; holdover 5,257. Market 20@25c lower than yesterday. Bulk of sales \$20.85@21.10; tops \$21.20; heavy 250 lbs up, medium, good and choice \$21@21.20; medium 200 to 250 lbs, medium, good and choice \$20.80@21.15; light 150 to 200 lbs, common, medium, good and choice \$20.50@21.10; light lights 130 to 150 lbs, common, medium, good and choice \$19@20.75; heavy packing sows 250 lbs up, smooth \$20@20.50; packing sows 200 lbs up, rough \$19@20; pigs 130 lbs down, medium, good and choice \$18.25@19.25.

Cattle.

Estimated receipts today are 14,000; market slow; few early sales of beef steers 25c lower. Common and medium she stock steady; bulls and feeders 15@25c lower; calves steady to 25c higher. Beef steers, medium and heavy

weights, 1100 lbs up, choice and prime \$16.85@19.75; do medium and good at \$13.25@17; do common \$7@13.75; light weight 1100 lbs down, good and choice \$14@17.25; do common and medium at \$10.50@14.25; butcher cattle, heifers, common, medium, good and choice \$8@14.50; cows, common, medium, good and choice \$7.55@14.25; bulls, bologna and beef \$9@13.25; canners and cutters, cows and heifers \$6@7.75; do canner steers \$7.75@10.50; veal calves, light and handyweight, medium, good and choice \$14.25@15.25; feeder steers common, medium, good and choice \$10@15.25; stocker steers, common, medium, good and choice \$8.25@13.50; do cows and heifers, common, medium, good and choice \$8@10.75; stocker calves, common, medium, good and choice \$7.75@15.25.

Sheep and Lambs.

Estimated receipts today are 15,000. Sheep steady; lambs lower; quotation for wool stock: Lambs 84 lbs. down, medium, good, choice and prime \$17.50@20; do 85 lbs up, medium, good, choice and prime \$17.25@19.90; do cull and common \$13@17.25; spring lambs, medium, good, choice and prime \$16@20.50; ewes, medium, good and choice \$12.25@15.65; ewes, cull and common \$6@12.25.

BUFFALO.

Wednesday, May 7, 1919.

Cattle.

Receipts 15 cars. Market is slow; heavy and shipping grades 25c lower; butchers steady, prime heavy steers \$17@18; best shipping steers \$15@16; medium spring steers \$13@14; best native yearlings, 950 to 1000 lbs, \$15@15.50; light native yearlings, of good quality \$14.50@15; best handy steers \$14@15; fair to good kind \$12@13; handy steers and heifers, mixed \$12.0@13.50; western heifers at \$14@15; state heifers \$10@11; best fat cows \$12@13; butchering cows \$9@10; cutters \$7@8; canners \$5@5.50; fancy bulls \$11@12; butchering bulls \$9@10.50; common bulls \$7.50@8.50; best feeders, 900 to 1000 lbs \$11@12.50; medium feeders \$10@11; stockers \$10@10.50; light common \$8@9; best milkers and springers, \$100@150; mediums \$75@90.

Hogs.

Receipts ten cars. Market 50c higher. Heavy and yorkers \$22; pigs and lights \$21@21.25.

Sheep and Lambs.

Receipts five cars. Market higher. Top lambs \$17.25; yearlings \$14@14.50 per cwt; wethers \$13.50@13.75; ewes at \$12.50@13.

Calves.

Receipts 300; steady \$7@16.50.

WESTERN NEW YORK FRUIT PROSPECTS.

(Continued from page 726).
Crawfords and similar varieties from twenty-five to fifty per cent were killed, but with the heavy set of buds there should be enough left to produce a good crop of peaches. Plums have been killed to the extent of fifty per cent. Although the apple and pear buds have been quite badly frozen, the tips of the small leaves showing the effects of the cold, there has been little injury to the fruit itself. Sour cherries have been badly frozen; the injury may reach ninety per cent of the buds.

Canners and preserving plants are contracting fruit in the Genesee valley, offerings eighteen to twenty cents a quart for strawberries and six to eight cents a pound for sour cherries. Attempts are being made to contract the peach crop at last year's figures; but growers believe they will receive at least \$3.00 a bushel for their better grade peaches this year.

Western New York fruit growers are making extensive preparations for growing and harvesting their big fruit crops. The community spraying service which has been operated successfully in Niagara county for several years will be extended to Monroe, Wayne, Ontario and other leading orchard counties. The community packing house system, which was tried out satisfactorily in Niagara county last year, has been adopted by the Wayne county peach and apple growers, and will be in operation, it is expected, in several Ontario county communities.—E. E. R.

NEW HAMPSHIRE STARTS WOOL DRIVE.

WITH a view to stimulating sheep raising on a large scale, the Sheep Breeders' Association of New Hampshire has undertaken an active campaign and other New England states are moving along similar lines. The granite state organization has procured the services of Edgar A. Perry, a graduate of Massachusetts Agricultural College, who has had experience on ranches in Idaho, Oregon and Washington. Mr. Perry is starting by having a census taken in respect of the sheep business. The plan now in process of being worked out by the association contemplates pooling the wool of New Hampshire so as to obtain more advantageous prices and a better market. The organization will take consignments of wools either directly or through its agencies, and will sort them under competent supervision, then will attend to the marketing. Half a cent a pound commission will be charged to cover the expenses.

SELLING WOOL.

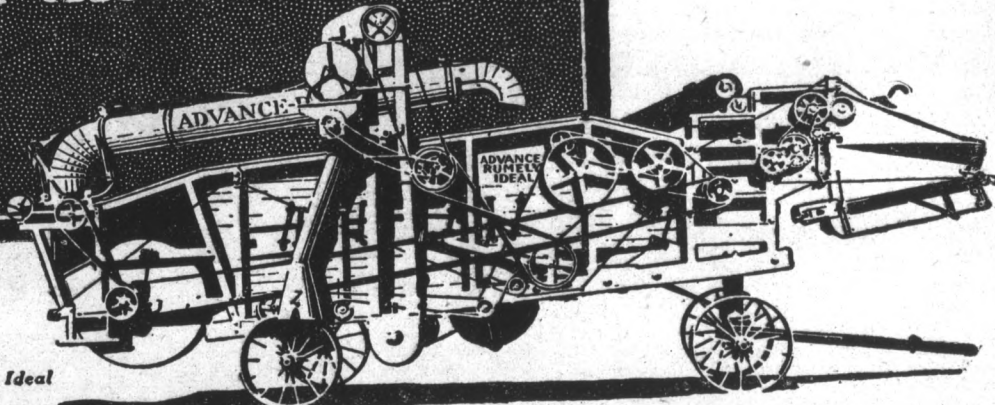
(Continued from page 724).
selling end of the business and that if they couldn't trust the company to make satisfactory sales, they had better ship their wool elsewhere.

One big advantage in the connections made was that the company has no wools of its own to offer in competition to its customers for it does not buy and sell wool on its own account.

The idea of grading the wools locally before they were shipped was given up when it was explained that unless large amounts of wool were concentrated at a point but one line of each grade could be established. This would necessitate heavy, medium and light shrinking wools of one quality being sold together at one price which would be a rank injustice to the grower of the lighter conditioned wools.

While single shipments of wool will be welcome by the company it feels as does the Illinois Agricultural Association, that the saving in freight rates should be sufficient in most cases to make pooling the wools for shipment only advisable. L. L. HELLER.

The Best of 80 Years Experience in this New Small Ideal



The 22 x 36 Ideal

THE accumulated manufacturing experience of over three-quarters of a century—and the judgment of over 20,000 Ideal owners—is back of the new, small 22 x 36 Ideal Thresher.

You know the record and reputation of the larger sizes of the Ideal—there's no farming community that hasn't its Ideal outfits with their satisfied customers. When we were called upon to build a smaller size separator, we didn't just "turn one out"—we built along the same lines as the Ideal, determined that our small threshers would be leaders in their class just as are the larger.

So in the small as well as the larger Ideals you will find those features that mean the difference between a "sure" and a "guesswork" job. Ideal thresher owners will tell you that.

Bunching, or cylinder winding is unknown in the Ideal—because the Ideal is designed on the principle of a steady, even flow of straw through the machine from the time it enters the cylinder until, free from all grain, it leaves through the stacker.

First of all, we placed the Ideal grates exactly right in relation to the cylinder. Then we designed the Ideal travelling slatted rake to take the straw from the cylinder and carry it to the straw rack. Result—more grate surface and a steady even flow of straw, making choking impossible.

Shaking alone wasn't a guarantee of complete separation, so we put sets of lifting fingers on the straw rack, that tear the straw open—rake it—beat it from beneath. Result—complete separation and no waste.

Then, to take care of the increased capacity due to these inventions and to make the Ideal do a perfect job of cleaning, we put in extra chaffer area. The chaffer in the cleaning shoe, with the adjustable sieve and our special system of wind control, guarantee a perfect job of cleaning without waste. Result—the kind of cleaning that gets "no dockage" at the elevator.

Such construction shows why the small 22 x 36 will handle up to 900 bushels of wheat in a day's run—the 28 x 44 up to 1,500 bushels.

The Ideal is built in four sizes—22 x 36, 28 x 44, 32 x 52 and 36 x 60—standard in design and construction, and meeting all needs, from the man who owns his own power and wants to do his own threshing, to the custom thresher.

Write for a special Ideal catalog.

ADVANCE-RUMELY THRESHER CO., Inc.

La Porte, Indiana

Battle Creek, Mich.

ADVANCE-RUMELY

Ship Your Wool

to the

National Wool Warehouse & Storage Company

The National Wool Warehouse & Storage Company, a selling agency controlled by Western sheepmen, will give your clip individual attention and will render you a separate account of sale if you market your wool through their organization.

We Advance 35¢ Per Pound

upon farm wools to all shippers using our form sight draft attached to the original R. R. Bill of Lading, interest at 7%.

Our Low Handling Charges

2 1/2¢ Per Pound Covers grading, storage, insurance and selling. If sales are not made within 4 months of date of arrival additional storage charge of 15¢ per month per bag will be made.

We advise gathering the wools together in car-load lots and shipping under one name, to reduce freight charges, retaining the individual grower's marks on each clip. Shippers are invited to witness the grading of their wool at our Warehouse.

Write us today for further particulars

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HAY Ship To The Old Reliable House
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GUARANTEED TUBES

Direct—Prepaid \$1.95 for 30 x 3

Send no money with order. State size and quantity wanted. We will send you tubes on approval. Every one guaranteed, or your money back. This is just an example of the bargains you can get on all Auto Supplies direct from Detroit. Write to-day.

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CULOTTA & JULL

Eastern Market, Detroit, Mich.

Headquarters for fancy fruits and produce. We make a specialty of berries, cherries, peaches, pears, asparagus, celery, etc., and need your shipments to supply our trade. We want your shipments of eggs, veal and poultry. We handle only on commission and give you the benefit of our market, large or small shipments have our every care and attention. Reference Peninsula State Bank.

Mr. POULTRY FARMER:

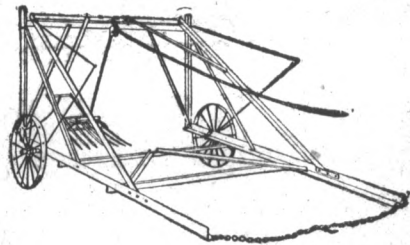
We make a specialty of White Henery Eggs and have created a profitable market for your eggs the year around. We pay the highest premium for your Henery Whites—We remit same day shipments arrive. Ship Often—Ship by Express

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Remember! We guarantee you satisfaction with every shipment.

Samp's Manure Loader



This is one of the greatest time and labor saving machines for the farm. Have been manufactured since 1912, but were curtailed for the last two years on account of the war. These machines are fully guaranteed, and in every way practical. They are of steel construction and designed to last a life time. Farmers have been averaging a 75-bushel manure spreader full in 8 minutes time with these machines. Write for particulars.

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