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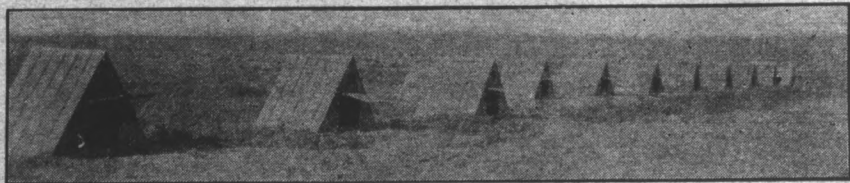
## Good Managers Attract Good Farm Help

By Lester J. Meredith

ONE of the most serious problems with which the farmer must contend is that of securing and keeping efficient hired help. Every advance in agriculture, every labor-saving machine means the use of better help on the farm. Moreover, farming is a better business, a cleaner business than it was. The old days of the rustic, alleged hay-seedy type of farmer and hired man have passed. The business farmer of today wants an educated, clean fellow who can see things and knows how to do them.

The chief reason why farm labor has been held at a low level, seemingly, is because so many men have gone into it as a makeshift, and because so many men who have failed elsewhere adopt it, or have it adopt them, because it is easy to farm. It is easy for the man who is content to remain all his life a blank to make a living at farm labor. Such men yelp about low wages on the farm and do not try to develop their own capacities. When a man has nothing more to offer than his labor he is getting down to the level of a machine, and is worth about as much as any low horsepower machine. The man who has to gaze steadily at anything for an hour before he sees it will get about so far and no farther. Such men will always be needed on the farm, but the man who commands the high wages must have the ability to size up a piece of work at a glance and know what to do. It is quick-acting brains that count most on the farm nowadays. The fellow who can size up a situation when he sees it coming in the distance and be ready to meet it, will always find opportunity for advancement on the farm, and if he puts his whole strength and enthusiasm into it as he would into a game of football he will soon have a farm of his own.

Now, I do not claim that a man can get rich, or even well-to-do, on a farm except as an owner, but I do claim that if a young man has an aptness for the work and will take the time to learn it, he can soon own a farm of his own and do about as well as if he went into any other line of work. At the start he can do about as well as he could in the shop or factory. The great difficulty with farm work is that experience counts for so little. An experienced tradesman or railroad man gets better wages and is held in higher regard because of his experience. After a few years, experience in farming counts for nothing. Mental and physical gymnastics are the great assets of the farm hand. Granting all this, I still hold that if a young man has an aptitude for farm work and will learn the business, there is no business in this country or any other in which he can capitalize his ability and knowledge so easily and become an owner instead of a laborer. In making this claim I do not arrogate to myself any special qualifications as a judge except these. I was raised on a farm. I left the farm because I found a broader field in developing a larger agricultural undertaking in the west,



a field where I could utilize the knowledge and experience gained during the years I spent on the farm and in a technical college. I now own a farm and consider myself as much of a farmer as I ever was, and entitled to the opinion. My work has covered quite a wide field and I have played the whole game from farm laborer to farm owner, and have some thoughts on the problem.

The efficient management of farm labor is largely a matter of studying human nature. Some men know too much and some men know too little. It is difficult for one to secure a well-balanced fellow who will do his work promptly and efficiently. Besides, men vary so much in temperament, strength and the ability to do certain kinds of work that one must make a careful study of each man and try to get him working under conditions and surroundings that will bring out the best that there is in him. One of the best hired men I ever had on my farm proved an utter failure for the first few weeks, because he had a natural dislike for dairy cattle. One day the man who had charge of the team work was taken ill, which necessitated a change in the working force. I hired a new man for the dairy barn and put Tom in charge of the team work and field work. I never had a man who had the knack of keeping things going so smoothly in the fields. The long and straight furrows and corn rows excited the admiration of people who passed the farm. The change from dairy work to team work made a loyal and contented man out of one who had been a failure at first. I have had many such

cases and, though I am living on the farm myself and take the lead in much of the work, I always try to have each man satisfied with his work and proportion it so that each man will know just what he is expected to do and not attempt to put his share over on the other men. Some men will work well by themselves but are not much good when put with two or three others. All of these traits of character must be studied and the work so proportioned that each man may do his best and be loyal and contented.

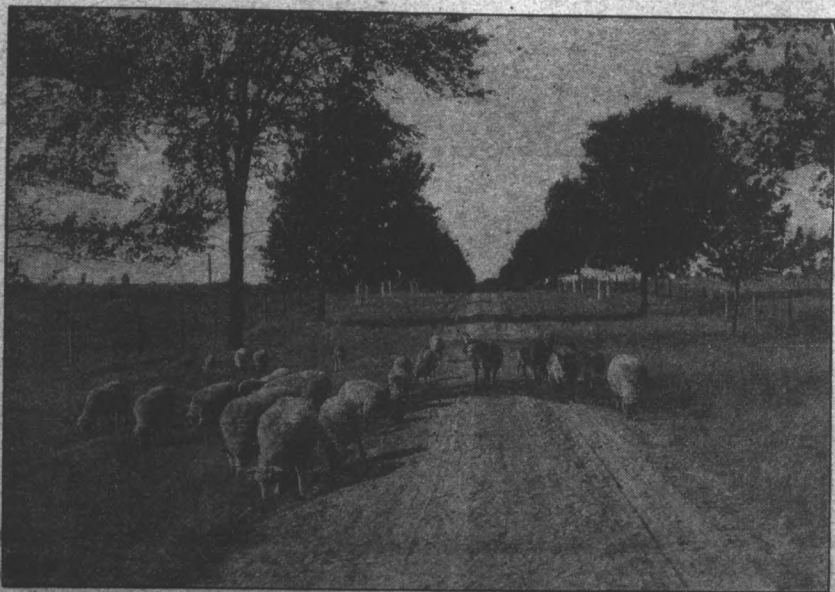
Farm labor is just about what we make it and before it will be in a fair way to be put on a better basis the working conditions on farms must be improved. Experts tell us how manufacturers have increased the efficiency of their men by providing more favorable conditions, eliminating lost motion and shortening the working hours. It would seem that farmers should profit by a study of these problems and do everything possible to encourage better men to work on farms. About the first thing to do is to provide work the year round and get married men and their families into comfortable cottage homes. Many people wonder why laboring men go to the city when they are needed in the country. Where, let me ask, would they go? Have you a pleasant tenant house on your farm? If you have one at all, what is it like? Is it as good as one of the muslin-front hen-houses? Where is it? Have you stuck it behind some big red barn where you keep your prize cattle or is it near the hog yards? Is there any ground about it to provide a garden or flowers? Even hired men's wives love

flowers. A majority of men would be willing to live where they would not want to take their families. Let us have more cottage homes for our men and help to raise the plane of efficiency of farm labor.

Coupled with the betterment of working and living conditions the buildings and fields should be arranged so as to avoid lost motion and unnecessary hauling. It is an easy matter to save a vast amount of time during the year by giving these problems a little study. The same holds good on all parts of the farm.

In order to shorten the working day on the stock farm one has to learn that he is a stockman, and plan his management so that the care of the stock will be done at a specified time each day. When he awakens to the fact that clover and grass are more valuable than too large an acreage of small grain crops and that more bushels of grain may be grown on fewer acres under a proper system of rotation and stock feeding he can so plan his work that fewer men and teams will be needed on the farm than is the case when he is attempting to do all of his farm work during the crop growing and harvesting season with a force of inferior men. Stock farming, properly conducted, will reduce the amount of field work and enable one to provide steady work for his men and teams during the year. Such management necessarily attracts the better class of men and works strongly toward putting the farm labor on a higher plane of efficiency.

It is business suicide for a farmer to employ labor without planning his work so that each hour will add most to the net income of the farm. This net income is made up of cash profits and direct benefits. The food for the family grown on the farm, the comforts of the family and modern conveniences, permanent improvements, and so forth, should all be taken into account in figuring the profits from farm labor. A careful study of the class of men employed on farms shows that the most efficient men are found on the best farms, and the less efficient on the poorer farms. This is, undoubtedly due to the fact that the best farms from the viewpoint of the hired men are those where a system of stock farming furnishes steady work during the whole year. It is this feature of stock farming that has never been given due appreciation by the grain farmer who holds up the old argument that stock farming requires too great an expenditure for hired labor. On the other hand, the stock farmer can raise grain at less cost per bushel than the grain farmer, because of the increased fertility of his land and the more efficient organization of his men and teams. The careful study of the relative conditions surrounding the man who has steady work during the year, and who lives with his family on the farm, shows that he soon becomes a permanent fixture on the farm, under



Good Live Stock Helps to Solve the Labor Problem.

(Continued on page 190).



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## CURRENT COMMENT

### National Strike Bill

THAT one of the chief causes of the abnormally high cost of living is the lessened production due to increased labor strikes is clearly shown by Roger W. Babson, the nation's leading statistician, in an article published in a current American Magazine. Mr. Babson's facts and figures are so impressive that they are worthy of general study. He has compiled the number of important strikes by yearly periods from November to October inclusive, showing a progressive increase in the number of strikes of from 701 for this period in 1914-15 to 2,185 in the same period for 1918-19, an increase of over 200 per cent.

His figures relating to the cost of these strikes are equally interesting. He estimates the loss to employers for the latter year at approximately \$50,000,000, and the loss to workers in idle days at ten times that amount, or \$500,000,000, which latter item may be made up later by increased wages secured by this method, provided the increase is permanent. This loss he estimates to be distributed over 1,600,000 workers, and to approximate \$300 apiece.

But the loss to the public in which class the strikers are themselves included, is much greater. In the realm of men's work clothes, for instance, Mr. Babson figures that the loss in production directly caused by strikes approximated 1,768,800 pairs of men's shoes, 15,886,500 men's shirts and 19,183,800 pairs of overalls, to say nothing of the indirect loss running back to the source of the raw materials. The fact that a comparatively small percentage in lessened production is illustrated by examples such as the cotton crop of 1915, which was about thirty per cent short of the flush crop of the previous year, with the result that the average price increased about sixty per cent, and the coffee crop of the current year, which is nine per cent lower than that of the previous year, while the price has increased sixty-eight per cent. In like manner lessened production is equally certain to raise the price of other products to the consumers of the country to an equal degree.

An epidemic of strikes such as the country has suffered during the past year is costly to the people as a whole, and of doubtful benefit to the workmen who have joined in them, even if their contentions have been won, when the reaction of lessened production on living costs is considered. The diag-

nosis of the disease seems plain, the application of a remedy is more difficult. Undoubtedly the most effective remedy would be the education of industrial workers as to the need of more production as a means to the end of reducing the cost of living, on which point some branches of organized labor have been insistent under threat of more strikes. This is a phase of industrial unrest which must be reckoned with. It is a reconstruction problem of no small moment, and of far-reaching importance to the future welfare of the country.

### A Pure Fabric Law is Needed

owners of America desire that the public shall know more about what part of the cost of clothing goes to the man who raises the sheep and produces the wool out of which woolen clothing is made, and how large a portion of virgin wool is used in the manufacture of the clothing.

According to data recently furnished to the United States Senate by the National Wool Growers' Association it requires one and a quarter pounds of scoured wool to produce one pound of worsted, wool cloth. One yard of worsted cloth weighs from ten to eighteen ounces; the average winter suit, which retails from \$50 to \$75, is made of goods weighing fourteen ounces per yard. At three and one-half yards per unit, or slightly over three pounds, it would require less than sixty-two ounces of scoured wool to make the suit. If the suit happens to be made of the very finest grade of western wool, selling at \$1.90 per scoured pound, instead of the medium grade, the wool in the entire suit would cost \$7.37. This is what the buyer is paying for, but what he gets is another question.

It is claimed by well-posted authorities that more than eighty per cent of the raw material used in manufacturing "all wool" cloth is shoddy. This will explain why it is almost impossible to buy clothes that will wear as well as formerly. It is time the public was protected from shoddy profiteers who are charging "all wool" prices for yards of re-vamped shoddy. There is a legitimate place for shoddy in manufacturing fabrics, the same as there is for oleomargarine in the human diet, but there is no more reason why shoddy should be sold as wool than there is why oleomargarine should be sold as butter. A suit of clothes or overcoat made of genuine wool will wear for a long time and hold its shape. When shoddy is used the strength of the fabric is impaired and it shows its bad feature in a short time.

Every person interested in buying wearing apparel, as well as wool producers, should make a careful study of the pure fabric bill now before congress. The passing of such a bill would mean that buyers of woolen apparel would be insured against shoddy, and that a larger portion of the money expended would go to the men who are keeping the sheep. There never was a time when both producers of wool and purchasers of wearing apparel realized the value of a pure fabric law more than they do today, and now is the time for congress to free the public from clothing profiteers, and wool growers from unfair competition.

The menace to wool growers from the general use of shoddy in clothing is greater than is the dumping of wool into America from foreign countries, and yet for years politicians have been pleading for the protection of the American sheep industry. What the public and the sheep industry need is protection from shoddy manufacturers and rag men. When it was necessary

to protect the public from adulterated foods, congress passed the pure food law. Now the public needs a pure clothes law. The wool growers are only asking the same kind of protection that congress gave the dairy farmers. What will congress do?

### Meredith Succeeds Houston

THE appointment of Edwin T. Meredith, of Des Moines, Iowa, to succeed David F. Houston, who recently resigned the office of Secretary of Agriculture to accept that of Secretary of the Treasury, meets with the hearty approval of the majority of farmers and farmers' organizations of the country. For many years Mr. Meredith has been in close touch with the agricultural interests of the great middle-west, where he has been unusually successful as the publisher of one of the leading national farm publications.

It was Mr. Meredith, who, a number of years ago conceived the idea of a powerful national farmers' organization to represent agriculture at Washington. Through his publication he launched a campaign for a National Chamber of Agriculture, which finally resulted in the organization of our present state and national farm bureaus. It is a fitting climax to the perfection of this great organization that Mr. Meredith should be appointed to this important position. With a Secretary of Agriculture, who is in full sympathy with such an organization it is plain to see that the present farm bureau movement will find the completion of its national bureau much easier than would have been the case had it been forced to fight for recognition from a Department of Agriculture who frequently failed to grasp the farmer's point of view. The farm bureau movement is fortunate, indeed, in having a man of Edwin T. Meredith's type at the head of the Department of Agriculture during the time it is actively fighting for recognition from other interests at the Capitol.

While the coming year means much to the agricultural interests of the country, it is only fair to the new Secretary of Agriculture to say that conditions are hardly favorable for him to make a creditable showing in such a comparatively short term of office. Many of the most capable men formerly connected with the work of the department, especially those in the Bureau of Markets, have resigned to accept more remunerative positions in the fruit and vegetable trade, while others are planning to leave in the near future. This seriously handicaps the work of the department, and makes it extremely difficult to fill the vacancies with men of the right caliber. It is going to require considerable time and increased pay to find men capable of filling some of these positions efficiently. In the meantime let us get behind our new secretary by doing what we can to influence congress to recognize the situation and make adequate appropriations to attract competent men to some of these positions. It is wrong to have the great Department of Agriculture used merely as a training school for men who are seeking more profitable positions in the commercial world, as has been the case during the past few years.

## News of the Week

Wednesday, January 28.

DESPITE their disappointment at the terms for the settlement of the Adriatic question the representatives of the Jugo-Slavs agree by a narrow majority to accept the treaty offered by the allies.—English exchange falls to new low levels on American markets.—National council of the veterans of foreign wars declare in favor of universal military training.—Henry P. Fletcher, United States Ambassador to Mexico, resigns.—British troops arrive in Schleswig-Holstein, where a

plebiscite is to be taken.—Sunday school council of evangelical denominations in session at St. Louis advocate a closer cooperation with the international association.

Thursday, January 29.

TWO American aviators are held by Mexicans after being forced to descend on Mexican soil.—Organized labor promises to work for Mayor Couzen's street car plan for Detroit.—J. Dwyer, pioneer stove manufacturer of Detroit, dies at the age of eighty-two.—German officials are fearful that a revolution will break out when demands are made for Germans wanted for trial by the allies.—Siberian revolutionists refuse to give up Admiral Kolchak whom they recently captured after the allied commander at Irkutsk had advised his surrender.—Federal food administrator is author of the statement that clothing will soon become cheaper.—The settlement of the Adriatic question does not appear to be agreeable to the Jugo-Slavs.—Caranza grants oil permits to Americans for boring wells in that country.

Friday, January 30.

MICHIGAN Methodists, Congregationalists, Baptists and Presbyterians have joined in a movement to build a People's Church, to cost \$250,000, just off the grounds of the Michigan Agricultural College.—American diplomats to Stockholm are specially honored by King Gustaf, the second time in history that foreign ministers have been so recognized.—Methods for the distribution of liquor for medicinal purposes are published by the internal revenue department.—Ohio passes law authorizing railroads to charge three-cent fares.—British aviators are now planning on bi-weekly trips between New York and London.

Saturday, January 31.

BRITISH military officers arrest many Sinn Feiners, among whom are local officers elected at recent municipal elections.—Seven persons are killed in a Pittsburgh fire which burns sixteen residences.—The action of the United States Senate on the peace treaty is defended by Viscount Grey, of Great Britain.—A reign of terror is reported in German West Austria, where the territory is being overrun by Hungarians.—The Italian rail strike ends.—Teachers of the Traverse City schools have had their pay increased about fifteen per cent.—The French Chamber of Deputies votes confidence in the recently formed cabinet under M. Millerand.—Arrangements have been made with Japan for sending large numbers of Japanese to Mexico.—A new party to be known as the land and labor party is formed in Oregon.—Hungary is given more time to consider the terms of the treaty with the allies.

Sunday, February 1.

THE two United States aviators held by Mexicans are freed.—The procedure necessary for the selection of a king and regent is published by the head of the new Hungarian army despite the predicted monarchical and clerical reaction against the terms of the treaty with the allies.—England will undertake the restitution of Palestine when it is thought that that country will be able to stand alone.—The latest returns from the Hungarian elections show the Christian Union party to have sixty-six seats, the largest number in new parliament, with the small farmers electing fifty-five.—Belgium wants former chancellor Hollweg of Germany tried on charges of violating the laws of war.

Monday, February 2.

THE United States government will probably favor the union of Germany and Austria.—Seven lives are lost in a tenement fire in Newark, N. J.—Germany may recall her envoy to Rome.—Positive and authentic statements are made that England does not seek further loans in the United States.—The opening statement of the prosecution in the Newberry election trial is made by United States Attorney Dailey.—French troops defeat the Moroccan troops in a fight south of Tifet.—Teachers of Lincoln, Nebraska, are granted \$400 advances in salary.—The local Bolshevik forces at Vladivostok have completely isolated the city from the American and Japanese military contingents, says a recent dispatch from Tokio today.—The sentiment of the railroad chiefs seems to be that there will be a strike unless Director-General Hines grants a wage increase when he meets with representatives of the brotherhoods tomorrow.—Scores of shots were fired in a fifteen-minute battle between federal officers and ten raiders who, Sunday night forced their way into the government's storehouse at Detroit and attempted to escape with \$20,000 worth of liquor.





## The Quality of Seeds

*Inferior Seed Breaks the Uniformity of the Stand and Brings Grief to the Farmer*

**C**ERTAIN factors have a determining influence upon the profit and yield of farm crops. These factors always vary from season to season, yet their relation to the crops is constant, at least with reference to their importance. First, among these important factors is the seed from which the crop develops; second, the supply of available plant food and moisture; third, the climatic conditions, an influence which can scarcely be estimated; and, fourth, the protection of the crop against insect and fungus enemies. A full consideration of all these factors necessarily involves many questions of culture and management which are rather of an indefinite nature and entirely aside from some of the things which our seed experts and crop experts are thoroughly familiar with.

First, let us give thoughtful consideration to some of these latter factors in the light of what investigation and experience has wrought for them, leaving the question of pure seeds for our main consideration. Few of our farmers realize what a vast amount of knowledge has been acquired in connection with the study of our soils and the kinds of plant food that is needed to produce crops profitably. From the work of our soil experts we have developed principles and practices which practically every farmer has adopted and applied to his own conditions. The question of the use of chemical plant foods, their use, value and relative efficiency, has received a larger amount of well-deserved attention from our leading experiment stations. With the extensive development of the use of these materials has come also the system of fertilizer control, which insures to the purchaser a certain amount of definite information to guide him in the selection and use of these plant foods. In this, and in the development of other phases of soil management, the farmer has been furnished with such information that he is in a position to control the plant food factor to a large extent. As a result of this information, we can point to increased yields per acre without a corresponding increase in the cost of production. The application of this knowledge, then, in the control of the many phases of this factor of plant food means larger profits.

### Climate a Varying Factor.

Climate is the most difficult factor to cope with successfully. Were it possible, for instance, to accurately predict the temperature and rainfall for the coming season, how well could we make our plans for all other phases of crop production. If we were assured that there would be a light rainfall and many hot days, we could select a crop to suit these conditions, and crop failures would seldom occur. In this field, however, much has been accomplished to place the farmer in a position where he may have information to act upon. With a remarkable degree of accuracy, approaching storms can be forecasted, radical changes in the temperature reported so that the grower can take steps to protect his crop. Drainage and irrigation are effective agents against too much or too little rainfall. And, on the other hand, we know more of the relationship of crop plants to climate. Recognizing these relations has been the first step to-

ward developing strains and varieties resistant to certain climatic features.

### Seed Quality.

The factor of seed quality is one which merits greater attention from all sources, including the seedsmen, the buyer and the grower. The farmer wants to know the variety, the purity or freedom from foreign matter, and the ability of the seeds to produce plants as measured by their ability to germinate when placed in congenial conditions. Supplied with information of this nature there is little or no reason for seed failures. Neglect to assume responsibility of ascertaining seed information is perhaps due to conditions in the seed trade, which has assumed such enormous proportions. That some of these conditions should be remedied goes without saying and the purpose of this article is to call the attention of the farmers of the state to some of the reasons why they should exercise more care in the selection and testing of seeds.

### In the Good Old Days.

In the early period of our agricultural development when the means of distribution were limited, seed production was largely a local business. A few farmers in a community raised seed and it was possible to have more or less information concerning the yield and character of the crops from which it was produced. As farm areas increased more rapidly, there came a greater demand for seed which was supplied, in part, by local seed and, in part, by commercial seed. Gradually the demand and sale of farm seeds assumed such proportions that certain men engaged in the business, buying seed here and there, cleaning and grading when necessary, and distributing it to other parts of the country.

The development of certain restricted and more or less widely separated areas as seed producing centers also necessitated the service of the dealer as a middleman and distributor. With the responsibility of growing and harvesting of seed removed, and the purchasing of seed from the market having become such a simple proposition, there seems to have developed the tendency to pay little attention to the matter other than to be concerned and indignant when prices soar, when the seed fails to make a strong germination or when obnoxious weeds appear in place of crop plants. No one would excuse the folly of a farmer who would permit himself to be blind-folded and then pass over good money for a cow he had never seen. If such methods of transacting business are careless in the purchase of cattle they are equally careless in the purchase of seed for farm crops.

### Satisfaction in Purchasing Seeds.

Assuming that the described conditions are generally accurate, it is only natural that farmers should want to know how to purchase seeds wisely under present-day conditions. The value of seed testing has solved many of the problems involved in the purchase of pure seeds and is without any question a matter which every farmer should understand. As with the other factors mentioned, any means that will give information concerning this important element in crop production must in the end be accepted as good business practice. Such information



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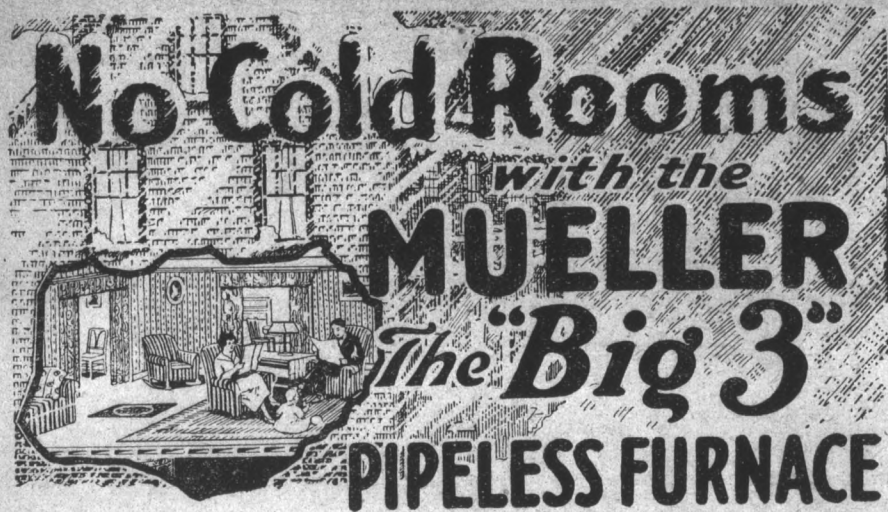
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as may be secured from seed testing can be applied so as to minimize the element of chance that plays such a large part in the use of seed, or other materials purchased indiscriminately. And, after all, scientific or business farming is largely a process of eliminating this element of chance or accident by applying the facts gained by scientific investigation to the operations of farming.

Seed testing does not include merely the operation of ascertaining purity and germination. While these factors are very important there are other elements of quality which may affect the yield and profit as much, or even more. We must proceed to ascertain quality in all its features so far as it is humanly possible, and this is what seed testing should mean to every farmer.

To thoroughly understand the points involved in real seed testing it is necessary to analyze the term quality in such a manner that its important elements will stand out clearly. These various elements suggest definite questions that must be answered so far as is practicable, and the attempts to answer these questions involve such efforts as may be combined under the term "seed-testing." In the next few paragraphs the writer will give a few factors which must be considered in determining the quality of seeds.

#### Identity of Species.

Is the seed offered of the species true to name? Fortunately, in the case of most farm crop seeds the identity of the species is evident in the form and general appearance of the seed. Were this not the fact, then it would be necessary to adopt other means of identification. In some cases the seed must be planted, and the resulting plants examined to fully determine the species. To judge of the species requires familiarity with the appearance of the different crop seeds. Lacking this, one may resort to the opinion of the experts employed by the federal government or the state experiment stations.

#### Identity of Variety.

Is the seed offered of the variety named? To answer this question by the examination of the external characters of the seed is more often impossible than not. With certain crops, identification of varieties from appearance of seed is possible within certain limits. With the majority of vegetable seeds, however, it is difficult to determine the variety from seed examination. Then one must grow the crop to obtain satisfactory and definite information. Careful seedsmen buying stocks of untested seeds maintain trial or proving grounds for this purpose. When the identity of the strain plays an important part in the marketing of, and in the returns from a particular crop, seed can be purchased a year in advance of actual need and a small quantity tested in a trial plot to ascertain the identity.

#### Identity of Strain.

Is the seed offered of the strain named? The characteristics which distinguish the definite strains of any variety are not evident in the seed. Where a particular strain is desired one may secure most complete satisfaction by purchase from the originator of the strain or from one making a specialty of growing that particular strain.

#### Appearance of the Seed.

Is the seed normal in color, etc., for the kind named; or is it dull and abnormal from age or treatment? In the purchase of seeds many place a great deal of importance on the question of appearance. As a guiding factor this

is comparatively safe if one is familiar with the influence of color, etc., also of vitality and viability. Purchasers should be cautioned, however, against highly polished seeds of certain kinds of farm and truck crops, such as red clover for example. The unnatural color and appearance of such seeds is intended to cover the real condition of the seed.

#### Origin of the Seed.

Is the seed offered from such a region that its use would be followed with risk and diminished returns? This is a very important matter with certain crops, though the question cannot always be answered. When not there is added risk with certain kinds of seed.

#### Purity of the Seed.

Is the seed free from chaff, rubbish and foreign seeds in quantity or of undesirable character? This can usually be answered by careful examination, but more satisfactorily by a proportional analysis such as the federal and state laboratories are prepared to make.

#### Weight Per Bushel.

Is the weight per measured bushel such that it indicates a superior grade of seeds? Large, plump seeds and little chaff make a heavier bushel than small seeds and a quantity of chaff. This factor is especially important with grass seeds in determining the quality.

#### Viability of the Seed.

What proportion of the seeds will sprout when placed in suitable soil conditions? Will most of them sprout or are most of them dead? This question is readily answered by resorting to the germination test. This may be made by the purchaser or he may ask the state seed laboratory to make the test for him. The results in either case will be valuable as a guide, not only in the purchase, but in determining the rate of seeding.

#### Vitality of the Seed.

Are the sprouts produced in the germination test made under favorable conditions, strong and vigorous, or are they weak and likely to make weak plants? This is often answered in the results of the preceding test, for loss of vitality is but a step on the road to loss of viability.

#### Health of the Seed.

Is the seed offered apparently free from signs of disease which may have attacked the seed itself or which may attack the plants developing from such seed? In the present development, this is a matter which must, in most cases, be referred to trained pathologists, who are able to detect and recognize diseases and disease-producing organisms in various stages of development. While this matter has received little attention compared with other matters pertaining to seed quality, it is of no less importance.

Definite answers to many questions with reference to points of seed quality are not possible in every case. There should be an attempt, however, to answer as many as is humanly possible. In most instances, questions as to variety and strain must be answered by the grower or by the dealer who is offering them for sale. Such statements as may be made relative to these points must be taken for granted as correct until subsequent development of the seed has proven or disproven their accuracy. Inasmuch as this may involve serious loss it is safer to answer this one the small test plots where the character of the seed is such that its vitality and viability will not decrease excessively in a one or two year period. This feature is a strong

(Continued on page 200).





# The Feed Situation

By Sanders Sosland

**S**TUBBORN resistance to bear pressure has been evident on feed markets for some weeks and no less stubborn has been the opposition to bullish enthusiasm among many members of the trade. As a result, feed-stuff prices have fluctuated within a comparatively narrow range, but the tendency of values for practically all commodities used extensively in dairy feeding operations has been noticeably downward, though only to a slight degree. Discussion is quite general in feed market circles and among consuming interests in the country as to the probability of a continued easy tone and to what extent, if any, values will recede. Of course, there is a division of sentiment as to price fluctuations, yet it is significant that a bearish attitude prevails among a majority of the trade.

It is hardly necessary to caution the dairy interests against purchasing feeds in too large quantities for future needs. The argument is often used that when buying in large quantities a considerable saving in price may be effected, which, no doubt is true. However, prices for most feed commodities are at such an extraordinary level, and the future of markets so uncertain, that unexpected slumps may be witnessed at a time when the feeder is holding large stocks which would more than wipe out the small saving realized in the heavy purchase. Feeders in neighboring districts should pool their purchases, and in this way take advantage of any saving and at the same time safeguard themselves against a possible sharp readjustment of values. This is being practiced more generally among producers than at any other time in the history of feed markets.

The high protein concentrates, cottonseed and linseed cake and meal, are among the commodities which recently have displayed softness. "Buyers won't buy," is a comment heard often in cottonseed feed trade circles, and almost invariably the reason is high prices. While dairymen of Michigan are not particularly heavy direct buyers of cottonseed feed, they provide an enormous consumptive outlet for the product in the form of various manufactured or commercial mixed feeds. The abnormal levels commanded by mixed feeds of high protein content are the result largely of the near-record prices demanded for cottonseed meal by crushers of the south. Declines in cottonseed cake and meal usually, or at least should be, reflected in the prices for the commercial mixtures.

While mixers and the manufacturers of fertilizer have been heavy buyers of cottonseed meal, the demand from the range cattle feeders and breeders, from feed lot owners and from members of the dairy industry, has been very light on the whole. For a time considerable buying was in progress by rangemen of the northwest, including Montana, Wyoming, Idaho, Utah, northern Nebraska and surrounding states, which

sections of the country suffered severely earlier in the season from drouth, but that was merely a temporary spurt in the demand. Those sections today are buying very meagerly, not that they are holding liberal stocks, but that consumption is far below normal. Favorable weather conditions thus far this winter in the range states have been an influence in the lessened demand, but the extraordinary level of prices, the abundance of roughage on ranges in most districts, the rather unsatisfactory outcome of cattle operations the past year, and the indifference of feeders in using the high-priced commodities, explain the present lack of buying. Dairymen have been somewhat freer buyers because of the relatively more favorable market for their products and the tendency to stimulate the milk flow, but other consuming interests thus far have pursued a policy quite similar to that of rangemen.

At this writing cottonseed feed of forty-three per cent protein content is being offered on the Chicago market around \$80 a ton for carlots, and around \$82 a ton for the forty-five per cent grade. These prices, which prevail in the important feeding sections of the central states territory show a decline of about \$3.00 a ton, compared with a month ago. The 38.5 per cent protein meal is quoted at a discount under the high grades of approximately \$1.00 for each unit of difference. Cold pressed cottonseed cake is selling around \$62.50 to \$63 a ton in Michigan and surrounding territory. Prices are on a similar basis in other sections of the country.

Depression in prices for cottonseed feed is due in a measure to the fact that crushers have recently been operating more generally on good quality seed. Heretofore millers have been actively working off their stocks of off-grade seed, damaged by wet weather, the meal from which is being taken by fertilizer and mixed feed manufacturers. The amount of offgrade seed sold to mills was abnormally large in the aggregate, but trade advices indicate the requirements of manufacturers will easily absorb the production. But the high protein feeds, some of which are running up to fifty per cent, used almost entirely by feeders are moving more freely than at any other time on the crop. Very large quantities of high protein meal are reported in transit at the present time, and, unless demand soon develops for the product, much so-called distress meal may be available. Because of the high level of prices, millers are unwilling to store a portion of their output for spring and summer needs, which normally is the case, and therefore are making every effort to dispose of their production as soon as possible to make shipments. Such a practice increases the bearish position of the market so far as the immediate future is concerned. (Continued on page 216).

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## NEBRASKA RATIFIES FARM BUREAU CONSTITUTION.

DELEGATES from the leading counties of Nebraska at the annual convention of the State Farm Bureau at Lincoln ratified by a unanimous vote the national constitution adopted at Chicago last November.

Nebraska is the eleventh state to fall in line to make the American Farm Bureau Federation a reality. The other states are Iowa, Illinois, Indiana, New York, Kentucky, Vermont, New Hampshire, West Virginia, Georgia and California. Ten states are sufficient to make the national body a go. Other states are expected soon to fall in with the procession.

broad program for the coming year was adopted, which calls for a statewide membership campaign. In the past Nebraska has not had set dues for members, and all elected officers have worked without pay or expenses.

In a set of resolutions adopted the work of the past year was endorsed and power given to executive committee to name the amount to be paid the national association.

A sum of \$500 was subscribed voluntarily to take a county case to the Supreme Court. County commissioners in Hall county declared the State Farm Bureau appropriation law unconstitutional.

The state association will fight the case to the end. Mr. Howard limited his speech to an explanation of the work and plans of the national association. He was taken ill during the morning session, but after medical attention continued in the afternoon. He came to Lincoln from a similar meeting at Columbia, Mo.

## GRAPE GROWERS GET TOGETHER.

AT a recent meeting of the grape growers of the country to perfect a national organization, the following officers were elected: President, O. W. Johnson, Geneva, Ohio; vice-presidents, M. I. Fisher, of Silver Creek, N. Y.; W. S. Keeline, Council Bluffs, Iowa; G. W. Elliott, of Bay Village, Ohio; treasurer, C. A. Reynolds, of Silver Creek, N. Y.; secretary, W. H. Asbury, Unionville, Ohio.

Unionville Lake county, Ohio, was selected for the official headquarters for the year 1920. The executive committee presented the following as a text for 1920, and the same was adopted by the representatives present:

Gather data on the average cost of production in each association composing the national association; estimate the possible tonnage a few weeks prior to the picking season; estimate the prices the various growers should receive for their grapes f. o. b. cars at their market loading station for the season; watch for glutted markets during the shipping season and notify the growers; seek markets wanting grapes but unsupplied, and notify the nearest

grape belt of the want; seek to retain for the nearest grape belt the logical markets for it and advise the others; they should properly estimate the possible requirements of each market center.

At no time, or under any circumstances, should the association endeavor to create a crop shortage, hold its crops for unnatural profits, or deal unfairly with either growers or consumers, but at all times it should do all in its power to obtain for the grower the full cost of producing their crops, plus a fair profit over and above said cost, also to seek the best distributing systems possible that will deliver the finished article or crop product to the ultimate consumer at the lowest possible cost over that of production. It shall be its aim to eliminate the profiteer in every stage of the transaction from grower to consumer.

## JERSEY FARMERS FORM STATE FEDERATION.

MANY hundreds of thousands of the substantial farmers of the United States, belonging to farm bureaus, or county boards of agriculture, have become members of a national federation, organized in Chicago last November by thirty-three states having state federations of farm bureaus. The New Jersey county boards of agriculture, acting in line with other states, have organized a state federation which they call a State Council, and have secured S. L. Strivings, vice-president of the New York State Federation, to address the state meeting at Trenton. This will be the New Jersey farmers' opportunity of learning something more definitely about the program of the National Federation. The proposal that the substantial farmers of this country shall stand solidly as a patriotic American force against the inroads of radicalism, and shall give intelligent protection to the interests of agriculture will be discussed.

## EMMET COW-TESTING ASSOCIATION.

THE Emmet County Cooperative Cow-testing Association No. 1, finished its first month's work December 31. The tester visited twenty-six herds with 210 cows on test. Considering the newness of the work the first month's results were good. Thirteen cows produced thirty pounds or more of butterfat for the month. Of this number three produced over forty pounds of fat. Five herds had an average of over 600 pounds of milk or twenty-five pounds of butterfat. There is much interest being shown by the men in the matter of feeding, and several are changing their rations to suit the needs of the herd. Three herds were not put on test but will be entered in the January testing period. Interest is being awakened for another cow-testing association and it is hoped that in the spring, association number two can be started.

## Good Manager Attracts Good Farm Help

(Continued from first page.)  
stands the methods of crop growing and stock feeding, and so is able to save his employer many dollars in the ease with which he can do the work there is to be done.

The varied demands of labor on the farm present a different problem from the management of labor in the factory. To further add to the problem, there are unfavorable seasons and unexpected factors to contend against. Therefore, any system that will distribute the labor continuously over the year and furnish the help with the

right amount of work at the right time and give the owner means of planning against these unusual factors is a desirable one. Different crops require attention at different seasons and live stock calls for the most attention when crops require the least. By an intelligent crop growing system and the selection of live stock which will fit in with it, the labor problem is greatly simplified. Many scientific farmers have failed because they have disregarded this important problem of the most efficient management of farm

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## Better Farm Crops

By J. W. Nicolson

IN response to an invitation from Professor C. P. Bull, of Minnesota, delegates from a number of state crop improvement associations met on July 11, 1919, at St. Paul, Minnesota. The following states were represented: North Dakota, Minnesota, Michigan, South Dakota, and Wisconsin. This meeting was the outcome of a desire of a number of state associations for closer relationship and a chance for interchange of ideas, with a view to attaining higher and more uniform standards of seed requirements.

Professor R. A. Moore spoke briefly on the advantages of those interested in crop improvement meeting on common ground, so more people could profit by the experience and results already accomplished.

Mr. C. P. Bull, secretary of the Minnesota Crop Improvement Association, speaking on "What Should Constitute Pedigree or Purebred Seed," brought out the fact that many associations have to deal in their inspection work with both self-pollinated and cross-pollinated varieties and that the term "pedigree" should be broad enough to cover both types. The requirements for growing seed stocks of cross-pollinated varieties would have to be more strict regarding their proximity to other varieties of the same kind of grain. It should be required that all seeds advertised as purebred or pedigreed should be carefully inspected, both as to origin, present purity and freedom from other undesirable factors.

Mr. J. W. Nicolson, secretary of the Michigan Crop Improvement Association, next spoke on "Seed Inspection and Certification by Associations," emphasizing the need for more uniform and in general higher purity requirements for seeds approved by associations. "Much of the plant breeder's work of the past years has been lost from lack of a properly organized crop improvement association to cooperate in maintaining high standards of purity and excellence while increasing and distributing improved varieties. A number of states now have sections quite well standardized on a given variety. Oftentimes this variety has excellent adaptation in other states. We should standardize our inspection requirements and make them strict enough so farmers of any state association can secure inspected seed from other states which will correspond in quality and purity to the standards to which he is accustomed." A brief resume was given of some of the Michigan Crop Improvement Association's requirements for registration of seeds.

Mr. B. S. Wilson, secretary of the Kansas Crop Improvement Association, gave a paper on "The Inspection of Kanred Wheat." Mr. Wilson gave in detail the methods pursued in inspecting in 1919 a very large acreage of Kanred wheat which through the efforts of the Agronomy Department and the Kansas Improvement Association, is rapidly becoming the standard variety of Hard Red Winter Wheat for the state.

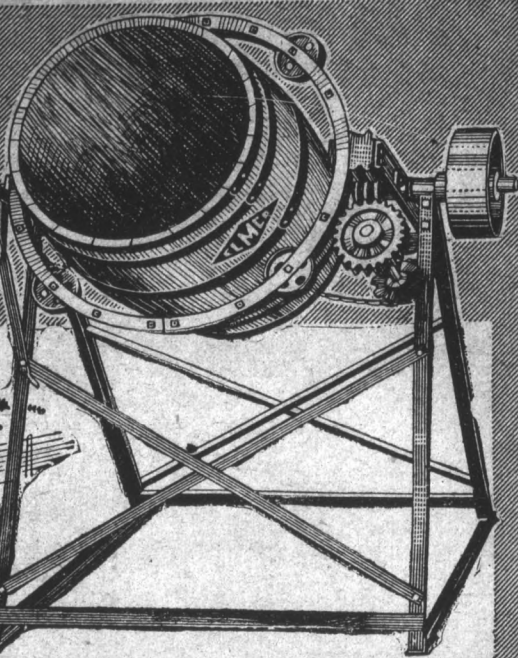
Mr. A. L. Stone, State Seed Inspector of Wisconsin, spoke on "Official State Seed Inspection." Mr. Stone explained the manner in which cooperation could be effected between state seed departments with associations. Particular emphasis was placed on the fact that the chief assistance state departments could give would be when crop improvement associations took up inspection of clover and grass seeds.

Speaking on "Marketing Pedigree" (Continued on page 218).

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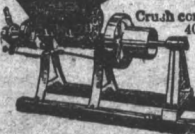
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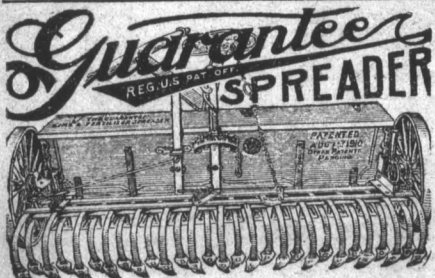
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## New York "Hort" Meeting

**I**N a talk on pruning, Professor W. H. Chandler, of Ithaca, said that in the test orchards at the State College of Agriculture many trees are used in experiments to determine the merits of the different forms to which fruit trees are commonly trained, and tests have gone far enough that the effect of the pruning to secure the different forms on the fruitfulness of the young apple trees, can be reported.

One method permits the tree largely to shape itself, only removing crossing and interfering branches. Another is called the open head, usually only five main branches are permitted to grow, and the four lower ones are kept larger than the uppermost one. This is to avoid bad splitting forks formed by the branches of equal size. To secure the central leader form all of the branches are cut back enough to keep them smaller than main leaders. As many branches are left as it is possible to leave without having too much crowding. With such varieties as Wealthy, Rome, Wagener, Hubbardston and Northern Spy, not a large amount of pruning is required, but much is necessary to force spreading forms like the Baldwin, Rhode Island Greening and Tompkins King into that form.

The amount of fruit borne to the tree by the time they were nine years old on the side of the orchard including Baldwin, McIntosh, King, Wagener, Northern Spy, Oldenburg, Rhode Island Greening, Twenty-ounce and Wealthy was as follows: Little pruning, 264.21 pounds; central leader, 220.10 pounds; open head, 200.10 pounds. The result in the orchard which contains only McIntosh, Wagener, Oldenburg and Wealthy, was as follows: Little pruning, 303.81 pounds; central leader, 307.62 pounds; open head, 264.19 pounds.

Much more fruit has been borne on trees receiving little pruning; the smallest by trees trained to the open head and receiving the largest amount of pruning. It may be said that all trees pruned to open head form are developing satisfactorily. In case of a number of varieties like Baldwin, Rhode Island Greening and Tompkins King the pruning given to secure a central leader form has not been sufficient to cause the trees to develop satisfactorily with that form. It is probable that the open head form of tree can be secured with less pruning than would be required to secure a central leader in the case of Baldwins, Rhode Island Greening, Tompkins King, McIntosh, Winter Banana, Twenty-ounce, and Jonathan. The central leader form can be secured with a smaller amount of pruning in case of Wealthy, Wagener, Oldenburg, Rome and probably Northern Spy.

Professor J. H. Gourley, horticulturist of the New Hampshire Experiment Station, spoke on the soil fertility problem in the orchard, saying that Dame Nature has made a different problem for each orchard. If you want to know its fertilizer needs go to your orchard and find out. With apple orchards the tillage and sod mulch systems can both be made successful, depending upon the natural conditions. With stone fruits tillage should be the rule.

Any system of orchard cultivation should include cover crops but in twelve years this has not resulted in increase of fruit over clean culture in New Hampshire experiments.

If the soil texture is good and adapted to fruit growing trees with sod mulch and applications of nitrogen will give as good results as soil tillage. Tilled apple orchards usually make no response to fertilizers when they are

growing, and in some cases when the trees are well grown. We maintain that as a rule in sod or mulched orchards it pays to fertilize, but in tilled orchards much money is lost by applications of fertilizers. It has also been observed that the apple is grown successfully where there is no lime and orchards do not respond to lime applications.

Red colored fruit is not affected except adversely by fertilizers. Inorganic forms of artificial fertilizer seems to give more satisfactory results than organic ones. The grower will most always get results if he uses nitrogeous fertilizers in sod orchards. Nitrate of soda gives better results if put on two or three weeks before blossoming time.

In his report on plant diseases, Prof. F. C. Stewart, of the Geneva Experiment Station, referred briefly to experimental results as given in several recent bulletins. In one experiment it was found that apples in ventilated barrels scald less than one-third as much as those in commercial barrels, providing the storage room is ventilated. Ordinary commercial wraps decreased scald but little. Apple scab was very destructive in New York state in 1919. Results of sulphur experiments do not give any indication that dusting will supercede spraying. Bordeaux, if the 3-10-50 or 2-10-50 formula is used, gives better results with less injury than does lime-sulphur.

President R. A. Pearson, of the Iowa Agricultural College, spoke of the solid, intelligent, conservative farmers as the defense of the nation and its ideals, saying that the people who are working to overthrow the government are evidently ignorant of the fact that there is such a conserving force in the country.

Some fruit statistics were given by George Atwood, of Albany, in which he showed that while the apple crop in New York state last year was very small, it has brought the growers larger aggregate returns than in years of normal yields. He stated that over nine million barrels of apples in the United States, of the last year's crop, have been made into by-products, mostly cider.

In his report on new fruits, G. H. Howe, of the Geneva Experiment Station, said the Cortland apple, originated at the station, resembled McIntosh in shape and color and the trees were hardy. The Delicious apple is apparently gaining in favor in the lower Hudson valley. The King David fruit last season was of excellent quality. Of the peaches, J. H. Hale is a most promising variety but tender in wood. June Alberta is an attractive large early peach, and almost a freestone. The Rochester is susceptible to brown rot. The Pacific is an attractive plum, larger than other purple varieties. The Ida cherry can never take a high place as a commercial variety, the fruit is soft. Ontario ranks well among standard green grapes, but does not stand shipping well. The Honeysweet black raspberry has given a very favorable impression at the station. It is worthy of a trial. The Premier is a perfect strawberry, superior to the Senator Dunlap in Chautauqua county.

Professor G. W. Herrick, entomologist at the State College of Agriculture, in discussing some orchard pests of the past season and the lessons learned, pointed out the necessity of community spraying. No matter how carefully a few men in a community spray, unless all spray the insects cannot be controlled. Both the Pear

(Continued on page 209).



## Feed for the Dairy Herd

By Earle W. Gage

**I**F the dairy farmer is to make a success, he must grow the feeds for his herd on his farm. The farmer who depends largely on what he buys, or upon what accidentally comes along is not going to make a success, and it is doubtful these days, if he can make even a profit.

One reason why so many dairymen fail to make a striking success of the business is that they fail to start the business in the right way. They fail to make the best use of the land on which they are working. There is surely room for improvement in the herds and in their management, but I believe there is even greater room for improvement in the management of our farms. We, today, as farmers, are not getting anything like proper returns from our acres. This last year has been an exception for most sections, and farmers are surrounded with crops such as few have known before.

The season has been, with the farmers, for the most part. Which causes us to ask now, "Why cannot we have every year some good crops?" The reason we cannot have them every year is because we do not handle our land properly. There is absolutely no reason why the crops in this country should not be on an average of fifty per cent better than they are, taking one year after another. The reason why they are not fifty per cent better is because there is too great a percentage of men who are willing to take what comes along and who handle the land with as little labor as possible, and who devote very little attention to the cultivation of their land. The time has come when it is absolutely essential that farmers change all that and put into the business of producing crops a little more care and intelligence and thought and a little bit more labor.

Many farmers put enough work on their land, but they do not do it in the right way. There is considerable being said about farm management these days. This is one of the most important lines of improvement that can be undertaken by the farmers at the present time. We are too willing to handle our farms as our fathers did, and we are too willing to let the farm crops be produced in the same way and with the same lack of orderly methods that our greatgrandfathers had. That was all right in the old days. The land at that time was overflowing with natural fertility, but now conditions are changed, and in many places the soil is depleted of much of the fertility, while in other places the land is infested with weeds and show the effects of long cropping. This must be changed.

The farmers must consider the crops best adapted for the business he is in. Most of us are interested in dairying, so let us consider some dairy crop. Every practical dairy feeder has found that the most important characteristic of a good feed for a dairy cow is that which she likes best. We must have in the feed something that lends palatability to it—something that will make the cow consume a lot of it. If you feed a cow one hundred pounds of feed, she will produce so much milk; if you feed her one hundred and fifty pounds, that same cow will produce you so much more milk. Feed her one hundred pounds of feed that she likes and she will give you more milk than if you feed her one hundred pounds of feed that she just eats. Therefore, the production of food that has that characteristic of palatability or that is acceptable to the cow is doubly important, because in the first place it will make the cow produce more milk for the amount consumed, and in the second

Continued on page 194.



"Happy as a Lark!"—Pete Robinson

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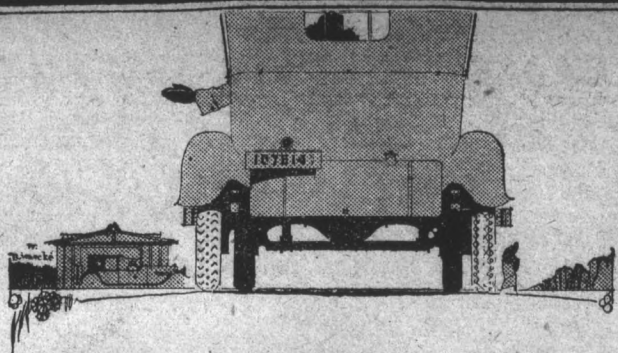
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You will also find that Millers do not vary. Every tire is signed by the maker and inspector. Both are penalized if a tire comes back. So they don't let faults get through.

There are numerous large cities—like Buffalo—where not a single Miller Tire last year came back for adjustment.

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Center tread smooth with suction cup, for firm hold on wet asphalt. Geared-to-the-Road side treads, to mesh like cogs in dirt.

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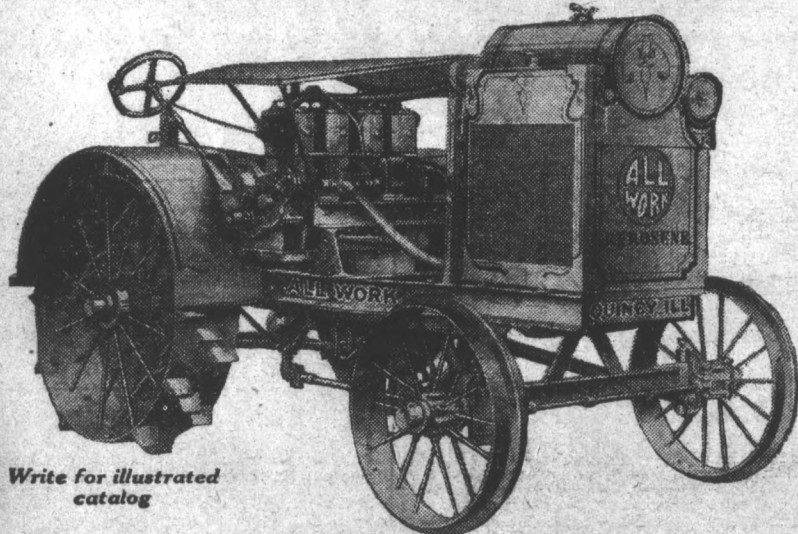
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ond place, it will make her consume more food and produce that much more milk.

And if we can get a feed that the cow likes, she will produce the milk cheaply for us. While it is important to make a cow give a large yield, eight or fifteen thousand pounds, it is just as important to produce that milk in such a manner that it will cost us less than what we get for it. Producing ten thousand pounds of milk at a cost of \$200 is not very profitable to the farmer, but if he can produce ten thousand pounds for \$150, or better still, for \$100, then there is a chance of making some profit. Therefore, it is necessary to consider the cost of the article that we feed the cow.

You can enumerate almost on the fingers of one hand the list of really succulent feeds available for the dairy cow. Corn silage is easily the most acceptable to the cow, but equally as acceptable are turnips and mangels, properly fed. But the silage is better for the farmer, just as good for the cow, since silage can be handled, all periods considered, cheapest, easiest and with greatest feeding efficiency. Therefore, corn should be one of the principal products of the dairy farm.

But corn alone is not sufficient, and in order to balance things up, we must give some dry food, because it is not proper to give a cow nothing but succulent food; that would only disgust her and disorganize her digestive system and put her in bad shape for producing milk. Alfalfa is good where it can be successfully grown and cured, but there are other crops precisely as good for the dairy farmer. One we might mention would be red or alsike clover. Clover is almost as rich in food as alfalfa, and it is easier made into hay, and easy to feed, and is a surer crop in most sections.

In addition to a succulent food and a highly nitrogenous food, such as clover, we need something in the way of a cereal and straw. There is not a crop that does better than oats; barley and wheat also do well, yet oats is the better one to grow in most sections. If the farmer adds to that a certain amount of land given over to pasture made of the proper kind of grass, then he has a complete production of food for the dairy cow—a succulent crop for the winter, grasses for the summer and clover or alfalfa for the hay, and oats or barley for the grain, and some straw. These four crops are essential things for success in dairying. If the farmer eliminates one of them he cannot hope to make a success of dairying.

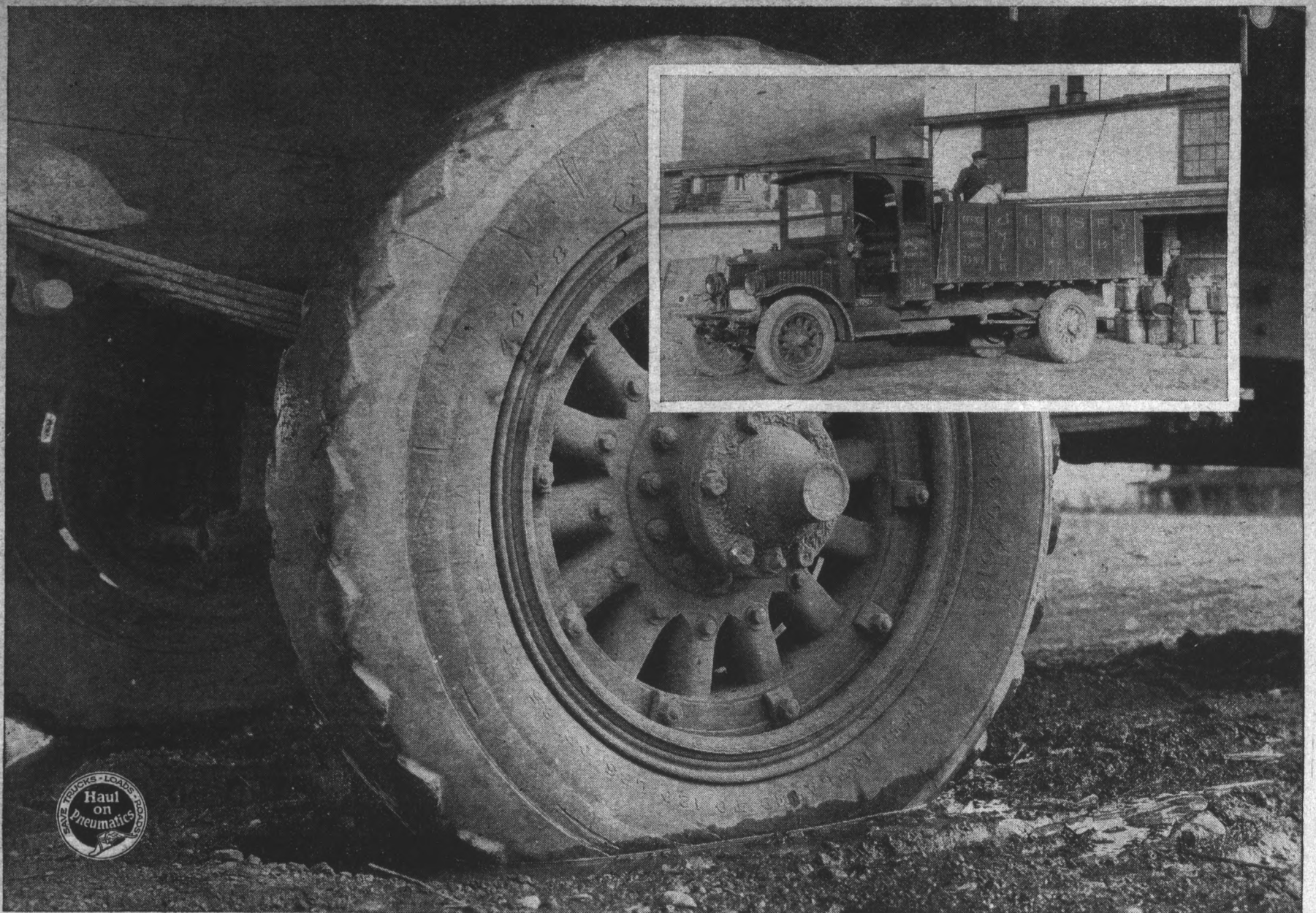
There are possibilities of increasing our dairy farm crops that are almost incredible to a man who has not tried them, and who has not worked these things out. It has been found that certain crops do better after certain others. For instance, the man who would grow in the first place a crop of corn, finds he gets his best results when he sows that corn on a clover sod or an old pasture sod. That sod plowed with a moderately shallow furrow and manure applied on the surface, and the whole thing well packed and disk-harrowed, and the corn sown right after the operations mentioned, results in a good crop.

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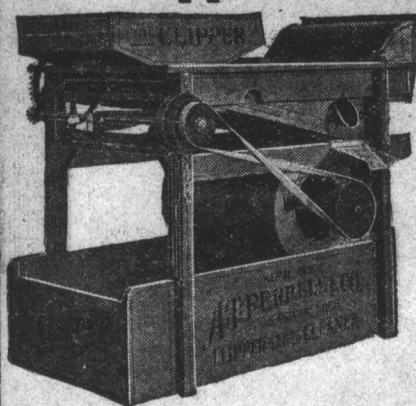
In addition to reporting that pneumatic-tired trucks pave the way for the general motorization of farm work, they list mileages of Goodyear Cord Tires, on trucks, as ranging from 15,000 to past 40,000 when given proper care.

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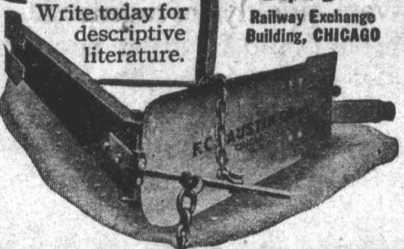
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### Politicians and Statesmen are Beginning to Wonder Whose Interests are Being Represented.

By Elmer E. Reynolds

**L**AST week I presented something for several allied groups in all sections, has greater difficulty in adjusting its position on public questions, yet I have never visited headquarters that I did not find representative farmers from different parts of the country developing plans for intelligent action.

Each insists that he is voicing the sentiments of a majority of the members in the organization he represents. When he goes before a congressional committee he speaks for the five hundred thousand or million farmers of his organization and for all farmers in general. Here lies the secret of their powerful influence in congress. The average senator or congressman has a wholesome respect for organized public sentiment.

The Grange is strongest in the east, and eastern farmers are conservative in their views. This conservatism is reflected in the atmosphere of the Washington Grange headquarters. The efforts of Professor Atkeson and Mr. Loomis have been directed to the prevention of destructive legislation rather than the promotion of a constructive program. With the flood of proposals now before congress about all the farmer representatives can do is to investigate each bill, weigh its good and bad features by the standard of farm and country needs, refer the information thus obtained back to state and local organizations, and then make the best fight possible for its enactment, defeat or amendment.

The Grange representatives, by their timely opposition to the Lane-Mondell land development bill, to drain swamp lands and irrigate desert lands, were largely instrumental in defeating the proposition. Mr. Mondell wisely told of a delegation of governors and other representatives from the swamp land states and the arid belt that there was little chance of getting his pet land scheme through congress.

The Grange has endorsed the Cummins bill, providing for the early return of the railroads to their owners, with a labor dispute tribunal and its anti-strike clause. The new Kenyon packer bill embodies the essential provisions that were in the Grange bill, prepared by Professor Atkeson at the request of Senator Grenna, and if it becomes a law, it will be distinctively a Grange measure.

The Grange has joined with the Farmers' Union, Dairymen's League and National Board of Farm Organizations in presenting a resolution in favor of "the early ratification of the peace treaty with such reservations and compromises as may be necessary."

In regard to Senator Smoot's bill to repeal the exemption provisions of the land bank law in so far as they apply to future bond issues by the joint stock banks, the Grange representatives say the issue is a plain one. "Either it is, or it is not, a good public policy to furnish money at low rates to develop farm home owning. If it is good policy, in your judgment, then write your senators and congressman to defeat the Smoot Land Bank bill."

The Grange headquarters is keeping a close lookout on the several daylight-saving bills, so-called, that have been introduced. Cities and states may take action which will, in a measure, nullify the law and be injurious to farmers' interests.

The National Board of Farm Organizations, the Washington headquarters

The National Board of Farm Organizations claims to have secured modifications of the draft rules affecting farm boys, is largely responsible for increased activity in the Department of Agriculture along economic lines, aided in securing the defeat of the daylight saving; its representatives prepared the initial draft of the Capper-Hersman bill, now pending, amending the Clayton antitrust act so that collective marketing of farm products may be made clearly lawful.

The National Board did not take an aggressive stand on the old Anderson-Kenyon packing-house bill, and friends of effective packer legislation are of the opinion that this bill, now discarded for the new Kenyon bill, not only conferred arbitrary powers upon the Department of Agriculture, but contained loopholes which made it ineffective. Mr. Lyman and Mr. Bower seem somewhat undecided on the Smoot Land Bank bill.

The Farmers' National Council has evidently been more prolific in propaganda than effective in influencing legislation. Nevertheless, I am told that Mr. Hampton was the father of the denatured alcohol bill and was instrumental in getting it through congress a few years ago. Whether or not this was a benefit to farmers I leave with my readers.

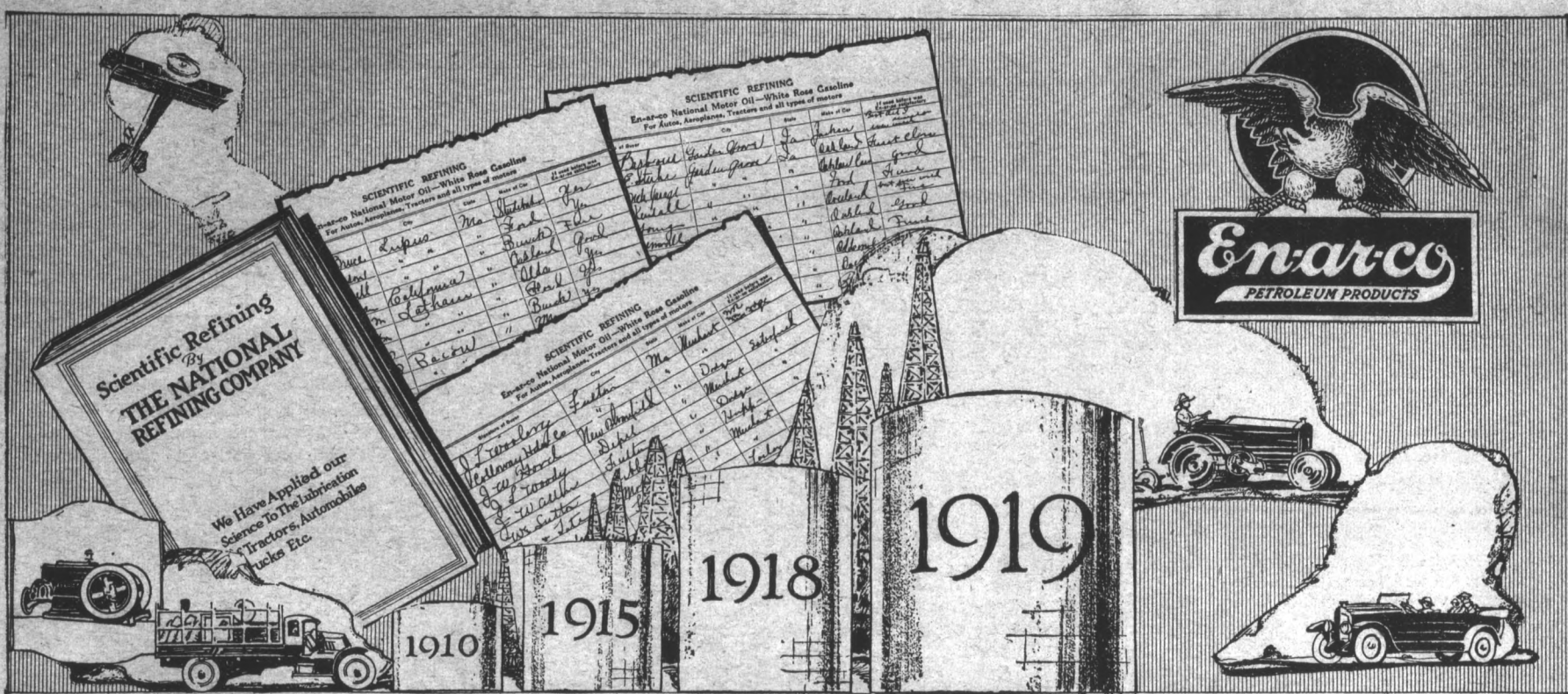
Giving testimony relative to the attitude of farmers toward government ownership of railroads, before the inter-state and foreign commerce committee, recently, Mr. Marsh said: "Sentiment for government ownership is increasing rapidly among farmers." Mr. Marsh favored the old Kenyon packer bill which made the secretary of agriculture sole autocrat of the meat packing industry. Professor Atkeson, the Grange representative, is author of the clause in the new Kenyon bill which provides for the enforcement of the act by a federal live stock commission with three members.

Mr. Hampton joined with Samuel Gompers and the railway brotherhood officials in saying that "an overwhelming majority of farmers, of the members of the American Federation of Labor, of the railway brotherhoods, as well as the general public, favor an extension of the period of government operation of railroads for at least two years."

The Farmers' National Council stands with the Grange and National Board in favor of the Capper-Hersman bill, but this appears to be the only thing upon which it is able to agree with the other organizations. It has evidently tried to line up the farmers with the so-called new labor party and is somewhat addicted to the single-tax idea.

I am leaving the folks on the farms to judge for themselves as to whether the men in charge of the different farm organization headquarters in Washington (Continued on page 200).





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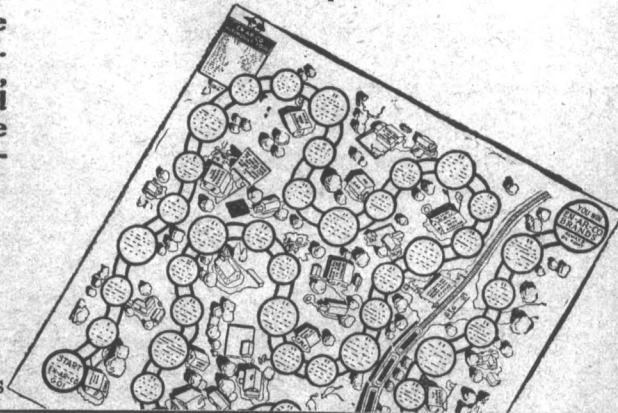
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## Buying Eggs or Stock

THE beginner with purebred poultry often wishes to know whether hatching eggs or breeding stock will be the best investment. Some have the best luck in one way and some with another. There are advantages and disadvantages to both methods. The buyer of fine quality breeding stock must pay a good price but he sees the birds right after the purchase and is able to form a fair judgment of the quality. It only takes a few birds as foundation stock to build a large flock, if skillful breeding is combined with patience.

The buyer of hatching eggs must wait several months before he can tell the exact quality of his stock and often the results will be much better or much worse than expected. If a breeder is successful in raising chicks a start with purebred stock can be obtained cheaper with hatching eggs. A five or ten dollar setting of eggs will sometimes produce six or eight birds of fine quality that are worth many times the cost of the eggs. However, it is not always possible to judge the quality of hatching eggs by the price asked. This is due to the fact that some breeders with medium stock think they have better birds than they own, and feel they can ask a high price. Other breeders with fine stock may lack confidence and sell their hatching eggs for less than they are worth.

Sometimes eggs can be purchased from a breeder of fine stock that will have no stock for sale. He will keep all of his best birds for his own use but he will sell a few eggs from his best birds every year. This gives a new breeder a chance to procure some really fine stock for a moderate investment and if they are given good care, such stock will pay good dividends.

Another mistake in buying hatching eggs is to order eggs from bred-to-lay stock and expect to raise a lot of exhibition fowls. Both the bred-to-lay and exhibition birds will be purebred and yet their value is different. Birds that are mated for high egg production should produce good layers and birds mated because of their feathers are expected to make birds with fine feathers. The beginner who expects to raise exhibition birds should go to the breeder of exhibition stock for his hatching eggs. The breeder who culls his birds and keeps high egg producers may not have a flock perfect in comb and feather but it is the flock that the farmer likes because of its utility value.

Many breeders are endeavoring to combine the exhibition and bred-to-lay factors so that the high egg-producing stock will be attractive and uniform in type and size. The best method is probably the purchase of some breeding stock and hatching eggs. These purchases can be carried on at intervals for a few years until the farm flock contains the quality that the owner desires. The purchase of one setting of fine quality eggs each year will bring new blood into the farm flock and if this addition is combined with careful culling the flock will soon be of considerable value. But have an aim and stick to it. Find out the breed that you wish to keep and do not change except for very important reasons. Then there is a chance for fine success and every dollar spent for improvement will not be wasted in doubtful experiments but will help to build a business.

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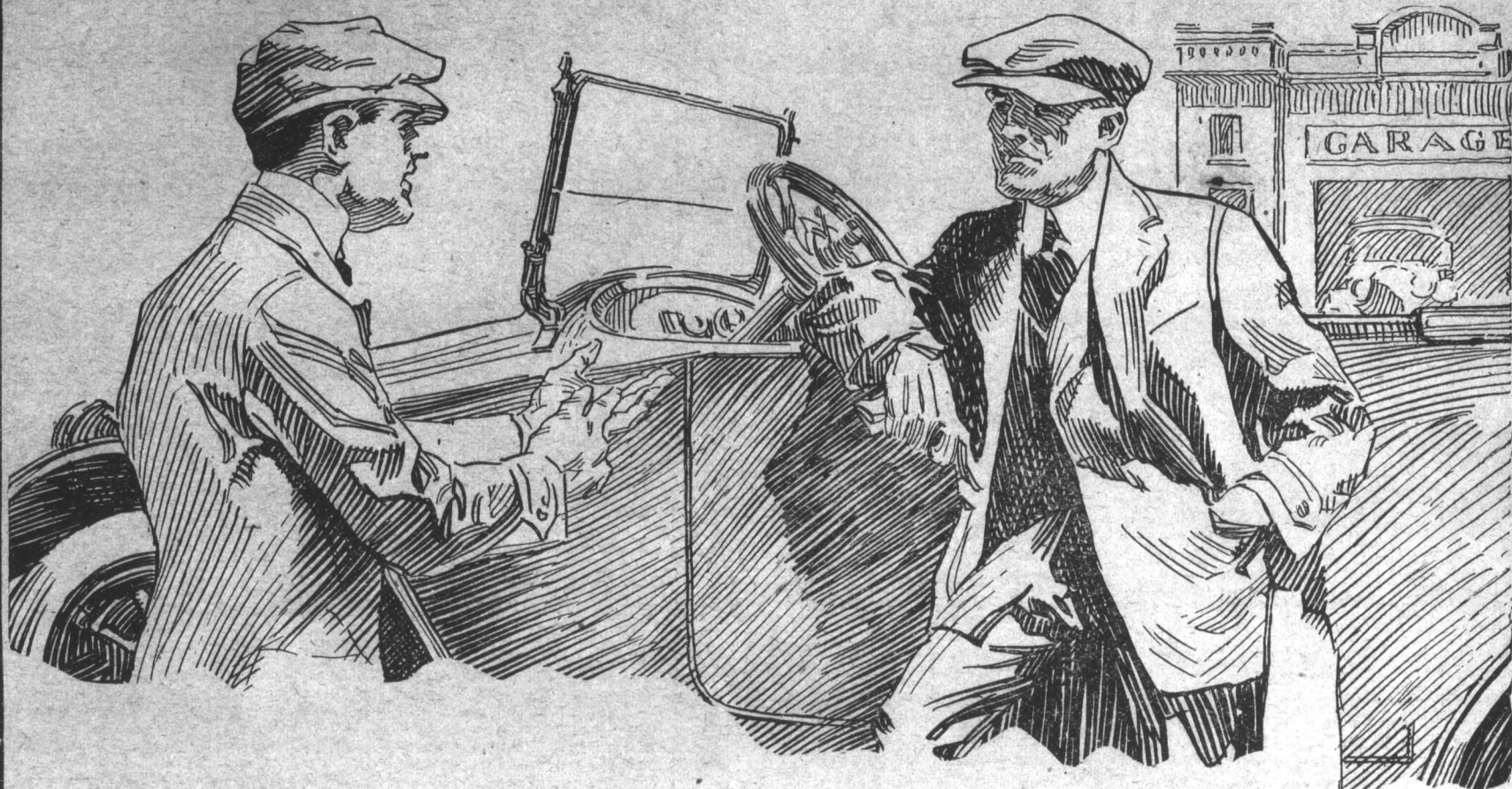
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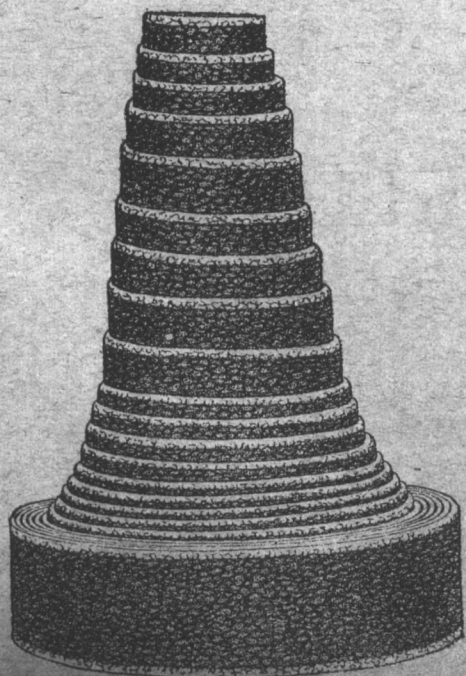
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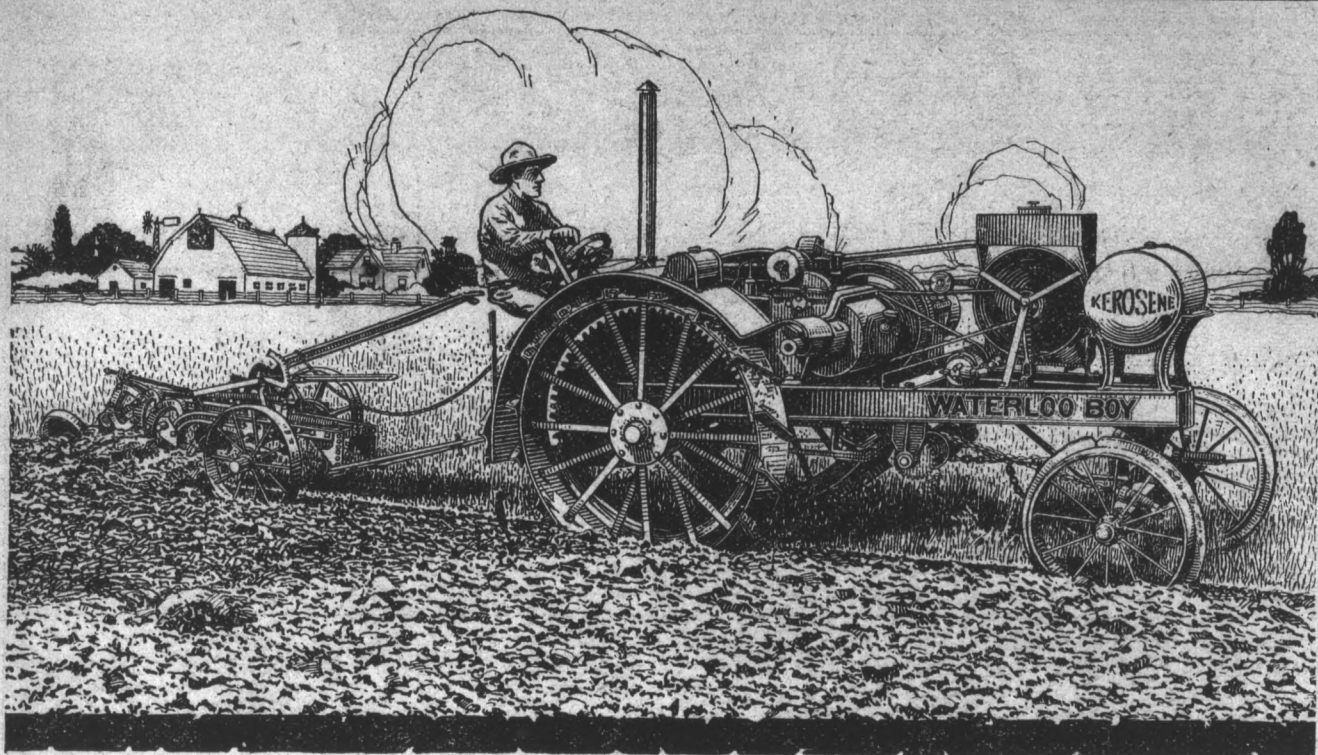
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The cooling system always holds the engine at the proper temperature. While the motor runs at the right temperature for perfect lubrication,

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**OTTAWA MFG. CO., 1500 Wood St., Ottawa, Kans.**



## THE QUALITY OF SEEDS.

(Continued from page 188).

argument for growing one's own seed supply from proven stock where conditions permit.

There is no reason, however, for not stating that any individual can make the necessary effort to gather information that will enable him to judge of the other factors of quality. Until this is done by the farmer or dealer it must be assumed that the farmer is willing to take a chance on untested seeds and to gamble on his crop yields.

### Seed Testing Involves Time.

Seed testing requires a certain amount of time. Purchase of seeds a day or two before they are needed for planting will not allow of careful testing by the farmer. Early buying is essential, and is recommended even though one may be deprived of the benefit of a drop in the market price. It must be realized that the saving of a few cents per bushel by accepting low-priced seeds, or by late purchase, does not represent, in any degree, the full profit to be derived from the use of such seed. Low-priced seed is not always low grade, but much of it is. Also one purchasing seed late in the season may have to accept whatever the trade can offer. As with other commodities, it is likely that the cream of quality will be taken by the early buyer.

### Dealers Appreciate Early Orders.

The fact must not be overlooked that seed dealers appreciate early orders for seed of prime quality. If he specializes in farm crop seeds, then this condition will doubtless obtain more often than if he handles seeds as a sideline to a general store or feed business.

In conclusion it may be well to state that the purpose of the writer is not to belittle the judgment or practice of any individual or groups of individuals concerned with the seed business. It is an attempt to arouse farmers to the real importance of giving more attention to the question of selecting high-quality seeds and point out certain definite features that every farmer should consider in order that he may improve the quality and yield of his crops.

Past agricultural progress may have been due more to improvements in technique than to the introduction of pure seed of better varieties, but in the future our hopes must center about the use of better seed. There are valid grounds for this statement. Crop production is the application of the principles of chemistry and physics, and these two sciences are established on a solid foundation; plant breeding and seed selection is applied biology, and biology is in its infancy because its progress is also dependent upon these older sciences.

## "WHO'S WHO" AT WASHINGTON.

(Continued from page 196).

ton are truly representing them, or are promoting their own individual opinions or the ideas of a small clique. If they are not representing real farm sentiment, it may not be wholly their fault. In order to speak for the farmers they must know what the farmers want. Don't be afraid to speak out in your local meetings. Let the delegates who represent you at the county and state meetings know your sentiments. Keep your farm paper editors informed as to your legislative needs and your attitude upon public questions. Each Washington headquarters keeps files very carefully for the opinions of farmers of the farm papers, and they are readers and farm editors.—R.

**BARGAIN FENCE PRICES!**

No matter how little or how much fence you need—get my new big Bargain Fence and Gate Book. Shows 150 styles—bed rock prices. Buy DIRECT FROM FACTORY and save 20% to 40%. Also on Gates, Lawn Fence, Barb Wire, etc. My low prices will surprise you. **FREIGHT PREPAID.** BROWN FENCE is made of Heavy, Basic, Open Hearth, Galvanized Wire—stiffest, strongest, longest-life fence. Sample to test and book, free, postpaid.

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### DOES SHADE INTERFERE WITH BUSH FRUITS?

I have one acre of sandy soil which is shady. Would the shade interfere with the growth of red raspberries or blackberries? SUBSCRIBER.

One of the most important factor entering into the growing of raspberries is the moisture supply. It is likely that the ground shaded with trees would be too dry during the season when moisture is most needed. I would not set any variety of raspberries on this land. The same would apply to blackberries. Currants or gooseberries would do better on this location. Keep well cultivated or mulched to hold the moisture.—D. W.

### CONDEMN SCHOOLHOUSES, ETC.

We have a good frame schoolhouse. Can the state authorities condemn it because the doors swing in? Also, have drain commissioners a right to blow up bridges to make public drains? H. P.

By Compiled Laws 1915, Sec. 5875, the superintendent of public instruction is authorized to inspect and condemn schoolhouses not found in a safe and sanitary condition; and what is safe and sanitary is, within all reasonable limits, a matter for him and his assistants to determine.

The power to construct public drains necessarily includes with it the right to remove any obstructions necessary to accomplishing their purpose.—J. R.

### TRESPASS BY HUNTERS.

What is the law prohibiting people trespassing for the purpose of hunting and trapping on farms not belonging to them?—R. C.

By Act 317, Sec. 3, Public Acts 1917, it is provided: "No person shall hunt with firearms or with dogs or in any other manner on enclosed lands of another, or upon any farm lands, or farm woodlands connected therewith, when notices have been posted on such lands by the owner forbidding hunting thereon. No person shall deface or destroy any such notices placed upon such enclosed lands."

By Sec. 20 of the Act which this statute amends (Comp. Laws 1915, Sec. 7500), any person violating this act is declared guilty of a misdemeanor and subject to fine of not less than \$10 nor exceeding \$100 together with costs, or by imprisonment in the Detroit House of Correction for not less than ninety days, or both, in the discretion of the court. J. R. R.

### TURKEY WITH SWELL HEAD.

I would like to ask what is the matter with our fowls and what to do for them. A turkey after continually being picked and getting well got a very sore head. It swelled up, its eyes full of cheesy matter, and its throat full of yellowish-white sores with a very foul odor. It could not eat so we killed it, and now one of the hens has the same disease.

Gratiot Co. J. I. W.

If the bird is not too far gone the swellings can be drained and the bird isolated and treatment given about the same as for roup. A disease of this kind is dangerous and it often pays best to kill the afflicted bird and burn the carcass rather than risk infecting other birds in the flock.

The treatment of value is largely preventive and consists in keeping the poultry houses in a sanitary condition and breeding from strong vigorous stock to produce birds that seem resistant to the diseases that would otherwise cause serious losses. R. G. K.

There is a delightful English feeling about this simple, home-like interior, which is in perfect agreement with the English exterior, shown below.



The simplicity of Colonial lines distinguishes this home. It has the same floor-plans as the other houses on this page.



In the development of this house the Southern feeling is most pronounced.

## Beauty and Economy Meet in Curtis Woodwork

REALLY beautiful woodwork at reasonable cost has long been a cherished dream of home builders.

One could get good woodwork—honest wood and excellent workmanship—at a fair price. But to finish a home in woodwork architecturally true to some period or expression required the services of an architect to work out every detail of that woodwork. This done, it was necessary for some manufacturer to produce that woodwork to order.

No wonder beautiful homes used to be expensive.

We made good general woodwork and we made some of the special kind. Our ambition was to make the special kind for every home builder. It seemed that

only in one way could the special kind of woodwork be put within the reach of all—that way is through standardization.

We standardized Curtis Woodwork from designs made by one of America's foremost architects. Standardization thus becomes the means through which you can have, at reasonable cost, the woodwork of your desire.

Curtis Woodwork is true to four architectural expressions—Colonial, English, Southern, and Western. Curtis Woodwork in these four expressions is available at any Curtis dealer's.

Your architect can use these Curtis standard sizes and designs in planning your home. He can save his time and your money by doing so. Nor will he sacrifice one single note of individuality either in his work or in your home.

If you cannot consult an architect you can build your home from Curtis plans, which your lumber dealer can obtain. These Curtis homes—of from three to eight rooms—were planned and designed by Trowbridge & Ackerman, New York architects, who also designed all the Curtis Woodwork now within the reach of all.

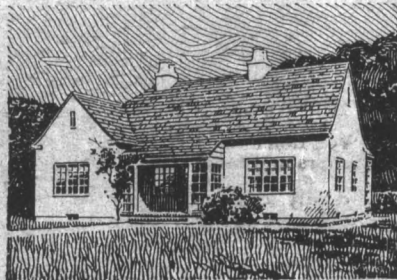
Ask your lumber dealer about Curtis Woodwork. It will be supplied through him when you build. Ask him to obtain for you, free, a portfolio of "Better Built Homes"; or send the coupon below, with 25 cents in postage, and the portfolio you

name will be sent direct. Ask for portfolio No. VI, if you are interested in homes of 3, 4, and 5 rooms; portfolio No. VII, if in homes of 6, 7, and 8 rooms; or, if you are interested in houses particularly adapted for farm use, ask for portfolio No. VIII. Each portfolio contains illustrations of the exteriors, interiors and floor plans, with complete descriptions of thirty-two homes. Begin now to start action on realizing your dreams of a home of your own.

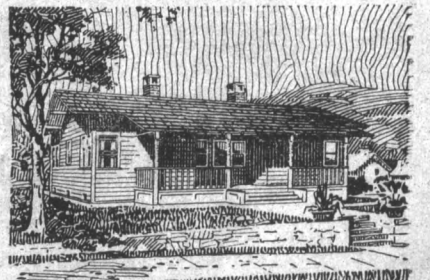
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4093-5093 So. Second St., Clinton, Iowa  
Eastern offices at Pittsburgh and Baltimore

The makers of CURTIS Woodwork guarantee complete satisfaction to its users. "We're not satisfied unless you are."



This five-room English cottage is built for comfort and follows the best traditions of English construction.



This friendly-looking house carries out the lines of the Western expression.

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"The Permanent Furniture for Your Home"

### CURTIS SERVICE BUREAU

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Enclosed find.....Cents in stamps, for which please send me Portfolio of Better Built Homes, Vol. VI (3, 4, 5 room houses) 25c. Portfolio of Better Built Homes, Vol. VII (6, 7, 8 room houses) 25c. Portfolio of Houses for Farm Use, Vol. VIII, 25c.

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Proper and frequent cultivation are necessary to the production of maximum crops. Planet Jr. tools enable you to get increased yields because of their superior design, scientific construction. They do the work quicker, easier and more thoroughly. Planet Jrs. are guaranteed fully and last a lifetime.

**No. 4 Planet Jr. Combined Hill and Drill Seeder, Wheel-Hoe, Cultivator and Plow** sows all garden seeds (in hills or drills), plows, opens furrows and covers them, hoes and cultivates them all through the season. A hand machine that does the work so thoroughly, quickly and easily that it pays for itself in a single season.

**No. 12 Planet Jr. Double and Single Wheel-Hoe** has hoes that are wonderful weed killers. The plows open furrows, cover them and hill the growing crops. The cultivator teeth work deep or shallow. The leaf lifters save much time in late work when plants are large or leaves too low for ordinary work. Crops are straddled till 20 inches high, then the tool works between rows.



## Planet Jr.

Free 72-page Catalog Shows tools doing actual farm and garden work and describes over 55 Planet Jrs. including Seeders, Wheel-Hoes, Horse-Hoes, Harrows, Orchard, Beet and Pivot-Wheel Riding Cultivators. Write for it today.

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## SCOTT'S RED CLOVER

Larger quantities than ever before are being imported. This seed is unfit to sow. Most home grown seed is of poor quality, so it is very necessary to use care in buying. Our Field Seed Book tells "How to Know Good Seed" and why imported seed is poor stuff. It, as well as samples, are free. We have all other field seeds that are practically weedless. O. M. SCOTT & SONS CO., 174 Main St., Marysville, Ohio.

## MARRIED MAN WANTED

Wish to hire married man to work on this farm with small or no children. Must be competent and reliable, without bad habits: good opportunity for a man who is willing and able to give honest efficient service. Address

HERBERT W. MUMFORD  
Brookwater Farm, Ann Arbor, Mich.

## SCOTT'S ALFALFA

Weeds are alfalfa's worst enemy the first year. The first thing to think about in buying alfalfa is purity. Our seed is especially selected and cleaned to be free from weeds. We have the ordinary and several other varieties. Ask for Field Seed Book giving special information on alfalfa, and "How to Know Good Seed". O. M. SCOTT & SONS CO., 374 Main St., Marysville, Ohio.

**TREES Plant for Profit** Our Trees All kinds of Trees and Plants Grow Improve value, appearance, pleasure and profit of your farm, garden or orchard. Reduce high cost of living. Plant good stock. Fruit needed everywhere. Free Catalogue. MITCHELL NURSERY, Beverly, Ohio

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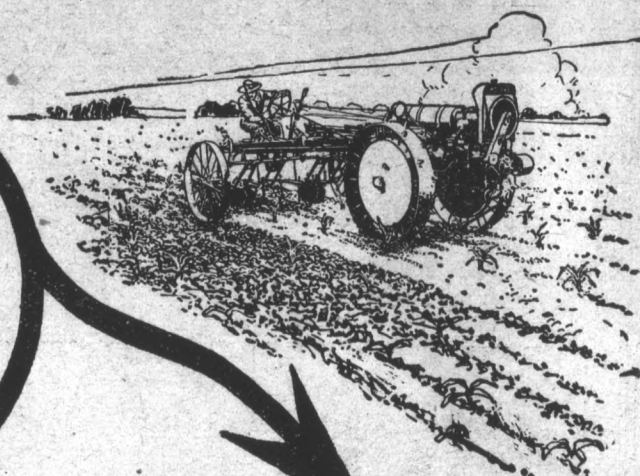
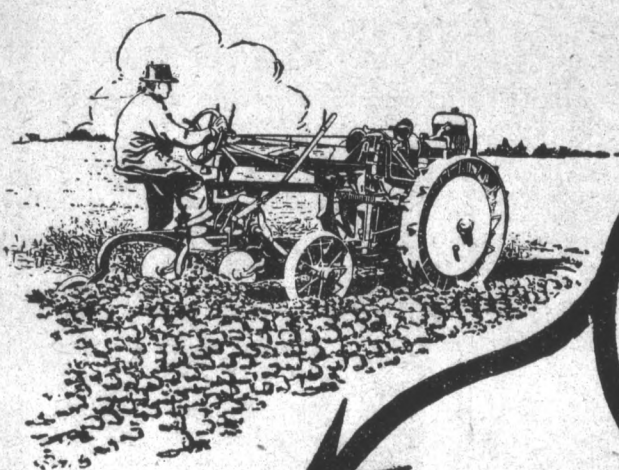


# SIX TESTS FOR A FARM POWER-PLANT

There are many tractors, but  
the *Moline Tractor is Universal*

## It is **THE ONLY** **FARM POWER-PLANT**

Combining



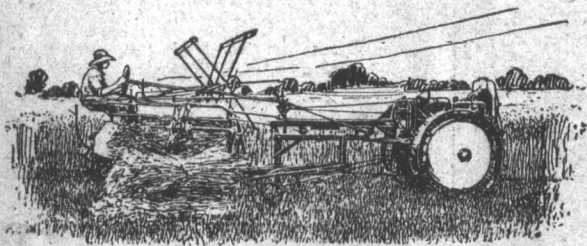
### Exclusive Features

with

### Indispensable Results

- |  |              |                            |
|--|--------------|----------------------------|
| 1. Does all field work, including cultivating, harvesting and belt work    | <i>Means</i> | No duplication by horses   |
| 2. One man completely operates both tractor and all implements             | <i>Means</i> | A large saving in labor    |
| 3. A single seat in the center of all controls of tractor and implement    | <i>Means</i> | Great ease of operation    |
| 4. A single unit of operation—the tractor and implements form but one unit | <i>Means</i> | Can back and turn short    |
| 5. Operator sees all his work — "Foresight is better than hind sight"      | <i>Means</i> | Better and faster work     |
| 6. Tractive power in front of the work with operator behind the work       | <i>Means</i> | Power like horses are used |

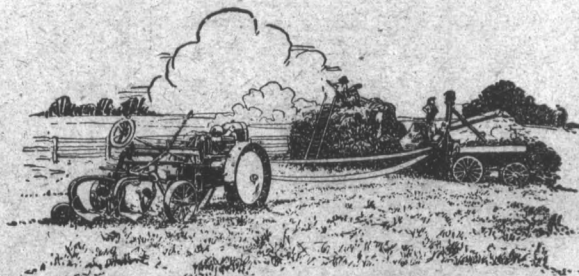
## UTILITY IS NOT SACRIFICED FOR PRICE



### The Power of a Correct Principle

The principle of doing all field operations with one man sitting where he can watch his work is correct, or farming has always been done backward, and the operator would always have ridden or led his horses instead of driving them.

The Moline Universal Tractor places the power of nine big horses where the horses stood—is driven just like horses are driven, from the seat of the implement, and hitched up to the implements just like horses are hitched.



**NOTE**—If desired you can use the "drag behind" or horse drawn implements you now have with the Moline Universal the same as with other types of tractors.

See your Moline Dealer or write our nearest branch for full information.

## Moline Plow Company, Moline, Illinois

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Des Moines  
Bloomington, Ill.  
Indianapolis

Columbus, Ohio  
Jackson, Mich.



# WORLD EVENTS IN PICTURES



Distillers who had anticipated a "leak" in the prohibition laws of the country and held over supplies, rush heavy shipments to Cuba to avoid confiscation. The picture shows Chinese coolies moving the barrels from the docks where they had been hastily dumped, into warehouses at Havana.



Few other cities afford the protection to the young women within their borders that is given those within Washington, D. C. The picture shows the national capital's corps of policewomen.



Lady and Sir Oliver Lodge, eminent British scientist and investigator of psychical phenomena, in New York.



Alexandre Millerand, governor of the recently recovered territory of Alsace, becomes premier of France.



Boston woman undertakes to restore historical naval flags.



The remarkable launching of the steamer "City of Sherman," at Pensacola, Fla. The vessel was 95 per cent complete when put in the water and was the second in the world launched with steam up.



An Australian inventor with his model airplane which rises vertically into the air and sustains itself by rapidly revolving propellers.



The Assembly Chamber at Albany, New York, during the trial of the five socialist members suspended pending investigation of alleged disloyalty.





Why Banker Smith prefers

## MULE-HIDE Shingles

"IT'S a business proposition with me. You see, no self-respecting banker can afford to wear frayed cuffs or worn-down heels whether he lives in a big city or a small town. I use the same logic in my surroundings. That's why the roof of my house is covered with MULE-HIDE Shingles. For appearance and durability MULE-HIDE can't be beat. I know that to be a fact because those Shingles are giving the same service and have the same rich, gray-green shade as when they were put on several years ago.

**"Not a Kick in a Million Feet"**

is certainly some record; and I know from my experience that it is backed up by service. You can get the same quality shingles in a beautiful red shade, too, but of course the color is a matter of preference and it's up to you. Just be sure it's MULE-HIDE when you buy Roofing or Shingles."

Go to your lumber dealer

**THE LEHON COMPANY** *Manufacturers*  
44th to 45th Street on Oakley Avenue • Chicago



## Inspiration from the Life of Lincoln

By E. L. Vincent

THE life of Abraham Lincoln, as we look at it from the vantage ground of more than half a century, presents many and varying aspects. To one, it may seem that simplicity was his outstanding characteristic; and Lincoln was a plain man, in every sense a man of the people. Another may believe that Lincoln was preeminent in his ability to use the English language effectively. Of this there are many excellent proofs. Again we may find evidences of matchless human sympathy, of perseverance under difficulties, of unswerving devotion to duty and loyalty to the country he loved so well.

Nothing too good can ever be said of Lincoln's preeminence in any of these directions. He was simple, he was possessed of oratorical ability, he was devoted and he was loyal to a degree rarely witnessed. But think of him for a moment as a man of power to do the thing which seemed to him to be right. A man might have all the striking characteristics we have mentioned and still fail in the possession of that quality which will enable him to stand fast and carry others with him. Just here we find Lincoln's most marked manifestation of greatness.

Sometimes we see little streams that come down from the mountain side. They sparkle and make music in the sunshine, but what becomes of them? One leads away into some valley field and disappears amid the tall grasses. Another threads its course across the side of the mountain and is lost in a morass. So these rivulets rise and flash and go out of sight without accomplishing anything of good. The more severe the storm, the louder they roar and the swifter they run; but every particle of power they have is wasted. They do nothing to help the world or to hold it fast in time of tempest.

Again these hillside streams find their way together. One gives up its waters so that another may be made larger and stronger. And yonder in the valley we see a mighty river, with power to turn wheels, to make men happy, to help on the world's commerce.

It was the prevailing note in Lincoln's character that every fine quality converged toward a common center and made for power. Lincoln knew how to carry men with him. The day in which he lived called for just such ability as he possessed. A weaker man would have gone down and been swept away by the tide which set so strongly against him at times. The nation was at its very extreme of peril. A single false step on the part of the man who was carrying the country's burdens and all would have been lost. But Lincoln never took that step. Dark though the shadows might lower about him, fiercely as the tempest of hate and envy might press upon him, he stood like a rock in his place. He knew how to be simple, and kindly and gentle and cheerful, but he also knew how to hold fast to the right as God gave him to see the right.

And here we find our greatest lesson as men of a later day. How many times of late have we been told that we are living over a volcano. The conditions under which we are living are depicted as having brought us to the brink of a precipice. No one can doubt that the times are critical. Perhaps we do not know just how great may be the dangers lying just ahead of us.

### POULTRY

#### Hubers Reliable Chicks

500,000 FOR 1920



By Parcel Post Prepaid. Delivered to You. Guarantee Live Delivery. Eggs for Hatching by the Set or 100.

We have installed the most modern features of the Hatching Industry which will insure chicks as strong as Hen Hatched Chicks and Full of Pep.

This is our 11th season. With the great increased demand for our chicks and the fine reports and praise from Stock of Good Quality, Bred for Heavy Egg Production and that they are Properly Hatched. Stop your loss by buying our Reliable Chicks.

We hatch all our chicks from pure bred, free range farm stock. S. S. White and Brown Leghorns, S. C. Anconas, Barred Rocks, S. C. and R. C. Reds, S. C. Black Minorcas, and S. C. Buff Orpingtons. Special combination offer on chicks, hovers and brooder stoves. Before buying elsewhere send for free illustrated catalog and prices. Place your order at once and avoid disappointment in the rush of the season.

**Hubers Reliable Hatchery**  
East High St. FOSTORIA, OHIO

**Baby Chicks** Bred-to-Lay and Exhibition S. C. W. Leghorns, stock that produced the winners in the state demonstration farm work. Winners at Detroit, Toledo and Oil City, Pa. Shows. \$10.50 per 50, \$20 per 100, \$35 per 500. Safe delivery postage paid. Sunnybrook Poultry Farm, Hillsdale, Mich.

**ANCONAS** Now is the time to place your order for **HATCHING EGGS**. Write for prices **C. & M. WHITTIER** Hand Station, Michigan **ANCONAS**

**Barred Rocks.** Choice Cockerel and Pullets from pure bred quick maturing heavy laying strain. Cockerel \$4.00 to \$8.00. Pullets \$3.00 to \$5.00. Pens \$15.00 to \$25.00. R. J. PATON, Route 3, Box 115, Ypsilanti, Mich.

Poultry Ads. Continued on Page 205

#### DAY OLD CHICKS

##### New Spring Catalog

The Day Old Chick business is on. We advise you to write for Catalog now, and then order as early as you can.

The most complete descriptive Catalog we have yet published; its instruction will help you.

Thirteen Heavy Breeds.

Three Especial Egg Breeds.

You will be particularly interested in the extra heavy laying breeds: White Leghorns inspected and certified as heavy producers by the Poultry Extension Specialist of the Agricultural College.

Cockerels and Pullets: Several breeds; see Catalog.

We solicit your interest in the Homestead Farms plan of Pure Breed Poultry raising.

STATE FARMS ASSOCIATION  
Desk F. Kalamazoo, Mich.

**Baby chicks:** Standard Bred S. C. White and Brown. Also English White Leghorns. Bred to lay, large white eggs. Safe arrival guaranteed, shipped up to your door by parcel post. Free catalogue with list.

**WOLVERINE HATCHERY,** R. 2, Zeeland, Mich.

**Baby Chicks** Importer and breeder of Barron White Leghorns, White and Barred Rocks and S. C. Rhode Island Reds. Book orders early. I have taken over the Folly Cove Farms and stock business. Brummer's Poultry Farm, Holland, Mich., R.R. No. 8.

**BABY CHICKS** S. C. White Leghorns \$20.00 per 100, eggs \$2.00 for 15. Order early. Hillside Poultry Farm, Hillsdale, Mich.

**Barred Rocks** egg contest winners, eggs from strain with records to 200 a year. \$2.00 per setting prepaid by P. P. Circular free. FRED ASTLING, Constantine, Mich.

**Baby Chicks** S. C. W. Leghorns, White, Buff Barred Rocks, S. C. R. I. Red, Anconas, White Wyandottes, Buff and Brown Leghorns, 25 for \$6.25, 50 for \$11.00 for \$20. Fenton Chicken Hatchery, Fenton, Mich. Box 244.

**Baby Chicks** S. C. W. and Brown Leghorns, and S. C. Anconas. Healthy, vigorous, and from a good laying strain. We guarantee safe delivery. Order now. Seventh season. Send for price list. City Limits Hatchery and Poultry Yard, R. 5, Holland, Mich.

**Baby Chicks** 100-000 Barron Strains, also S. C. Brown Leghorns and Barred Rocks for early delivery. Cat. free. Knolls Hatchery, R. 3, Holland, Mich.

#### Ring Neck Pheasants

##### THOROUGHBREDS PAY

Lay 40 to 50 eggs each per year—Raised as easily as chickens—Only eat half as much—Very profitable—Bring \$2.00 per pound alive.

**Genuine Wild Mallard Ducks**

Lay 50 to 60 eggs per year—Guaranteed to be only from Wild Trapped Mallards.

**Giant Bronze Turkeys**  
Prize Flock, headed by 55 pound tom.

**S. C. R. I. Red Chickens**  
Fine laying strain of prize birds.

Send for Free Illustrated Booklet and Price List of Eggs.

**Bloomfield Farms**  
America's Largest Game Farm  
1778 Penobscot Bldg.  
Detroit, Mich.

**62 BREEDS** PROFITABLE Pure-Bred Chickens, Geese, Ducks, Turkeys, Hardy Fowls, Eggs and Incubators at lowest prices. Pioneer Poultry Farm. Valuable poultry book and catalog FREE. F. A. NEUBERT, Box 423, Mankato, Minn.

**PLANS FOR POULTRY HOUSES.**  
All styles. 150 illustrations. Send 10 cents. Inland Poultry Journal, Dept. 49, Indianapolis, Ind.

**Buff Leghorn** and White Leghorn Cockerels, from 200 egg strains. Booking orders for eggs, and chicks. DR. WILLIAM SMITH, Petersburg, Mich.



Therefore, while we need to be earnest and patient and simple and full of hope, we need most of all the strength of purpose that will enable us to take our stand for the right and hold steady, as though our backs were against a rock of defense that never can be shaken.

To us of the United States have been given by nature, or nature's God, great stores of common sense. This native ability to think quickly, to plan clearly and to act wisely has always stood us in good stead. To the men and women of the farm has especially been given the palm for solid, everyday good sense, be the crisis what it may. Perhaps that is how Lincoln was able to lead the nation through to light as he did. His homely sense, his indomitable courage and his ability to hold on appealed to the sound judgment of the people, and they gave him the support which saved the nation.

Now, once more there is a call that we shall summon every ounce of sound, sober sense to the rescue of the nation from the flood of ills that seems to be sweeping over it. The call to every farmer and every farmer's wife and every farmer's boy and girl is to think carefully, to weigh men and their acts, to find out what is truth and then stand by it through every form of opposition.

We admire Lincoln's power, and rightly admire it. Now is the time to make that same power our own!

#### AMERICA'S GIFT TO FRANCE.

THE little town of Meaux on the River-Marne, forms the high-water mark of the great German advance on Paris, in 1914. That town was approximately the nearest point to Paris reached by the advanced German patrols. On a spot in that village, to be selected by Marshal Foch, it is planned that the American nation shall erect a colossal statue by Frederick MacMonnies, to commemorate the victory by which the armies of France hurled back the seemingly irresistible German hordes. To complete this undertaking, a committee of representative American men and women have organized and plans are now being laid to collect the necessary funds.

The cost of erecting the statue is estimated at \$250,000 and it is desired that the gift come from people representing every phase of American life. Therefore, it is purposed to secure the necessary funds by a nation-wide appeal to the school children of America who will be invited to donate any amount from one cent up. Adult subscriptions will also be accepted. In this way, "America's Gift to France" will resemble the Statue of Liberty given in part by the school children of France.

#### FOREIGN APPLE MARKETS UNSATISFACTORY.

A DISAPPOINTING feature has been the unsatisfactory condition of the foreign outlet. Prices received in British markets often fell below cost and expenses, and only the best grades and varieties have reached the top legal price. Owing to the decline in rate of exchange, exporters lost about \$1.00 in \$5.00, compared with returns under normal conditions of exchange.

Best Maine apples were quoted at forty shillings per barrel in Liverpool on December 22, from which the net return in New York would not leave a satisfactory profit.

Canadian competition in the foreign markets is active, owing to the large crop in Nova Scotia, and it was reported that about 750,000 barrels were in storage in Nova Scotia at the end of the year. Prices in Montreal and Toronto have ranged from \$6.00 to \$8.00 per barrel, which is about the same as in the leading cities of the United States.



## Essex Sets World's Long Distance Endurance Mark

**3037 Miles in 50 Hours  
Proved Its Reliability**

In its official test of 50 hours to prove endurance, Essex has established its claim as the dominant new type light car. Who ever before regarded a car of its type in the light of such proved performance and endurance? Only specially built racers and a few of the larger, costlier cars have been considered capable of such a test. Surely light weight cars have not been associated with such reliability as Essex has shown.

#### Proves Essex Economy

This test gives to Essex proof of the greatest factor in motor car economy. Light cars are notable principally for their economy in saving of gasoline, oil and tires. These qualities Essex has revealed from the first. But real economy must also include freedom from repairs and mechanical attention—all costly items.

So what greater proof of Essex economy could be asked than its new world endurance mark.

**5869 Miles in 94 Hours  
22 Minutes Driving Time**

These tests were not made to establish speed records. Two trials were made before the 50-hour run was completed. So, in all, the Essex went 5,869 miles in 94 hours, 22 minutes driving time, averaging more than a mile a minute. Sleet stopped one, after 27 hours, 58 minutes, and 1790 miles. Snow halted a second, three days later, after 16 hours 25 minutes and 1042 miles. The third, begun the next day, went the full

50 hours. These tests were made under American Automobile Association observation on the Cincinnati Speedway.

Think what they mean. The average car is driven little more than 5,000 miles in a season. The average driving speed is probably 25 miles an hour. The Essex went more than a mile a minute for 5,869 miles.

You might expect that a car of its weight would require frequent mechanical attention. But there was no need for that in the Essex.

#### Doesn't It Settle the Light Car Question?

Essex now adds to its light car qualities the advantage of endurance and reliability. It brings costly car distinction, beauty and fineness to the light weight, moderate price class. Essex cars appeal to pride, and that is why owners speak of them as they do.

Individual owners would never ask as much of a car as did this 50-hour test.

It showed how much more could be expected of an Essex than any one would demand of it.

Every Essex delivered has resulted in an increased demand. Sales passed \$35,000,000 in 11 months—a new record.

This latest proof will decide thousands who have only waited for just such evidence that Essex would stand up. All buyers cannot possibly be served. Now is the time to make your reservation.

(124)

**WITTE LEVER CONTROL**  
**"Arm Swing" Drag Saw**  
You have Absolute Control of the Saw at all times.  
Push on lever to start saw—Pull to stop.  
Arm Swing motion as in hand sawing.  
Low Prices. Big 3-Color Folder FREE.  
**WITTE ENGINE WORKS**  
Kansas City, Mo. Pittsburgh, Pa.  
219 E. Oakland Ave. 219 E. Empire Bldg.

#### POULTRY

**Barred** Plymouth Rock Cockerels, large, from prize-winning laying strain, \$5.00 each. J. A. BARNUM, Union City, Mich.

**Barred Rock** Baby chicks a specialty. We are booking orders now for 1920. Apply for terms. H. H. PIERCE, Jerome, Mich.

**Barred Rock** Cockerels, Ringlet strain, \$3.00 each; pullets \$2.00. A. A. WOOD & SON, Saline, Mich.

**CHICKS CHICKS** 12,000 chicks a week after Mar. 20. Grand laying strains, utility S. O. White Leghorns and Mottled Anconas. Strong, sturdy chicks shipped everywhere parcel post guaranteed safe arrival in lots 25; 50; 100 or more. 12th season, order now. Fine free catalogue. W. VAN APPELDORN, R. 7, Holland, Mich.

**COCKERELS:** Rose and Single Comb R. I. Red. Bred for color and eggs. \$3.50 and \$5 each. Satisfaction guaranteed. CHICKS. Rose and Single Comb R. I. Red. Barred Plymouth Rocks. Prepared by parcel post and safe delivery guaranteed. Write for free illustrated catalog. INTERLAKES FARM, Box 39, Lawrence, Mich.

**CHICKS** We have shipped thousands each season since 1904. Are booking orders now for Spring delivery, booklet and testimonials. FREEPORT HATCHERY, Box 12, Freeport, Mich.

**Chicks** Leghorns, Minorcas, Spanish, Houdans, Campines, Reds, Rocks, Orpingtons, Bra-mas, Wyandottes, Tyrore Poultry Farm, Fenton, Mich.

**Fowler's Buff Rocks:** Cockerels, cock birds and pullets. Write for prices. R. B. FOWLER, Hartford, Mich.

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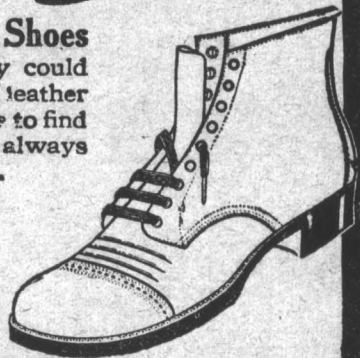
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# Crooked Trails and Straight

By Wm. MacLeod Raine

"I am."  
"You are."  
"Yes. The mask was found just outside the office where the man dropped it before he got into the saddle."  
"So?"

"That's not all. Curly and I found something else, too—the old shirt from which the cloth was cut."

The sheepman swept him with one of his side-long, tiger-like glances. "Where did you find it?"

"In a barrel back of the Jack of Hearts."

"Now, if you only knew who put it there," suggested Cass, with ironic hopefulness.

"It happens I do. I have a witness who saw a man shove that old shirt down in the barrel after tearing a piece off."

"Your witness got a name, Bucky?"

"I'll not mention the name now. If it became too well known something might happen to my witness."

Fendrick nodded. "You're wiser there. She wouldn't be safe, not if a certain man happened to hear what you've just told me."

"I didn't say she, Cass."

"No, I said it. Your witness is Mrs. Wylie."

"Maybe, then, you can guess the criminal, too."

"Maybe I could, but I'm not going to try."

"Then we'll drop that subject. I'll ask you a question. Can you tell me where I can find a paroled convict named Blackwell?"

Fendrick shook his head. "Don't know the gentleman. A friend of yours?"

"One of yours. Better come through, Cass. I'm satisfied you weren't actually in this robbery, but there is such a thing as accessory after the fact. Now, I'm going to get that man. If you want to put yourself right, it's up to you to give me the information I want. Where is he?"

"Haven't got him in my pocket."

The officer rose, not one whit less amiable. "I didn't expect you to tell me. That's all right. I'll find him. But in the meantime I'll have to lock you up till this thing is settled."

From his inside coat pocket, Fendrick drew a sealed envelope, wrote the date across the front, and handed it to O'Connor.

"Keep this, Bucky, and remember that I gave it to you. Put it in a safe place, but don't open the envelope till I give the word. Understand?"

"I hear what you say, but I don't understand what you mean—what's back of it?"

"It isn't intended that you should yet. I'm protecting myself. That's all."

"I guessed that much. Well, if you are ready, I'll arrange your lodgings for the night, Cass. I reckon I'll put you up at the hotel with one of the boys."

"Just as you say."

Fendrick rose, and the two men passed into the street.

## CHAPTER XIV.

### A Touch of the Third Degree.

**C**ULLISON was not the man to acknowledge himself beaten so long as there was a stone unturned. In the matter of the Del Oro homestead claim he moved at once. All of the county commissioners were personal friends of his, and he went to them with a plan for a new road to run across the Del Oro at the point where the canon walls opened to a valley.

"What in Mexico is the good of a county road there, Luck? Can't run a wagon over them mountains and down to the river. Looks to me like it would

be a road from nowhere to nowhere," Alec Flandrau protested, puzzled at his friend's request.

"I done guessed it," Yesler announced with a grin. "Run a county road through, and Cass Fendrick can't fence the river off from Luck's cows. Luck ain't aiming to run any wagon over that road."

The Map of Texas man got up and stamped with delight. "I get you. We'll learn Cass to take a joke, by gum. Luck sure gets a county road for his cows to amble over down to the water. Cass can have his darned old homestead now."

When Fendrick heard that the commissioners had condemned a right of way for a road through his homestead he unloaded on the desert air a rich vocabulary. For here would have been a simple way out of his trouble if he had only thought of it. Instead of which he had melodramatically kidnapped his enemy and put himself within reach of the law and of Cullison's vengeance.

Nor did Luck confine his efforts to self-defense. He knew that to convict Fendrick of the robbery he must first lay hands upon Blackwell.

It was, however, Bucky that caught the convict. The two men met at the top of a mountain pass. Blackwell, headed south, was slipping down toward Stone's horse ranch when they came face to face. Before the bad man had his revolver out, he found himself looking down the barrel of the ranger's leveled rifle.

"I wouldn't," Bucky murmured genially.

"What you want me for?" demanded Blackwell sulkily.

"For the W. & S. robbery."

"I'm not the man you want. My name's Johnson."

"I'll put up with you till I find the man I do want, Mr. Johnson," Bucky told him cheerfully. "Climb down from that horse. No, I wouldn't try that. Keep your hands up."

With his prisoner in front of him, O'Connor turned toward. They jogged down out of the hills through dark gulches and cactus-clad arroyos. The sharp catclaw caught at their legs. Tangled mesquite and ironwood made progress slow. They reached in time Apache Desert, and here Bucky camped. He hobbled his prisoner's feet and put around his neck a rope, the other end of which was tied to his own waist. Then he built a small fire of greasewood and made coffee for them both. The prisoner slept, but his captor did not. For he could take no chances of an escape.

The outlines of the mountain ranges loomed shadowy and dim on both sides. The moonlight played strange tricks with the mesquit and the giant cactus, a grove of which gave to the place an awesome aspect of some ghostly burial ground of a long vanished tribe.

Next day they reached Saguache. Bucky took his prisoner straight to the ranger's office and telephoned to Cullison.

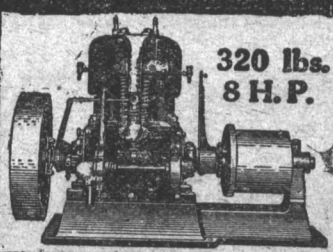
"Don't I get anything to eat?" growled the convict while they waited.

"When I'm ready."

Bucky believed in fair play. The man had not eaten since last night. But then neither had he. It happened that Bucky was tough as whipcord, as supple and untiring as a hickory sapling. Well, Blackwell was a pretty hard nut to crack, too. The lieutenant did not know anything about book psychology, but he had observed that hunger and weariness try out the stuff that is in a man. Under the sag of them many a wagon over them mountains and down will snaps that would have held fast if sustained by a good dinner and sound

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night's sleep. This is why so many "bad men," gun fighters with a reputation for gameness, wilt on occasion like whipped curs. In the old days this came to nearly every terror of the border. Some day when he had a jumping toothache, or when his nerves were frayed from a debauch, a silent stranger walked into his presence, looked long and steadily into his eyes, and ended forever his reign of lawlessness. Sometimes the two-gun man was "planted," sometimes he subsided into innocuous peace henceforth.

The ranger had a shrewd instinct that the hour had come to batter down this fellow's dogged resistance. Therefore he sent for Cullison, the man whom the convict most feared.

The very look of the cattleman, with that grim, hard, capable aspect, shook Blackwell's nerve.

"So you've got him, Bucky."

Luck looked the man over as he sat handcuffed beside the table and read in his face both terror and a sly, dogged cunning. Once before the fellow had been put through the third degree. Something of the sort he fearfully expected now. Villainy is usually not consistent. This hulking bully should have been a hardy ruffian. Instead, he shrank like a schoolgirl from the thought of physical pain.

"Stand up," ordered Cullison quietly.

Blackwell got to his feet at once. He could not help it, even though the fear in his eyes showed that he cowered before the anticipated attack.

"Don't hit me," he whined.

Luck knew the man sweated under the punishment his imagination called up, and he understood human nature too well to end the suspense by making real the vision. For then the worst would be past, since the actual is never equal to what is expected.

"Well?" Luck watched him with the look of tempered steel in his hard eyes.

The convict flinched, moistened his lips with his tongue, and spoke at last.

"I—I—Mr. Cullison," I want to explain. Every man is liable to make a mistake—go off half cocked. I didn't do right. That's a fact. I can explain all that, but I'm sick now—awful sick."

Cullison laughed harshly. "You'll be sicker soon."

"You promised you wouldn't do anything if we turned you loose," the man plucked up courage to remind him.

"I promised the law wouldn't do anything. You'll understand the distinction presently."

"Mr. Cullison, please—I admit I done wrong. I hadn't ought to have gone in with Cass Fendrick. He wanted me to kill you, but I wouldn't."

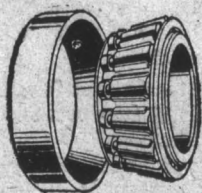
With that unwinking gaze the ranchman beat down his lies, while fear dripped in perspiration from the pallid face of the prisoner.

Bucky had let Cullison take the center of the stage. He had observed a growing distress mount and ride the victim. Now he stepped in to save the man with an alternative at which Blackwell might be expected not to snatch eagerly perhaps, but at least to be driven toward.

"This man is my prisoner, Mr. Cullison. From what I can make out you ought to strip his hide off and hang it up to dry. But I've got first call on him. If he comes through with the truth about the W. & S. Express robbery, I've got to protect him."

Luck understood the ranger. They were both working toward the same end. The immediate punishment of this criminal was not the important issue. It was merely a club with which to beat him into submission, and at that a moral rather than a physical one. But the owner of the Circle C knew better than to yield to Bucky too easily. He fought the point-out with him at length, and finally yielded reluctantly, in such a way as to aggravate rather than relieve the anxiety of the convict.

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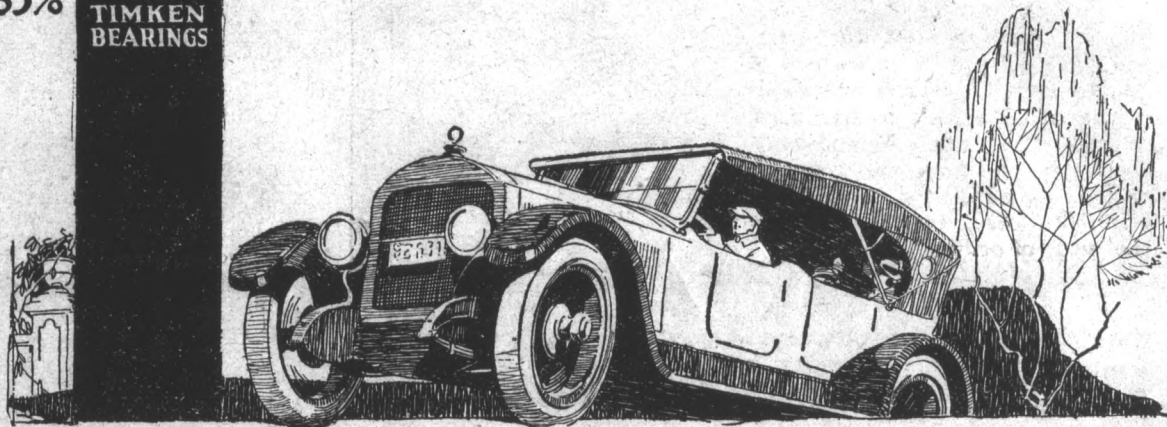
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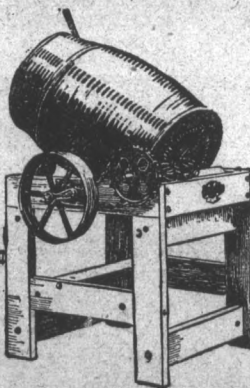
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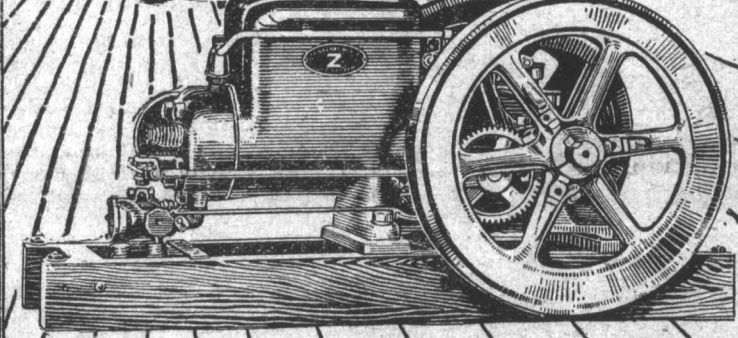
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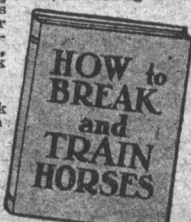
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"All right. You take him first," he finally conceded harshly.

Bucky kept up the comedy. "I'll take him Mr. Cullison. But if he tells me the truth—and if I find out it's the whole truth—there'll be nothing doing on your part. He's my prisoner. Understand that."

Metaphorically, Blackwell licked the hand of his protector. He was still standing, but his attitude gave the effect of crouching.

"I aim to do what's right, Captain O'Connor. Whatever's right. You ask me any questions."

"I want to know all about the W. & S. robbery, everything from start to finish."

"Honest, I wish I could tell you. But I don't know a thing about it. Cross my heart, I don't."

"No use, Blackwell. If I'm going to stand by you against Mr. Cullison, you will have to tell the truth. Why, man, I've even got the mask you wore and the cloth you cut it from."

"I reckon it must a-been some one else, Major. Wisht I could help you, but I can't."

Bucky rose. "All right. If you can't help me, I can't help you. Apparently he dismissed the matter from his mind, for he looked at his watch, and turned to the cattleman. "Mr. Cullison, I reckon I'll run out and have some supper. Do you mind staying here with this man till I get back?"

"No. That's all right, Bucky. Don't hurry. I'll keep him entertained." Perhaps it was not by chance that his eye wandered to a blacksnake whip hanging on the wall.

O'Connor sauntered to the door. The frightened gaze of the prisoner clung to him as if for safety.

"Major—Colonel—you ain't a-going," he pleaded.

"Only for an hour or two. I'll be back. I wouldn't think of saying goodbye—not till we reach Yuma."

With that the door closed behind him. Blackwell cried out, hurriedly, eagerly. "Mister O'Connor!"

Bucky's head reappeared. "What! Have you reduced me to the ranks already? I was looking to be a general by the time I got back," he complained whimsically.

"I—I'll tell you everything—every last thing. Mr. Cullison—he's aiming to kill me as soon as you've gone."

"I've no time to fool away, Blackwell. I'm hungry. If you mean business get to it. But remember that whatever you say will be used against you."

"I'll tell you any dog-goned thing you want to know. You've got me beat. I'm plumb wore out—sick. A man can't stand everything."

O'Connor came in and closed the door. "Let's have it, then—the whole story. I want it all: how you came to know about this shipment of money, how you pulled it off, what you have done with it, all the facts from beginning to the end."

"Lemme sit down, Captain. I'm awful done up. I reckon while I was in the hills I've been underfed."

"Sit down. There's a good dinner waiting for you at Clune's when you get through."

Even then, though he must have known that lies could not avail, the man sprinkled his story with them. The residuum of truth that remained after these had been sifted out was something like this.

He had found on the street a letter that had inadvertently been dropped. It was to Jordan of the Cattleman's National Bank, and it notified him that \$20,000 was to be shipped to him by the W. & S. Express Company on the night of the robbery. Blackwell resolved to have a try for it. He hung around the office until the manager and the guard arrived from the train, made his raid upon them, locked the door, and threw away his mask. He dived with the satchel into the nearest

alley, and came face to face with the stranger whom he later learned to be Fendrick. The whole story of the horse had been a myth later invented by the sheepman to scatter the pursuit by making it appear that the robber had come from a distance. As the street had been quite deserted at the time this detail could be plausibly introduced with no chance of a denial.

Fendrick, who had heard the shouting of the men locked in the express office, stopped the robber, but Blackwell broke away and ran down the alley. The sheepman followed and caught him. After another scuffle the convict again hammered himself free, but left behind the hand satchel containing the spoils. Fendrick (so he later explained to Blackwell) tied a cord to the handle of the bag and dropped it down the chute of a laundry in such a way that it could later be drawn up. Then he hurried back to the express office and released the prisoners. After the excitement had subsided, he had returned for the money and hid it. The original robber did not know where.

Blackwell's second meeting with the sheepman had been almost as startling as the first. Cass had run into the Jack of Hearts in time to save the life of his enemy. The two men recognized each other and entered into a compact to abduct Cullison for his share in which the older man was paid one thousand dollars. The Mexican Dominguez had later appeared on the scene, had helped guard the owner of the Circle C, and had assisted in taking him to the hut in the Rincons where he had been secreted.

Both men asked the same question as soon as he had finished.

"Where is the money you got from the raid on the W. & S. office?"

"Don't know. I've been at Fendrick ever since to tell me. He's got it salted somewhere. You're fixing to put me behind the bars, and he's the man that really stole it."

From this they could not shake him. He stuck to it vindictively, for plainly his malice against the sheepman was great. The latter had spoiled his coup, robbed him of its fruits, and now was letting him go to prison.

"I reckon we'd better have a talk with Cass," Bucky suggested in a low voice to the former sheriff.

Luck laughed significantly. "When we find him."

For the sheepman had got out on bail the morning after his arrest.

"We'll find him easily enough. And I rather think he'll have a good explanation, even if this fellow's story is true."

"Oh, he'll be loaded with explanations. I don't doubt that for a minute."

But it will take a lot of talk to get away from the facts. I've got him where I want him now, and I'll make him squeal before the finish."

"Oh, well, you're prejudiced," Bucky told him with an amiable smile.

"Course I am; prejudiced as old Wall-eyed Rogers was against the vigilantes for hanging him on account of horse stealing. But I'll back my prejudices all the same. We'll see I'm right, Bucky."

#### CHAPTER XV.

#### Bob Takes a Hand.

FENDRICK, riding on Mesa Verde, knew what had happened found a met Bob Cullison, and before he gun thrown on him.

"Don't you move," the boy warned. "What does this tommyrot mean?" the sheepman demanded angrily.

"It means that you are coming back with me to the ranch. That's what it means."

"What for?"

"Never you mind what for."

"Oh, go to Mexico," Cass flung back impatiently. "Think we're in some fool moving-picture play, you blamed young idiot. Put up that gun."

Shrilly Bob retorted. He was ex-



cited enough to be dangerous. "Don't you get the wrong idea. I'm going to make this stick. You'll turn and go back with me to the Circle C."

"And you'll travel to Yuma the first thing you know, you young Jesse James. What you need is a pair of leather chaps applied to your hide."

"You'll go home with me, just the same."

"You've got one more guess coming kid. I'll not go without knowing why."

"You're wanted for the W. & S. Express robbery. Blackwell has confessed."

"Confessed that I did it?" Fendrick inquired scornfully.

"Says you were in it with him. I ain't a-going to discuss it with you. Swing that horse round, and don't make any breaks, or there'll be mourning at the C. F. ranch."

#### NEW YORK "HORT" MEETING.

(Continued from page 192).

Psylla and codling moth migrate, necessitating general spraying of orchards. One of the constructive measures will be cooperative community spraying over a large area.

"Higher Reaches in Insect Control," was the subject of a talk by Professor P. J. Parrott, entomologist of the Geneva Experiment Station, in which he said the delayed dormant spray was not a cure-all for all ills of apple trees. Much burning of foliage is due to failure to spray thoroughly and intelligently. He said he liked the spray gun because of its convenience. He also said that apple leaf hopper, an important pest of potatoes, is the cause of tip burn, and can be controlled by Bordeaux mixture and the arsenates.

President G. C. Creelman, of the Ontario College of Agriculture, Guelph, Canada, in an address on reorganizing agriculture, said that the farmer is too slow in a business way. He lacks faith in his soil. He will not spend \$10 to make \$20. He advised the farmers to adopt an accounting system which will enable them to keep track of their business, as other business men do.

The New York state fruit growers adopted resolutions in favor of larger appropriations for the state agricultural college and experiment stations; giving the secretary a salary sufficient to enable him to devote his entire time to the work of the society; in opposition to that clause in the Foods and Drugs Act which prevents the use of wrapping material in barrels of fruit and vegetables, for an appropriation to enable the Geneva Experiment Station to conduct spraying and dusting experiments; asking the senators from New York state to give their aid to securing the immediate settlement of the peace treaty and in favor of a league of nations; and against compulsory health insurance legislation. The new officers are: President, H. E. Wellman, Kendall; first vice-president, T. E. Gross, Ledgeville; second vice-president, F. W. Cornwall, Pultneyville; third vice-president, H. L. Brown, Waterport; fourth vice-president, J. B. Pease, Niagara county; secretary and treasurer, E. G. Gillett, Penn Yan.

The New York State Horticultural Society now has one thousand six hundred members and is planning a campaign for two thousand, which will make it by far the largest organization of its kind in the world.

Fruit growers in attendance at the meeting were generally of the opinion that apple bud prospects at this time are excellent. Leading growers predicted that if the New York state growers give their orchards the same care that is given northwestern orchards, they may enlarge their orchards and will be able to compete successfully with other sections.

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"I had very good results in using Scalecide for pear psylla on pear trees last year and expect to use it this fall."—Lester Collins, Moorestown, N. J. Mr. Collins used 68 barrels of Scalecide last year and 70 barrels this year.

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## Our Boys' and Girls' Page

### When Life is in the Building

By E. L. Vincent

A FEW years ago we were fixing up the cellar wall of our farm house and wanted some good, sound, solid stones for the underpinning. For some time we had our eyes on a ledge of rock in a gully away up on the hill, and now we opened the little quarry up. I never saw finer stones than most of them were. With a drill I had made, and a hammer, I put holes into the solid rock and then with plugs and feathers, as they are called, I split off blocks with an almost perfect edge, clear, blue, sound and beautiful.

While working at that we came across some thin, flat stones in the bed of the creek and lifted some of them out, thinking they would be fine for flagging or for walks about the house. One of these we did not get down the same season we quarried it, but left it out on the bank and turned on edge to wait a more convenient time.

Winter had passed before we went to see the stone again. It looked sound and good when we last left it; but now it was split and shivered into layers so thin and brittle that what we had believed to be a splendid flagging stone was fit for nothing. You know what had happened. Rain had found its way into some tiny crevices in the upper edge of the stone. Old Jack Frost got busy, for he saw an opportunity to have some fun. He boosted with his powerful shoulders deep down in the heart of that stone and kept working away until he had ruined the stone and spoiled our plans into the bargain. I do not know when I have been more surprised than I was to see the wreck a little bit of water, turned into frost, had wrought, and all because of a few tiny cracks in the stone not as thick as the blade of a knife. Scarcely can we believe it, but it is true. Somehow in the days when the stone was in the making, something happened so that it was not as perfect as the blue stone I saved for the foundation of my house.

When life is in the making is the time to look out for flaws that may by and by work havoc with success, happiness and all that we hold dear. One of the crevices into which failure may creep is putting off doing the things that should be done now. Have you never said when asked to do any given thing, "Wait a few minutes?" Look out for that flaw. Frost may get in there and tear down what might be otherwise a fine character.

Another of these tiny openings through which trouble finds its way into the heart life is the habit of reading books that do not leave a good taste in one's mouth. Some things we can forget, but bad books stick. I cinths and festoon the chandelier heard a man in the great Bowery above with peach blossoms. These are Mission in New York say before a meeting of down-and-out men: "If I only could forget!" and tears were in

his eyes and sorrow in every tone of his voice. Never touch a bad book. Fling it in the fire rather than let it leave its stain on your soul.

Again, shut every avenue of the life against association with fellows who steal, swear, loaf around and brag of base things they have done. Better go down in the yard and make friends with the old horses or the cows. They will help you to be better and more kind. If you love them, they will love you back again. But a companion that has every earmark of being a sneak is worse than a serpent. The poison from his heart will surely get into your life and ruin you.

"The old man!" "The old woman!" Ever hear any fellow say that of his father and mother? Did it not make your very soul rise up in indignation when you first heard it? Your fist no doubt doubled up and you were tempted to strike the boy who had so low a regard for those who have done so much for him. It is a good time to say, "That is no way to speak of your father and mother! Say that again and I am done with you!" And say it as if you mean it, too. And keep your word if the shameful words are repeated, for any young man who keeps up being disrespectful to his parents will some day find his life shattered and broken like the stone spoiled by the frost.

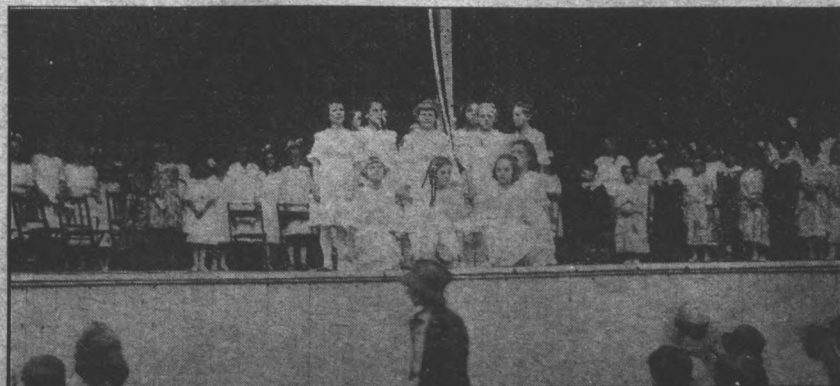
Finally, every time you see somebody in trouble, help him out. Not to do so, but to turn away thinking, "It is no business of mine," is to open wider the crevice in the character for the entrance of selfishness and lack of regard for the feelings of others. There is no more sure way to build up a life that will win than to be good and kind and true in every spot and place. It may be we will have good success in business and make a great deal of money. Money is good if we put it to good use. But the money is not what brings happiness or peace of mind. It is what we do with it. The world needs a great deal of money, but it needs most of all good men to handle that money.

Look out for flaws in your life. Keep true and clean and sound in word, thought and speech and you can't help winning.

#### A VALENTINE PARTY.

BY L. M. THORNTON.

A PRETTY centerpiece for a Valentine table is made by covering a toy chair such as can be secured from ten-cent stores, with pink crepe paper and enthroning in it a Kewpie doll with a quiver and darts over his shoulder. Bank the chair with pink hyacinths and festoon the chandelier heard a man in the great Bowery above with peach blossoms. These are Mission in New York say before a meeting of down-and-out men: "If I only could forget!" and tears were in



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ent sizes and crumpled a little to give them the shape of peach blossoms.

When an elaborate menu is not desired serve heart-shaped sandwiches, small heart-shaped cakes with pink frosting, and pink ices. A clever scheme for spending the hour following dinner is to have as many narrow pink ribbons leading from the Kewpie doll as there are guests. As each leaves the table he or she follows one of the ribbons and somewhere at its end, up stairs or down stairs, or even in the cellar, is found a tiny pink envelope with a wee card inside it telling what he or she must do to entertain the company when recalled to the living-room by the ringing of a bell. If the musical girl receives a command to dance, and the literary one to serve punch from the big bowl in the center of the table, she may be somewhat troubled until she learns that misery is to have company, for the bashful boy must kiss the prettiest girl in the room, and the loquacious one must keep perfectly still for fifteen minutes. After all have assembled, however, there comes the good news that five minutes will be given for "trading tasks," and the exchanges, or attempts at exchanging, result in almost as much pleasure as the program given later.

#### CALVES GIVEN TO HELP BOYS' AND GIRLS' CLUBS.

SIXTEEN members of the Winnebago County Holstein Breeders' Association have each agreed to donate a purebred Holstein heifer calf to the Boys' and Girls' Calf Club movement in the county. Clubs are now being organized through the country schools, and a calf will go to the school in each township which has the largest number of entries of purebred Holsteins, according to G. A. Sell, county agent.

In each town the prize calf will be offered at public auction, and sales will be in most cases a semi-social event celebrating the close of the contest. The returns from the sales, which will aggregate well over \$2,000, will be at the disposal of the pupils of the winning schools under the direction only of the teachers and the county superintendent of schools.

These contests will be open to Jerseys and Guernseys as well as Holsteins. These various activities are planned in the hope that the number of calf club members will be much greater this year than last year. Last year there were one hundred boys and girls enrolled and the more optimistic believe that the number will be nearly three hundred this year.

#### DUROC BREEDERS PUSH PIG CLUB WORK.

ILLINOIS breeders of Duroc-Jersey swine outlined a program recently for pushing the breed in the state, to which about \$10,000 was subscribed to be spent largely in pig club work. More enthusiasm prevailed than at any recent gathering of the red hog men.

A public sale will be held in March to which breeders will contribute bred sows, and the proceeds will be used to finance the work outlined. The meeting was held at Peoria at the offices of the National Duroc-Jersey Record and was attended by about one hundred breeders.

The officers and executive committee will employ an experienced man as soon as possible to carry on the work outlined. It will be principally to put Duroc pigs in the hands of boys and girls doing pig club work.

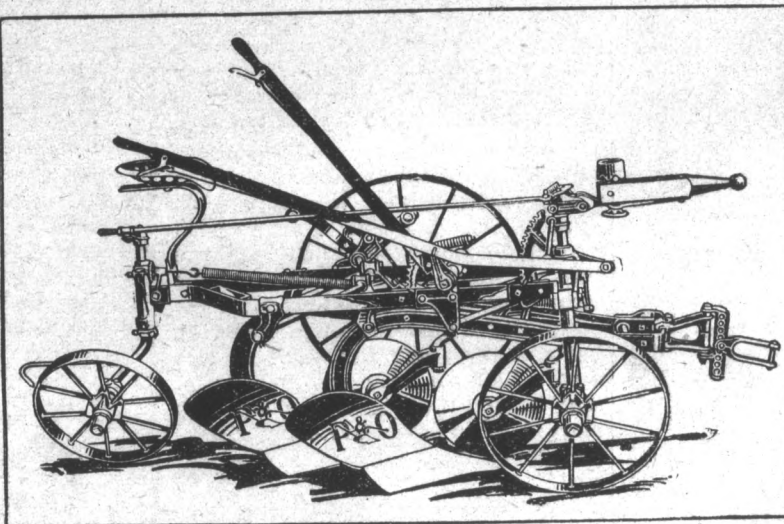
He will help the boys and girls feed and finish the pigs and show them at the county and state fairs.

The main object of the enterprise is to interest more people in Duroc hogs, especially the coming-on farmers.

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## Woman's Interests

### Study Ways to Make Time

I'D like to do it if I could only get time." How many times in the course of a week do you say that? It doesn't matter who you are, housekeeper, teacher, pupil, or man of the house, there is always something you want to do, but never seem to have the time for.

And yet how many useless things we do. Things we don't care a fig about doing, perhaps actually rebel against while we do them. But custom or convention or the family or the neighbors expect them of us, so we conform.

What we all need is a full realization of the value of five minutes, plus the ability to distinguish essentials. You, home-maker, want time to read a good magazine. One which will help you with your home problems and at the same time keep you in touch with the things which are going on in the world. But you never get a minute's time to read. Did you ever try to plan for that time? Have you ever seriously stopped to consider how many things you do in the course of a day that could just as well be omitted with no inconvenience to the family, and without affecting their health or happiness?

Do you know by actually watching the clock how many minutes it takes you to dry the dishes? Have you ever timed yourself to see how long it takes to make the beds? Do you know to a minute how long it takes to roll and cut a batch of cookies? Do you know which takes longer to make, cookies or doughnuts?

Taking the average family as one of five, you could save at least ten minutes three times a day by omitting drying dishes. Simply rinse in scalding water and stand on edge to drain. There is a half hour for reading or piano practice or drawing, or perhaps for studying up on bee-keeping or poultry methods. A half hour every day means three hours a week. If you make drop cookies you save at least twenty minutes more every time you bake. Cooking potatoes in the jackets saves you another ten minutes, and, better still, saves to your family the valuable food elements directly under the potato skin which you cut off and throw away.

You save time when you plan to save steps. How many steps do you take from cupboard to table every time you get a meal? A kitchen wagon, on which you can put everything except the food that is cooking, would save five or ten minutes every time you set the table. Lacking the table, a large tray helps, though a heavily loaded tray is sometimes harder on a frail

woman than the extra steps. If you can't even afford the tray, use the cover to your boiler, or a lard can cover. A number of little things could be carried in at one time on a pail cover.

If you have small children you can save time by training them to wait on themselves. And they will, just love to do it. Haven't you noticed how proud the tiniest youngster is the first time he learns to do some little thing which has always been done for him? Don't take the time to get even the two-year-old a drink. Tell him to climb up on a chair and get it for himself. He may have trouble the first time, but the earlier he learns self-reliance, the better it is for him and for you. Let them dress themselves as soon as possible. Make little underwaists to button down the front so they can button and unbutton their own clothes. Many of the rompers now made button in front, so lean to that style when you buy.

Have a system in housekeeping. Plan to do certain things on certain days, and, as a rule, stick to your schedule. Don't be one of the housekeepers who wash on Monday one week, on Wednesday the next, and Saturday afternoon the third week. Do the things which take most thought and strength early in the day. You are freshest in the morning, therefore do the exacting things then. Leave less essential tasks until later.

Above all, study the clock, and your own work. Time yourself at everything you do, and then see if you can't think of a way to do the work in less time and with fewer motions. There are just twenty-four hours in every day. You need eight of them, at least, for sleep. That leaves only sixteen hours for everything you want to do, which is little enough in these strenuous times. So if you want time to read or study or play, it is up to you to make it.

### WASHING WITH A MACHINE.

ONE frequently hears a woman object to a washing machine on the ground that "nothing makes clothes look so nice as the good old way." It must be admitted that the clothes turned out by some machines rather justifies such a claim, but they can be made to look as well, and better, with the machine, if you go about it right.

The reason so many machine-done washings do not look well, is that the same methods are employed with the machine as are used when we wash "by hand." Remember that with the



Michigan's First Poultry Club was Organized at Alpine, Kent County.

## Comfort-



With

## COLGATE'S

you always shave with comfort.

It cools and soothes, no matter how tough the beard.

Nor is there any need to rub the lather in with the fingers. Don't do it—it only adds "mussiness" to what may be a genuine pleasure. (We've said this for years—men who use Colgate's are learning to give up the mussy "rubbing in.")

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machine the great essential is plenty of good, hot suds. It is the forcing of suds through the garments which removes the dirt. The clothes should be soaked before washing, preferably over night, but at least a half hour. To insure a good suds dissolve one pound of washing soda in one gallon of hot water, being sure no sediment remains, and add a half cup or a cup of this to each machineful of clothes. The harder the water the more of the solution you need as the soda softens the water.

Dissolved soap must be used. Shave one bar of good laundry soap and dissolve in boiling water. Let it simmer on the back of the stove if necessary. Then add two cups, one pint, of this to each machineful of clothes. Rinse first in water as hot as you can stand, then in cold. The hot water removes the

suds better than cold. If you haven't one, you can buy one for one dollar and it is well worth the money. After the cold rinse proceed as in hand-washing to blue, starch and hang out, hanging colored garments in the shade. With this method no boiling is necessary.

The following methods of setting colors in new goods are given by the extension department of the Michigan Agricultural College. Of course, they should be employed before the garments are washed the first time.

Blues.—One-half cup of vinegar and one tablespoonful of alum to a large pail of water (four or five gallons).

Lavenders.—One tablespoon of sugar of lead to a large pail of water.

Pinks and Blacks.—Two cups of salt to a large pail of water.

## Who Says the Price of Eggs Is Too High?

WHILE ninety-cent eggs are putting wrinkles in the brows of urbanites these wintry days, there are at least four hundred women in Michigan who are not planning a boycott to bring down the prices. These are the members of the twenty-two poultry clubs in the state, organized during the past year by Miss Annabel Campbell, poultry specialist who is sent out from the Michigan Agricultural College. Recognizing that women have charge of the poultry flocks on the majority of farms, the poultry department of the college decided to send out a woman specialist to assist the owners of flocks in their efforts to increase the income derived from their birds.

As a first step in her work Miss Campbell began the organization of poultry clubs, working through the county agricultural agent, the home demonstration agent, or some other person who could be secured to act as local leader in counties where there is

number of eggs sold and used and their value, the meat sold and consumed, the number of eggs set and hatched and the number of chicks in the flock. By means of this the owner of a flock can know positively whether or not the flock pays.

While the clubs aim to place better stock on the farm the first year's work concerns itself largely with utility birds. Later, if the owners desire, these birds may be replaced by pure-breds. There are to be six meetings each year, two months apart, and whenever possible the specialist will be present at these meetings. At all times she furnishes outlines for study, literature and references, and will assist the members in securing new stock whenever they desire. Members are at liberty to ask her advice on building up their special flocks.

The subjects for study the first year are all practical. They include the general health of the flock—sanitation of house and grounds, symptoms of disease, treatment of disease, elimination of mites and lice, incubation and brooding—natural and artificial; marketing—grading and packing of eggs and preparation of flesh for market; study of compounding rations and best types of poultry houses; culling. Every member of the club may have her flock culled, the aim being to give each member sufficient knowledge to enable her to cull her own flock.

A canning demonstration is also planned for the first year. Canning the surplus cockerels and culled hens and pullets seems to offer the best solution of getting rid of these birds. It gives space for the productive fowls, eliminates the cost of feeding them, and lays up a store of meat for the housewife to have on her emergency shelf.

The second year's work is more general. It includes a study of the history of breeds, study of standard, visit to a fair or poultry show so that breeds may be studied and a study of six special breeds selected by members.

The first club formed was in Alpine township, twelve miles from Grand Rapids in Kent county. Nineteen women made up this flourishing club and each one secured from one to three settings of eggs from the Agricultural College. Barred Rocks, Rhode Island Reds and White Leghorns were popular choice. Most of the members have built up their flocks from this start so that this club, which met first with Mrs. Allen, is peculiarly a college club.

In addition to boasting the first club ever formed, Kent county claims the club which is famous for its fine turkeys. This is the Chase Lake Club, near Ada, which was organized in the spring of 1918 by Miss Clara Rogers, which the month's total is entered and returned to the leader. This gives the



A Bird of Merit from the Flock of Mrs. Cramton.

no agent. If a rural club already exists and it seems unwise to start another, the work is often carried on through the existing organization. Each club should have at least ten members, two of whom are to act as president and secretary-treasurer. The president selects the place of meeting, notifies club members of meetings and acts as chairman. The secretary-treasurer performs the usual duties of such office, while the leader receives from the specialists the monthly record blanks, distributes them to members, and at the end of the month makes out a report for the specialist from the filled-in cards returned to her.

These cards are of two sizes, a large one to be hung in a prominent place in the kitchen and furnish a convenient place for jotting down just what the hens do daily to pay for their keep. There is a smaller record card on

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(Continued on page 215).





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**BEST BY TEST**

## Good Roads---Better Schools

By Mary M. Allen

**W**omen would not have dared to mention it before the road bonds carried, but now we confess our main reason for voting "yes" was that we knew that ultimately good roads would lead to centralized rural schools because good roads will eliminate one great objection to the centralized school—namely, the transportation of children to and from school.

Julius Bernard Arp, in his book on "The Consolidated School," says: "In a land of freedom which boasts of equal opportunity for all it is unthinkable that any pronounced and abiding privileges shall be enjoyed by one class of citizens and denied to another class." Yet we all know that the educational advantages of the urban child has in no way kept pace with that of the city child.

There are many reasons for this. Our forefathers coming into the wilderness first built their house and the next consideration was the school house. We boasted of being the first nation to place a school within the reach of every boy and girl. While the pioneer's school was not conducted on psychological principles nor the buildings erected with a regard to the laws of sanitation, many men and women were strengthened, both physically and mentally, for the battles of life in that school of the pioneer, and a certain national pride and sentiment clusters about the "little red school house." Now we must come into the knowledge that the one-room rural school has outlived its usefulness. The constant addition of branches to the school curriculum has made it impossible to accomplish the work required in the time given to do it. No matter what training you give a teacher, she cannot instruct the twenty or thirty classes of the rural school and do it properly in the time she has. Only twelve in every hundred of the pupils who enter the rural schools in Michigan ever finish high school. The present day one-room school gives no time for vocational training and that is the chief reason why so few of the rural children finish school.

In Minnesota and Ohio where centralization has been established for several years, results show without exception, double the number of pupils completing the course than under the old one-room system.

Those who oppose the centralization plan must not be led into the mistaken belief that the work of the centralized school will be laid out along the plan of the city school and that pupils will be educated as in the past, away from the farm. This is not the intention. Wherever the centralized school exists it is the center of rural life. Centralization is based on the idea that the chief aim of education is to best adjust the individual to his environment. All technical subjects are re-directed and made more applicable to farm life. By introducing agriculture, manual training, domestic science and art, and household management, farm life is made attractive, children stay in school longer and the city has no attractions for them. Nature study, citizenship, hygiene, arithmetic and history are vitalized and not committed to memory from bone-dry books.

We might write pages on the advantages of centralization. We wish this thing might be presented to the men and women of the farms in all its detail. Both state and national bulletins on the subject are available.

We find that objections to centralization now centers about two points—namely, opposition to increase of expense to the taxpayers, and difficulties of transportation of pupils.

Dr. Dewey, an eminent Chicago psychologist, once said, "What the best

and wisest parent wants for his own child that much the community wants for all its children. Any other ideal for our schools destroys our democracy."

Painted farm buildings cost more than unpainted, grain binders cost more than sickles, sewing machines cost more than needles, automobiles cost more than the old ox team and wagon; yet we do not criticize the use of the grain binder because it reduces the cost of production of a bushel of wheat. The initial cost of a centralized school building and equipment is greater than that of the one-room school, but the annual cost per pupil is less in the centralized school and the benefits are increased by one thousand per cent. Anything that tends to increase taxes meets with determined opposition. In olden times taxes meant a tribute paid to rulers and other privileged classes by masses for which the payer received no benefits. Taxes cease to be a burden when the benefits accruing are proportionate to the amount paid. Administration of government and school affairs must be efficient. It cost the United States \$500,000,000 for elementary schools in 1914. In the same year, we paid \$1,200,000,000 for cigars, cigarettes and tobacco. Rural school taxes under the present system are a burden in communities where cash returns from land is low and where per capita wealth is low. Children in these districts are deprived of even a good one-room school. The centralization plan eliminates this by exchanging a local system of school support for a state-wide system. State aid is given and later on in the course, federal aid to communities meeting only reasonable requirements for an efficient school so that in the end in communities where school taxes are most burdensome under the old system they are reduced under the centralization plan.

The second objection is difficulty in the transportation of pupils to and from school. Good roads have eliminated this objection. Routes are laid out so no child shall ride more than six miles. Drivers are chosen with care. No unbecoming language or behavior on the part of children in transit or drivers are permitted. In severe weather buses are artificially heated, children arrive at school fresh and ready for work, and arrive on time.

Within the next few years Michigan men and women of the farms will have an opportunity to accept or reject centralization. Centralization is best from all viewpoints. It has been tried out. The question is whether you consider your boy or girl worthy of the educational advantages that his city cousin has.

### TIMELY HINTS ON HEATING.

**C**oal shortage and health make special precautions necessary at this time. The shortage of coal and its high price have only been accentuated by the great coal strike. Economy in the use of coal is a necessity, not only on account of prices, but on account of a limited supply.

You may feel that you have economized in the use of coal just as much as you well can and still keep warm and comfortable. Very likely you have; but here are some suggestions; which if you haven't used them, will enable you to be more comfortable and economize still further in the use of fuel.

With humidified air in your room, you can be more comfortable with a deficiency in humidity. Dry air is not only an insulation against electricity, but also against heat. Air needs moisture to transfer the heat along from

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one particle to another, and for the air to be an efficient distributor of heat it must have a sufficient amount of humidity. A room properly humidified requires much less fuel to maintain its temperature than a dry room.

A room heated to 65o. with moist air is more comfortable than a room heated with dry air to a temperature of 70o. The reason is that air which is too dry interferes with the normal radiation of the body. Many people find it necessary to heat their rooms to 75o or 80o simply because the humidity of the air is considerably below what it should be.

When the air in a room is so dry that it warps books and the furniture begins to dry out, it is entirely too dry for the health of the occupants.

If your heating system does not provide means for maintaining proper humidity of the air in the room, it is necessary to use pans of water in order to evaporate sufficient moisture. Wicks or cloths dropped into the pans and extending over the edge or over a cross-piece on the pan accelerate the evaporation. It takes a little time and trouble to keep the pans filled, but freedom from colds and generally better health more than repay the effort. The discomfort caused by excessively dry air lowers both the mental and physical efficiency of a person. For the sake of comfort, no less than economy of fuel, the air in the room must contain sufficient moisture.

If your heating system provides a means of humidifying the air at the same time it heats it, it will not be necessary to place pans of water with wicks in various parts of the house.

In most warm air furnaces there is a means for humidifying the air, and the water pan must be kept filled so that at no time it will become dry.

With furnaces that heat by the circulation of air currents, as some of the pipeless furnaces do, it is easy to maintain an even degree of humidity as well as of heat in every part of the house from one central register.

With the winter just before us it is well to keep these things in mind and live scrupulously up to them, not only for the saving of fuel, which is necessary in view of the serious fuel situation, but as a protection against colds, influenza, and other illnesses which are likely to follow if the air is not properly heated and humidified.

#### EGGS TOO HIGH?

(Continued from page 213).

D. Everett Cramton was chosen first president.

This club, also, sent to the college twenty-eight settings of eggs, mostly Barred Rocks, and to quote the president, began to find out how little they knew about chickens. They had a meeting every month the first year and asked in everyone they thought would be interested in the work. During the late summer they began to cull the different flocks and have been at that work ever since.

In 1919 Mrs. Beech was made president, and there have been eight meetings with a membership of twelve. They again bought eggs from the college. Feeling the need of better organization, they are planning now to use record cards and hope to cooperate in selling surplus stock and eggs and standardize flocks as far as possible.

This club has specialized in raising turkeys and claims the record of producing the finest turkeys raised in the state. The bird illustrated, which is from Mrs. Cramton's flock, certainly looks as though the 1919 Christmas price for turkeys was justified.

Miss Campbell, the specialist, is ready to assist any community in the state, even if there is no county agricultural agent or home demonstration agent. She may be reached by writing her at East Lansing, Michigan, Extension Department, Poultry Division.

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Bread, biscuits, dumplings, rolls, cakes, cookies, pies—in fact everything baked in the home from LILY WHITE FLOUR will taste so good, look so good and actually be so good that they will be a delight to every member of the family, and a real treat to visitors.

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# EMPIRE MILKING MACHINES

## The Feed Situation

(Continued from page 189).

ed, yet for the spring and summer months the effect will be more of a bullish character.

Many cottonseed feed interests claim that fertilizer and commercial mixed feed manufacturers will continue to buy in sufficient volume to maintain prices. It is known that the demand from these interests is enormous, but they, too, are making every effort to depress values. And the commercial demand is largely for the cheaper grades not desired by feeders. For the next month, at least, further depression of cottonseed feed prices is the prospect and doubtless will materialize unless severe storms are witnessed in the west. Production of cottonseed cake and meal thus far on the crop has been considerably above a year ago.

In the linseed feed market, restricted operations of plants by a lack of flaxseed has been a price sustaining influence. Production of flaxseed in the United States in 1919 amounted to only 8,919,000 bushels, about 5,000,000 bushels under the average for recent years and one of the smallest yields on record, and with serious scarcity of cars, the present extreme shortage of the product is not surprising. There is hope, however, that Argentine, which is credited with a crop of 43,937,500 bushels, one of the largest in history for that country, will be a heavy exporter to the United States and make up the domestic deficit. But the United Kingdom will be a heavy importer of Argentine flaxseed, and there is doubt as to the prospects of a movement to this country. A free movement of flaxseed to the United States would bear values and force linseed feed prices down. The current market for linseed feed is around \$82 a ton, for carlots at Minneapolis, and about \$2.00 to \$3.00 a ton more in the feeding area to the east. Feed for spot shipment is wanted, but there is an extreme lack of demand for thirty to sixty-day delivery. Evidence of the easy position of the market is the fact that linseed meal for March shipment is available at a discount of about \$5.00 a ton under the spot figure, around \$77.50 to \$78 a ton. Practically no export business is being done in the linseed cake market, and values are down to \$72 a ton, basis seaboard points. Absence of foreign buying is expected to depress prices for meal in domestic channels.

First down, then up, with the price movements in both directions very narrow and unimportant, describes the action of bran markets. The situation still appears bearish and as the season progresses the tendency of values should be downward. For a time in the forepart of January values were down to around \$39 a ton for carlots in the spring and winter wheat belt, but current quotations show some strengthening, the general market being around \$41 to \$42 a ton in Minneapolis, \$42.50 to \$43 in Chicago, \$43 for soft winter bran in St. Louis, and around \$40 to \$40.50 a ton for carlots, in sacks, in Kansas City. Compared with a month ago the market is about \$1.00 a ton lower. Millers generally are quite eager to book for forward delivery at current price levels, and offerings for February and March shipment are fairly liberal. But the extensive handlers of feed are demanding concessions for deferred shipment.

Car shortage in the west, making mill shipments uncertain, is a bullish factor and recently has forced values up slightly. But this factor is merely temporary. Demand from the country, including Michigan points, is light on the whole, and stocks in interior jobbers' hands still are generally large. Extreme dullness has permeated the shorts market for some weeks and prices are easy, around \$52 a ton for

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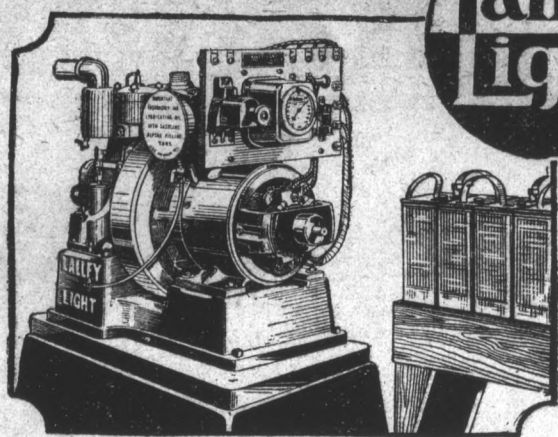
## THE FEED SITUATION.

(Continued from page 187).  
gray shorts or flour middlings in Minneapolis, with brown shorts at \$44. Gray shorts in the winter wheat belt are quoted at \$45 to \$47 a ton, basis Kansas City, and up to \$50 in St. Louis and \$53 in Chicago. Approach of the spring hog farrowing season should stimulate demand for shorts the latter part of this month. Unless values recede soon, which is dependent to a considerable extent on the action of carlots of corn, purchases for spring farrowing may be advisable. But there is no need for haste in accumulating requirements of the offal. Mill stocks are believed to be large, and jobbing interests have accumulated considerable shorts.

While markets of the east are receiving comparatively small supplies of hay, due, of course, to short production of clover and other tame hay, the west is loading alfalfa and other varieties in record volume. Kansas City, the largest hay market, has been receiving approximately four hundred cars daily for some time, more than half of which is made up of alfalfa. In spite of the enormous movement of alfalfa, prices, particularly on the grades desired by dairymen, display unusual strength, with sufficient orders from the east, north and south to easily absorb offerings. Dairymen of the east, including many in Michigan, are important buyers, substituting this hay for clover, of which there is an acute shortage. A somewhat easier tone, however, is evident in brown grades, some offerings of which are at a discount of as much as \$14 a ton under choice, the latter selling at a top of \$38 a ton in Kansas City. To the feeders other than dairymen, brown alfalfa is selling at bargain prices and is a much more attractive purchase than the fancier grades demanded largely because of color. It is improbable that the better quality alfalfa will recede to any extent, as the offerings of these grades make up a rather small percentage of the receipts. A continued heavy movement is in prospect, weather conditions having been excellent for loading.

January failed to witness the long expected heavy corn movement to the terminal markets, this being considered by many as one of the most important influences in the maintenance of values for feedstuffs during the month. But the grain trade is cautioning its customers to "watch out for February." There is much corn to move, and as soon as cars are available in sufficient volume, a heavy movement will materialize. February usually witnesses a heavy run of corn, if not the peak of loadings, and sharp price declines usually occur. Carlots of corn at this writing are bringing around \$1.50 a bushel. Lower values for the leading coarse grain will depress oats, the sorghum grains, kafir and milo, and other grains. Also, the bearish pressure will be extended to cottonseed and linseed cake and meal, millfeeds and mixed feeds. But the coarse grain is expected to turn up in March or April, any declines this month being looked upon as temporary. Severe weather the remainder of the winter in the west, might offset the bearishness which may come from easier corn prices, but this is rather improbable.

An influence in feed and all other markets which should be watched and considered is the advancing interest rates on money and the efforts being made by the Federal Reserve Board and the Federal Reserve Banks to reduce loans. In the past year these banks made a huge increase in their loans. Their reserves have recently been near the legal minimum. Now, they are in a position to lend less money and desire, in fact, to cut down the volume of loans they are carrying. The effect of this on feed markets is to encourage selling and to discourage holding for higher prices.



Lalley Light is a complete unit—engine and generator—with 16 cell storage battery. It supplies ample electricity for lights, water pump, washing machine, sweeper, cream separator, fanning mill, iron, etc.

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They know this because Lalley Light has stood the test of owner experience for ten years.

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Right now is the best time to begin enjoying Lalley electricity. You have the time now to make this installation.

You can begin enjoying Lalley benefits and comforts immediately and be ready for the savings in time and labor that Lalley Light will give you when the rush of farm work comes.

Furthermore, delay may mean that you will have to pay an increased price for this essential money-making farm equipment.

**Do not delay.** See your Lalley Light dealer today, or ask him to call upon you.

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# LALLEY LIGHT

THE ELECTRIC LIGHT AND POWER FOR EVERY FARM

## Don't Put Ear Corn in Your Silos —save it to sell or feed

You can have as good silage with as good or better feeding value, and save from 300 to 1500 bushels of ear corn per silo to put in your crib. It is being done by hundreds of farmers who have looked into the question of STOVER SILAGE—that is, silage without the ear corn. Read the words of farmers who are doing it; then think what a vast amount of extra money it will save you.

### Henry Schnadt Saved 1500 Bushels

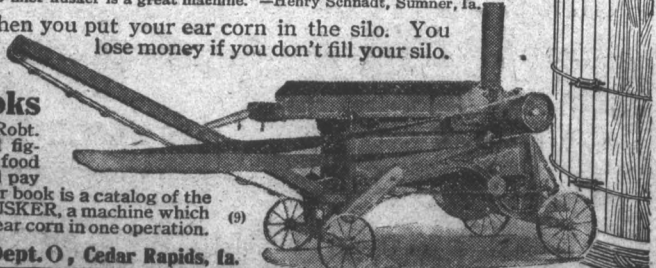
"I saved 1500 bushels of good corn when I filled my silos by taking the ear corn off as the silage went into the silo. I find Stover Silage equal to, if not better, in feeding value to the corn silage. Your silo-filler-husker is a great machine."—Henry Schnadt, Sumner, Ia.

You lose money fast when you put your ear corn in the silo. You lose money if you don't fill your silo.

### Write Today for these 2 Books

"STOVER SILAGE" by Robt. T. Jenney, gives facts and figures, analyses, comparative food values, etc. A book it will pay you well to read. The other book is a catalog of the JENNEY SILO-FILLER-HUSKER, a machine which fills your silo and husks the ear corn in one operation.

HALL MFG. CO., Dept. O, Cedar Rapids, Ia.



## SELDOM SEE

a big knee like this, but your horse may have a bunch or bruise on his ankle, hock, stifle, knee or throat.

## ABSORBINE

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

will clean it off without laying up the horse. No blister, no hair gone. Concentrated—only a few drops required at an application. \$2.50 per bottle delivered. Describe your case for special instructions, and Book 8 R free. ABSORBINE, JR., the antiseptic liniment for man and horse, reduces Painful Swellings, Enlarged Glands, Wens, Bruises, Varicose Veins, itchy Pain and Inflammation. Price \$1.25 a bottle at druggists or delivered. Liberal trial bottle postpaid for 10c. W.F. YOUNG, INC., 288 Temple St., Springfield, Mass.

## Lump Jaw

The farmer's old reliable treatment for Lump Jaw in cattle.

### Fleming's Actinoform

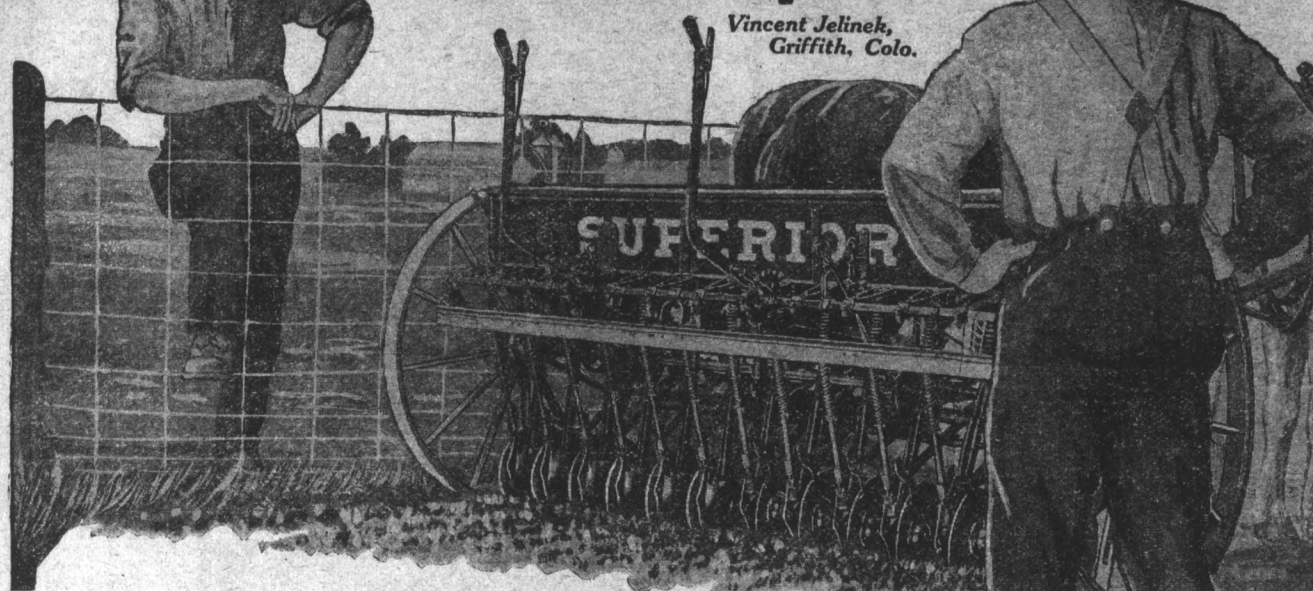
Sold for \$2.00 (war tax paid) a bottle under a positive guarantee since 1896—your money refunded if it fails. Write today for FLEMING'S VEST-POCKET VETERINARY ADVISER. A book of 197 pages and 67 illustrations. It is FREE. FLEMING BROS., Chemists, 252 Union Stock Yards, Chicago.



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The same strong, dependable construction marks all Superior Drills, whether for use with team or tractor. They sow your seed carefully, thoroughly, and economically. No spilling on top of ground, no uneven planting depths, no half-way covering. *The Superior sows absolutely right—for best growth and biggest profit!*

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INCORPORATED  
Springfield Ohio

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Bulls in service are, Black Monarch 3rd, Grand Champion Bull, Michigan State Fair 1914, 1915, 1916.

Imp. Edgar of Dalmeny, Grand Champion Bull, Michigan State Fair 1918.

President Wilson 4th, Grand Champion Bull, Michigan State Fair, 1919.

We offer for sale 6 choice young bulls by Black Monarch 3rd.

Edgars Calves, are as yet too young to offer for sale but are a promising lot of calves, and are going fast.

A visit will interest you, write for particulars to

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### WOODCOTE AUGUS

1919 Winnings to Date			
Mich. State Fair	12 1sts	2 cham.	1 gd. ch.
N. Y.	9 1sts	2 "	1 "
West Mich.	11 1sts	2 "	2 "
Saginaw	10 1sts	4 "	2 "
International—2 firsts including the undefeated calf herd for 1919			
Every Animal Bred At			
WOODCOTE STOCK FARM, Ionia, Mich.			

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

For sale at reasonable prices, several Aberdeen Angus bull calves and yearling bulls sired by Lord Ida 2nd No. 248330. Lang Bros., Davison, Mich.

For Sale Pure Breed Aberdeen Angus Cattle, Males and Female of different ages. Andrew Eitel, Vermontville, Mich.

## GUERNSEYS



First Prizes and Gold Medals were awarded to Guernsey milk and Guernsey cream at the 1919 National Dairy Show.

Show. Guernsey products are consistent winners at local as well as national contests. Write for our free booklets. The American Guernsey Cattle Club, Box 138, Peterboro, N. H.



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

## GUERNSEY BULLS FOR SALE

Atta Boy of Maple Crest born April 1919. Sire Imp. Spotswood Sequel A. R. 19 A. R. daughters Dam imp. Albinia price \$175.00. Pride's May King of Avondale born June 1919 Sire Nora's May King of Bailey Falls dam Queens Pride of Harriton A. R. price \$150.00.

Avondale Farms, Wayne, Mich.

## Registered Guernseys

A nicely marked four months old bull calf. F. E. ROBSON, Room 307, M. C. R. Depot Building, Detroit, Michigan.

### REG. GUERNSEY'S

The best of breeding—at prices you will pay—for good bulls—and bull calves—we can't beat the best. J. W. WILLIAMS, No. Adams, Mich.

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

Reg. Guernsey Bull calf 4 mo. old for \$75, delivered. Sire Deasie's May Rose of Allenwood 33278. His 5 nearest dams average 75 lbs. fat, dam of calf imp. E. A. BLACK, R. 3, Howard City, Mich.

For Sale Yearling Guernsey Bull for \$100. No better animal in Michigan at this price. LOREN DYGERT, R. F. D. No. 3, Alto, Mich.

3 Registered Guernsey bull calves, 1 to 10 months old. Priced to sell. GEO. W. REEVES, R. R. No. 7, Grand Rapids, Mich.

Guernsey Bull Calf, Lined of Walter Phipps Farm. Born May 2-19 9. \$100.00 f.o.b. Novi or Birmingham. Walter Phipps Farm, 80 Alfred St. Detroit, Mich.

For Sale Registered Guernsey Bull calves, sired by Starlight of Bonayre 33061, undefeated bull, yet cheap. John Ebels, R. 2, Holland, Mich.

## Holstein-Friesian Cattle

Herd Headed by  
Segis Pontiac De Nijlander

A 32-lb. grandson of Michigan's great 35-lb. champion. His dam, Oak Valley Korndyke Beets Segis Fan, 32.06. Is also a Michigan prize winner. Write for calf list. Wah-be-me-me Farms, White Pigeon, Mich.

## The Traverse Herd

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

TRAVERSE CITY STATE HOSPITAL  
Traverse City, Mich.

### GRADE UP YOUR HERD

with a young son of Spring Farm Pontiac Cornucopia 18th, whose five nearest dams have an average record of 56.22 pounds of butter in seven days. Have several priced to sell. JOSEPH H. BREWER, Grand Rapids, Michigan

### PRUNING AND SPRAYING MAKES OLD ORCHARD PAY.

**G**OOD management made an old unproductive orchard produce one hundred and sixty bushels of good saleable apples the past season on the farm of C. S. Osburn. This orchard was twenty-eight years old, badly infested and infected with all of the common orchard insect pests and diseases, and for years had not produced a bushel of perfect apples. Last season after pruning, the orchard was sprayed five times as follows: Before budding, at budding, at petal fall, two weeks after petal fall, and in July.

At picking time the apples were thoroughly inspected and actual counts were made. Worm control was ninety-five per cent effective. Scab and scale were almost completely controlled. A very few apples were unsaleable because of blotch. The investment of labor of pruning, spray material, and cost of application was seventy-five cents per tree.

### BETTER FARM CROPS.

(Continued from page 191).

Seeds," Professor H. D. Hughes stated that it had never been the policy of the Iowa Agronomy Department or Experiment Association to participate in the inspection and sale of seed. He further stated that their method was "To distribute to members of the association enough pure seed to sow one acre to test against own varieties. The individual being then left to draw his conclusions and to increase and distribute seed as he desires. The association cooperate in gathering data for publication on these tests."

This method started some animated discussion which led to remarks on the relation of seed companies to Crop Improvement Associations. Parker, Kansas; Champlin, South Dakota; Moore, Wisconsin; Bull, Minnesota; Nicolson, Michigan, gave their views which, boiled down, indicated a general belief in the necessity for follow-up work by associations after seed had been first distributed; and a willingness to cooperate with reliable seed companies who wish to assist in the distribution of approved varieties.

Professor Moore presented a constitution for a National Crop Improvement Association and called for a vote on the desirability of forming such an organization it was unanimously voted to form such an organization with the amendment that the name be "The International Crop Improvement Association," so the Crop and Seed Improvement Associations of the provinces of Canada could also affiliate.

After some discussion C. P. Bull, of Minnesota, moved that the International Crop Improvement Association consist of a federation of State Crop and Seed Improvement Associations, which should each pay an annual fee of five dollars to the International Association. Motion was seconded and carried.

Manley Champlin, of South Dakota, moved that the officers of the International Crop Improvement Association consist of a president, three vice-presidents, and a secretary-treasurer; these officials to constitute an executive committee empowered to draw up a constitution on the above general principles workable for one year; this constitution to be submitted for final acceptance at the next annual meeting of the organization. Motion was seconded and carried unanimously.





## LIVE STOCK SHIPPERS MEET AT REMUS.

WHILE addressing the members of the Remus Live Stock Shipping Association at its annual meeting Saturday, January 17, E. E. Compson, president of the local association and manager of the Michigan State Live Stock Association, asserted that well within the life of the older members of the association delivery of live stock by truck train from Remus to Detroit stock yards, would be a certainty. Elaborating upon the subject he told that already the use of the truck train from points near Detroit has resulted in the setting apart of a portion of the yards, the building of special chutes and a big driveway for the truck to maneuver in while at the yards. As at present constituted these trains are built to accommodate twelve head of cattle on the truck itself, a trailer to accommodate twelve head of swine and another trailer loaded with calves or other stock.

It seems doubtful that if Mr. Compson had made such an assertion five short years ago he could not have continued for the signs of disbelief, but Saturday his hearers did not hoot or yell, rather they accepted it as a grim reality. And it is. Five, ten years will see the main highways in Michigan completed and connected up in great



E. E. Compson, Manager of the Michigan State Live Stock Association.

paved ways capable of standing the battering of truck and trailer, as well as touring car, and already companies are forming throughout the state to care for freight of all kinds. But many had come to the meeting, not to look toward transportation problems of the future, but to listen to the report of the past year's business.

The association was formed April 2, 1918. Last year it shipped thirty-seven cars of stock as follows: Cattle 303 head; calves 625; swine 1,345; sheep 817; goats one. A total of 3,091 head. The total weight of which was 668,267 pounds. The farmers received for this stock \$82,910.16 after all expenses were paid. The cost of selling, including freight, averaged for the year sixty-eight and one-tenth cents per hundred weight. The average shrinkage between weights at Remus and those at the stock yards was 3.8 per cent.

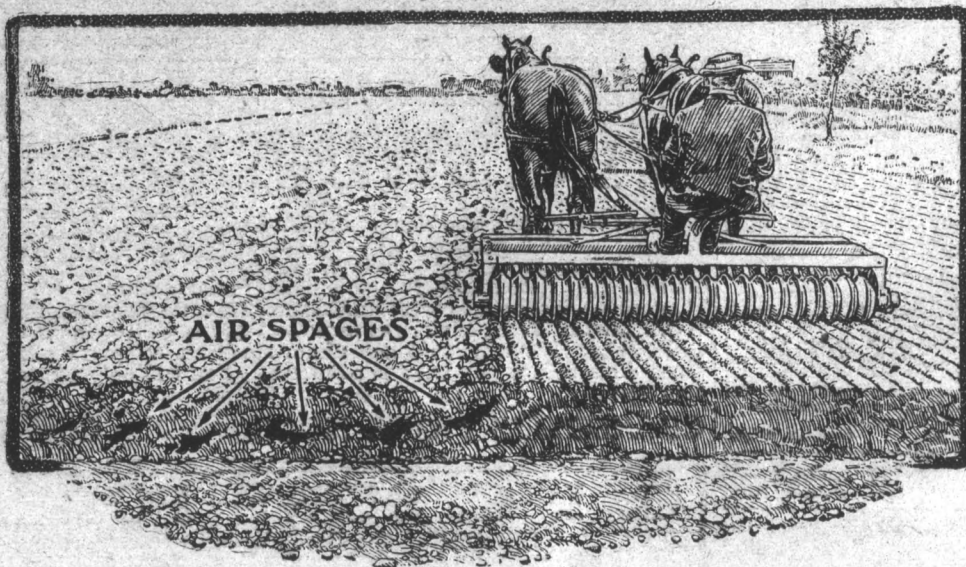
Whose goat it was we didn't learn, but presume it to have been that of some stock buyer of the past, for now the farmers are the only shippers at Remus and during the past year their membership has increased to 256 and stock has been shipped by them from Altona, Mecosta, Rodney, Blanchard, Weldman and Millbrook. Through their efforts the Pere Marquette railway was induced to build new stock yards at Remus and these are today claimed to be the finest between Petoskey and Detroit. At the meeting Saturday the members voted to roof one of the pens at their own expense so that in foul weather there will be less danger of foundering pigs and young calves by

(Continued on page 221).

# CULTI-PACKER

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It Cultivates — It Packs



## More Crops With Less Labor

The remarkable increase made in crops by use of the Culti-Packer is simply due to the better tilth of the soil produced by this tool without any extra labor.

Ten minutes' examination of the soil conditions in a field where a Culti-Packer is used will show you beyond doubt that it must yield a better crop than one fitted by ordinary methods.

The two sets of Culti-Packer wheels crush every lump in cloddy soil, making the entire bed available for feeding roots.

They firm out the large air spaces in which roots dry out and die. They settle the

loose ashy soils into better shape for holding moisture.

They pack moist earth around stubble or manure which has been plowed under, thus promoting its quick decay.

The Culti-Packer does these things at one operation in less time and with less work than you now use. See the Culti-Packer at your dealer's—arrange to try it—we leave it to you to judge its worth on your farm.

Culti-Packers For Sale By Your Local Dealer

The Dunham Company, Berea, Suburb of Cleveland Ohio

## Facts in BLACK & WHITE

### Tests Prove the Value of a Purebred Holstein Sire

Reports of tests covering a period since 1909 and published by the Iowa Agricultural Experiment Station, state that the average of records made by first generation heifers by a purebred Holstein Sire show an increase of 71 per cent milk and 42 per cent fat at an average age of three and one-half years over the record of their scrub dams at an average age of six years. It has long been a proven fact that the introduction of a purebred Holstein bull to a herd of common cows will substantially increase production, and profits.

Read in our booklets just why there's big money in the big Black-and-White Cattle.

THE HOLSTEIN-FRIESIAN ASSOCIATION  
164 Hudson Street  
Brattleboro, Vermont

### HOLSTEINS OF QUALITY

A few richly bred bull calves for sale from dams with records from 20 to 25 lbs. in 7 da. and from 33 lbs. sire. Shipped to any reliable party on approval. Write me price you wish to pay, and I will describe the best bull that I have for the money.  
E. H. HARDY, Rochester, Mich.

## "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.

### HIGH CLASS HOLSTEIN BULLS AT FARMERS' PRICES

**King Pontiac Segis Mo'night**  
Born November 6, 1918. Son of a 33-pound bull out of 15.4 pound dam, with 13,754 pounds of milk in a year. Price \$250.  
**King Klondyke Fenecia DeKol**  
Born April 19, 1919. Nice straight, well marked son of a 21-lb. dam and 26-lb. bull. Price \$175.  
**Yankee Burke Prince**  
Born July 2, 1919. Mostly dark. Out of 26-lb. bull and A. R. O. dam. Price \$150.  
Also young bull ready for service, out of untested dam and good sire. Price \$150.  
Young bull from untested dam. Price \$75.

#### Terms If Desired

Hard tubercular tested. Registration papers furnished with each animal.

Hillcrest Farm, Ortonville, Mich., Route 1  
or JOHN P. HEHL  
181 Griswold Street DETROIT

\$100 a year get 2 heifers 19½ lb. 2 yr. sister: 27 lb. sire bred to 27 lb. son of Maple crest Kora, Bang. Only 1 bull calf left.  
M. L. Mc. Laulin, Redford, Mich.

## GET A BETTER BULL WINNWOOD HERD

BREEDERS OF

Registered Holstein-Friesian Cattle

We have bull calves ready for service and a new crop of baby bulls coming all of Maplecrest breeding. We have one of the largest pure bred herds in Michigan and this will be the last chance to buy sons of Flint Maplecrest Boy, cheap. For his daughters start to freshen this winter and they will all go on yearly tests. We own them all and will develop them. Don't wait, a bankable note is the same as cash to us and our price will be right. Tell us your wants.

JOHN H. WINN, (Inc.)

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## A Grand Opportunity

We have for sale one more son (ready for heavy service) of the famous sire "Alcartra Pontiac Butter Boy" (136933) whose daughters sold so well at the Lansing sale, one selling for \$2000 and one a ten months old calf for \$500.

The dam is nearly ready to freshen and we expect her to materially increase her present record of 18.6.

Write for pedigree.

SINDLINGER BROS.

Lake Odessa,

Michigan

### LONG DISTANCE

Holstein calves of either sex. Can spare a nicely marked heifer backed by seven dams that average above 1200 lbs. butter and 2400 lbs. milk in one year. Choice Duroc Sows. A. FLEMING, Lake, Mich.



## King of the Pontiacs and King Segis

Bull calf born Dec. 10th. 1919. Sire: from son of King of the Pontiac whose dam is 33 lb. daughter of King Segis. Sire's dam Bucca Lassie Jean Butter 33.05 Milk 721.

Dam, Fine large cow now on test making 23 lbs. Price \$150.00 if sold at once.

A. W. COPLAND, Birmingham, Mich.  
Herd under state and federal supervision.

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

**BUY** our next herd sire from Lake Side Dairy. We have a 25-lb. son and a 24-lb. son sired by our 32-lb. bull that will improve your herd. Write LAKE SIDE DAIRY, Lake Odessa, Mich.

## Seven Yearling Heifers

FOR SALE—These heifers are of King Segis and Pontiac Kordyke breeding. All will be bred this month to "The Milk and Butter Champion", the only bull in the world whose dam is a world's record milk cow and whose sire's dam is a world's record butter cow, and both are yearly records. A good chance to get started right. L. E. CONNELL, Fayette, Ohio.

**CLUNY STOCK FARM**  
A Semi-Official Bred Bull to Head  
**Your Herd**  
Maplecrest Application Pontiac No. 132652, heads  
**Our Herd**  
His dam's record is 1344.3 lbs. butter, 23,421.2 lbs. milk in 365 days, and 35,103 lbs. butter and 515.6 lbs. milk in 7 days.  
One of his sons from our good record dams will carry these great blood lines into **Your Herd**.  
For pedigrees and prices write to  
**R. BRUCE McPHERSON, Howell, Mich.**

**Reg. Holstein** Bull, nicely marked, born Dec. 1, 1919, choice breeding, \$60 Reg. and Del. J. Robert Hicks, St. Johns, Mich.

**REGISTERED** Holstein bulls sired by King Zerna Balcarra Pontiac, son of the \$50,000 bull; some from good A. R. O. cows. C. H. Giddings, Gobleville, Mich.

**FOR SALE** Four fine registered Holstein cows from 2 to 6 years old due to freshen in six weeks. Price \$100. E. A. Lundberg, Dimondale, Mich.

## MICHIGAN JERSEYS

Michigan is an ideal place for the raising of Jersey Cattle and there are no better cattle for dairying than Jerseys.

Jerseys mature early, live long, produce persistently, give the greatest amount of butter-fat obtainable from every pound of feed. They are hardy and vigorous, always on the job and the greatest mortgage-lifters that ever entered a barn.

Michigan should have more Jerseys and the Jersey breeders of the state are anxious to cooperate with anyone who is interested in successful dairy farming.

### MICHIGAN JERSEY CATTLE CLUB

#### The Wildwood Farm

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

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

Maple Lane R. of M. Jersey Herd. For sale Blue Belle's Premier son of Sophie's Premier that sold for \$1750 this fall. Bulls and bull calves, R. of M. Red cockerels. IRWIN FOX, R. 3, Allegan, Mich.

**FOR SALE** Jersey Bulls ready for service. R. of M. ancestors. Raleigh-St. Lambert breeding. Jerseys stand for economy. Waterman & Waterman, Packard Rd. Ann Arbor, Mich.

**Registered** Jersey bulls ready for service. Some bred heifers, best of breeding. CLARENCE BRISTOL, Fenton, Mich.


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

Bulls ready for service from our herd bull Marguerite's Premier, grandson of Port's 99th of Good Farm, and cows now on test for R. of M. Smith & Parker, Howell, Mich.

## HARWOOD HEREFORDS

Young stock both sexes for sale. "Keep On 508019" heads the herd. Write us your wants. Visitors welcome.

**JAY HARWOOD, Ionia, Mich.**  
Farm six miles south of Ionia.



### The Bell Cow for Profit

Jersey Cows don't eat merely to live, but to produce the richest quality of milk from the smallest amount of feed. They are the money-makers. Any breeder will tell you that a dollar's worth of feed goes farther and yields a greater return when fed to a Jersey. Jersey Milk averages 5.37% butterfat. Jersey Milk, Jersey butter and Jersey cheese bring the biggest prices on the market.

# JERSEYS

Breeders will tell you that the Jersey is the Pride-Prize-Profit breed. Let us tell you why the Jersey is the investment cow! Write for free literature about Jerseys.

**THE AMERICAN JERSEY CATTLE CLUB**  
322-M West 23rd Street New York, N. Y.  
An Institution for the benefit of every Jersey owner

## THE FAMOUS O. I. C. SWINE

We have the undefeated Herd of the World. Winning premier breeder and exhibitor at every fair shown in 1919-1918-1917, including the following state fairs—Ohio, Michigan, Indiana, Illinois, Missouri, Kentucky, Tennessee, Oklahoma, New York, Alabama, Tri-state fair Memphis, and the National O. I. C. twice. Stock of all ages for sale. Registered free in the O. I. C. association. Order now. We will ship any of our stock on approval allow you to keep three days before you have to pay for it. You will be your own judge on your own farm.

**CRANDELL'S PRIZE HOGS, Cass City, Mich.**

## O. I. C. SOWS FOR SALE

One of the Best Herds in Michigan  
Spring gilts and fall yearlings bred for March, April and May litters. I ship C. O. D., pay express and register in buyer's name. If you want a BIG TYPE sow, guaranteed right in every way, write me.  
**J. CARL JEWETT, R. 5, Mason, Michigan.**

## HEREFORDS

3 Prince Donald, 3 Farmer and one Polled bulls from 7 to 13 months old, for sale.

**ALLEN BROS. PAW PAW, MICHIGAN**

**Herefords** Special low price on the following for a short time. One four year old cow, due in spring. Two 2 year olds with calves by side. One yearling heifer. Three bull calves, about 9 months old, one polled, two horned, all well marked and good dark color.  
**COLE & GARDNER, Hudson, Mich.**

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

**Hereford Herd Headers** only the upper crust retained, undesirables unsexed, not the largest herd, but few as good. Come and see. Farm adjoins town. E. J. Taylor, Fremont, Mich.

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

**For Sale** Shorthorns of Quality Scotch and Scotch Topped descendants of Archers Hope, Avondale, Max Walton Sulton and White Hall Sulton. Model Type, by the Oscola Co. Shorthorn Breeders Ass. John Schmidt, Sec. Reed City, Mich.

## BIDWELL SHORTHORNS

Registered bulls, cows and heifers. Good Scotch and Scotch-Topped for sale. In prime condition. Modern sanitary equipment. Herd under state and federal supervision. 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.

**Richland Stock Farms**  
Home of the Michigan Champions.  
Shorthorn Sires in Service:

IMP. Lorne, IMP. Newton Champion, Sterling Supreme. Why not buy a young bull to head your herd that carries the blood that is making Shorthorn History. Only a few real headers left. Write your wants.  
**C. H. PRESCOTT & SONS, Tawas City, Mich.**

**Scotch Shorthorns** Imp. Royal Bruce heads a select herd of females consisting of the Rosewood, Lovely Orangeblossom and Roan Lady and several other good females. Two bulls ready for service for sale also a few females.  
**CARR BROS. & CO., Bad Axe, Mich., Address**  
Norman Car, Secretary.

**MILKING SHORTHORNS** Clay bred bull calves. Davidson and Hall, Tecumseh, Mich.

**Branch County Farm** breeders of American Polled Shorthorns. Herd headed by Grand Champion bull, Sultan's Standard, son of Sultan Creed. For sale choice young bulls & heifers priced to sell. Address G. E. Burdick, Mgr., Coldwater, Mich.

**MEADOW HILLS** Shorthorns. Herd headed by \$11 ver King, full brother of Lavender Sultan. Purdue University's great sire. For sale females of all ages, a few young bulls. Geo. D. Doster, Doster, Mich.

**Shorthorns** Good Scotch bred bulls, cows and heifers priced right.  
**W. B. McQUILLAN, R. 7, Howell, Mich.**

**Milking** Shorthorns of best Bates breeding. Nothing for sale at present.  
**E. H. KURTZ, Mason, Mich.**

**Central** Mich. Shorthorn Breeders Ass. offer 40 bulls, 38 females, write for new list.  
**OSCAR SKINNER, Sec. Gowen, Mich.**

**The Kent Co. Shorthorn Ass.** have males and females of quality for sale.  
**L. H. LEONARD, Sec. Caledonia, Mich.**

**Wanted** Several Scotch and Scotch topped heifers or young cows that are in calf to good Scotch bulls. Lawrence P. Otto, Charlotte, Mich.

## HOGS

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

**Berkshires** Bred and open gilts serviceable boars: can furnish pairs or trios.  
**RUSSELL BROS., R. 3, Merrill, Mich.**

**Registered** Berkshire boars, one yearling, two spring boars priced reasonable and guaranteed to be O.K.  
**B. B. REAVEY, Akron, 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.**

**Registered Duroc Boars**

We have a choice lot of spring boars, sired by Michigan Cherry Col. No. 118479. Ira Jackson selected this boar to head our herd. Our prices are within every farmer's reach. The Jennings Farms, Bailey, Mich. R. F. D. No. 1.

**Walnut Hill Durocs** June farrowed boars ready for service from Ira Jackson and Brookwater stock, also bred gilts and sows of all ages for Mar. and Apr. farrow, priced right and registered in buyer's name. Write  
**JOHN C. DEAN, R. 1, Mason, Mich.**

## DUROC JERSEYS

**CAREY U. EDMUNDS, Hastings, Mich.**

## DUROC JERSEYS

**E. D. HEYDENBERG, Wayland, Mich.**

**Duroc Jerseys** Our herd won 15 firsts, 9 seconds, 3 thirds, 3 fourths, 3 fifths at leading Michigan fairs including State Fairs. We have some choice boars ready for service, reasonable prices. Some bred sows later on.  
**RUSH BROS., OAKWOOD FARM, Romeo, Mich.**

**MICHIGANA FARM** has a few good farmers Boars at farmer's prices. Also boars good enough to head good pure bred Duroc herds. Get our prices on bred gilts and sows. They will interest you whether you are planning to get a bred sow or not.  
**O. F. FOSTER, Mgr., Pavillion, Mich.**

**DUROC JERSEYS**  
Gilts bred for March and April farrow. A Guarantee back of every Sow Sold.  
**F. J. DRODT, Monroe, Mich. R. 1.**

**Duroc Boars.** Spring boars, fashionable breeding, right prices.  
**BOARDMAN FARMS, Jackson, Mich.**

**Duroc** bred sows and gilts sired by Orion Cherry King Col. 2nd. bred to All Col. of Sangamo 2nd. First class lot, reasonable. W. C. Taylor, Milan, Mich.

**Chester Whites,** spring and fall stock for sale Durocs, either sex. At Saginaw fair we won highest honors against strong competition.  
**F. W. ALEXANDER, Vassar, Mich.**

**O. I. C. and Chester White Swine**  
Strictly Big Type with quality. Spring pigs of March and April farrow. A choice lot of boars. Will only spare a few more gilts at present. Will ship C. O. D. and record them free.  
**Newman's Stock Farm, Marlette, Mich. R. No. 1.**

### 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**

**O. I. C's.** Last spring boars all sold. Have an extra good lot of last spring gilts, good fall pigs notakin. Good stock, registered free 1/4 mile west of Depot.  
**OTTO B. SCHULZE, Nashville, Mich.**

**O. I. C's** Am offering a few September pigs that combine size and quality.  
**C. J. THOMPSON, Rockford, Mich.**

**O. I. C's.** Big type gilts, fall yrs., tried sows, Mar., Apr. farrow. Summer and fall pigs. I pay exp., reg. free, satisfaction guaranteed. G. P. Andrews, Danville, Mich.

**O. I. C.** Gilts bred for March and April farrow. I pay express and register in buyers name.  
**H. W. MANN, Danville, Mich.**

**O. I. C's** Service boars, fall pigs no akin also Buff R. cks. at \$3.00 each.  
**CLOVER LEAF STOCK FARM, Monroe, Mich.**

**O. I. C's.** one 18 mo. herd boar, a few bred gilts and a choice lot of fall pigs.  
**JOHN C. WILK, Alma, Mich.**

**O. I. C's** Have some Choice Spring Gilts, bred for spring farrow.  
**THAYER BROS., R. 1, Mason, Mich.**

**O. I. C.** Gilts bred for March and April farrow, guaranteed safe with pigs. Fall pigs and a few service boars. Herd immuned by D. T. F. C. Burgess, R. 3, Mason, Mich.

**O. I. C.** choice gilts bred for March, April and May farrow and fall boars. Am booking orders for spring pigs. A. J. Barker & Son, Belmont, Mich.

**L. T. P. C.** 1 spring boar, (by Long Jones) the best pig you ever saw; price \$100.00; send check with first letter or the other fellow will beat you, if you don't like description will return check. A few good spring boars left at farmer's prices. Gilts will be bred to a grandson of King Buster and a Grand Son of Dishes Giant, no better pair of young boars in the state, and Wiley's King Bob.  
**H. O. SWARTZ, Schoolcraft, Mich.**

**FOR Sale**—Large Type Poland China Gilts, bred for April farrow. Inspection invited. Free delivery from Manchester. A. A. Feldkamp, R. 2, Manchester, Mich.

**Poland Chinas** sows bred for March and Apr. farrow. Large type with best of breeding.  
**R. W. MILLS, Saline, Mich.**

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

**Boars also sows and pigs.** Real Big Type Poland Chinas. Bred big for 25 years. Sired by Mich. Buster by Giant Buster, litter 14 out of Mow's Miss Queen 2nd, some breeding, also by Butler's Big Joe by Rust's Big Joe, out of a Wonder Queen, furnished. Write us your wants, we will treat you right, our prices are low.  
**J. C. BUTLER, Portland, Mich.**

**LARGE** Type P. C. the largest in Mich. Spring boars now ready to ship. Boars for the breeders and boars for the farmers. Come and see the real large type with quality. Free delivery from Parma furnished visitors. Look up my exhibit at the Great Jackson Co. Fair, Sept. 8th to 12th, expenses paid if not as advertised. W. E. Livingston, Parma, Mich.

**M. R. P. C.** Breeder if you want to get in the King row. Buy a gilt bred to Big Bob Mastodon, more Grand Champion blood in his veins than any other Boar in Michigan. C. E. Garnant, Eaton Rapids, Mich.

**Big Type P. C. Boars,** best breeding, doubly immuned.  
**A. A. WOOD & SON, Saline, Mich.**

## TWO HERD BOARS

for sale. Ask for description of a real boar, live wires. Also have a few fall pigs, pair not akin  
**C. A. BOONE, Blanchard, Mich.**

**BIG** Type Poland Chinas. Sired by Smooth Mastodon litter mate to the Ill. Grand Champion. The big boned, deep, long bodied kind at farmer's prices. Wah-be-me Farms, White Pigeon, Michigan

**Big** Type P. C. sows bred to Ls Big Bob & THIRTY Ls Giant, fall pigs, none better, call or write.  
**E. B. LEONARD, St. Louis, Mich.**

**Bargains** on big type Poland Chinas, both sex, all ages. Shorthorn calves, either sex, and B. P. Rock cockerels. Robert Neve, Pierson, Mich.

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

## HAMPSHIRE

**Steuben's Hampshire Farm**

A few No. 1 bred Gilts left, a few choice fall boar pigs, can furnish pairs not akin. Booking orders for spring pigs, large type, no better blood lines. Satisfaction guaranteed.

**STEUBEN'S HAMPSHIRE FARM**  
ANGOLA, IND.

**Pine Grove** Hampshires, "Quality First" Michigan Boy, Grand Champion boar of Michigan. Bred and owned by us. Many other prize winners at Michigan State Fair 1919. Hog's for sale all ages, both sex. "Lookout Joe", a \$1000 boar heads our herd.  
**GEO. COUPAR & SONS, R. 1, Marlette, Mich.**

**Edgewood** Hampshires, spring boars sired by our prize winning and Grand Champion boars. Make the right buy today and get a good one: either for Hampshire breeding or for a cross on your other sows. Depew Head, Edgewood Farm, Marion, O.

**Hampshires** Bred gilts now ready to ship, a few 180 lbs. boars left and fall pigs from new blood lines.  
**JOHN W. SNYDER, R. 4, St. Johns, Mich.**

**T. P. C.** Tried sow and gilts bred to our Grand Champion Boar Big Type King Junior Champion Gordale Timm and first prize Senior boar pig Wonder Jumbo. W. Brewbaker & Sons, Elsie, Mich.

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

**Big Type** P. C. Gilts bred to Big Orange Model and O. H.'s Defender. None better in State. Priced to sell.  
**W. J. Hagelshaw, Augusta, Mich.**

**Big Type** Poland Chinas. Up-to-date in breeding, with size and quality. We like good ones and believe you do also. Have three choice gilts for sale, bred for April 7, 9, 10, respectively. Their sire at 18 months weighed 640 lbs., not fitted, and stood 40 in. tall, 73 in. long and on a 10 in. bone. They are bred to a great son of Mountain Giant. Write or come and see. You're always welcome. **WESLEY HILL, R. 6 Ionia, Michigan.**



## BOOM IN LAMB MARKET.

A FEW months ago when sheepmen were parting with their fat lambs at far lower prices than those lately paid they would have been astounded if it had been possible to peer into the future and see fat lambs of the right weight selling readily on the Chicago market for \$9.75 per 100 pounds, while feeders were bringing as high as \$7.75 for lambs on the high-class shearing order requiring only a short finish. It is simply a case of meager offerings just at a time when the popular taste for lamb and mutton is unusually strong. It turns out that feeding in the sheep states where the practice is especially large has been carried on much less extensively this winter than was at first reported, and supplies are now greatly short. Prices are far higher than ever before in the midwinter period, and even ordinary lambs and sheep are selling extremely high. The best lambs were selling one year ago at \$7.50, and that was looked upon as a very high price. Three years ago \$14.15 was paid for the best lambs, four years ago the top stood at \$10.90 and eight years ago at \$7.40. Not a great many feeders are being marketed, nor are there many breeders offered on the market. There is a range of about \$7 per 100 pounds between top lambs and top sheep prices, the spread having been as much as \$7.75 a few weeks ago. Feeding districts are sending to market considerable pregnant stock, but killers take most of it. The export demand for fat stock has started up for the first time since 1916, but not many suitable lots are being shipped to market.—F.

(Continued from page 219)

The coming year looks brighter than previous ones to the association and this venture appears destined to prove as profitable, if not more so, than the creamery has to the farmers of the community.

Officers for the coming year were elected by acclamation each to succeed himself, and are: President and manager, E. E. Compson; vice-president, George Bauman; secretary-treasurer, M. J. Reutz; directors, Elmer Hornbeck, Lawrence Simon, Valentine Bott, J. K. Hatfield.

## Veterinary.

CONDUCTED BY DR. W. C. FAIR.

**Cribbing.**—Is there any cure for cribbing? I have a horse that cribs and would like to know if it is a disease or only a habit. J. H. C., Ashley, Mich.—Crib-biting is a vice which when chronic is incurable. Remove manger and place it on floor. If he sucks wind, buckle a strap around his neck and let him wear it.

**Periodic Ophthalmia.**—One of my best horses is troubled with moon eye and I would like to know if this is a curable ailment. F. C. M., Homer, Mich.—This is considered an incurable disease. Dissolve 40 grs. of boric acid and 40 grs. of borate of soda in one-quarter of a pint of water and apply to eyes twice daily.

**Kidney Stimulant—Worms.**—Would like to know how to keep a horse in good condition and what to give them to make their kidneys act. I would also like to know of a simple remedy for worms in hogs. M. A. C., Wayne County.—Oats and mixed hay is the best winter feed, grass and oats the best summer feed, but of course, there are many other kinds of rations which can be fed to horses and they thrive and do well. One part corn, two parts oats, some wheat bran, corn fodder and straw is fairly good winter food for horses. Give horse 2 drs. acetate of potash once or twice a week, if you believe his kidneys do not function properly. Mix one part dried powdered sulphate of iron, one part salt and six parts powdered gentian and give each one-hundred-pound hog one-half of a teaspoonful in feed three times a week. Santonin is the best worm remedy for hogs, but it is expensive.

# \$735<sup>68</sup> Milk From A Grade Cow in One Year

Springdale Dairy

JOHN. N. SOUDER  
Prop.The Quaker Oats Co.,  
Chicago, U. S. A.Brunswick, Md.  
Jan. 10, 1920

Gentlemen:—

I want you to know how pleased I am and how I like your SCHUMACHER FEED. I have a grade cow nine years old. In 1917 we began weighing our milk, feeding any kind of feed we could get. This cow did fairly well. In 1918 I was able to get your feed the entire season and this cow produced 2,000 lbs., more milk than the year previous. I fed twice daily 20 lbs. of silage and 10 lbs of SCHUMACHER FEED, also mixed clover hay and corn stover. We were not feeding to make a record of any kind.

Her total yearly yield was 1672 gallons of milk for which we got 44c a gallon. The total being \$735.68. The total cost of the feed was \$225.00 leaving a net return of \$510.68. Naturally, I feel that SCHUMACHER FEED is the best feed a dairy-man can feed.

Yours very truly,

(Signed) J. N. Souder

## Indisputable Evidence

The letter reproduced above so strikingly confirms, by actual experience,

the facts we have been telling dairymen and farmers about SCHUMACHER FEED, particularly as a feed for producing MAXIMUM MILK PRODUCTION and keeping cows in "fine fettle" throughout long milking periods, that it needs little additional comment. It tells what was fed—how fed—the cost and the net returns. Bear in mind this was a **grade cow 9 years old** and no special effort was made to make a record. It is **INDISPUTABLE** evidence that

## SCHUMACHER FEED

is a feed you cannot afford to overlook. Check up your cows—your feed costs and see if they show a big yearly profit. **Start Now—feed SCHUMACHER FEED**—not for a week or a month, but for the entire lactation period of your cows and you will feel as Mr. Souder does, **THAT IT IS "THE BEST FEED A DAIRY-MAN CAN FEED."**

### SCHUMACHER FEED AND BIG "Q" DAIRY RATION

are **IDEAL** feeds for dairy cows. SCHUMACHER FEED supplies the carbohydrate or maintenance part of the ration and BIG "Q" the protein concentrate portion. Ask your dealer for them. If he cannot supply you, write to us.

### The Quaker Oats Company

Address: Chicago, U. S. A.

#### ROYAL BRED GILTS

Dams sired by Michigan Cherry Col. Bred to Jacks Cherry Orion King, No. 169259. Son of the \$10,000 champion, Jacks Orion King 2nd. all high class stock, write for prices. The Jennings Farms, R. 1, Bailey, Mich.

**CHESTER WHITES** Spring gilts bred, fall pigs of good breeding. Reasonable prices. Verner Bowen, Grand Ledge, Mich.

**B. T. P. C.** spring Boars all sold. One Oct. 21st yearling boar, wt. 425 lbs., as near perfect as any pig in Michigan. Price \$125. Gilts ready Jan. 1. Bred to a good son of \$10,100 Harrison's Big Rob. Every pig recorded free. JOHN D. WILEY, Schoolcraft, Mich.

**L. T. P. C.** Spring gilts ready to ship also fall pigs both sexes. P. R. ALEXANDER, R. F. D. 6, Albion, Mich., Bell phone 3831.

**B. T. P. C.** Gilts sired by Big Giant and O's Orange. Bred to O's Orange and Col. Jack Jr. No better breeding to be had. L. L. Chamberlain, Marcellus, Mich.

**Tamworths** The great bacon breed. Some good registered gilts bred for March farrow. Also fall pigs. W. H. WARNER, Concord, Mich.

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

Registered Hampshire Boar 1 yr. old from O. E. Hadley's Grand Champion stock Price \$125.00. M. F. Millard 39 Larchmont Ave. Detroit, Mich.

#### SHEEP.

**Shropshires** Registered ram lambs sired by Imp. Butter. Also choice bred ewes. W. B. McQUILLAN, R. 7, Howell, Mich.

20 choice Reg. Shrop. ewes due to lamb in March also about 15 Reg. ewe lambs unbred. Priced for quick sale. H. F. MOUSER, R. 6, Ithaca, Mich.

**KIDS** of Mich. You are the future farmers of the state. I am one of the best sheep breeders in the state. Let's get together that you may start your own flock of registered Shropshires now. A lot of kids have already done so, but I want more. I will buy your ram lambs and cooperate with you in every way. Write me for my proposition and prices. KOPE-KON FARMS, S. L. Wing, Prop. Box A, Coldwater, Mich.

#### 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.

**Idle Wild Stock Farms** Shropshire yearling rams from prize winning stock. Make your selection early. Cliff Middleton, proprietor, Clayton, Mich. R. 3.

**Registered** Shropshire bred ewes, 1 to 3 years old. Large, healthy, well fleeced representatives of this flock gave satisfaction in 15 states, last season rams all sold. O. Lemen, Dexter, Mich.

**Co'swolds** ewes bred to one of Canada's best rams, start right buy good ones, while they can be had. A. M. BORTEL, Britton, Mich.

#### HORSES

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

**For Sale** Reg. Percheron Stallions and Mares also a car of grade draft colts. CHAS. A. BRAY, Okemos, Ingham Co., Mich.

**THE BEST** Percheron Stallion in Michigan for Sale. Must sell on account of poor health. C. L. STOCKDALE, P. O. Box 37, Wayland, Mich.

**For Sale** A black registered three year old Percheron Stallion weight 1700 lbs. broke to work. Julian A. Palmer, Camden, Michigan.

#### BELGIAN DRAFT HORSES

We have the best and largest herd in the world to select from, with Grand Champions heading our herd.

We won more premiums at the International Belgian Horse Show, Waterloo, Iowa, 1919 than any other breeder or exhibitor, competing against 25 exhibitors from Iowa, 3 from Indiana, 1 from Illinois and 1 from Canada.

We have sold 4 winners at the International Belgian Horse Show to an Iowa breeder. Those horses winning again at the International Live Stock Show at Chicago the same year.

We are listing mares of Iowa breeders and breeders from other states, to be bred to our Rubis 8004, whose offspring won at both Internationals this year, taking some of the highest honors in stallion and mare classes.

We can sell you a carload of stallions and mares or just one of either sex.

We invite your inspection and will meet you at any of the railroad stations if you will write us in time.

Come to Burt, Michigan, via Grand Trunk Railway or to St. Charles, Michigan, via the Michigan Central Railroad.

We are in the market for Registered Belgian Draft Colts

#### Owosso Sugar Company Prairie Farm

ALICIA, Saginaw County, MICHIGAN



# Latest Market Reports

## SECOND EDITION.

The markets in this edition were revised and corrected on Wednesday afternoon, February 4.

### WHEAT.

The market rules scarce and dull. Local flour prices show a small advance and the firm feeling in corn feeds is stimulating the prices for wheat. Chicago and Minneapolis quote wheat firm, but flour in Minneapolis is greatly unsettled. At Detroit Saturday's quotations were:

No. 1 red	2.65
No. 1 mixed	2.63
No. 1 white	2.63
No. 2 red	2.62
No. 3 red	2.59

### CORN.

Reports of a reduced acreage of corn in 1920, owing to dissatisfaction among farmers, had a tendency to raise the level of corn prices Saturday. The present meagerness of supplies at the leading terminals, a result of inability of the railroads to move grain promptly, also had the tendency to raise values, especially as this was the last day for January shorts to fill contracts. Toward the windup of the day's transactions something of a flurry was witnessed at Chicago, with last prices at the highest level of the season. At Detroit prices did not change. Wednesday's quotations are as follows:

No. 3	1.56
No. 3 yellow	1.58
No. 4 yellow	1.54
No. 5 yellow	1.51
No. 6 yellow	1.48

### OATS.

The week has been featured by a come-back during the closing days in the matter of export buying. The foreign buyers need oats and are not allowing the cheapness of money to stand in the way. Oats are scarce and buying has been active. The grain is wanted by local consumers and also by exporters. Present quotations on the Detroit market are as follows:

No. 2 white	.95
No. 3 white	.94
No. 4	.93

### RYE.

Rye is at its weakest point and exporters have quit the deal. At Detroit Cash No. 2 rye is quoted at \$1.68.

### FEEDS.

There has been a slight advance in prices of some kinds of feed during the past week. Present quotations at Detroit are as follows: Bran \$49; stand-

ard middlings \$51; fine middlings \$60 @61; coarse corn meal \$67; cracked corn \$68.50; corn and oat chop \$57 @58 per ton in 100-pound sacks to jobbers.

### SEEDS

There has been a steady advance in the quotations for seeds on the Detroit market. Present prices are as follows: Prime red clover \$35.75; alsike \$36; timothy \$6.90.

### HAY.

The demand for hay is active and the supplies are not sufficient to meet the requirements of the trade. Present quotations at Detroit are as follows: No. 1 timothy \$33.50 @34; standard timothy \$32.50 @33; light mixed \$32.50 @33; No. 2 timothy \$31.50 @32; No. 3 timothy \$27 @29; No. 1 mixed \$31.50 @32; No. 1 clover \$31.50 @32; wheat and oat straw \$13.50 @14; rye straw \$13.50 @14 per ton.

### BEANS.

There has been no changes in the local bean quotations the past week. Present values for choice hand-picked Michigan pea beans at Detroit are \$7.25 per cwt.

At Chicago there is a feeling of steadiness and the demand is more active, but requirements are easily taken care of. Choice hand-picked pea beans are quoted at \$7.75 @8; red kidneys at \$14 @14.50 per cwt.

### ONIONS

At Detroit the supplies of onions are moderate and the demand and movement slow. Yellow Globes are quoted at \$5.75 @6.50 per 100-pound sack, according to size and quality. California's \$6.25 per 100-pound sack.

### POTATOES.

At Detroit the demand and movement is slow, and the market dull, with little change in prices. Recent sales to jobbers of Michigan U. S. Grade No. 1 round white stock are reported at \$7.25 @7.50 per 150-pound sack. At Cleveland the demand and movement are moderate and prices unsettled. Sales to jobbers of New York U. S. Grade No. 1 round white stock are reported mostly at \$7.25 per 150-pound sack. At Pittsburgh the demand and movement are slow and the market steady. Michigan and New York round white stock U. S. Grade No. 1 is selling to jobbers at \$7 per 150-pound sack.

### POULTRY.

Poultry is scarce and has been for some time with no sign of improvement. The demand for hens and chickens has been specially active and of-

ferings Saturday were not sufficient to fill the needs of consumers. Present quotations for live poultry at Detroit are as follows: Spring chickens, large 34 @35c; small 31 @32c; hens 36 @38c; small hens 33 @35c; roosters 23 @24c; geese 28 @33c; ducks 40 @45c; turkeys 44 @45c per pound.

### EGGS.

An easy market is quoted for eggs at Detroit, and the fresh receipts are large. Consumers are refusing to buy storage eggs, preferring to pay the higher price for fresh goods. Present values are as follows: Fresh eggs 54 1/2 @55 1/2c per dozen; storage eggs 46 1/2 @48c.

### BUTTER.

The market is firm and demand active. Present prices at Detroit are as



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25% to 60% on a  
**Pipeless Furnace!**

Because I build them myself. You can't beat the price of the man who makes the goods, Friend.

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quoting my direct-to-you-from-factory price. Also get my offer on Kalamazoo Stoves, Ranges, Kitchen Cabinets and Tables, Phonographs, Fireless Cookers, Cream Separators, Sewing Machines, Washing Machines, Indoor Closets, Paints and Roofing. I'll quote easy terms, give you an unconditional guarantee and pay the freight.

Ask for Catalog No. 909.  
"The Old Stove Master"  
Kalamazoo Stove Co., Mfrs.  
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We thank you for the confidence placed in us.

We realize that the better service we give you the more popular we will become and the greater our business will grow. Our effort will be to give you every advantage in price and guarantee satisfaction because we know it is the best thing we can do for you and for us. Send a postal today—write for the list.

**Robert A. Pfeiffer,**  
Progressive Fur Merchant

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Mich.

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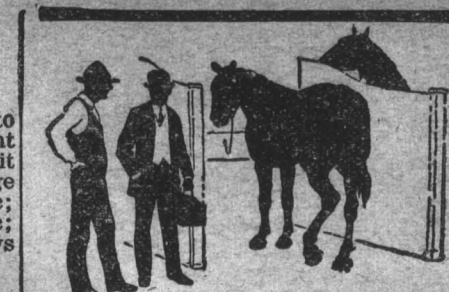
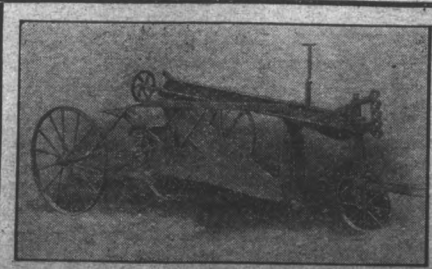


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W. W. WEAVER, Custom Tanner, Reading, Mich.  
**Wanted** Competent farmer with family for general farm near Detroit. Reply Box No. B 27, Michigan Farmer.

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FOR SALE A fine 160 tract unimproved land near Beulah, Mich. suitable for general farming or fruit \$4,000, easy terms. O. J. Delwiche, Madison, Wis.



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"Last May," writes Fred C. Nichols of Jefferson, N.Y., "my horse had a bad ankle, a large wind puff and it had been hurt and turned hard. Save-The-Horse has taken it all off. I was told it was incurable. Have used several treatments but Save-The-Horse is the best ever."

## SAVE-TH-HORSE

(Trade Mark Registered)

was made for the stubborn, so-called incurable cases of Ringbone, Thorpin, SPAVIN—or Disease of Shoulder, Knee, Ankle, Hoof or Tendon—when all other remedies have failed; and is sold under signed Guarantee to cure or return money. Always keep a bottle ready for any emergency. Send today for FREE 96-page Save-The-Horse BOOK on diagnosing and treating all lameness—result of over 25 years of success; also write for sample of Guarantee and expert veterinary advice. All FREE.

### TROY CHEMICAL CO.

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Druggists everywhere sell Save-The-Horse with Signed Guarantee, or we send it direct by Parcel Post Prepaid.

## Fruit Trees

Jonathan, Delicious, Spy, Duchess, etc.—best 2 yr. stock. Elberta Peach, Sweet and Sour Cherries, Plums, Pears, Berries, Grapes, Roses, Shrubbery. Send for prices and particulars and order this month for stock is scarce.

**Celery City Nurseries**  
Kalamazoo, Mich.

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### 344 Acre Michigan Farm \$5,000, on State Road

Good all times of year. mile stores, etc., motor bus passes farm, near R.R. center, only 8 miles large city. As good soil as lies out of doors: well-drained, productive tillage, stream-watered pasture for large herd; wood, timber, fruit. 10-room house, steam-heat, view over beautiful river which farm borders. house could not be replaced for \$7,000; large barn, etc. To settle quickly, low price \$5,000 is made, easy terms. Where can you equal this exceptional bargain? Details page 73 Strout's Catalog Farm Bargains 23 States; copy free.

E. A. Strout Farm Agency, 814BC Ford Bldg., Detroit

### FOR SALE

Stock or Dairy Farm of 640 acres located in Osceola Co. 2 miles from good shipping point 1 mile from the Mackinaw Trail 200 acres cleared 200 more can be easily cleared, well fenced with woven, 2 barns one 34 x60 and one 36x64 both have full basements. 2-12x40 silos, fair house, good well, windmill, every 80 of this has a spring creek easy terms enquire of the owner ROSEL BLYM, Reed City, Mich.

### GLADWIN COUNTY FARMS

WHY RENT? \$800 down, will buy 80 acres 3 miles from Beaverton, Mich. 20 acres improved, fine dark loam, clay subsoil, 1/4 mile to school, good roads, R. F. D. and Tel. some buildings, price \$35 per acre, 6% int. New farm list soon ready.

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Four fine Stock fenced, watered and grassed over. Several improved and part improved farms. 300 acre Sheep Ranch, with good buildings, orchard and 20 fine breeding ewes. 12,000 acres of unimproved land, on easy terms.

McClure Stevens Land Co., Gladwin, Mich.

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Where life is worth living. Moderate prices—genial climate—productive lands. For information write STATE BOARD OF AGRICULTURE, Dover, De.

1000 acre ranch or farm 4 miles from Barryton, Fair house and barn. Well fenced. 100 acres ready for crop. Fairly good soil. \$15.00 per acre, \$5000 down and terms for balance. ADELBERT MYERS, 405 N. Kinney Ave. Mt. Pleasant, Mich.

For Sale 135 acre farm, productive soil, timber-splendid location, close in, elegant modern buildings, well fenced, 80 ton silo—Deal with owner, selling reasons sickness. A bargain \$140 per acre. Forrest Flebach, Nashville, Mich.

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Will Save 80% of Your Work.

Will ship to any responsible party subject to approval, without a cent in advance. Absolute satisfaction guaranteed. Write for terms and circular.

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## Live Stock Market Service

### DETROIT

#### Cattle.

Receipts 1,604. Market rules dull, but about steady with Tuesday's scale of prices.

Best heavy steers	11.00@11.75
Best handy wt bu steers	9.75@10.25
Mixed steers and heifers	8.75@ 9.25
Handy light butchers	7.75@ 8.75
Light butchers	7.00@ 7.50
Best cows	8.75@ 9.25
Butcher cows	6.00@ 7.00
Cutters	6.50
Canners	5.50@ 5.75
Best heavy bulls	9.25@10.25
Bologna bulls	8.00@ 8.75
Stock bulls	7.00@ 7.75
Milkers and springers	65 @ 125

#### Sheep and Lambs.

Receipts 3,526. Market is dull and slow at Tuesday's prices.

Best lambs	14.00@18.00
Fair lambs	14.00@18.00
Light to common	11.00@13.00
Fair to good sheep	10.00@11.00
Culls	5.00@ 8.00

#### Hogs.

Receipts 5,760. Market dull and 50c lower; some sold early at \$15.50.

All grades \$15.00

### CHICAGO.

#### Hogs.

Estimated receipts today are 20,000; holdover 5,976. Market very dull and weak to 25c lower. Bulk of sales at \$14.75 @15; tops, early \$15.40; heavy, 250 lbs up, medium, good and choice \$14.40 @14.90; medium 200 to 250 lbs, medium, good and choice \$14.75 @15; light 150 to 200 lbs, common, medium, good and choice \$14.90 @15.15; light hogs 130 to 150 lbs, common, medium, good and choice \$14.50 @15 heavy pack-

ing sows 250 lbs up, smooth \$13.75 @14.10; packing sows 200 lbs up, rough \$13.50 @13.75; pigs 130 lbs down, common, medium, good and choice \$13.75 @14.50.

#### Cattle.

Estimated receipts today 8,500. Beef steers, medium and heavy weight 1100 lbs up, choice and prime \$15 @17; do medium and good \$11.25 @15; do common \$9.15 @11.25; light weight 1100 lbs down, good and choice at \$12.25 @16; do common and medium \$8.75 @12.25; butcher cattle, heifers, common, medium good and choice \$6.65 @13; cows common, medium good and choice at \$6.65 @11.75; bulls bologna and beef \$7.25 @11; canners and cutters, cows and heifers at \$5.75 @16.65; do canner steers \$6.25 @7.25; veal calves, light and handyweight, medium, good and choice \$17 @18.50; feeder steers, common, medium good and choice \$8 @12; stocker steers, common, medium, good and choice \$7.25 @10.75; do cows and heifers common, medium good and choice \$6.75 @9; do calves, common, medium, good and choice \$7.75 @11.

#### Sheep and Lambs.

Estimated receipts today are 13,000. Market is strong and spots higher. Lambs 84 lbs down, medium, good, choice and prime \$17 @19.85; do culls and common \$14 @16.75; spring lambs medium, good, choice and prime \$14.75 @18; ewes, medium, good and choice \$10 @13; ewes, cull and common \$6.50 @9.50; yearling wethers medium, good and choice, \$16.50 @18.

### BUFFALO.

On this market today hogs were selling about steady with heavies at \$15.50 @15.75; yorkers \$16 @16.25; pigs at \$15.75 @16.25; lambs brought \$20 @20.35; calves \$7 @21.



follows: Fresh creamery 60c; fresh creamery in one-pound prints 60@ 61½c per pound.

### CHEESE.

There has been no material change in the market during the past few days. At Detroit present prices are as follows: New York flat, June make 34c; Michigan flats, new make 31@ 31½c; Michigan daisies 32½c; Wisconsin twins 31c; domestic Swiss 52@ 55c per pound.

### HIDES

At Detroit present quotations for hides are as follows: No. 1 cured 32c; No. 1 green hides 27c; No. 1 cured veal kip 50c; No. 1 green veal kip 45c; No. 1 cured calf 75c; No. 1 green calf 70c; No. 1 horsehides \$11; No. 2 horsehides \$10; No. 2 hides, 1c and No. 2 kid and calf 1½c off; sheepskins, as to wool 50c@ \$3.50.

### NEW YORK PRODUCE MARKET.

January 31, 1920.

**Butter.**—The market for butter has been sensitive and irregular during the past week. There has been a feeling that we would shortly see materially reduced prices and receivers have been free sellers. The main factor that is causing the sensitive feeling is the foreign butter that is known to be headed for this port. In fact, a Danish steamer docked yesterday having aboard 5,000 casks of Danish butter. That butter will be ready for distribution by Tuesday, and we can expect that the quotation on high-grade butter will be materially affected by it. Advices from butter-producing areas indicated a very noticeable increase in production. That factor also is one that will cause a tendency toward lower prices. There is practically no new export business, although there have been some inquiries from England. Much of the stock that was purchased by foreign countries some time ago is now being shipped as rapidly as shipping space is available. During the past week about one and one-half million pounds of such butter have been shipped. The price of butter has fluctuated during the week and at present is about one cent lower than a week ago. Established quotations are: Extras, 63c; higher scoring than extras 63½@64c; firsts 58½@62c; seconds 55@58c.

**Eggs.**—The quotation on most classes of eggs has shown a decline this week. That is due to the fact that the market was bolstered up last week by speculative activity as it was figured by speculators that this week would see a shortage of eggs. On the contrary, receipts have been fully up to average and the quality has been fair. Quotations are as follows: Firsts 60@63c; extra firsts 64@65c; extras 66@67c.

**Poultry.**—Considering the high values placed on poultry of all kinds and the large receipts consumption has been exceptionally high and prices have advanced. The influenza epidemic is without doubt responsible to some degree for the increased demand for poultry. Quotations are: Spring chickens 32@35c; fowls 40@45c; old roosters 24c; turkeys 40c; ducks 39@40c; geese 36@37c.

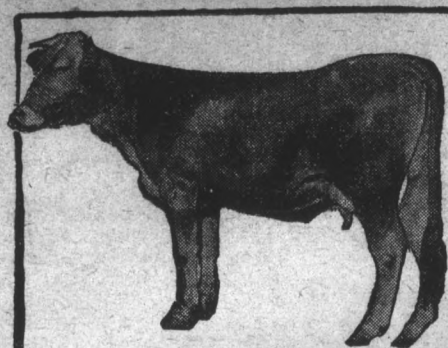
### PRICES PAID FARMERS AT THE ADRIAN COMMUNITY MARKET.

The following prices were paid to farmers for products delivered at the Adrian Community Market on Saturday, January 24:

Apples, green per cwt \$4; red \$4.50; beans, choice hand-picked per cwt \$7; butterfat 63c; butter (packing stock only) 30c; Holland cabbage \$120 ton; cream, butterfat 63c per pound; eggs henry white 60c per dozen; do gathered white 55c; do fresh brown 55c; hickory nuts 7c per pound; honey comb 32c per pound; do extracted 23c; dressed hogs 14@18c; lambs 15@20c; maple syrup \$2.25 per gallon; maple sugar 30c per pound; mutton 10@12c per pound; onions (dry) \$5 per cwt; do No. 2 \$2.50 per cwt; potatoes No. 1 \$4.50 per cwt; do \$2.25 cwt; dressed veal 100 to 140 pounds 22c; do 80 to 100 pounds 18c.

**Live Poultry.**—Cocks 12c per pound; ducks 30c; hens, extra large and fat 30c; do ordinary 26c; springers 25@27c; turkeys 34c.

**Hides.**—Heavy steers, 60 lbs and up per lb 23c; heavy cows 60 lbs and up, per lb 26c; bulls, under 60 lbs 28c; do 60 lbs and over, per lb 18c; kips 15 to 25 lbs 45c; kips, long haired per lb 25c; calf skins, 8 to 15 lbs 65c; horse hides large \$10; do medium \$9.



### This Healthy Brown Swiss

won a national Senior Championship at 3 years. She is a record milk producer.

Cultivate health, and the milk pail will show instant improvement.



## What Makes Heavy Milkers?

Good breeding and good feeding are by no means the biggest factor. Perfect **HEALTH** is the master key. The constant strain of milk production will in time wear down the disease-resistance powers of the most rugged system. The digestive and genital organs are the first affected. Nature must be given medicinal assistance.

**KOW-KURE** is a cow medicine designed to help solve the health problems of cow owners. By directly affecting the organs where disease lurks, this medicine is successful in treating or preventing Abortion, Retained Afterbirth, Barrenness, Bunches, Scouring and Milk Fever. Try a treatment on your poorest milkers and note results. Feed dealers and druggists sell **KOW-KURE**; 60c and \$1.20 packages. Send for free treatise,

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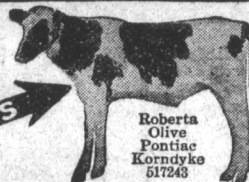
—full of valuable dairy hints and full information on treating all cow diseases.

**Dairy Association Company**  
Lyndonville, Vermont



## TREAT Your Own Herd for Abortion

Stop Losing Calves! You can wipe abortion out of your herd and keep it out.



Send for Free copy of the **Cattle Specialist** with questions and answers pertaining to Abortion in Cows. Answers every question. Tells how to treat your own cattle at small expense. Write **Dr. David Roberts Veterinary Co.** 640 Grand Ave. Waukesha, Wis.

## Maloney's FRUIT and ORNAMENTAL TREES

### SHRUBS, VINES, ROSES

are guaranteed true to name and free from disease by the largest growers in New York State. We recognize our responsibility to the fruit growers and we have this year issued a novel Wholesale Descriptive Catalog, that tells the things you ought to know about our business. Write for your copy today—it's free. No order is too big or none too small for us to handle personally. There is going to be a shortage of fruit trees this year, because most of the fruit tree seedlings come from France, and owing to the war the number sent to the United States for three or four years was way below the usual shipment. Be sure and get your order in early so as not to be disappointed.

#### BEARING AGE COLLECTION

3 Bearing Age 8-10 ft. trees for \$3.48: 1 Bartlett Pear, 1 Montmorency Sour Cherry, 1 York State Prune. We prepay transportation charges on all orders for over \$7.50.

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We're responsible; look up our rating. Danville's Pioneer Wholesale Nurseries

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## FARM WAGONS

High or low wheels—steel or wood—wide or narrow tires. Steel or wood wheels to fit any running gear. Wagon parts of all kinds. Write today for free catalog illustrated in colors.

**ELECTRIC WHEEL CO., 35 Elm Street, Quincy, Ill.**

### Mr. POULTRY FARMER:

We make a specialty of White Henery Eggs and have created a profitable market for your eggs throughout 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.

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"Enough Said!"

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Commission Merchants. Dressed Beef, Hogs, calves, Poultry, Live & Dressed, Provisions, etc. Correspondence Solicited. Ref. Wayne County & Home Savings Bank, Bradstreet, Detroit, Mich. Cad. 2879

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

**Seed Corn** Selected seed of the following varieties testing 90 percent or better. Early Butler, Pride of the North, Leaning, White Cap Yellow Dent, Mammoth White Dent. Price \$3.00 per bushel. Bags extra at 60 cents each. Sample ears at 25 cents each. **THE HORN BROS. CO., MONROEVILLE, OHIO.**

**Strawberry Plants** \$3.75 per thousand. Sen. Danlap and Pocomoke, the two leading varieties, also the well known Brandywine, Michel's early and Warfield. \$3.75 thousand, \$2.25 per 500 or \$1.75 for 250. All plants guaranteed to be first class plants or money refunded. No catalogues. Filena Woolf, Swan Lake Fruit Farm, Allegan, Mich.

**Seed Oats** Choice Swedish Select and Big Four Seed Oats testing 40 to 43 pounds. Price \$1.50 per bu., bags extra at 20c each. **THE HORN BROS. CO., MONROEVILLE, OHIO.**

**FERRETS** brown or white large or small. A few left. Send for price list. **GLENDAL FERRET CO., Wellington, Ohio.**



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## Wonderful Roofing Offers

Now is the time to buy roofing. But you must act quickly to get your share of these uncommon savings.

Ajax high grade rubber surfaced roofing in rolls of 108 square feet; complete with nails and cement.

**KP-302.**  
3 Ply, per roll.....\$1.85  
2 Ply, per roll..... 1.60  
1 Ply, per roll..... 1.22

Rawhide Stone faced gold medal roofing guaranteed fifteen years. Rolls of 108 square feet with nails and cement. **KP-303.** Per roll.....\$2.75

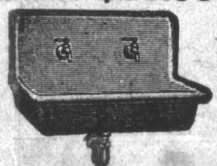
Famous Rawhide rubber roofing, 3 ply guaranteed for 12 years. Rolls of 108 sq. ft. with nails and cement. **KP-304.** 3 ply, per roll, \$2.10. 2 ply, per roll, \$1.90. 1 ply, per roll, \$1.55.

## Corrugated Metal Sheets

**Per 100 Square Feet**  
**\$2.50**

28 gauge painted 2 1/2 in. corrugated overhauled sheets 6 1/2 ft. long. **KP-306.** Per 100 square feet.....\$2.50  
26 gauge painted 2 1/2 in. corrugated overhauled sheets. **KP-307.** Per 100 square feet, \$3.50  
24 gauge extra heavy painted 2 1/2 in. corrugated overhauled sheets. **KP-308.** Per 100 square feet.....\$4.00

## One-Piece Sinks \$15.95



**KP-6520.** White porcelain enameled one-piece roll rim sink and back; two nickel-plated faucets, strainer and lead "P" trap complete.  
18 in. x 30 in.....\$15.95  
20 in. x 36 in..... 16.95

## Harris' Cream Getter Separators



**The Machine with a 100% Record**  
The Harris "Cream Getter" Cream Separator has made a remarkable record—not a single return, not a complaint. The big increase in sales enables us to offer all sizes at big price reductions. Your old separator taken in exchange as part payment on your new "Cream Getter." Buy on your own terms.  
Send first payment of what you can spare with your order and tell us how you can pay the balance.  
The same high quality "Cream Getter" with all exclusive patented improvements, including the equal milk distributing sleeve now offered at the reduced price shown below. Mail coupon for all facts and full explanation.

Order Number	Size	Capacity Per Hour	Reduced Price
X27KP100	21	175 Pounds	\$34.50
X27KP200	22	250 Pounds	\$38.40
27KP300	23	375 Pounds	\$52.00
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27KP700	25	750 Pounds	\$64.00
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X indicates table sizes. Ready for shipment from Minnesota, Pennsylvania, Chicago Warehouses. 3% Disc. If all cash is sent with order.

## CAMP MERRITT

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With the complete purchase of this big Army Camp, we have received millions of feet of fine lumber and enormous quantities of material of every kind for every building purpose—doors, windows and millwork—plumbing material, heating equipment, pipe, valves, electrical supplies and in fact everything used in one of the largest and finest Government Training Camps in the country. This material is now ready for distribution. Our representatives are on the grounds and are prepared to show prospective buyers everything we have for sale. Address all mail to our main headquarters here in Chicago.

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With the award of this completely equipped Army Camp, we secured millions of feet of high grade thoroughly seasoned lumber, enormous quantities of doors, roofing, pipe, valves, pipe fittings, plumbing and heating material. We have prepared complete lists of everything we have for sale at this Camp and have stationed our representatives on the ground. All mail should be addressed to us here at our main headquarters in Chicago.

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In securing this camp, we are now able to place before you practically all equipment of one of the largest and finest Government Army Camps. Think of it! Nearly 20,000,000 feet of lumber and wallboard; thousands of closet outfits, heating stoves, refrigerators and heaters; large quantities of electrical apparatus, pipe and practically everything used in a town of 30,000 people. Address all mail to our main headquarters here in Chicago.

**Mail the Coupon for All Particulars Now!**

## 20,000,000 Feet of High-Grade Lumber!!

Never again will you have such a splendid chance to buy high grade and thoroughly seasoned lumber. Like all of the material used in the Government Camps, this lumber was purchased under rigid government inspection and is of splendid quality. Sit right down and figure your requirements now! If you can use buildings of any kind, send us your requirements and let us give you the benefit of the savings we have made in these great purchases. Any of the buildings at the camps can be taken down and shipped to you with a big saving. Our complete list includes buildings of every size.

### 2,000 Complete Buildings!

225 Mess Halls, all sizes  
65 Store Houses, size 20 ft. x 98 ft.  
95 Heater Houses, size 9 ft. x 35 ft.



### All Sizes for Every Use!

200 Power Houses, size 9 ft. x 35 ft.  
230 Stables, size 24 ft. x 100 ft.  
45 Blacksmith's Houses in numerous sizes

## Government Barbed Wire

**Per Reel**  
**\$1.70**

Bought by us at less than the actual cost of manufacture. Finest barbed wire, made under rigid Government supervision. Made of 12 gauge open-hearth steel wire with four point barbs, 5/8 in. long spaced 3 in. apart. Covered with special weather resisting paint. Put up in reels containing 750 feet; weight per reel 58 lbs.

**KP-100.** 625 reels or more, per reel...\$1.50  
**KP-101.** 100 reels or more, per reel... 1.55  
**KP-102.** 50 reels or more, per reel... 1.60  
**KP-103.** 25 reels or more, per reel... 1.65  
**KP-104.** Less than 25 reels, per reel..... 1.70

### GALVANIZED BARBED WIRE

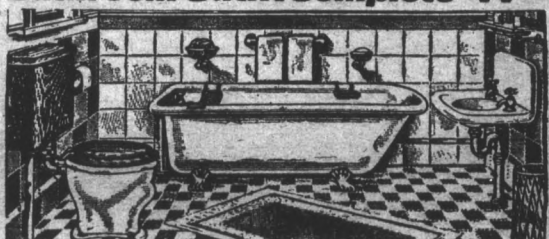
Quadruple galvanized coated barbed wire bought from the Government made of 12 gauge open-hearth steel wire with four point barbs, 5/8 in. long, spaced 3 in. apart. Unlike ordinary standard galvanized barbed wire, this stock is galvanized after weaving and is coated on all surfaces with galvanizing four times as heavy as regular stock, which means that much additional life to the wire. 60 lb. reels containing 750 ft. Prices f.o.b. cars Pittsburgh, Pa.  
Carload lots (625 reels or more) per reel \$3.15  
100 reels or more, per reel..... 3.20  
50 reels or more, per reel..... 3.25  
25 reels or more, per reel..... 3.30  
Less than 25 reels, per reel..... 3.35

## Indoor Toilet \$9.95



**No Plumbing Needed**  
**KP-1816.** Improved Chemical Indoor Toilet, fitted with regular shaped closet seat and cover, finished in birch, mahogany. Cast metal frame and base; steel casing enameled in azure blue. Complete with exhaust pipe and chemicals ready for use \$9.95

## Bathroom Outfit Complete \$71.50



Substantial value is offered in this guaranteed "A" grade bathroom combination. ORDER NOW and get the benefit of this unusual saving.

**KP-306.** Consists of white porcelain enameled bath tub 5 ft. long and 30 in. wide, fitted with nickel-plated connected waste and overflow, nickel-plated double bath cocks. The white porcelain enameled lavatory is furnished with nickel-plated trap and nickel-plated compression faucets indexed for hot and cold water. The closet includes a white vitreous earthenware wash down Syphon action bowl and a highly finished golden oak tank lined with heavy copper. Closet seat finished to match the tank. Our special low sale price, complete.....\$71.50

## WATTS CORN SHELLERS \$79.50

Your best chance to buy the world's best corn sheller at big reduced prices under most liberal terms with a 30 day free trial and guaranteed satisfaction.  
**Watts No. 1** Corn Sheller for the man who shells corn by for his own use. Capacity 50 to 75 bushels per hour with a 3 H.P. engine, now \$34.50. Order No. KP-900.  
**Watts No. 4** Corn Sheller with cleaning system, cob stacker and grain elevator, \$79.50. Order No. KP-901.  
**No. 4 Sheller** with cleaning system, cob stacker, grain elevator and automatic feeder, as illustrated, \$99.50. Order No. KP-902.  
**Watts No. 7** Corn Sheller with stand-wagon box, grain elevator, cob stacker, type "R" feeder on steel trucks. Capacity 200 bushels per hour, now \$256.00. Order No. KP-903.  
**Watts No. 8** Double Cylinder Sheller for custom work. With standard equipment, wagon box, grain elevator, cob stacker, and feeder, horse hitch on steel trucks. Capacity 200 bushels per hour, now \$390.00. Order No. KP-905.  
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Best formula. White, black and twenty-six non-fading colors to choose from. Put up in one gallon cans, 5 gallon kits, 25 gallon half barrels and 50 gallon barrels. **KP-206.** gal. \$2.54. Supersaturated base paint. Red, yellow or maroon, gal. \$1.60. Green slate or red, gal. \$1.90.

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50 lb. Keg **\$3.25**  
**KP-4081.** All kinds and sizes mixed, carriage, stove, plow bolts, up to 1/2 in. diameter and 8 in. long. 50-lb. keg.....\$3.25  
100-lb. keg..... 6.25

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**\$20.00** for Old or New Models  
**KP-1907.** Latest honeycomb pattern. Large water capacity and cooling surface. Black Japan finish. Old or new models, ea. \$20.00.

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The wonder buildings of the age. Wonderful because they are so simple. Erected in a few hours. The only tools you need are a hammer and wrench.  
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Made of heavy galvanized iron with non-tip flared legs. **KP-512** 5 ft. \$1.95; 8 ft. long, \$2.95; 10 ft. long, \$3.95. Lots of three, 10c less each; six, 20c less each; twelve, 30c less each.

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Our big, complete stock of pipe offers big values. Random lengths complete with couplings in all sizes are now offered at prices that show big savings. Suitable for the conveyance of water and all liquids. **KP-204.**  
1 inch, per foot - - - 8c  
1 1/2 inch, per foot - - - 9c

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**\$3.75** per 100 lb. keg  
New Wire Nails, all sizes from 8 to 40 D. Put up in 100 lb. kegs. A handy assortment for general use—plenty of each kind. **KP-68.** 100 lb. keg, \$3.75.

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The best hay baler made at a remarkable saving. Largest capacity built to run from a large tractor or small gas engine. Get the benefit of these low prices. **KP-315.**  
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