

# KANSAS FARMER

For the improvement  of the Farm and Home

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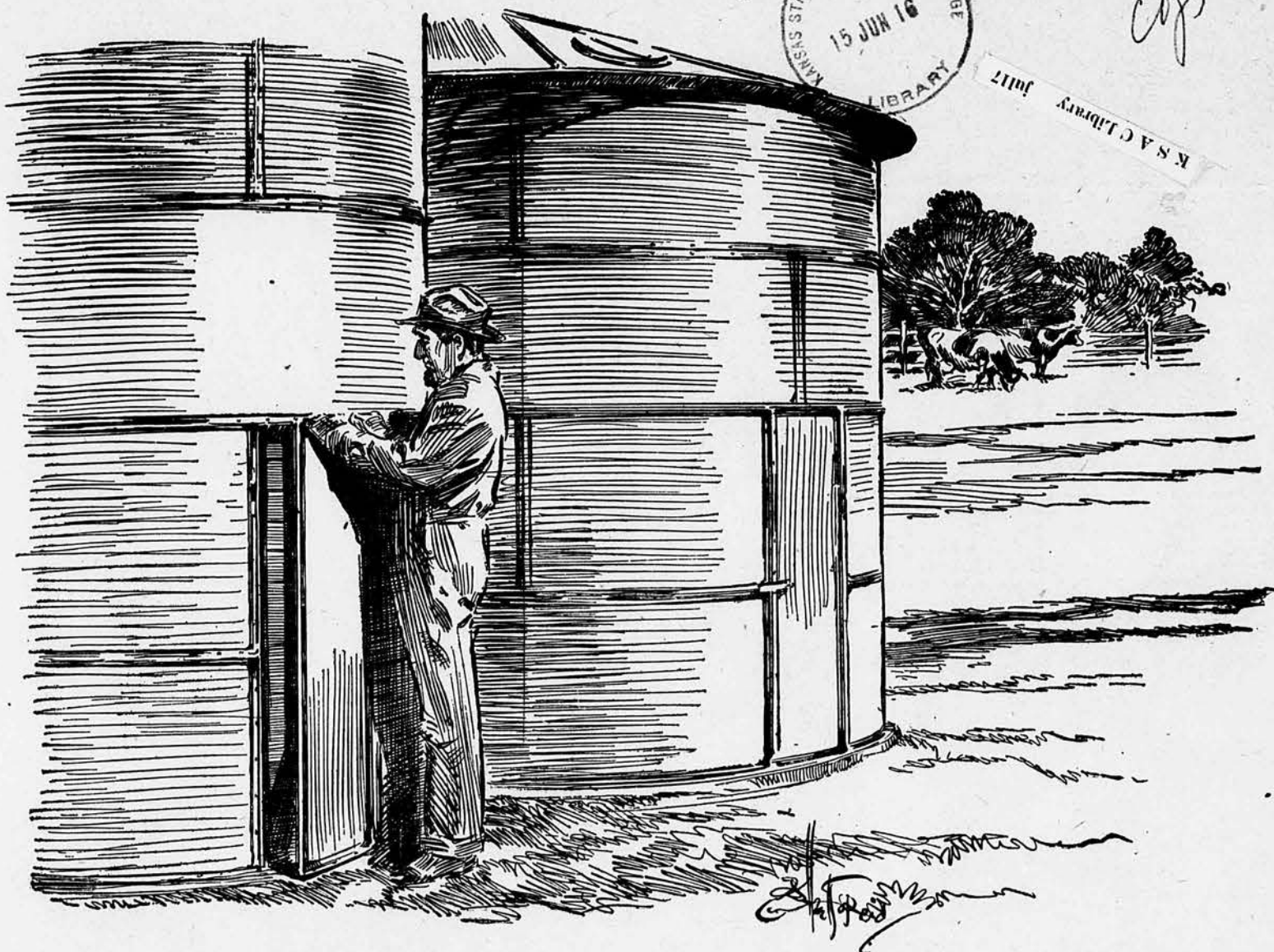
**A**BILITY to store the wheat crop on the farm will be of greater value to the farmers this year than ever before.

There is an unusual shortage of freight cars, resulting from the congestion of freight on the Atlantic seaboard. A lower price necessarily results from inability to get transportation facilities, and from the greater risk and hence greater margin taken by elevators to handle grain before it has gone through the sweating process.

Two-thirds of the Kansas grain is marketed in July, August, September and October, and almost without exception prices are lower then than later in the year.

The principle remedy for this condition is in the hands of the farmer himself and consists in the storing of grain on the farm for a short period varying from a few weeks to several months. This may be done by stacking the grain, by storing it in farm elevators, granaries, or metal bins, or by a combination of stacking first and storing in bins afterwards.

Edward C. Johnson



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## FARM POWER

Items of Interest About Automobiles, Engines, Tractors, and Motorcycles

**A**FTER a car has been used for two years, the average storage battery will require considerable attention. Perhaps a new battery would be advisable. Sometimes new plates and new separators are all that is necessary to take care of the battery. Such replacements, however, have to be made at a shop where they have methods of opening the cells for making such repairs.

The generator should give service easily up to twenty thousand miles without replacement other than new brushes. This also applies to the starter motor, provided it is a separate unit. Whether the starter acts through a chain engaging the crank shaft, or through gears on the fly wheel, or by some other method, a service of fifteen or twenty thousand miles should not necessitate any replacement here.

## The Useful Tractor

There are dozens of things that a tractor can do when regarded as something more than an agency for plowing. It can pull mowers, hay loaders, haul hay to the stack, bale and stack and haul the bales to town. It can economically do everything to raise corn except the easy work of planting and cultivating, and in addition it will run any one of the half dozen machines for putting the corn into more convenient shape for feeding or market. It can handle every operation connected with small grain crops.

The tractor has its place on the corn belt farm as surely as in the great wheat belt. With the corn crop, the crisis lies in the work of preparation. The harvest is not rushed. The crop does not spoil easily. If it is not gathered in one way it will be in another. Cultivating, which is still the almost undisputed province of the farm horse, is spread out over many weeks of leisurely nibbling along the corn rows. We have seen the wonderful opportunity for multiplying the corn yield by deeper plowing; the plowing is already the greatest problem of the farmer. With horses plowing must be begun early and finished late. But the work of preparation requires haste. Uniform plowing, uniform preparation and uniform date of planting result in an even crop all over the field and add quality to the product. In a humid climate the ground should be left until in the proper condition and then made ready with all possible haste. In a dry climate the thoroughness of preparation is even more important.

The tractor adds capacity to the farmers' weapons and the work goes on at top speed. All the work of soil preparation up to planting, or nearly 66 per cent of the hours required up to the harvest, may easily and quickly be done by the tractor.—F. L. CHAPMAN, JR., in Better Farming.

## Tractioners Needed

In the May issue of Power Farming the necessity for trained men to operate tractors successfully was emphasized.

"The better acquainted a man is with the operation of gas tractors," said the editor, "the surer he is of complete success with them."

"It seems to us that the farm worker, particularly the young man engaged in farm work, can make himself much more in demand if he will just make a study of the operation of a farm tractor. Of course, these differ in type and design; but the same general rule of operation applies to all of them, and the man who understands the theory of the operation of the gas engine will not have any trouble in the handling of tractors in general. If ever skilled help was needed on the farm, it is now that the era of farm power operation has fairly begun. So, to the young man on the farm, we would say again, qualify yourself for better employment and better wages by getting well acquainted with the gas tractor."

A most practical course in Farm Motors is now given at the Kansas Agricultural College.

## The Farm Lighting System

The farm lighting system must be attended to with great care, says J. L. Mowry of University Farm, St. Paul, Minn., in a recent Farmers' Library bulletin on "Lighting Farm Buildings." An

acetylene gas system in perfect working order is an intricate piece of machinery, he says, and an electric lighting plant is far more delicate. A lighting plant takes more attention than an equivalent number of coal-oil lamps or candles.

Good lighting systems for house and barn, however, add to the attractiveness as well as to the convenience of farm life. Trouble is usually due to ignorance or negligence. The introduction of modern equipment, such as high-efficiency lamps, has done much to encourage the development of small isolated plants and a few years may make their use common.

"Not many years ago," adds Mr. Mowry, "many men would not think of getting in behind the wheel of an automobile, much less investing money in such a machine, but now there are few who do not feel that they can care for the power plant which is hung between the fore wheels of a motor car."

"The man who puts in the isolated lighting plant should understand it thoroughly and should have made up his mind to put it on his list, along with the pigs and the calves and the chickens, to receive its share of persistent attention."

## Tire Replacement and Repairs

A car that has run fifteen or twenty thousand miles will usually be on its third set of tires. If replacement of tires is necessary, better buy new tires. Buy a good standard make. As a rule it does not pay to expend very much on a tire to have it retreaded, unless its tread has been damaged by improper application of the brakes, because when the tread is badly worn on a tire it has had much usage, and the fabric is weak, although in some cases on a good tire the fabric will outlive the retreading.

On a car that has made this mileage the various mechanical parts will need some attention. You will find on the average good car, however, that very few of these replacements will have to be made. Even if the car shows considerable wear, an expense of \$125 in repair parts, and \$50 or \$75 in labor, should be enough to put the worst car at ten to fifteen thousand miles in perfect condition. This is an estimate, but it usually is a safe one. Ordinarily it will not cost you \$50 to take care of the replacements and overhauling labor on any good car that has been carefully used up to fifteen or twenty thousand miles.

## Care of Inner Tubes

Inner tubes driven in extremely hot weather, stretch and take a permanent set. Unless they are handled exactly right under these conditions, they are sure to give trouble. This is especially true of old tubes. It is customary to take an inner tube which has been punctured and inflate it to find the puncture. After the puncture has been repaired the tire is usually inflated to a little above its normal capacity and hung up in the garage to see if any more leaks show up. The tube which has been in use and probably passed through a long term of service, removed from the casing in a punctured condition, with the rubber deteriorated by the heat, when blown up and allowed to remain under a strain, takes a further permanent set—that is, the tube gets larger than it was before. No tube with a permanent set beyond the normal, ever lasts very long.

A correct way to handle tubes under these conditions, is as follows: As soon as the puncture has been repaired, lay the tube away without air in it, in a cool place. The tube should first have been thoroughly rubbed with soapstone. Under this treatment the rubber will recover itself. The tube will gradually draw together and get smaller. It will then be in much better shape for service than if handled otherwise. A tube that has been stretched by being blown up, allowed to hang around unsized with soapstone, will invariably be too large for the casing. This will double the tube over, and cause a leak which will do great damage to the casing.

To neglect farm implements is to throw away money. No machine is built that will care for itself. It is the sheltered machine and the one gone over occasionally to see that all parts are in working order, that gives best service.

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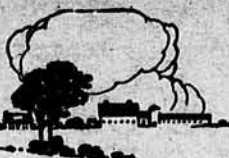
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## K. S. A. C. COMMENCEMENT

Another commencement has passed at the Kansas State Agricultural College. This year's work at the college has been characterized by an increase in the agricultural enrollment amounting to 18 per cent. The school year closed with the exercises of commencement day on Thursday of this week. The annual address by the Honorable P. P. Claxton, United States Commissioner of Education, on the subject, "The Value of Land," was most appropriate to the occasion.

Each year the Kansas Agricultural College is taking a more important place in directing the affairs of the state. This is true because of the ever-increasing numbers of young men and women being trained and equipped each year to take up the burdens of leadership in the communities where they locate after leaving the institution. This year over 300 graduates went out from the college, having completed four-year courses. Over 100 of these are young women who have completed courses in the home economics division. A few less than 100 young men graduated in agricultural courses.

About 60 per cent of the young women are taking up teaching work. There is an increasing demand for teachers thoroughly trained in the arts and sciences having to do with home-making. In recognition of this demand for teachers, a considerable proportion of the present class have taken special studies in the department of education. They are thus not only well trained in the principles of home-making, but know how to impart their knowledge to others. This will greatly increase their usefulness in widening the influence of their alma mater.

There is another side to this matter of training in the principles of imparting knowledge. It is safe to assume that many of those who now take up teaching will later have homes of their own. The training in psychology and other educational subjects so necessary for the successful teacher, is fully as useful when applied to the developing minds and bodies in the home.

President H. J. Waters states that fully 75 per cent of the men graduating in agricultural courses are going back to the farms or taking up work very closely allied to the farm. One goes into the well established seed business of his father as a seed specialist. One goes to the Kansas City Stock Yards. Twelve or fifteen will teach agriculture in high schools. There is such need for leaders trained to fill these conditions, that the young man without a farm can find ample opportunity to make himself useful in advancing the cause of better agriculture.

In addition to these are the men trained along mechanical lines. We are coming more and more into the age of machinery. The Kansas farmer with his six and eight-horse teams, double-row tools, and other modern machinery, is ten times as efficient as the one-horse farmer of the South. Mechanical development goes hand in hand with agricultural progress and it is highly proper that this sort of training should be given at our Manhattan institution.

The needs of those who want all the practical training they can get in a few terms, are not neglected. In all departments of college work we find this sort of instruction given and at the graduation exercises held Thursday of this week, a fine body of young men and women received diplomas showing the completion of these practical courses. These almost without exception begin to put to practical use the training they have received.

No one more fully realizes the value of the training received than the old graduate. Many of these were back for commencement week. The alumni dinner, which was attended in a body by the 1916 class, served to arouse anew the pride of these old graduates in the work of the institution.

People of Kansas have good reason to be proud of their agricultural college which has just sent out to positions of leadership and responsibility the largest class in its history.

## AYRSHIRE BREEDERS ORGANIZE

Ayrshire cattle are not a new breed by any means, but they are not so well known as the other dairy breeds. They are very hardy and vigorous and wherever they have been used for dairy purposes they have given a good account of themselves. Those breeding them claim they are especially adapted to the conditions existing in the western part of Kansas.

There are about thirty Ayrshire breeders in Kansas, or at least this many having pure-bred bulls and grade herds.

In order to give the breed greater publicity and help along the cause of dairy farming, the Ayrshire breeders of Kansas met at Manhattan June 9 and organized the Kansas Ayrshire Breeders' Association. Fifteen were present at this meeting. Anyone in the state owning a pure-bred Ayrshire bull or pure-bred Ayrshire cows, is eligible to membership. It was voted to hold a meeting in Kansas City just before the dairy show which is to be held this fall under the management of the Southwest Dairy Show Association. The new organization will join hands with the Jersey, Holstein and Guernsey associations in conducting this dairy show which will be the first strictly dairy show ever held in Kansas City.

The officers of the new association are: President, Dr. F. S. Schoenleber, Manhattan; first vice president, E. L. Johnson, Waldron; second vice president, A. H. Sanderson, Marysville; secretary-treasurer, E. F. Kubin, McPherson.

## WEATHER MAN HELPS HAY-MAKER

Hay-making requires sunshine. Getting hay properly cured is not an easy matter. This is especially true of alfalfa. It is full of sap and it takes a good deal of drying weather to get the moisture sufficiently evaporated so the hay will keep in the stack.

If the hay-maker could be sure when a few days of sunshiny weather could be expected, he could make his plans accordingly and have a lot of alfalfa down ready for the sun when it came.

The weather bureau of the Federal Department of Agriculture has just completed arrangements for making what is called an "alfalfa grower's forecast." These forecasts will be made from Chicago. The district forecaster, of course, has complete telegraphic reports from all over the country. Whenever the indications are that there will not be rain for several days, this information will be included in the regular daily forecasts. These are telegraphed to nearly a hundred points in Kansas and are given wide publicity by mail, telephone, and daily papers.

Kansas is one of the leading alfalfa states and is also one of the states receiving the heaviest rainfall during the period in which alfalfa is being harvested. The rainfall over the eastern third of the state from April to September, inclusive, is greater than the average of any other state in the corn belt.

Alfalfa growers in Shawnee County quite generally call the Weather Bureau to get a line on what is to be expected in the way of sunshine. This new forecast should be especially useful to those having large acreages of alfalfa to put up, and will be helpful to others as well.

The fight to keep oleomargarine from masquerading as butter must be carried on continually. Constantly in Congress laws and amendments are being offered with the purpose of throwing down the bars which will permit oleomargarine to sell as butter. We have no quarrel with this imitation if it is sold, purchased and used for what it is. Good stuff it is, too, and wholesome, we believe, but not butter. Our congressmen can not be too careful to guard the dairy interests of the country, and the government should maintain the closest inspection of the sale of oleo. When a family pays for butter, we want the pure, unadulterated article; but if we buy oleo because it is cheaper and tastes good, it should carry its brand.

Stock farming and diversified crops mean prosperity in Western Kansas.

## NEW SERUM METHODS

On another page of this issue is an article telling of the development of a new and improved method of protecting cattle from blackleg. In fact, the method will even check and cure an outbreak in a herd. The perfecting of such method of controlling this serious disease means much to the cattlemen of the whole country.

Many may not realize just what it means to have such discovery turned over to the people. The method is protected by a patent, taken out in the name of the public. This prevents any private firm or individual from monopolizing the new method and collecting a royalty for its use.

There are perhaps many who do not know what is meant when hog cholera serum is spoken of as Dorset-Miles-McBride serum. This name is applied to hog cholera serum because these men in the employ of the Bureau of Animal Industry at Washington, perfected the method after a number of years' careful work. The method is now generally used all over the country for protecting hogs against cholera. This method was given to the people, although if these men had been so disposed they could have kept the discovery secret, left the government service and made a fortune for themselves in manufacturing serum and collecting a royalty.

Doctor Dorset is still in the service and it has just been announced that he and R. R. Henley have perfected a new method of making serum whereby a perfectly clear, sterilized product can be produced. Under the old method it was possible for serum to act as a carrier of foot and mouth disease and several outbreaks were traced to the use of infected serum. By the new method the serum can be sterilized by the application of enough heat so that even if the hog from which it was made had foot and mouth disease the serum would be perfectly safe.

The Department of Agriculture in making the announcement states that in so far as they know this method is not now employed by any commercial concern, and since the process was discovered by the federal government anyone in the United States is free to use it.

The people receiving the benefits from such discoveries as these made at Manhattan and by the Federal Department of Agriculture should by all means give these high-minded men the honor due them for their unselfishness in giving these valuable discoveries to the public without other recompense than the regular salaries they receive.

## FARM BUREAU ADVISORY BOARD

In one of the counties having an agricultural agent, the members of the farm bureau have created an advisory board. One of the duties of this board is to investigate any new proposition that is presented to farmers of the county. If some agent starts to canvassing farmers for any sort of scheme, farm bureau members will immediately refer him to this advisory board and will have nothing to do with the proposition until it has been carefully investigated.

Ninety-nine years ago Andrew Jackson began the construction of a military highway from Nashville, Tenn., to Madisonville, La., which was completed in May, 1820. It was planned by the topographical engineers of the army and built by soldiers. In the final surveys the engineers followed a straight line bearing north 35 degrees east as closely as the topography of the country permitted. The total length of the road is 516 miles, and all of it has been in continuous use ever since it was finished. At the present time there is a project to transfer the name of Jackson Highway to another route between these terminal cities. The advocates of the old route make the statement that the rural white population along it is five times as great as along the proposed new route, which is 810 miles longer, good testimony to the value of a well-located highway in bringing people into the country traversed by it.

## PASTURE IMPROVEMENT REPORT

Kansas has approximately twenty million acres of land devoted wholly to grazing. This has a valuation of not less than 400 million dollars. Grass is the basis of the cattle business, and when Dean W. M. Jardine of the agricultural college over a year ago suggested to the cattlemen in attendance at the Emporia farm conference, that a plan of deferred grazing could be worked out that would bring the grass back, they listened with much interest and asked many questions.

The dry years of 1911, 1912, and 1913, reduced very materially the capacity of our pasture lands. Pastures all over the state valued at from \$25 to \$40 an acre, were growing more ragweeds than grass, and owners of these pastures felt that their investment was slipping away.

The plan proposed by Dean Jardine was no experiment. It had been tried out on the government range lands under the Forestry Bureau where conditions were far less favorable than in our Kansas pastures. There the method has been highly successful. Readers of KANSAS FARMER were given in detail the proposed plan following the Emporia meeting.

Much careful study of our pasture plants is necessary before the method can be applied to Kansas conditions. A number of cattlemen offered the use of pastures and finally an arrangement was made with a large ranch owner near Manhattan, to begin the necessary investigations. Last April at the cattlemen's meeting held in Manhattan, the beginning of this experiment was announced. At the meeting last week Dean Jardine was able to report some most interesting results, although from its nature such work will require several years' time to establish fundamental principles.

The plan followed was to divide the pasture into three fields. Field one was grazed early, field two later, and field three not grazed until the important forage plants had set seed. Next year field two will be grazed early, field one second, and field three again protected until seed has formed. This deferred grazing the second year also protects the seedling plants that started from the seed matured the year before. The late grazing has been found necessary in order that the grass seed be trampled down and brought into contact with the soil.

In various parts of these pastures little squares were staked off and all through the season counts were made to find out just what was happening. No one knows very much about our pasture plants and thus study is bringing to light many interesting facts. On August 10 there were three times as many plants of the side oats grama grass in the protected area as in the unprotected, and three times as many short grama plants. On August 25 there were three times as many big and little bluestem plants in the protected area. These grasses are the predominating plants in the pastures studied and are valuable forage plants. All of them began maturing seed about August 10. The worst seeds were the annual and perennial ragweeds. Mowing has checked these quite materially.

A number of slides were thrown on the screen and these showed what a wonderful growth of grass there had been in these pastures. The season was unusually favorable for the grass to recover from the effects of the dry year, and by giving it an opportunity the pastures have been greatly improved in capacity even as a result of one year's work. No one could see the pictures shown and listen to Dean Jardine and Mr. Kenney tell of the painstaking work they were doing without being impressed with the value of this pasture study. The results of such careful experimental work will be of great service to the cattlemen of the state in preventing this 400-million-dollar investment from depreciating in value.

The steers used in the feeding test closed at the Kansas Experiment Station last week were sold on the Kansas City market, June 12, for \$10.15 a hundred.



# SUCCESSFUL BLACKLEG SERUM

*F. S. Schoenleber and O. M. Franklin Tell Cattlemen of New Cure for Blackleg*



SOME OF THE CATTLE AT THE KANSAS AGRICULTURAL COLLEGE.—CATTLEMEN IN ATTENDANCE AT RECENT LIVE STOCK MEETING WERE MUCH IMPRESSED WITH VALUE OF STOCK WORK BEING DONE.—LACK OF LAND IS SERIOUS HANDICAP.—A THOUSAND ACRES NOW BEING LEASED

**T**HE veterinary department of the Kansas State Agricultural College has perfected a practical method of absolutely preventing, stopping and controlling an outbreak of blackleg among cattle. It has developed an hyperimmune serum which will immediately stop the progress of the disease in a herd and which when used in connection with blackleg virus will immunize the animal against the disease. This serum and virus has been successfully used on more than 20,000 head of calves.

The announcement of any advancement in science; the discovery of any new feature or a new application of some well established principle is usually accepted by the public with some hesitation and skepticism. When the federal government announced some years ago that it had found a remedy which would prevent hog cholera, there were many "Doubting Thomases" everywhere. In fact we still have some of them with us.

In presenting to the stockmen of the state something that may to an extent revolutionize the cattle industry—that will at least place more certainty in cattle raising—we fully expect to encounter those who will doubt the value of the new method of protecting cattle against blackleg. In spite of the fact that Kansas has over 140 million head of cattle, the Kansas legislature has never made an appropriation for any such work as this and therefore we cannot blame the cattlemen for being skeptical. However, in spite of this handicap we have been able to develop this new serum and now offer it to those interested in growing and feeding cattle.

In the spring of 1905 when the writer took charge of the veterinary department of the Kansas Agricultural College, the department was sending to cattle raisers several hundred thousand doses of blackleg vaccine annually. At this time occasional reports would come to the office complaining of the inefficiency of the vaccine. Upon investigation it was found that at times the vaccine killed a certain per cent of the calves vaccinated, at others it did not protect them for any length of time. Further investigation showed that all blackleg vaccines used, no matter from what source, acted the same way. From year to year these complaints increased in numbers, showing that the disease was becoming more and more virulent. Some cattle raisers tell me that last year they vaccinated three, four and five times and still lost calves. The losses ran up in some cases to over 10 per cent.

These conditions prompted the department to look into the situation critically and see just what could be done.

In 1912 the work of analyzing and testing vaccine of the different makes was begun. Samples of vaccine made in this country and in Europe were bought, including samples from the government. These were all tested in the bacteriology laboratory, under the microscope, upon guinea pigs and upon calves.

The results showed that none of this vaccine was of a standard strength, no two samples were exactly alike, even from the same brand. In all of this work it was found that the government single came nearest of any to being standard.

Upon going still deeper into the subject it was found that the methods employed in its manufacture were such that it could not be standardized in its application; that no blackleg vaccine could or can be made that will be efficient in every case.

Having proved all blackleg vaccines inefficient we were then up against another problem: "With all these losses from blackleg and with no reliable means to prevent it was there anything that could be done to relieve the situation?" The question of producing and using a hyperimmune serum or such a serum and virus together naturally presented itself and accordingly the investigations were begun with that end in view. Dr. T. P. Haslam and Dr. O. M. Franklin were detailed to prosecute the work and the latter has been kept at it exclusively for several years and we now have found something worth while in controlling this much dreaded disease of cattle.

#### MAKING THE SERUM.

Since we first successfully used the serum in a bad outbreak, until the present time, it has never failed to effectually stop the disease, and in some instances cured animals apparently commencing to show signs of the disease. Simply as an experiment, a few well advanced cases have been cured with special treatment by using large doses of the serum. This procedure, however, is only recommended in exceptional cases, as the expense is considerable and the chances of success are small even in the hands of an experienced person in this work. Formerly, the regular vaccines have been the only means at our command in handling the disease before it developed as a means of prevention, and after it appeared in a herd as a check to its spread. These vaccines have not proven very satisfactory in either role. In stopping blackleg outbreaks it has proven a complete failure. When this work of developing a blackleg serum first started we had occasion to control severe outbreaks of blackleg in some large herds. The regular vaccine was used several times without success, then we attempted to check the trouble with a stronger vaccine than is regularly used, but without results, and a continued large loss of cattle in the meantime. In some few cases the vaccine apparently checked the loss, but experienced stockmen know that there are times when even four or five vaccinations fail to stop the trouble.

In practically all cases where the new serum is used on animals that are apparently well and show no symptoms of blackleg at the time of injection, they remain well, and if symptoms develop shortly after using the serum, another application will usually save the animal. We have noticed in several instances

that animals which had received the regular dose of serum in infected herds develop a light attack of the disease in the next twenty-four hours, and recover without additional treatment; showing that the animals were infected at time of using the serum, and that the serum headed off the disease.

#### REASON FOR SERUM EFFICIENCY.

Why do we obtain such striking results from the use of the serum as compared with the poor results from the regular vaccine in stopping blackleg? This is readily explained when we consider the nature of the two substances. The regular vaccine must first produce a slight attack of the disease in the animal before it protects, and it is from five to seven days before this action commences to be of importance. The serum in contrast to this commences its protective action as soon as it is injected. It contains the neutralizing substances or antibodies which unite with the germs of blackleg and their poisonous products and render them harmless.

In producing the serum the virulent germs of blackleg are injected into the veins of an immune animal, gradually increasing the dose until over half a quart of the virus is injected at one time. The animal is then bled and the clear serum which rises above the clot is filtered through a germ-proof filter which holds back all germs and leaves a perfectly clear sterile serum. This is bottled with the addition of a very effective preservative to further insure its sterility. It is then tested against virulent blackleg powder, which is the dried virus of the disease, and since we have established the relation between the killing dose of the virus on calves and guinea pigs, the serum can be tested on guinea pigs as accurately as if calves were used. Five to eight drops of this serum must protect a guinea pig against a dose of virus equal to  $\frac{1}{4}$  to  $\frac{1}{2}$  of killing dose for a calf. A calf given the regular dose of serum will be protected against natural infection for about ten days, and in order to lengthen this immunity, it is necessary to vaccinate before the effects of the serum are lost. This is done by using blackleg virus in pellet form three days after the serum injection.

The exact time this more permanent immunity will last has not been determined accurately, and we have to depend on the results secured in the last three years for the basis of our conclusions. We have never had a case of blackleg reported either in well or sick herds where weaned calves or yearlings received this treatment. In several instances young calves given this treatment came through a season without loss the first time; this had happened on these ranches for years. However, we are recommending that young calves be revaccinated in about six months until we can determine just how long the immunity will last in calves of different ages.

#### COST OF TREATMENT.

There has been some question as to whether it was practical to use this

treatment on account of the expense, which is now from thirty to sixty cents an animal, averaging about fifty cents. Stockmen who have had the experience of trying to control a bad outbreak of blackleg with the regular vaccines or by other means need no arguments as to whether it would be sound business to use a treatment at this price that could be depended on to stop the trouble as soon as used. In the last year we have received many reports of loss amounting, in breeding and range herds, from 1,000 to 3,500.

The cost of using the serum treatment in the largest herd would have meant a saving of over 75 per cent, and for the smaller and pure-bred herds the saving would have been greater. It has been the generally expressed opinion of many extensive cattlemen that the treatment would be thoroughly practical at twice the present cost. As to the efficiency of this treatment, we can say that it is the only treatment that has any scientific basis for the immediate control of the disease when once it has made its appearance in a herd, and from field results in the last three years, it has proven absolutely superior to any other means of stopping outbreaks of the disease. Also it is apparently superior to the regular vaccines for vaccinating well animals, as we are able to use unattenuated virus in pellet form which would be impossible without the serum.

#### SINGLE TREATMENT METHOD.

On account of the necessity of the two treatments, there is a great demand, especially in the large range herds, for a vaccine which will give effective immunity at one treatment. We have developed such a treatment, and have used it successfully on about 8,000 animals. It is very difficult to produce and is necessarily expensive, as only a very limited amount can be produced from a calf. At present we are working toward the cheapening of its production. It is the only means by which a calf can be positively immunized by one treatment with safety. It can be given in any sized dose, as it contains no germs, and contains only the soluble products of the disease.

We have tested this single treatment method out at different times experimentally on two hundred head, giving them the treatment and later injecting a fatal dose of blackleg virus, and all animals remained perfectly well while animals not treated were killed with the same dose of virus. The only objection to its general use is the almost prohibitive cost, but even this is not proving sufficient to bar its use where blackleg is severe, as its superiority to any other means of protection against blackleg can be readily proven by our experiments, and its use in the field has demonstrated its efficiency to the thorough satisfaction of all who have used it. It cannot take the place of the serum, of course, in sick herds, but it, or some equally efficient material will supersede the present day vaccines.



A FARM  
ELEVATOR  
SAVES  
LABOR

# FULL VALUE FOR WHEAT

## Forced Marketing Temporarily Depresses Price

weather. Portable granaries have the advantage of being readily moved, and of receiving grain direct from the thresher without the necessity of harvest-time hauling when all teams are busy and hard to pick up.

There is no method of farm storage more practical and valuable to the average wheat grower than these portable bins.

### FARM ELEVATORS

The use of the fully equipped farm elevator is growing, however. There is every reason why grain growers should have elevators in which the grain may be stored as threshed, and from which it may be readily hauled when prices have recovered from their harvest-time slump.

When properly designed, farm elevators are easily operated and handle the grain with the minimum of labor and expense. Cutting out man labor and substituting machinery makes the work easier and faster, and the cost per bushel less. Moreover, a farm elevator erected near a good road means that the grain will get to market at a time when prices are right, regardless of weather.

There are a number of elevators in use on Kansas wheat farms. One of the

cement can be figured at prevailing prices. The work may be done by the help on the farm, if experienced in carpentry and the setting up and adjustment of machinery. Or a contract may be made for the building with experienced elevator builders.

The galvanized steel elevator is another type that is now being received with much favor. The drawing shows the plan and the elevation of such a structure. It is planned solely as a grain storage, and is fire, lightning and rat-proof. This elevator consists of two galvanized metal storage tanks, to which is connected a wagon dump, elevator leg and drive. The engine used is a portable farm engine of about four horsepower.

Such tanks are built of galvanized sheets arranged to be bolted together on the job. They are erected over a concrete pit and foundation. The pit is hopped to the elevator boot, and the grain feeds into the boot by gravity, as does the wagon-dump.

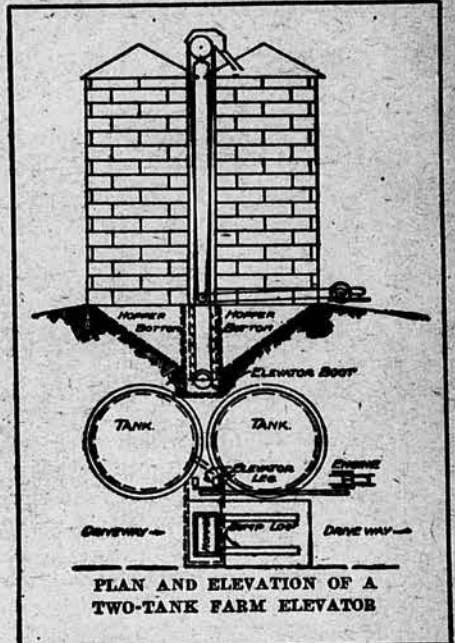
The parts of metal storage tanks are built at the factory and simply require putting together on the farm. The machinery consists merely of the wagon dump, the elevator leg, and the counter-shaft and chain drive, all operated by a small gasoline engine.

One leg can as easily serve two tanks as one. With one tank, the capacity will be about 4,500 bushels. With two tanks, about 9,000 bushels.

It is better to build a roof over the wagon dump, as this protects it from rain. It is essential that no water shall run into the elevator boot.

Such metal tanks are built in various sizes, up to 7,000 bushels capacity each.

The bill of material for the elevator shown includes the following: One tank 14' 4" x 34', 100 feet 8" red stitched elevator belt, 100 7" x 4" elevator cups, 400 bolts, one boot for 7" cups, one 6" swivel spout, one set dump irons, one sprocket 8 T. No. 77, one sprocket 40 T. No. 77, one sprocket chain No. 67, one head pulley 24" x 8", four feet shafting 1 1/2", two common flats 1 1/2", one set collar 1 1/2", one pulley (for engine belt) 18" x 6", 2,500 feet lumber for

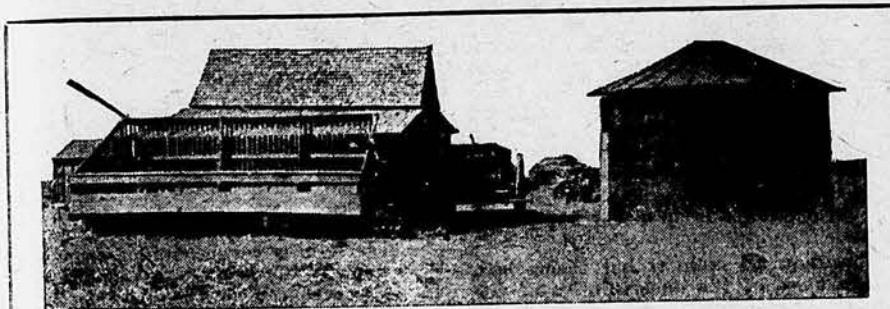


general principles of the automobile and tractor, the dissimilarity stands out much more conspicuously. An automobile engine seldom is called upon to deliver its full power. A tractor must develop almost its maximum at all times, hour after hour, sometimes from one day into the next. An automobile runs on momentum half the time. Momentum is an idle dream around the tractor. An automobile engine could be 50 per cent wrong and still give satisfaction for years. When a tractor loses that much power, it loses the amount necessary to move it and is fit then only for light stationary work. The tractor gets the sudden jolts which the automobile misses through the swaying motion induced by its speed.

"Speed is another important consideration. The all-purpose tractor will be put to various types of drawbar work. Plowing requires speed within certain limits in order to properly scour the

**T**HE four months following harvest are invariably the months of lowest grain prices. Yet in these four months—July, August, September and October—two-thirds of the great Kansas wheat crop finds its way to market.

What these four months of low prices have cost the farmers of Kansas is almost beyond estimate. This loss is a direct loss. It is a cash loss that comes right out of the farmer's own pocket. And a little study—a little careful consideration of the causes—reveals the proper remedy, and the remedy which



GRAIN SAFELY STORED IN BIN CAN BE HAULED TO MARKET WHEN PRICES ARE RIGHT.—FORCED MARKETING QUITE OFTEN MEANS LOWER PRICES

every Kansas grain grower should use to his own great profit.

### VISIBLE SUPPLY GOVERNS PRICE

These low prices hinge on the "visible supply" of grain.

All grain prices are controlled by the law of supply and demand. So far as the grain trade is concerned, the grain available is indicated by the "visible supply." That is, the grain actually delivered to the elevator for shipment.

Thus the four months of low prices are the grain speculator's opportunity. He brings all the grain he can into the "visible supply." He fills the great railroad terminal elevators to overflowing. He fills his own elevators. He is helped by the farmers, who haul to market two-thirds of their grain in the low-priced four months following harvest.

And the more grain there is thus brought into the "visible supply," the lower the price drops. This practice puts a fictitiously low price on grain for a short time, while its real value is measured solely by the world demand.

Grain stored on the farm does not figure in the "visible supply" as it does when hauled to the elevator company, either to be sold or stored. Consequently it does not act as a club on the market.

### GROWER LOSES HEAVILY

So the practice of harvest-time marketing operates to the grain speculator's advantage, and the loss falls altogether on the farmer. The ultimate consumer gets no benefit.

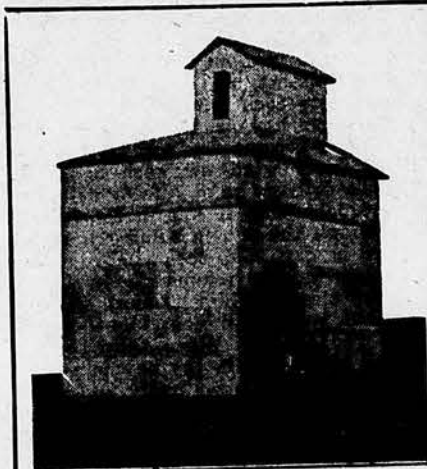
Take this year's wheat crop in Kansas. It will likely be above 100,000,000 bushels. If Kansas farmers hold this grain back for the four months following harvest, and then hold their crop for the higher prices of late fall and winter, they will undoubtedly realize as much or more than fifteen cents a bushel over the harvest-time price.

Otherwise, that is about \$10,000,000, which is the farmer's dead loss through "dumping" his grain onto the early market.

What is the remedy? It is simple. Provide secure grain storage on the farm. Hold the grain back, out of the "visible supply," until world-conditions of supply and demand operate to restore normal grain values.

### PORTABLE STORAGE POPULAR

To store grain on the farm requires proper facilities. The portable metal granaries that have come into extended use the last few years have proved to be, when rightly built, satisfactory in every way. Such storage is safe and secure from fire, rats, lightning and



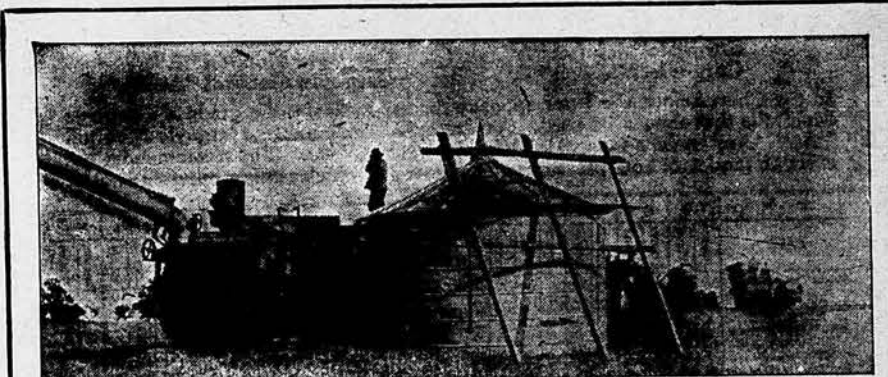
FARM ELEVATOR OF FRAME CONSTRUCTION ON KANSAS WHEAT FARM

cuts on this page shows such an elevator of frame construction, holding 6,000 to 7,000 bushels of grain. The equipment includes a 6-horsepower gasoline engine, feed grinder, 400 bushels per hour elevator and all necessary drive shafting, equipment and wagon dump. Such an elevator will handle all the grain used or produced on the farm. It is not only a storage for grain but is used for handling feeds of various kinds.

It has two 12 x 12-foot bins over the driveway; two 8 x 12-foot bins either side of the work floor, and a grinder bin overhead.

The cupola is 8 x 12 feet and 12 feet high. As built, the house is covered with galvanized siding. The bill of material required about 20,000 feet of lumber, 900 cubic feet of concrete, and the following machinery: One 6-horsepower gasoline engine, one No. 1 feed mill, four common flats, one set 30" x 4" T. & L. pulleys, one 18" x 6" pulley, two 1 1/2" set collars, 35' 4" x 4-ply belt, 20' 5" x 4-ply belt, four feet shafting 1 1/2", two common flats 1 1/2", one set collars 1 1/2", one sprocket 40 T. No. 77, 50' sprocket chain No. 67, one head pulley 24" x 9", 95' red stitched belt 8", 95 elevator cups 7" x 4", 200 bolts, one boot for 7" cups, one swivel spout 6", one set dump irons, one sprocket, 8 T. No. 77.

This machinery will cost in the neighborhood of \$330 to \$350. Lumber and



RUNNING GRAIN FROM THRESHER INTO PORTABLE STEEL TANK.—SAVES LABOR AT THRESHING TIME AND PROVIDES SAFE STORAGE

staging, elevator leg and wagon dump, 700 cubic feet concrete.

The cost of the machinery will be about \$90. No engine is included, as nearly every farm has a portable engine that will handle the work.

Farm elevators mean that the grain is handled throughout by machinery. They save all scooping. They make quick and fast handling. They thus save money and time, when time and money count. Above all else, they put into the individual grain grower's pocket thousands of dollars that otherwise are lost by premature marketing of the crop.

### Engine for Tractor

In the Implement and Tractor Trade Journal, Howard E. Everett has the following to say on the development of the tractor engine:

"It has been demonstrated that there is but one type of engine adapted to tractor work—a tractor engine. The ordinary stationary or automobile engine will not stand the acid test of hard service. Stationary engines seldom have the proper balance for tractor work. This makes counter balancing necessary and then the tractor is weighted unnecessarily. A tractor requires a uniform speed which stationary engines can't always deliver.

"While there is some similarity in the

bottoms and produce the best results. Within these limits it is possible for one tractor pulling a certain number of plows to work so slowly that a smaller tractor pulling fewer plows at a greater speed can cover more ground in a certain time. Work on the road or pulling binders requires a faster speed than plowing. Most tractors have more than one speed. This is accomplished by shifting gears or by adjusting the governors.

"Refinements are being shown every year in the small tractor. Working parts formerly exposed to a cloud of dust are now enclosed. Great improvements have been made in the cooling, oiling and ignition systems. The manufacturers who are keeping abreast of tractor development will include these improvements."

The old idea that farm crops "run out" may safely be looked upon as a humbug; that is, if reasonable care is given to the selection of good seed and proper methods of soil culture each year. If, due to careless handling, farm crops do run down or "run out," the best thing to do is to run them out. Dispose of the poor stuff and make a fresh start with good seed from the farm of a thrifty neighbor. Then keep the seed good.





**Many oils break down under this heat. Part of the oil goes off in vapor, just as hot water gives off steam. With an oil film only .003 of an inch thick this vaporization must be reckoned with.**

In that Chart you will find specified the grade of Gargoyle Mobiloils you should use in your motor. If your car is not listed, a copy of our complete Lubrication Chart will be sent you on request.

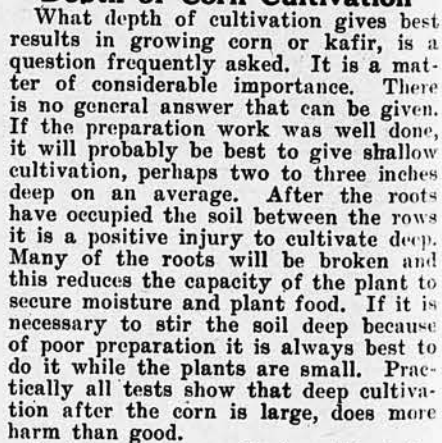
**In buying Gargoyle Mobiloils from your dealer, it is safest to purchase in original packages. Look for the red Gargoyle on the container. For information, kindly address any inquiry to our nearest office.**



**In the Chart below, the letter opposite the car indicates the grade of Gargoyles Mobiloids that should be used. For example, "A" means Gargoyles Mobiloid "A," "Arc" means Gargoyles Mobiloid "Arctic," etc. The recommendations cover all models of both pleasure and commercial vehicles unless otherwise noted.**

MODEL OF	1916		1915		1914		1913		1912	
CARS	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter
Knight Car	A	Arc.	A	Arc.	A	Arc.	A	Arc.	A	Arc.
" " Com'l.	A	Arc.	A	Arc.	A	Arc.	A	Arc.	A	Arc.
" " (Model 48)	A	A	A	A	A	A	A	A	A	A
Knott	A	A	A	A	A	A	A	A	A	A
" (Model 35)	A	A	A	A	A	A	A	A	A	A
Locomobile	E	E	E	E	E	E	E	E	E	E
Lozier	A	Arc.	A	Arc.	A	Arc.	A	Arc.	A	Arc.
Marron	A	Arc.	A	Arc.	A	Arc.	A	Arc.	A	Arc.
Maxwell	Arc.	Arc.	A	Arc.	A	Arc.	A	Arc.	A	Arc.
Merced	"	"	"	"	"	"	"	"	"	"
" (22-70)	"	"	Arc.	Arc.	"	"	"	"	"	"
" (22-72)	A	A	A	A	A	A	A	A	A	A
Mitchell	"	"	A	Arc.	"	"	"	"	"	"
" (8 cyl.)	A	A	"	"	"	"	"	"	"	"
Moline	"	"	"	"	"	"	"	"	"	"
" Knight	"	"	A	A	A	A	A	A	A	A
National	"	"	A	A	A	A	A	A	A	A
" (12 cyl.)	"	"	"	"	"	"	"	"	"	"
Oakland	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	A	Arc.	A	Arc.
" (8 cyl.)	A	A	"	"	"	"	"	"	"	"
Oldsmobile	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	A	Arc.
" (8 cyl.)	"	"	"	"	"	"	"	"	"	"
Overland	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.
Packard	"	"	A	A	A	Arc.	Arc.	Arc.	Arc.	Arc.
" Com'l.	A	A	"	"	"	"	"	"	"	"
Paige	"	"	A	A	A	A	A	E	A	E
" (6-46)	Arc.	Arc.	Arc.	Arc.	"	"	"	"	"	"
" (35 & 38)	A	A	A	A	Arc.	Arc.	"	"	"	"
Pathfinder	A	A	"	"	Arc.	Arc.	A	Arc.	"	"
" (12 cyl.)	"	"	"	"	"	"	"	"	"	"
Peerless	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.
" (12 cyl.)	A	A	"	"	"	"	"	"	"	"
Pierce Arrow	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.
" Com'l.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.
" (8 cyl.)	A	A	Arc.	Arc.	A	Arc.	A	Arc.	A	Arc.
Reo	A	Arc.	"	"	"	"	"	"	"	"
Raxon	E	E	A	A	A	Arc.	A	Arc.	A	Arc.
Selden	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.	"	"	"	"
Stearns Knight	"	"	B	B	B	B	A	A	A	A
" (8 cyl.)	B	B	"	"	"	"	"	"	"	"
Studebaker	"	"	"	"	"	"	A	Arc.	Arc.	Arc.
Stutz	A	A	"	"	"	"	"	"	"	"
Vette (6 cyl.)	"	"	"	"	"	"	A	Arc.	A	Arc.
White	Arc.	Arc.	Arc.	Arc.	A	Arc.	"	"	"	"
Willis Knight	"	"	"	"	"	"	"	"	"	"
Winton	B	B	A	B	A	Arc.	Arc.	Arc.	Arc.	Arc.

**Minneapolis  
Boston  
Kansas City, Kan.**



Chaynes 0 2.55	Bowman 1.35	Decker 1.33	Barton 2.53	Phillips 3.94	Smith 4.80	Jones 4.31	Haydel 5.43	Washington 7.52	Haydel 6.86	Smalls 6.23	Brown 6.72	Douglas 7.70
Shuman 1.14	Thoman 1.33	Sanderson 1.20	Crabon No REPORT	Banks No REPORT	Delaney 0.66	McIntosh 4.51	Clark 3.99	City 4.61	Porter 6.17	Jackson 5.57	Ashburn 5.77	7.60
Watson 0.52	Logan 1.70	Gray No REPORT	Tipton 1.76	Ellis 1.63	Reynolds 2.62	Urean 1.49	Others 1.92	City 4.61	Porter 6.17	Jackson 5.57	Ashburn 5.77	7.60
Grady No REPORT	Wickham No 0.55	Burt No 1.64	Law No 0.97	Boss 2.46	Rush 1.41	Barton 1.41	Ellsworth 4.15	Clark 3.99	Porter 6.17	Jackson 5.57	Ashburn 5.77	7.60
Hamilton 0	Keary 0.55	Phayre 0.33	Madison 0.97	Payson 0.80	Stallard 1.74	Stallard 0.397	McPherson 6.32	Clark 3.99	Porter 6.17	Jackson 5.57	Ashburn 5.77	7.60
Dixon No REPORT	Coast 0.01	Smith No REPORT	Ford 0.44	Payson 0.80	Stallard 1.74	Stallard 0.397	McPherson 6.32	Clark 3.99	Porter 6.17	Jackson 5.57	Ashburn 5.77	7.60
Watson 0.18	Logan 0.48	Gray No REPORT	Tipton 1.76	Ellis 1.63	Reynolds 2.62	Urean 1.49	Others 1.92	City 4.61	Porter 6.17	Jackson 5.57	Ashburn 5.77	7.60

In most counties it was a fine month for the growth of all crops, though corn was somewhat backward on account of the late start it received in April.



little deeper than the surface-planted, but there is not the difference some suppose. Most of the corn roots will be found in the surface six or eight inches of soil, whatever method of planting was followed. When corn is listed the feeding roots tend to establish themselves in the part of the soil supplying the most plant food and where other conditions are most favorable. For this reason listed corn can be injured by deep cultivation the same as surface-planted corn.

Nearly all of the most successful corn growers are now using the six-shovel cultivator. There are times when the corn becomes very weedy and when there is a good deal of trash on the ground. Under such conditions the large shovels must be used.

The old plan of laying the corn by with a deep cultivation, throwing a ridge of dirt to the row, has been found to be a mistake. It is far better to leave the surface comparatively level, only stirring it deep enough to keep down the weeds and prevent a crust from forming.

In these days of high-priced land and corn, it will sometimes pay to give the crop some extra attention even after it has grown too large to cultivate with the ordinary cultivators. Stirring the soil between the rows with a one-horse cultivator may be a decided advantage. If a heavy rain follows the laying by of the corn, it may crust the soil badly and a heavy crop of weeds may start. Late cultivation of this kind must, of course, be shallow. Farmers who are making a specialty of growing seed corn can quite often afford to do this extra work because of the extra price they will get for the corn they grow.

### Care of Hay Rope

We have been asked if it will injure a good hay rope to hang it in a stable where it will be exposed to the gases rising from the manure of horses or cows.

This is not a good place to store a rope. These gases are alkaline and corrosive in their action. They will act on the fiber of the rope, and while the injury may not be very noticeable, the life of the rope will be shortened. A dry place away from the stable would be much more suitable for storing a good hay rope.

### Size of Silo

R. R., Johnson County, asks if a 13-foot silo will be too large for feeding thirty head of cattle.

One of the commonest mistakes that has been made in the building of silos is to build them of too great diameter. On very few farms is it wise to put up a silo more than 16 feet in diameter, and even for this size there should be at least thirty-five head of mature animals to be fed. The animals to be fed by the silo should always be the determining factor. Where the diameter is so great that only a thin layer can be fed from the surface each day, there is always more or less spoiled silage. It is far better to have a silo small enough so that a layer of three or four inches can be removed each day. Over a ton of silage must be fed daily from one twenty feet in diameter in order to avoid having spoiled silage on the surface. It would be necessary to have at least seventy head of cattle to feed before a start could be made. The big silo is all right for the cattle feeder, but the average farmer is a cattle raiser or is handling as many cows as his family can milk. He seldom has stock enough to warrant putting up a big silo.

We have always urged that this point be given careful consideration in planning for the silo. It is true that the large silo costs less in proportion to its tonnage capacity, but this argument has led many a man to buy a silo of too great diameter, and as a result he gets a poor idea of silage as feed. If a canvass were made to locate silos that have gone unfilled or that have been unsatisfactory, we feel sure this would be the explanation in most cases.

The silo is most important on a live stock farm, but more small ones should be built. Growing live stock in proportion to the capacity of the farm, is a far safer business than feeding cattle in a speculative way, and a small silo can be used to advantage on such farms, while large silos can only be opened when a large number of cattle are on hand for feeding.

### The Grange in Kansas

The present year is going to be another phenomenal one in organization. Last year Kansas headed the list with ninety new Granges, while Ohio made a close second with about eighty-three. This year up to the present time nearly fifty have been organized, and only half the year gone. Credit for this is due to

Worthy Master A. P. Reardon, and his force of deputy masters, who have been in the state and in their respective counties the only organizing factors and have devoted time and energy to it. The general work of the Grange has been strengthened by the visits of the master, its secret work exemplified, its general effort directed toward the work laid down in its constitution and rules. Social, educational and economic are some of the departments of the work. Programs cover the whole round of farm and home life, and the relation of the farmer to the entire community. From the care of the chickens to the right kind of manual training in our schools, from the selection of seed corn to a study of rural credit systems, are all in the range.

Some think that the co-operation in the Grange is solely devoted to buying a few things together. This is an error. While a business in larger bulk buying is done, and it is a vast amount today, that is not the limit of co-operation. Some bill in Congress that is vitally connected with the success or failure of western farm life is up for consideration. Co-

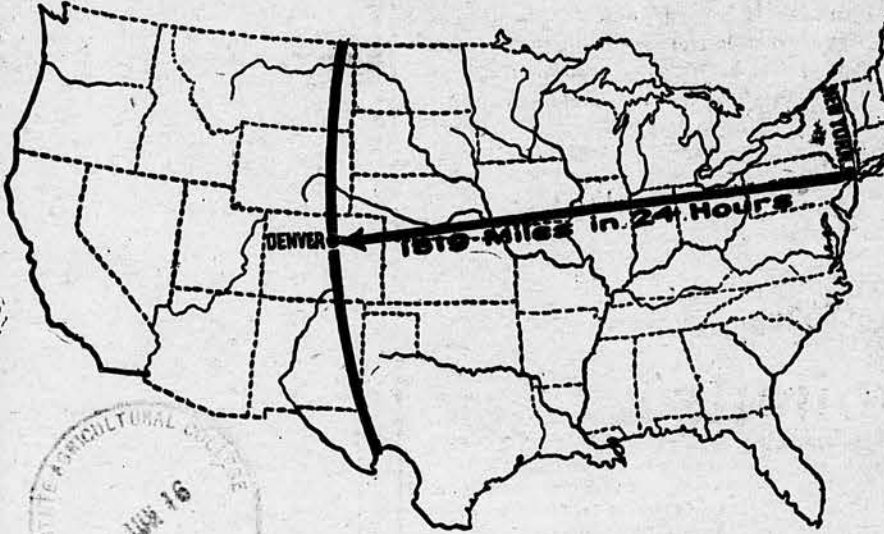
operating together thousands of farmers write senators and representatives, and their Grange committee in Washington, the National Master, and two very able State Masters, and a protest is made or a spur given to the passage of a very important measure. Couple with this that a dozen other state Granges are doing the same thing, and one can estimate the vigilance and the interest used. The dairy business, the rural mail delivery, and other things have at times been in more or less jeopardy, and have been saved by direct agency of the Grange. For the first time in Kansas legislative history the allied farmers' orders made a careful analysis of legislation offered, and brought forward also themselves bills covering needed legislation during the session of 1915. The rural high school law, under which there are now nearly fifty established, was the outgrowth of this, as also many other acts.

Of course, not every friend of farming really farms. Some of the members of the 1915 legislature who are not on the farm stood true blue for laws that

make farming successful and farm life better. We count you in, you belong to the bunch that backs the agricultural progress of the West. I am glad to see some of you ready to ask return to legislative halls.

The Grange stands for the best things, not only for the open country, but also the interests of the entire state. The organization going on has a more permanent basis than ever before. Its tackling of problems is altogether different, the attitude is constructive, and patiently, persistently so. Its mission is better understood by the masses of its membership. As a community building factor, its percentage of efficiency is much higher than ever before in its half century of existence.—ALFRED DOCKING.

Dry sows not bred for fall litters may be roughed through the summer on alfalfa or rape pasture. Sows carrying a litter should receive some grain with the pasture but not enough to cause them to become fat. Good condition is desired, but excessive fatness often results in small litters and weak pigs.



1819 Miles in 24 Hours

**Other Unrivaled Records**

All made under A. A. A. supervision, by a certified stock car or stock chassis, and exceeding all former stock cars in these tests.

100 miles in 89 min., 21.4 sec., averaging 74.67 miles per hour for a 7-passenger touring car with driver and passenger.

75.89 miles in one hour with driver and passenger in a 7-passenger touring car. Standing start to 50 miles an hour in 16.2 sec.

One mile at the rate of 102.53 miles per hour.

1819 miles in 24 hours at average speed of 75.8 miles per hour.

Over 2000 miles at speed exceeding 75 miles per hour without evident wear on any engine part.

## Hudson Super-Six

# Sets New 24-Hour Endurance Mark

*Fastest Time for Such Distance ever made by a Traveling Machine*

No man today—if he knows the facts—doubts the Super-Six supremacy.

At first the truth seemed like a romance. Think of one new invention, applied to a light six, adding 80 per cent. to its power.

Then official records began to pile up, certified by the A. A. A. The whole motoring world then had to concede this the greatest motor built.

But many men asked, "What about the endurance? Can a motor so flexible, so speedy, so powerful, stand up in years of road use?"

So we asked Ralph Mulford to take a stock Super-Six chassis and, under official supervision, show the world its endurance.

**All Records Broken**

He took a Super-Six stock chassis—certified by A. A. A. officials.

It had already been driven over 2000 miles at speed exceeding 80 miles per hour.

It had made a mile at Daytona at the rate of 102.53 miles per hour.

And he drove that car 1819 miles, on Sheepshead Bay track, equal to the distance from New York to Denver—in 24 hours of continuous driving—at an average speed of 75.8 miles per hour. At the end of that test—after nearly 4,000 miles of record-breaking strain—the car, when officially examined, showed no appreciable wear.

**How Much Endurance Has It?**

It will be many years from now before we can tell you how long a Hudson Super-Six will last. But the records we cite cover the greatest strains a motor car ever met. Many a great engine has gone to pieces under far lesser strain. Years of ordinary driving would never tax a motor like those thousands of miles of speed tests.

Yet the wear on the Hudson Super-Six was almost nothing. Certain it is that no man has ever built a traveling machine to compare with this car in endurance.

**Greatest Endurance Proved**

That was the last question—this one of endurance. In all other ways it has long been evident that the Super-Six stands supreme. Never has a motor of this size shown anywhere near such power. Never was an engine made to match this in smoothness. Never has a stock car recorded equal performance—in hill-climbing, quick acceleration or speed.

Handsome cars have never been shown. Finer engineering is simply unthinkable, with Howard E. Coffin at the head of this department.

You are getting the car of the day when you get the Super-Six. Every man who knows the facts knows that. And, in view of our patents, rivalry is impossible.

**No Need to Wait**

It is natural to say, "Let us wait and see," when we meet such radical advancements. We think that nothing can excel in so many ways without falling behind in one.

But not one fact about the Super-Six is left unproved today. Not in one respect has its performance been matched. Not in any way has a rival motor been made to compare with this.

There is no need to wait to get Time's verdict on the Super-Six. The records prove the Super-Six supreme. A half-hour's ride without those records would convince any man of the fact.

Thousands of these cars are now running. You will find them in every locality. And every owner will tell you that he never meets a car to compare with his, in looks or performance.

These are things to consider when you buy a car.

Phaeton, 7-passenger, \$1475    Roadster, 2-passenger, \$1475    Cabriolet, 3-passenger, \$1775

Touring Sedan \$2000    Limousine \$2750

(Prices f.o.b. Detroit)

## HUDSON MOTOR CAR COMPANY, DETROIT, MICH.



# What a DE LAVAL Cream Separator SAVES

## Over any other Separator or Creaming System

**QUANTITY** of cream that no other separator will recover completely, particularly under the harder conditions of every day use.

**QUALITY** of cream as evidenced by De Laval butter always scoring highest in every important contest.

**LABOR** in every way over any gravity system, and also over any other separator, by turning easier, being simpler, easier to clean and requiring no adjustment.

**TIME** by hours over any gravity system, and as well over any other separator by reason of greater capacity and the same reasons that save labor.

**COST** since while a De Laval Cream Separator may cost a little more than a poor one to begin with it will last from ten to twenty years, while other separators wear out and need to be replaced in from one to five years.

**PROFIT** in more and better cream, with less labor and effort, every time milk is put through the machine, twice a day, or 730 times a year for every year the separator lasts.



### SATISFACTION,

which is no small consideration, and can only come from knowing you have the best separator, with which you are sure you are at all times accomplishing the best possible results.

### EASILY PROVEN

—these are all facts capable of easy demonstration and proof to any user or intending buyer of a cream separator. Every De Laval agent is glad of a chance to prove them by a De Laval machine itself—without the slightest obligation to the prospective buyer unless entirely satisfied.

If you don't know the nearest De Laval agent simply address the nearest main office as below.

## THE DE LAVAL SEPARATOR CO.

165 Broadway, New York 29 E. Madison St., Chicago  
50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER

## Bigger Profits Better Bales and More of 'Em

There's money in baling hay—big money if you use the famous fast working Sandwich Hay Press (motor power). Bale your own hay—hold it for the top-notch market—make a nice, fat income baling hay for your neighbors—\$10—\$15—\$20 a day clear profit is common with our outfit.

## SANDWICH HAY PRESS

Solid steel construction. Sandwich Gas and Oil Engine, with magneto, mounted on same truck furnishes power. Complete outfit built in our plant, superior to assembled machines. Heavy steel chain transmission (no belt to slip). Simple self-feeder and block dropper. Turns out a continuous stream of solid, salable bales. Starts or stops instantly. Best press for alfalfa. We also make horse and belt power presses.

"TONS TELL," Our Book, Sent Free Pictures and describes these great presses. Write. SANDWICH MFG. CO., 517 Center St., Sandwich, Ill.



## FARM LOANS

### DO YOU WANT A LOAN?

If you do, write us. We will furnish you money at the lowest rate, best terms, prepayment privileges with every loan.

**CAPITAL MORTGAGE COMPANY**  
TOPEKA, KANSAS



## Drying Off Dairy Cows

It is not usually a difficult matter to dry the ordinary milk cow. In fact, the dairyman who milks common cows finds that many of them are dry several months of the year. The highly developed dairy cow, however, is a more persistent milker as a general rule. This is an important point in determining the value of the cow as a producer. The persistent milker will often give more milk in a year than will a cow that gives a very heavy flow at freshening time but dries up after five or six months.

Dairymen differ as to the length of time cows should be dry between lactation periods. It is generally agreed that they should have a rest of six to twelve weeks. Six weeks is probably too short a time, and twelve weeks is too lengthy a rest for good producing cows. The reproductive and milk-giving functions put a very heavy drain on a cow, and few can hold up year after year without this resting period. In our dairy breeds there are some few cows so persistent in milk production that it is almost impossible to get them dry at all. As a rule, such will have an "off" year occasionally. They simply cannot hold up to a heavy flow year after year.

The reason for drying cows between lactation periods is to give them a rest from this heavy strain of milk production and permit them to accumulate a reserve of vitality, also to enable them to better nourish the unborn calf.

The fat and ash a cow stores in her body during the resting period is drawn upon for milk production when she freshens. In fact, there is a close relationship between the ash stored in the body and the amount of milk given during a lactation period.

Heavy milkers that cannot be easily dried and are kept milking year after year without rest, wear out young. It is always better to give good cows six to eight weeks rest. They will last longer and will produce more in the long run than if they are milked continuously without this rest.

When drying up one of these heavy milkers, it is necessary to stop all grain feed, also silage, grass, or other succulent feed. They should not be milked quite dry, gradually leaving a little more milk in the udder at each successive milking. As the milk flow decreases they can be milked only one a day, gradually lengthening the time between milkings until they are dry.

In drying a persistent milker, close watch must be kept to see that her udder does not become unduly distended. It would be possible to have a cow's udder seriously injured by letting it get too full of milk.

### Skim Milk on Dairy Farm

One of the most important points in getting the full profit from milking cows is the feeding of the skim milk. This may be considered as a by-product, but many a manufacturer makes his profit by an economic use of the by-products of his main business.

Feeding the calves is one of the most profitable means of using skim milk on the dairy farm. Dairying cannot become an abiding industry unless provision is made to replace the cows. On every dairy farm new cows must continually be brought into the herd. Having to go out and buy cows to keep up a herd is

most unsatisfactory. The most successful means of accomplishing the desired result is to raise the heifer calves from the best cows. It is not enough to barely keep these calves alive. So fed, they will develop into scrawny, stunted, knot-headed heifers that will be of little use in the herd. Calves are worth raising right, and it can be done with skim milk by those who will take the trouble to learn how.

In any section given over largely to the sale of whole milk, it is a most difficult proposition to keep up the herds. In fact, in many localities commonly considered as highly developed communities, the class of cows being milked is getting poorer each year because no constructive improvement work can be done where skim milk is not available for feeding the calves.

Someone must supply the cities with whole milk, but on the average farm almost as much value can be made from the skim milk properly fed to calves and pigs as is paid for whole milk when sold at wholesale rates. This sort of dairying fits into general farming far better than does the sale of whole milk, and is the kind that should be practiced on more of our Kansas farms.

### Experience with Dairy Breed

Being a reader of your paper, I have noticed what you are doing to help along the dairy business, but I was especially gratified at your "Dairymen Discuss Business" in your issue of May 27, inst.

You are absolutely correct in saying the dairy business should be carried on as a part of the farm business and not specialized in. You are also correct in saying that many cows are coming from Wisconsin that are not good dairy cows—in fact I make the statement without fear of contradiction by any one who has had the years of experience that I have that the dairy cows of Wisconsin or any other state that has gone in for the pure bred craze are not as good as they were twenty-five years ago.

My dairy experience goes back to 1876, when I was just 16 years of age, and since that time I have tried this pure bred game to a finish, and if I had here on my farm the same bunch of big red, roan and spotted cows we milked in Minnesota thirty years ago I would not begin to trade them for the highest bred registered herd in the country if I intended to milk them for a period of years for profit at the pail. There is a lot of "bunc" being handed the farmers and dairymen in this cow business, and I can assure you you cannot take a Babcock tester along and pick out a good dairy with it—far from it. It takes many things to make up a really good cow, and one that will show a profit at the pail and a long pedigree is the last thing to be looked at. This pure bred game has cost me many thousands of dollars, and I have learned much. Purchasing a herd of pure-bred dairy cattle ten years ago in the east, we built modern quarters for them with cement floors, steel stanchions, etc., and fed and watered them according to the latest misinformation doped out by the "run for advertising" dairy papers. Fed "balanced rations," warmed the water at great expense of coal, and help, washed the udders, curried, scraped and mani-

## Attention Dairy Club Members

### Kansas Farmer Dairy Club Schedule of Feed Prices

IN calculating cost of feed, use figures here given except on feeds purchased. For all purchased feeds use actual cost figures. If any feeds are used that are not found in this list, write to KANSAS FARMER for price to use.

GRAINS AND CONCENTRATES		ROUGHAGES	
Corn chop	\$1.25 per cwt.	Alfalfa hay	\$8.00 per ton
Kaffir meal	1.00 per cwt.	Clover hay	8.00 per ton
Milo meal	1.00 per cwt.	Hay from sorghums	4.00 per ton
Peterita meal	1.00 per cwt.	Sudan hay	6.00 per ton
Corn and cob meal	1.00 per cwt.	Other hay	6.00 per ton
Head meal of gr. sorg/ms	1.80 per cwt.	All stovers	2.00 per ton
Oats	1.25 per cwt.	Silage	3.50 per ton
Ground oats	1.35 per cwt.	Straw	.50 per ton
Wheat bran	1.20 per cwt.	Green fodder	2.50 per ton
Cottonseed meal	2.00 per cwt.	Green alfalfa	3.50 per ton
Cold pressed c'seed cake	1.50 per cwt.	Roots	3.00 per ton
Linseed oil meal	1.80 per cwt.	Pasture	1.00 per mo.
Alfalfa meal	1.00 per cwt.		
Molasses-alfalfa feed	1.50 per cwt.		
Molasses-alfalfa grain feed	1.70 per cwt.		



cured and practically lived in the barn for about eight years and then gave it up in disgust. There is absolutely not a dollar to be made from the specializing in the cow business or hen business. When we quit all this tomfoolery our cattle did better. We ceased to have abortion, sterility and tuberculosis. Cut out all this bunc and go back to first principles with your cows and you will not go through what I did and pay \$300 for a cow, get one calf and then send her to the yards at \$27.50.

Specializing on the cow and hen is a failure. Go it slow, and above all, get the good, big red, roan and spotted cows at a reasonable price, and those with vigor enough to carry a calf and give milk at the same time. Do not take a moment's stock in these big records—they are forced and do not represent what the cow will do under normal conditions, such as obtain on the average farm. It is more important to have a cow that will drop a calf regularly than that she have a big record obtained by not breeding her during the lactation period, stuffing with the best of feeds and milking three or four times a day—and that's the way they are obtained—every one of them. It has descended to a regular game, and the average man will do well to let these animals alone. As stated, I speak from experience with these animals, and this experience has cost me several thousand dollars.—F. W. SMITH, Missouri.

EDITOR'S NOTE—We do not agree with all that Mr. Smith says, and perhaps many of our readers will take exceptions to some of his statements, but there is food for thought in his comments on the dairy business.

### Polled Hereford Information

In a recent issue we gave some statistics on Polled Hereford cattle. The information was based on the statements of an authority we had every reason to believe had the facts to date. This breed has been making rapid strides in recent years, and we find our informant was not up-to-date. From B. O. Gammon, secretary of the American Polled Hereford Breeders' Association, we have the following:

"Practically speaking, not one Polled Hereford bull out of 100 will fail to dehorn at least one-half of his calves when mated with registered Hereford cows. A number of bulls have been mated with from fifty to several hundred cows and have never sired a horned calf. Breeding the horns off the whitefaces is easy. An absolutely sure way to do it is known. Our great problem is to produce polled sires enough to do the work. This takes time.

"Our records show that not less than 50 head of the polled 'freaks'—the offspring of horned sires and dams—have been located during the past fourteen years. The first search made in 1901 and 1902, brought together the original fourteen freaks from which the Polled Hereford breed has been developed, and since that time several have come to light each year.

"We will admit that it is more difficult to find as many animals of the best beef type in the new breed as in the old established breed because Polled Herefords are subject to the same laws of breeding as are all other animals. In every breed of animals a few outstanding and superior individuals will be found, a great many common or average individuals and a few very inferior ones. This law holds true with Polled Herefords just as it does with horned Herefords, Shorthorns, horses, hogs, sheep, and all other animals. Hence, the larger the number we have to select from, the larger number of outstanding and superior cattle we will be able to find.

"There are now on record in the American Polled Hereford Record slightly more than 7,500 naturally polled Herefords, every one of which is also recorded in the American Hereford record. Since we do not accept any animal for entry until it is six months of age, it is probable that a conservative estimate of the Polled Herefords now living, would be from 12,000 to 15,000 head. These are owned by more than 2,000 men scattered through thirty-nine states.

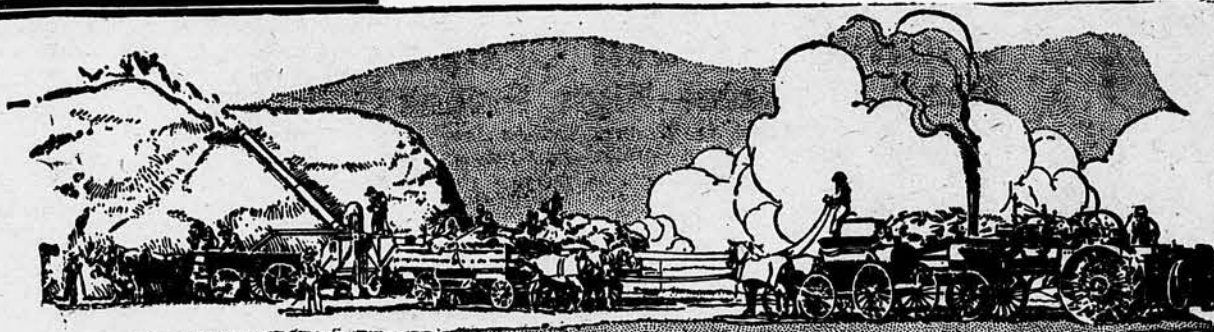
"In Kansas there are at present 177 men engaged in breeding Polled Herefords, or at least using Polled Hereford bulls in their herds, and these men, according to our records, not less than 625 head of Polled Herefords, every one of which is recorded in the American Hereford Record. My last annual report as secretary of the American Polled Hereford Breeders' Association shows that on December 1, 1915, Kansas ranked third among the states as to number of herds of Polled Herefords within her borders.

"A word as to the average merit of Polled Herefords as compared to horned ones. Kansas boasts a prize winning Polled Hereford bull, that when shown

throughout Canada in 1913 in open competition with horned Herefords, was good enough to win consistently. He weighed at maturity 2,700 pounds, and went to a good Kansas herd at nine years of age for \$650 at auction. Polled Herefords have not been extensively shown because of the comparatively few breeders who are practical showmen, but they have been shown always in the regular horned Hereford classes and have won a grand championship at Canadian National Exposition, the grand championship of Iowa classes at Des Moines, grand championships at West Virginia State Fair, first in class at Wyoming State Fair and Iowa State Fair, second at Indiana State Fair, St. Joseph Show and Denver Show, ranked as high as third at the International, etc. We must certainly challenge the statement that they are not as good as the horned ones. Less than one per cent of any breed of cattle are good enough to win show prizes, at least less than one per cent are shown, and as many Polled Herefords have won, in proportion to the number in existence as of any breed.

"More than eighteen head of Polled Hereford bulls have been good enough to sell for \$1,000 or over in the past three years. One sold at auction for \$2,025. One cow sold for \$1,000 at our association sale last February, and the entire 57 head in that sale averaged \$476."

In Eastern and Southeastern Kansas it would pay to sow cowpeas after the oats or wheat have been removed. This stubble land might just as well be growing a valuable crop as a crop of weeds. Under favorable conditions the peas can be drilled in with a disk drill, using about two bushels of seed to the acre. They will make some forage either for grazing or to be cured as hay, and will be accumulating a store of nitrogen for the next crop. They can be planted in rows also, and given some cultivation. This method requires less seed and is more sure of producing a crop, but of course requires the extra labor of cultivation.



## You Who Have Threshing To Do—

whether you're a grain grower or a thresherman—you must insist upon the *one* rig that saves the grain and operates at the lowest cost. Case sells more threshing outfits than any three other concerns. In this day of keen competition, the dominance of Case is a sure sign of superiority. Top place has been won and held solely because Case has earned it through 74 years of experience.

### Why Case Separators Win

1. All-steel—fire, wind and water-proof. Don't gamble with a wooden machine—it's an expensive risk.
2. Case separators get the greatest amount of grain out of the crop.
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4. The cylinders are big enough to handle damp and wet grain. Bad weather doesn't matter.

### Case Power Always Popular

In some localities steam is needed. In this day of kerosene and gasoline tractors we have not neglected steam engines, but have maintained leadership.



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In both the kerosene and gasoline field we have been pioneers.

You know the popularity of Case tractors. So whether you want to run your separator with steam, kerosene or gas engine you may place your faith absolutely in our guarantee. *We guarantee that any Case threshing outfit will do as well or better than any other on a given job. What more could you ask for?*

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Write today for our book describing Case threshing rigs. Don't be a party to a purchase until you have read it

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## DEVELOPING THE GILTS

A GOOD brood sow is the foundation for successful pork production. Too often undeveloped gilts are used for breeding purposes and are depended upon each year to produce the hogs for feeding. It is, of course, necessary to add young sows to the herd, but the pork producer should keep in mind the fact that the young, under-sized gilt will not produce as strong and vigorous pigs as will the mature sow or the well grown gilt. If gilts from the first litter the young sow farrows are saved for breeding, the breeding herd is sure to run down. Growth is retarded by early breeding and unless special attention is given to growing out the sow following the farrowing of her first litter, she never will become a profitable brood sow. It has been conclusively shown that the large, mature sow produces larger pigs and more to the litter than does the small, young sow.

The excuse offered for breeding gilts young is that it costs too much to keep them until they are fully developed. Again, it costs more to winter big, mature brood sows than gilts, so the old cows are sold and gilts saved to take their places. However, the value of the well developed sow as a producer is enough more to make up for this extra cost of maintenance. It is profitable to keep as many mature sows in the breeding herd as possible, and in replacing them it is a question whether a gilt from a gilt should ever be saved for a brood sow.

Many breeders of pure-bred hogs make it a rule never to breed a gilt under a year old. Fall gilts are bred to produce spring litters and spring gilts are not bred until they are a year old and then farrow their first litters in August or September. The producer of market pork may not be warranted in following this practice of the breeder of pure-breds, to the letter, but he can at least pick out the young sows that are to be used as breeders and see that they are given the kind of feeding necessary to develop them as rapidly as possible.

Future brood sows should be selected before they are weaned. If they are all litter-marked this is not so essential, but no good hog man will save sow pigs for brood sows without knowing what sow produced them.

These young sows need plenty of bone- and muscle-making feed. Alfalfa pas-

ture with a mixed grain ration containing a little tankage or meat meal, will give them the kind of framework they need. Alfalfa pasture alone will not properly grow out gilts. They simply cannot eat enough of it—it is too bulky. Under some circumstances it may be profitable to limit the grain ration given to pigs on alfalfa that are to be fattened for market later, but it is not good policy to do it with the future brood sows. It is necessary to bring young sows into the breeding herd, but every effort possible should be made to have them well grown before they farrow the first litter.

### New Remedy for Bloat

The Kentucky Experiment Station reports the use of formaldehyde as a remedy for bloat. It has been found to be very effective. The treatment consists in giving the cow bloated a tablespoonful of 40 per cent formaldehyde solution—commonly called formalin—shaken up in a quart of water. In drenching a cow the whole dose should not be poured down at once. It is far safer to give it a few ounces at a time so as not to choke the animal. Improper drenching often causes pneumonia. It is a good plan even when giving internal remedies, to put a rope or wooden gag in the cow's mouth. This seems to favor the belching of the gas and thus relieves the distended paunch. It is also a good plan to compel the animal to take exercise.

Bloat is a very common trouble where much alfalfa is grown. If given a chance, cattle and sheep will consume large quantities of green alfalfa or clover. It begins to decompose in the paunch under certain conditions, forming gas very rapidly. Unless the animal is relieved the pressure may become so great as to rupture some of the internal organs, resulting in death. Dairymen are especially subject to losses from bloat since they are often tempted to graze their cows on green alfalfa when other feed is short.

There is always danger and it is well to watch the animals closely and be prepared to administer some form of treatment quickly. Of course, in really serious cases internal remedies will not save the animal and as a last resort the gas must be let out through the left side.



## Bumper Grain Crops Good Markets—High Prices

Prizes Awarded to Western Canada for Wheat, Oats, Barley, Alfalfa and Grasses

The winnings of Western Canada at the Soil Products Exposition at Denver were easily made. The list comprised Wheat, Oats, Barley and Grasses, the most important being the prizes for Wheat and Oats and sweep stake on Alfalfa. No less important than the splendid quality of Western Canada's wheat and other grains, is the excellence of the cattle fed and fattened on the grasses of that country. A recent shipment of cattle to Chicago topped the market in that city for quality and price.

Western Canada produced in 1915 one-third as much wheat as all of the United States, or over 300,000,000 bushels. Canada in proportion to population has a greater exportable surplus of wheat this year than any country in the world, and at present prices you can figure out the revenue for the producer.

In Western Canada you will find good markets, splendid schools, exceptional social conditions, perfect climate, and other great attractions. There is no war tax on land and no conscription. Send for illustrated pamphlet and ask for reduced railway rates, information as to best locations, etc. Address

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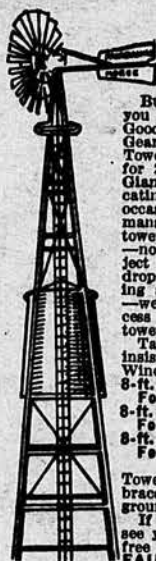


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**30 Days' Free Trial** Earn its own cost in butter in cream. Postal buyers free catalog, folder and "Direct-from-factory" offer. Buy from the manufacturer and save money.

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Buy a windmill outfit, but do like you did when you got a wife—Get a Good One. Fairbanks-Morse Back Geared Steel Mills and Heavy Steel Towers have been before the public for 25 years. Our latest model is a Giant in power—has enormous lubricating reservoir which requires but an occasional refilling—hard maple pitmans saturated in oil—wheel and tower galvanized "after completion"—no raw edges to rust—parts subject to strain made of expensive steel drop forgings and malleable iron, doing away with clumsy, heavy cast iron—we have great strength but no excess baggage to burden the top of tower.

Take these prices to your dealer and insist upon having a Fairbanks-Morse Windmill and Tower:

8-ft. F-M Windmill and 20-ft. Four-Post Tower ..... \$50.00

8-ft. F-M Windmill and 25-ft. Four-Post Tower ..... 56.00

8-ft. F-M Windmill and 30-ft. Four-Post Tower ..... 60.00

F.O.B. Kansas City, Mo.

Towers are made with horizontal angle braces five feet apart, starting at the ground.

If interested in other combinations, see your dealer, or write us today for free Illustrated Catalog H.

FAIRBANKS, MORSE & COMPANY Kansas City, Missouri

When Writing to Advertisers, Please Mention Kansas Farmer.

## Kansas Experiment Station Ends Test

December 6, 1915 to June 3, 1916—180 Days

FIFTEEN steers were fed in each of the six lots. They averaged about fifteen months of age when the experiment closed. Feeds were charged to them at the following prices: Shelled corn, 60 cents a bushel; ground corn, \$1.17 a hundredweight; corn and cob meal, 95.7 cents a hundredweight; ground kafir, \$1 a hundredweight; ground kafir heads, 80 cents a hundredweight; cottonseed meal, \$37 a ton; alfalfa hay, \$8 a ton; silage, \$3 a ton. Ten cents a hundred was allowed for grinding grain.

In reporting the results at the cattlemen's meeting in Manhattan June 9, Prof. W. A. Cochel called attention to the fact that the growing of the feeds had returned a fair profit on the basis of the prices allowed. Much of the roughage was inferior. The silage crops were immature and would have brought nothing if they had not been fed to cattle. The alfalfa was likewise much damaged by rain. The grower of the cattle who received \$40 a head for the calves, also made a reasonable profit. The selling price was placed on the different lots by a committee of buyers from the Kansas City and Wichita stock yards. The detailed results appear in the table. No account has been made of the labor of feeding or the value of manure and waste saved by hogs.

	LOT 1	LOT 2	LOT 3	LOT 4	LOT 5	LOT 6
	Shelled corn, Cottonseed meal, Alfalfa hay, Silage.	Ground corn, Cottonseed meal, Alfalfa hay, Silage.	Corn and cob meal, Cottonseed meal, Alfalfa hay, Silage.	Ground kafir, Cottonseed meal, Alfalfa hay, Silage.	G'd kafir heads, Cottonseed meal, Alfalfa hay, Silage.	Ground corn, Cottonseed meal, Alfalfa hay.
Initial weight .....	462.6 lbs.	465.3 lbs.	470.4 lbs.	472.3 lbs.	458.8 lbs.	460.5 lbs.
Final weight .....	898.9	896.6	880.7	896.9	840.3	902.4
Total gain .....	436.3	431.3	410.3	424.1	381.5	441.9
Average daily gain.....	2.42	2.39	2.28	2.35	2.12	2.45
Average Daily Ration:						
Grain .....	11.53	11.71	12.76	11.68	12.75	11.81
Cottonseed meal ....	1.58	1.58	1.58	1.58	1.58	1.58
Alfalfa hay .....	3.79	3.80	3.79	3.82	3.82	3.77
Silage .....	9.46	9.49	6.32	9.44	6.15	...
Cost of 100 pounds gain..	\$7.52	\$8.17	\$7.72	\$7.45	\$7.35	\$7.99
Cost of feed per steer....	\$32.80	\$35.26	\$31.69	\$31.59	\$28.05	\$35.34
Init. cost per steer @ \$8.75	40.48	40.71	41.16	41.87	40.14	40.29
Total cost per steer .....	73.28	75.97	72.85	72.96	68.19	75.63
Cost of marketing .....	3.60	3.58	3.52	3.59	3.36	3.61
Market price per cwt. ....	10.25	10.25	10.25	10.00	9.50	10.25
Value per steer .....	92.14	91.90	90.27	89.69	79.83	82.49
Profit per steer .....	16.26	12.35	13.90	13.14	8.28	13.25

**BEE SUPPLIES** Lowest prices Full line of everything needed. Write for new 1916 catalog. Clemens Bee Supply Co., 140 Grand Ave., Kansas City, Mo.





## SELL OFF THE OLD STOCK

**T**HE old hens that have stopped laying, and the old roosters, are not likely to prove profitable stock to carry over to next season. It is much better to get rid of them in some way and give the room to the young stock. Not only this, but old hens molt later every year and get their new feathers so late that they do not get to laying before cold weather sets in. Thus they are unprofitable all through the winter when eggs are high in price. Hens make better breeding stock than pullets, but no one wants to carry over more hens than are needed for this purpose. If you have only a few old fowls, the best way to get rid of them is to kill them and sell them to customers or to some local butcher, either alive or dressed. But if you have a large number, the only way to dispose of them is to send them to some larger market, a commission house, or packing concern. In warm weather it is not easy to ship dressed poultry long distances, unless thoroughly cooled and well iced. It is much easier to crate them alive and ship them. Old fowls, unless very nice and fat, will not bring a high price, though prices are very good just now—about 14 cents per pound live weight for fat hens. The roosters should be put in separate crates, for they sell at a lower price than the hens—about 9 cents per pound, we believe. When the hens begin to molt it is too late to try to feed them up, and you have a naked lot of hens that nobody wants to buy. Sell them now while they are fat and before they commence to molt.

Now that the chicks are growing nicely, see that you don't lose them by the rat, cat or skunk route.

It is awful disappointing, after raising chicks to a frying size, to have fifty of them taken in one night by rats, as was the experience of a neighbor of ours.

A correspondent wishes to know what to do when the wing feathers on young chicks are extra large and are drooping on the ground. About the only thing to do is to clip the feathers close. This stops their growth. The unnatural and excessive growth takes the strength of the chick and it is generally a puny one that is affected this way.

If you are in the poultry business to make a success of it, the thing to do is to look after every detail. The details make up the bulk of the work, and if they are looked after very carefully the great bulk of the work will be thus pretty well attended to. Success depends in a large measure upon the little things, and if these are neglected, failure is lurking at your door, ready to pounce upon you as soon as enough of the little things are left undone.

Exposure is one of the evils that we should look to. Hens that are compelled to remain out in drenching rain storms, or in a hard wind all day will not thrive. Hens will sometimes, of their own accord, leave a dry, comfortable house and go out in quite a hard storm for several hours, but this does not prove that is best for them. Cold and dampness will surely affect the health of the hens and check the output of eggs more or less, and especially so if the hens are compelled to expose themselves to bad weather very long.

The egg supply is diminishing and the hens are resting. It is a good idea to let them rest for awhile, for their arduous services during the spring deserve it. But after they have rested for a time, you want them to commence laying again, and the best thing to do is to give them a change of food. If you have been feeding principally on corn, change to some other grain, even if you have to buy it, while you have corn on hand. The hens get tired of the same grain right along, and will respond to a change of food quicker than to anything else. If you would have eggs in very warm weather you must feed the hens extra well, not forgetting animal food.

One of the difficulties in poultry raising is to get the hens to molt early, so that they will be ready to lay in the fall and winter. Left to themselves, hens will take a long time to molt, and will not finish until cold weather sets in. They will not then lay until early spring, and all the profits for the winter months

are lost. At a poultry institute a poultryman of long experience gave his method of controlling the molting of hens. As soon as the hens are through laying he turns them on alfalfa, feeding them bran only, in addition. Under this treatment they finish molting quickly, get new feathers and begin laying in September. By October they are in full laying condition and make a profit through the fall and winter. Of course the earliest hens to molt are the ones that commence to lay earliest in the fall. Some poultrymen help start the hens to molting by feeding very sparingly for a time, till the hens have commenced to shed their feathers, then to feed them all the stimulating feed they will eat. A little linseed meal in their soft feed will help them to molt early.

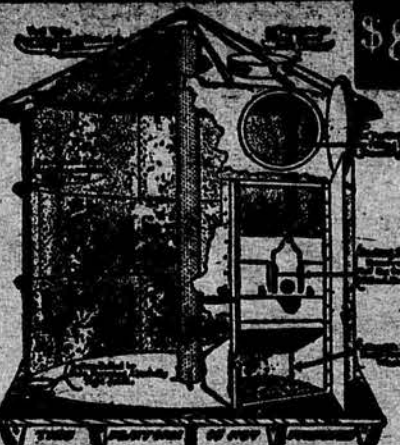
Never wait till you find the hens picking at themselves before you begin to look around for lice. The proper way is to look every few days for signs of them. Now and then pick up a hen and look her over carefully. In fact whenever you have occasion to pick up a hen for any reason whatever, do not put her down without a good examination for lice. If you find lice, it is a case of going over every hen in the house with some good lice powder. But the best thing to do about lice is to prevent them making an appearance. This can be done by thoroughly spraying the house, roosts and nest boxes with a good disinfectant and lice killer. Then provide a nice dusting place to keep themselves free of lice. It pays to do this, for it is a hard proposition when you actually discover them and know that they have a foothold.

In answer to an inquiry, we would state that the chickens alluded to are suffering from chicken pox. This is a disease which is quite prevalent in some parts of the country, but it is not a very dangerous or fatal disease, and succumbs to treatment very readily. Its symptoms are small, warty sores which appear on the head. These often come so thickly that they run into each other and it is then that the disease is at its worst. To cure this disease give a rather heavy dose of epsom salts to the whole flock. Wash the sore places on those which show the disease with some good, pure soap and water, giving them a good soaking. Rinse with clean water and swab thoroughly with peroxide of hydrogen. After the heads have become dry, anoint with carbolated vaseline. If the treatment is thorough, this will often cure the disease. Disinfect the premises and see to it that the sleeping quarters of the fowls are dry and clean. Some advise rubbing the scabs off the sores and anointing with a solution of turpentine and coal oil or a weak solution of carbolic acid, but this seems a pretty severe treatment, and the first method is preferable, though it takes a little more time.

### Preservation of Eggs

An inquiry comes in for a good method of preserving eggs. We presume this is sent by some one in the country who wants to save a few dozen eggs until winter or when eggs are scarce. The cheapest and best method is with dry salt. Place a layer of salt in the bottom of a deep crock or jar, then put your eggs so that they will not touch each other, then another layer of salt over them and so on, alternating the eggs and salt till the crock is full. These will keep for several months. It is understood that the eggs are perfectly fresh when laid down, otherwise salt or even saltpeter won't save them. Nothing can save a rotten egg from getting rottener with time. Another method is to use water glass. This can be obtained through druggists at from one dollar to one and a quarter per gallon. A gallon of the water glass being made into ten gallons of the preservative by simply dissolving it in ten gallons of water which has been boiled and cooled before use. You put the eggs into the mixture until the receptacle is full, then keep them in a cellar or room of even temperature which does not go over sixty degrees in temperature. Where large quantities of eggs are desired for preservation the cold storage system is the one to use, and if near any town of size facilities for storing eggs in cold storage warehouses may be hired at so much per case.

## This Bin Will Make You \$200 to \$800 Clear Profit



This is the year to hold your wheat. Don't dump it on the market at harvest time for 65c per bushel. **HOLD AT LEAST 1,000 BUSHELS** for a month or two and get \$1.00 or more per bushel. This will net you over \$200 clear profit and pay for the bin besides.

To be sure that your grain is in first class condition so that it will command the highest price at marketing time, store it in—

### COLUMBIAN METAL GRAIN BINS.

Our 1,000 bushel capacity all metal bins will give you a net profit of from \$200 to \$800 at a cost of 12¢ per bushel. Every farmer who holds his grain will certainly profit from the war prices. The more grain you hold the more money you will make.

## SEND NO MONEY

Just fill in the coupon telling us which size of bin you desire and we'll ship it at once without a cent in advance, sending the invoice and prepaid bill of lading to your bank. All metal construction makes COLUMBIAN GRAIN BINS rat, bird, fire and lightning proof. No. 20 gauge best grade galvanized metal is used in the body, with No. 24 gauge in the bottom and No. 26 gauge in the roof.

These bins are sectional in construction. Each section being joined by our patented joint which greatly strengthens the walls and makes erection simple and easy. You can do it yourself in a few hours' time. Every bin is equipped with large 5x3 foot hinged door, provided with hasp for locking. A collapsible shoveling board is provided which prevents the grain from running down faster than it is taken away. A sacking spout permits the removal of over half the contents of the bin without shoveling.

COLUMBIAN BINS may be mounted on platforms and hauled out to the threshing for filling. This saves the cost of sacks, twine and labor of handling.

### SEND THIS COUPON NOW!

Don't wait until harvest but write now and take advantage of our low delivered prices. Decide NOW—Today—to hold your wheat for \$1.00 or more per bushel. If your dealer cannot supply you with COLUMBIAN Bins we'll sell you direct on our no money in advance proposition. Remember we pay the freight to any station in the state of Neb., Kans., Okla., Ark., Mo., Iowa and Ill. Write for special prices delivered in other states.

**Columbian Steel Tank Co.,**  
1807 W. 12th St. Kansas City, Mo.

**Columbian Steel Tank Co. No. D**  
Kansas City, Mo.

Please { 500 Bushel Galv. Bin \$ 82.50 } We pay  
ship { 1000 Bushel Galv. Bin \$122.00 } the freight

Name.....

P. O. ....

Shipping Point.....

Send Bill of Lading to:

(Name of Bank).....

## You Will Find Many Uses for the Speedy Stitcher Awl

—and KANSAS FARMER Will Give You One FREE With One Years' Subscription

The SPEEDY STITCHER AWL is the latest and most effective Automatic Sewing Awl ever offered. How often have you thrown away a tug, a pair of shoes, a grain sack, just because the trouble and expense of taking them to town for repairs was too great. The SPEEDY STITCHER WILL SAVE ITS COST IN REPAIRS MANY TIMES OVER EVERY YEAR.



With this Awl one can mend harness, shoes, tents, awnings and pulley belts, carpets, saddles, suit cases, or any heavy material.

THE SPEEDY STITCHER is provided with a set of diamond-pointed grooved needles, including special needle for tapping shoes. It also contains a large bobbin from which thread feeds, all of which are inclosed inside the handle out of the way. Finished in the best possible manner—highly polished rock maple handle and nicked metal parts, with nickel-plated needles that will not rust.

## HOW TO GET THE AWL FREE

Send us only \$1.00 for one year's subscription to Kansas Farmer and 10 cents extra to cover packing and postage—\$1.10 in all—and we will send you this useful, dependable Awl, FREE.

**KANSAS FARMER, Topeka, Kansas**

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#### RANCH FOR SALE.

1,280 Acres, two streams, two sets improvements; 175 acres under irrigation, fenced and cross-fenced, outside range. \$10.00 per acre. No trade considered. This is a bargain.

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1,000 A., two miles McAlester, city 15,000. 200 a. fine bottom land. 150 a. in cult. 60 a meadow. Bal. pasture. Splendid fence, water. Good imp. \$21 per acre. Terms. SOUTHERN REALTY CO., McAlester, Okla.

#### UTICA, NESS COUNTY, KANSAS

On main line Missouri Pacific. Send for list of sixty wheat, corn and stock farms, any size you want, map of Kansas and other literature. If you don't want to buy any land, do you know of anyone who does? If you do, send us the names of parties who might buy land here. If we close a deal with any of them, will pay you well for your trouble. Buxton Rutherford Land Co., Utica, Kansas.

#### Come to Fowler, Meade Co., Kansas

Where great opportunity awaits you; where you can buy the finest of alfalfa lands set to alfalfa with flowing artesian wells; fine orchards and homes at from \$50 to \$75 per acre. Finest of wheat land, improved, at \$25 to \$50 per acre. Friends, Catholic, Christian and Baptist churches with large congregations. Write

THE HADDICAN LAND CO., Fowler, Kan.

### A SNAP

640 Acres of Land, well improved. 532 acres in good state of cultivation, every foot tillable; fine black wheat land. Last year's 1915 wheat crop made 47 bushels per acre. Good 5-room house, big barn, lots of sheds and outbuildings, 3 miles from town. Price, \$35.50 acre. Will trade for Kansas wheat land. What have you to offer? For further information write to

JOHN YOUNG, OWNER, PAMPA, TEXAS.

### 320 ACRES

Two miles of town, all smooth, tillable land, nicely located, nicely divided into farming land, meadow and tame grass, well watered, close to school, splendid neighborhood. Write for full particulars and descriptive booklet of farm bargains.

MANSFIELD LAND CO., OTTAWA, KAN.

### A Modern Topeka Home

#### TO SELL AT A BARGAIN

Inside location, on a good street, near school. Seven-room house, all modern conveniences. Good barn. This proposition will interest anyone wanting a choice location and a good home. Priced to sell. No trades. Address

BOX 5, Care KANSAS FARMER

### Your Time Our Money

If you will give us the former, we will pay you the latter.

We would like to have you look after subscription renewals and new orders for KANSAS FARMER, the oldest farm paper west of the Missouri River, full of farm information. Just a farm paper—no political, religious or race subjects discussed. Will pay you liberally for so doing. Territory arranged to suit. If you are interested, address

Agency Division  
Kansas Farmer, Topeka, Kan.

## GOOD KANSAS LAND CHEAP

Those who located in Central Kansas 20 years ago are farmer-kings today. Their land has made them independent.

Your chance now is in the five Southwestern Kansas counties adjacent to the Santa Fe's new line, where good land is still cheap.

With railroad facilities this country is developing fast. Farmers are making good profits on small investments. It is the place today for the man with little money.

Wheat, oats, barley, speltz, kafir and broom corn, milo and feterita grow abundantly in the Southwest counties referred to. Chickens, hogs and dairy cattle increase your profits.

Write for our illustrated folder and particulars of easy-purchase contract by which you get 160 acres for \$200 to \$300 down, and no further payment on principal for two years, then balance one-eighth of purchase price annually, interest only 6%—price \$10 to \$15 an acre. Address

E. T. CARTLIDGE,

Santa Fe Land Improvement Co.,  
1870 Santa Fe Bldg., Topeka, Kansas

### THIS WILL INTEREST YOU

Do you want to move to Topeka to educate your children? If you do, this modern five-room home near Washburn College will just suit you. New, only occupied ten months. A choice location. Must sell quick. \$3,200 takes it. Address S. CARE KANSAS FARMER, TOPEKA.

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KANSAS FARMER, TOPEKA, KANSAS



## Little Talks to Housekeepers

Helpful Hints Here for the Women Folks of the Farm

O, many a shaft at random sent,  
Finds mark the archer little meant;  
And many a word, at random spoken,  
May soothe or wound a heart that's broken.  
—Scott.

It is easy to keep the heels and edges of shoe soles blackened and neat-looking by applying liquid polish to them with an old tooth brush.

In pressing wool, use a sheet of dark brown paper instead of a damp cloth, and the results will be equal and will be accomplished in less time.

In running rods through curtains, place a small thimble over the end of the rod. This will protect the curtain from the rough edge and will make the task easier.

Poor Richard says:

There is no little enemy.

Necessity never made a good bargain.

Clean your finger before you point at my spots.

Three may keep a secret, if two of them are dead.

A lazy man runs for office in order that he may have a place to sit down.

If man could have half his wishes, he would double his troubles.

Children and princes will quarrel for trifles.

### Effect of Club Work Lasting

Boys and girls should be encouraged to become active in the state boys' and girls' club work carried on as a part of the work of the extension division of the Kansas Agricultural College. An incident emphasizing the possibilities of this work, has just come to our attention through the Kansas Farmer Dairy Club.

One of the poultry club boys of last year, who won a trip to Manhattan, returned from the agricultural college filled with enthusiasm over dairy cows and dairying. His visit to the dairy barn, his inspection of the cows, and the things he learned about the business of dairying, opened his eyes and filled him with a desire to work with cows—something he had never done, as he lived in town. He called upon a neighbor who had a cow, asking for the privilege of looking after her and doing the milking. He was given the job.

When the Kansas Farmer Dairy Club

### FASHION DEPARTMENT — ALL PATTERNS TEN CENTS

This department is prepared especially in New York City, for Kansas Farmer. We can supply our readers with high-grade, perfect-fitting, seam-allowing patterns at 10 cents each, postage prepaid. Full directions for making, as well as the amount of material required, accompanies each pattern. When ordering, all you have to do is to write your name and address plainly, give the correct number and size of each pattern you want, and enclose 10 cents for each number. We agree to fill all orders promptly and guarantee safe delivery. Special offer: To anyone ordering a pattern we will send the latest issue of our fashion book, "Every Woman Her Own Dress-maker," for only 2 cents; send 12 cents for pattern and book. Price of book if ordered without pattern, 5 cents. Address all orders for patterns or books to Kansas Farmer, Topeka, Kansas.



No. 7677—Ladies' Waist: Cut in sizes 34 to 42 inches bust measure. Another of the popular waists that are "full in their blousing," but it has features all its own to win for it approval. The collar that is novel in its uncertain line has edging for a finish. At the shoulder mark we see gathers in the blouse front that show revers embroidered. No. 7671—Children's Apron Dress: Cut in sizes 4, 6, 8 and 10 years. A pretty style, not too practical in appearance to serve as a dress. Made with long or short sleeves. A noticeable detail is the pocket at either side in fancy cut and finished with edging, in harmony with the collar and cuff trimming. No. 7687—Ladies' Shirtwaist: Cut in sizes 36 to 42 inches bust measure. In the scheme of this waist we see excellent taste. It is odd, yet it's stylish. The vest and collar are in one—a novel application of the new collar idea. In surplice style the vest closes the full blouse. One or two materials can be used in making this waist. No. 7431—Misses' Dress: Cut in sizes 14, 16, 18 and 20 years. The long loose lines of this dress are among the leading favorites for slender figures. There is a surplice vest in the center of the front and a handsome belt piecing at the waist line, below which the front of the skirt is full. No. 7656—Ladies' Skirt: Cut in sizes 24 to 32 inches waist measure. In diagonal suitings or plaid this model will make up most effectively. Slightly raised waist line used—a one-inch lap of the left front, attached from waist to center front hem, gives tailored effect. No. 7689—Ladies' Kimono: Cut in sizes 36, 40 and 44 inches bust measure. This design appeals because of the fitted back yoke and the generous lines from the body part where it drapes to just below ankle depth. In front a simulated yoke is formed by the clever arrangement of the bias banding.



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European Plan, \$1.00 to \$2.50 per Day.

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Eleventh and McGee Streets

## PURE BRED POULTRY

### POULTRY WANTED.

BROILERS, SQUABS, DUCKS, TOM turkeys, roosters and hens wanted. Coops loaned free. The Copes, Topeka.

### LEGHORNS.

PURE BUFF EGGS, \$3.50 hundred. Jessie Crites, Florence, Kan.

PURE-BRED SINGLE COMB BROWN Leghorn eggs, \$3 per hundred. Mrs. F. E. Tenn, Haven, Kan.

PRIZE WINNING SINGLE COMB WHITE Leghorns, one-half price. Eggs, 3c; chicks, 7c. Guaranteed stock, \$1 each from good layers, Ferris strain, that pay \$7 per year per hen. Clara Colwell, Smith Center, Kan.

### DUCKS AND GESE.

ENGLISH PENCILLED RUNNER DUCKS—Eggs, twelve, \$1; hundred, \$5. Frank Hall, Toronto, Kan.

### ORPINGTONS.

SINGLE COMB BUFF ORPINGTONS—Eggs from large vigorous farm range birds, \$1 per setting, \$4 hundred. Martha Brown, Parkerville, Kan.

BUFF ORPINGTONS—STRICTLY FANCY matings, splendid winter layers. Eggs, \$1.50 per fifteen, prepaid. J. F. Cox, Route 28, Topeka, Kan.

### PLYMOUTH ROCKS.

BARRED ROCKS—72 PREMIUMS. STOCK sale. Eggs half price. Italian bees. Mattie A. Gillespie, Clay Center, Kan.

UTILITY BARRED ROCKS AT BERMUDA Ranch. Eggs, fifteen, \$1; hundred, \$4. Frank Hall, Toronto, Kan.

BRED TO LAY BARRED ROCKS—EGGS from selected farm flock, \$1.00. Special matings headed by ten-pound exhibition cockerels, \$3.00. C. D. Swalm, Geuda Springs, Kan.

WHITE PLYMOUTH ROCKS STILL hold their popularity. Barring one, they were the largest class at the World's Fair at San Francisco. Good to lay, good to eat and good to look at. I have bred them exclusively for twenty-four years and they are one of the best breeds extant. Eggs from first-class birds, the same kind I hatch myself, \$2 per 15, \$5 per 45, and I prepay express or postage to any part of the Union. Thomas Owen, Route 7, Topeka, Kan.

### TURKEYS.

MAMMOTH WHITE HOLLAND EGGS, sized by 37-pound tom, \$3 eleven. Jessie Crites, Florence, Kan.

### RHODE ISLAND REDS

SIX PURE-BRED R. C. RED ROOSTERS, hatched last year, for immediate sale, cheap. Mrs. Howard Martindale, Madison, Kan.

SINGLE COMB RED EGGS—HUNDRED, \$2.50; thirty, \$1.50. Mrs. Rosa Janzen, Geneseo, Kan.

EGGS AT SACRIFICE PRICES AFTER May 22nd from our six grand pens: Rose Comb Reds mated to roosters costing \$15.00 to \$25.00; 15 eggs, \$1.50; \$30, \$2.50; \$50, \$4.00. Pure-bred range flock \$3.50 per 100. Also good hens and roosters cheap. Catalog. W. R. Huston, Americus, Kan.

### BABY CHICKS.

YOU BUY THE BEST BABY CHICKS, guaranteed, at Colwell's Hatchery, Smith Center, Kan.

PURE-BRED ROSE COMB RED BABY chicks, 10c each. Mrs. C. E. Hill, Toronto, Kansas.

REDS, BARRED ROCKS, BUFF ORPINGTONS from free range flocks. \$15 per hundred. L. E. Castle, 1920 W. Maple, Wichita, Kan.

### WYANDOTTES.

WHITE WYANDOTTE EGGS FROM prize winning stock, \$1.80, thirty; \$4.50 hundred. Mrs. Will Beightel, Holton, Kan.

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was announced, this boy was one of the first to enter, and though he is one of the youngest members—just old enough to join—he is among the best in the interest shown in the club work and the eagerness with which he goes about it.

Thus, work in the state poultry club may be responsible for making a good farmer of this boy.

### We Live Not to Ourselves Alone

How true it is that we cannot live our lives without influencing and being influenced by others. We are a part of the wheel of Time, and unless we carry our share of the load the strain on the other spokes will be the greater for our weakness. If we willingly shift the load, the loss will be our own and the gain will be theirs who take up the extra burden.

The mortal who goes through life thinking the world is indebted to him, will never reach the heights of true happiness, as no provision has been made for lifting him there. It will be he who goes about lending a hand—whether to help an individual or community—who will unconsciously climb the winding path to happiness. And as he nears the summit he will find the spirit of helpfulness he has radiated has borne fruit in a company of voluntary co-workers and the object of the journey will be overshadowed by the pleasure of companionship along the way.

Does all this seem impossible? It is not. It is human nature to be a slave to work and to feel that all the daily routine duties must be taken care of each day before outside matters, as we call them, can be given consideration.

One of the happiest families we have ever known, and one of the most useful both at home and abroad, was one in which the children numbered five and for many years an additional one or two were included in the family circle and given the care and training which helped shape them into useful citizens of whom those who reared them were proud.

The mother in this home, with the help of the children, did her own daily housework, the sewing for the family, was an active worker in the church, and was connected with those movements having for their purpose making the community a better one in which to live and surrounding the young people with environments leading onward and upward. The mother and father were of one mind concerning all these matters, and the children were made a band of willing helpers, all happy in their work and meanwhile getting a perspective of the life field of labor into which they have fitted one by one as the home training has been completed.

At no time has the income of this family been more than moderate, yet there has been enough and some to spare, of money as well as of love and influence. In this home the value of character and trained minds and hands, has been emphasized, and the lives that have gone out from it testify to the helpfulness of ideals. Two of the children have completed university courses with clean records and high grades, and the others are well on their way toward similarly fitting themselves. One of the daughters is now dean of women at the school from which she graduated only a few years ago, and is there exerting an influence for good born of those sterling qualities of character developed in the home.

These parents are still as young in thought as are their children, and are the coveted companions of all. And they still give of their time, money, and effort, to family, church, and community. They long since realized their obligation to society as well as to those solely dependent upon them, and in fulfilling it their lives have been enriched and they have been truly happy. Such lives leave behind them wealth which is incalculable.

### Farm Boy Cavaliers

This is an order planned and organized by Professor D. D. Mayne, of the School of Agriculture of the University of Minnesota. It corresponds to the Boy Scout movement. Though yet new, many troops are being organized, and it is expected that it will soon be a national order.

Any four farm boys, each of whom has the use of a horse for riding, may form a troop. The members will meet on horseback, elect a leader, an assistant leader, a secretary and a treasurer. They will then take the pledge of the order, sign their names to the roll, giving their postoffice addresses. A copy of the roll will then be sent to the secretary of state of the Farm Boy Cavaliers at the College of Agriculture, University Farm, St. Paul, Minn., from whom blanks and detailed information may be obtained. The general organization corresponds to that of the United States

government; each state organization to its own state government.

Boys entering the organization will take the rank of page. No one will be accepted who cannot ride a horse at a gallop, and no one under the age of 12. A page may become an esquire by being able to repeat the pledge and the twelve principles of the order, by earning at least five achievement badges, and by having not less than \$50 on deposit in his own name in some bank, or invested in some farm project. An esquire may become a knight by earning at least seven additional achievement badges and by having at least \$100 in bank or in some farm project.

The Cavaliers' pledge reads: "I pledge my word of honor that I will do my best to serve my God, my country and all persons who need my service; that I will keep myself clean in body and in mind, and that I will observe the principles of the Farm Boy Cavaliers."

The Cavaliers' twelve principles are service, preparedness, personal honor, obedience, loyalty, kindness and charity, courtesy, courage, industry, thrift, cleanliness and reverence.

Achievement badges are won by work in alfalfa or clover-growing, applied chemistry, automobile operation, barley growing, barnyard sanitation, bee culture, beef-calf feeding, bird study, blacksmithing, butter-making, canning, carpentry, cement construction, civic effort, corn-growing, entomology, farm accounting, forestry, harness mending, milk production, painting, photography, plant diseases, plowing, poultry raising, and similar farm activities.

The activities of the Boy Cavaliers, however, are not confined to farm projects such as have been named. Certain public services will be required such as, regularly patrolling roads, serving as fire wardens, dragging roads, planting shade trees, protecting the country against disease-bearing insects, extirpating roadside weeds, and serving as mounted escorts in public processions.

All inquiries regarding the organization should be addressed to Professor Mayne at St. Paul, Minn.

### Hot Weather Dishes

The body needs nourishing food during the hot weather, for there is work to be done which requires an energy-making diet, but there is also need for keeping the body as comfortable as possible. There are many dishes which are both appetizing and cooling, and these combined with the substantial foods, will be healthful.

Fruit has a very beneficial effect upon the system, and desserts which are a combination of fruit and gelatine are delicious and refreshing. The following recipes can be served plain or trimmed. The addition of chilled whipped cream will make them even better:

#### LEMON JELLY.

2 tablespoonfuls gelatine  
½ cupful cold water  
2 ½ cupfuls boiling water  
1 cupful sugar  
½ cupful lemon juice.

Soak the gelatine twenty minutes in cold water, add boiling water, strain, and add to sugar and lemon juice. Pour into mould and chill.

#### ORANGE JELLY.

2 tablespoonfuls gelatine  
½ cupful cold water  
1 ½ cupfuls boiling water  
1 cupful sugar  
1 ½ cupfuls orange juice  
3 tablespoonfuls lemon juice

This should be made the same as the lemon jelly.

#### Salmon Loaf.

1 can salmon  
4 tablespoonfuls melted butter  
1 cupful bread crumbs  
4 eggs, well beaten  
Salt and pepper to taste.

Drain the liquid from the salmon, keeping this, then pick and mash salmon, add salt and pepper to taste, the melted butter, bread crumbs and eggs. Mix well, steam one hour. Serve with salmon sauce.

#### SALMON LOAF SAUCE.

1 cupful milk  
Liquid from one can of salmon  
Pinch of salt  
1 tablespoonful corn starch dissolved in little milk  
1 tablespoonful butter

Boil this mixture in double boiler or pan set in another vessel of boiling water, until it thickens. Add one well beaten egg just as it is removed from stove.

#### Summer Fashion Book, 10 Cents

As owing to the large number of departments, it is not possible for us to illustrate the very many new designs that come out each month, we have made arrangements to supply our readers with a quarterly fashion catalog illustrating nearly 400 practical styles for ladies, misses and children, illustrating garments all of which can be very easily made at home. We will send the latest issue of this quarterly fashion book to any address in the United States, postage prepaid and safe delivery guaranteed, upon receipt of 10 cents.



### Knox Nut Frappe

½ envelope Knox Sparkling Gelatine  
1 cup cream. ¼ cup cold water. ¼ cup milk.  
½ cup sugar. Whites of one egg.  
1 cup cooked pineapple and strawberries.  
1 cup chopped nuts.

Soak gelatine in cold water five minutes and dissolve over hot water. Add dissolved gelatine to cream, milk and sugar and stir in beaten white of egg. When cold, add pineapple and strawberries which have been chopped in small pieces, also chopped nuts. Serve ice cold in sherbet glasses.

### Try This Dessert

A cooling and welcome suggestion for warm days.

To get sure results, use



(Granulated)

This is the gelatine preferred by most housewives because it is pure, granulated and unflavored.

Four pints can be made from one package—you can make only one pint from a "flavored" package.

Knox Gelatine will help you prepare numerous salads, desserts, puddings and ices. Complete instructions are given in our

#### New Recipe Book

Sent FREE for your grocer's name. Enclose 2c stamp for pint sample.

Chas. B. Knox Co., Inc.  
432 Knox Ave., Johnstown, N. Y.



Meet Me at the TULLER For Value, Service, Home Comforts

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DETROIT, MICHIGAN  
Center of business on Grand Circus Park.  
Take Woodward car, get off at Adams Avenue.

#### ABSOLUTELY FIREPROOF

200 Rooms, Private Bath, \$1.50 Single, \$2.50 Up Double.  
200 Rooms, Private Bath, \$2.00 Single, \$3.00 Up Double.  
100 Rooms, Private Bath, \$2.50 Single, \$4.00 Up Double.  
100 Rooms, Private Bath, \$3.00 to \$5.00 Single, \$4.50 Up Double.

TOTAL 600 OUTSIDE ROOMS  
All Absolutely Quiet  
Two Floors—Agents' New Unique Cafes and Sample Rooms Cabaret Excellence

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HAROLD SOMERS, 180 DeKalb Ave., Brooklyn, N. Y.

If on the market for pure-bred stock, read KANSAS FARMER live stock advertisements. You will find what you want.



**HORSES AND MULES.****The Champion Breeder --- Missouri Chief 8385**

Sire of the World's Grand Champion Jack, Kansas Chief 8748  
In public service at our ranch south of Ellinwood. Excellent facilities for handling any number of healthy Jennets.

**Write Us for List of Winnings of His Get.**

Most liberal terms and other information about this sire possessing excellent size, quality, bone, finish, and unexcelled style and action. Winner first as sire at Kansas State Fair, Hutchinson, 1915.

**M. E. RICHARDSON - STERLING, KANSAS**

**DEIERLING STOCK FARMS**

Have fifteen large, heavy boned, black, registered jacks, 15 to 16 hands high, good heads and ears, good style, good breeders. I have a number of jacks sired by the champion, Pride of Missouri, also several other good hard prospects. In my 1914 sale I sold the champion of Kansas State Fair, 1915, Eastern Lightning, also Demonstrator, first prize aged Jack Missouri State Fair. Reference, Peoples Bank. Written guarantee with each animal. Have a number of Percheron stallions for sale, also saddle stallions. Barn in town. Wabash Railroad.

**WM. DEIERLING, QUEEN CITY, MISSOURI.**

**PERCHERON STALLIONS FOR SALE**

A pair of coming fours and a coming three-year-old, two blacks and the other a bay, sired by the herd stallion Sirocco (51358), which we sold to go to Northern Nebraska. They have the size, bone and quality, and are priced to sell.

**A. M. DULL & SONS - WASHINGTON, KANSAS**

**POLAND CHINAS****POLAND CHINAS.****100 - BRED SOWS AND GILTS - 100**

**ALL IMMUNE, BIG-TYPE POLAND CHINAS**

FOR SALE—Sows and gilts bred for July and September litters. A few Receiver gilts bred to The Wonder by Long Wonder. A few gilts sired by First Metal and bred to Receiver Wonder. These are big stretchy gilts and will please anyone. Also a few October and November gilts and a few choice October boars. Can ship pairs or trios, not related. Prices reasonable. Come and see our herd. Over 700 registered hogs on the farm.

**THE DEMING RANCH, OSWEGO, KANSAS**

Two Miles from Town. **H. O. Sheldon, Herdsman.**

**FAULKNER'S Famous Spotted Polands**

We are not the ORIGINATOR, but the PRESERVER OF THE OLD ORIGINAL BIG-BONED SPOTTED POLANDS.

The oldest and largest herd on earth. Every hog recorded in the recognized records. MID-SUMMER SALE AUGUST 9. If interested in the world's greatest pork hog, ask for catalog.

**H. L. FAULKNER, BOX K, JAMESPORT, MO.**

**Poland China Boars**

For Sale—Seven fall boars by Iowa King, the first prize aged boar at Missouri State Fair last year. Price \$30. First check gets choice. All immune.

**P. M. ANDERSON, Lathrop, Mo.**

**HENRY'S BIG-TYPE POLANDS**

Fall boars, also gilts bred or open, sired by Mammoth Orange. Spring pigs by Mammoth Orange and Big Bob Wonder.

**JOHN D. HENRY, Route 1, Lecompton, Kan.**

**POLAND CHINAS**

For Sale—A few large type bred gilts; all vaccinated by the double process. Price reasonable for quick sale.

**A. J. SWINGLE - Leonardville, Kansas.**

**LANGFORD'S SPOTTED POLANDS.**

Mr. Farmer, look this way. Pigs ready to ship. T. T. Langford & Sons., Jamesport, Mo.

**SHORTHORN CATTLE.****VAIL HERD SHORTHORNS**

For Sale—Four Scotch-topped bulls, eight months old, all reds. They are extra good. Priced at \$100. First check gets choice.

**W. H. VAIL - HUME, MISSOURI**

**HILL'S SHORTHORNS**

One red Shorthorn bull 11 months old, sired by Bettie's Albion 399451, pure Scotch, well built, weight between 600 and 700 pounds. Ready for service. Priced to sell.

**C. E. HILL - TORONTO, KANSAS**

**Sycamore Springs Shorthorns**

Master of Dale by the great Avondale heads herd. A few young Scotch bulls and bred heifers for sale.

**H. M. HILL - LAFONTAINE, KANSAS**

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Headed by Prince Valentine 4th 342179. Families represented, Orange Blossoms, Butterflies, Queen of Beauty and Violets.

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**SHORTHORN BULLS**

Four young bulls, nine to eleven months old.

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Registered Shorthorns, bulls and heifers, reds and roans. Bred and raised on Clover Lawn Farm. Main line Missouri Pacific.

**C. W. ASKEW & SONS, UTICA, KANSAS**

**LOWMONT SHORTHORNS.**

Brawith Heir 351808 heads herd. Inspection invited. E. E. Heacock & Son, Hartford, Kan.

**OHIO IMPROVED CHESTERS****IMMUNE O. I. C. PIGS**

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**Choice August and September Pigs**

Weight 125 pounds, \$25. Booking orders for spring pigs, \$15 each; pair, \$25; trio, \$35. Registered. Express prepaid anywhere in Kansas. F. C. Giffin, Route 1, Russell, Kan.

**CHESTER WHITE PIGS.**

Write for breeding and prices. E. E. Smiley, Perth, Kansas.

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Advertising "bargain counter." Thousands of people have surplus items of stock for sale—limited in amount or numbers hardly enough to justify extensive display advertising. Thousands of other people want to buy these same things. These intending buyers read the classified "ads"—looking for bargains. Your advertisement here reaches over 300,000 readers for 4 cents a word per week. No "ad" taken for less than 60 cents. All "ads" set in uniform style, no display. Initials and numbers count as words. Address counted. Terms, always cash with order.

**SITUATIONS WANTED** ads, up to 25 words, including address, will be inserted free of charge for two weeks, for bona fide seekers of employment on farms.

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**LADY OR GENTLEMAN TO TRAVEL** for old established firm. No canvassing. Staple line. \$18 weekly, pursuant to contract. Expenses advanced. G. G. Nichols, Philadelphia, Pa., Pepper Bldg.

**MEN AND WOMEN WITH SELLING** ability earn \$3 to \$10 a day. Staple goods and straight business proposition. C. W. Carmen, Department D, Merchants Bank Bldg., Lawrence, Kan.

**FARMERS WANTED—\$75 MONTH.** MEN and women, U. S. government jobs. Short hours. Common sense education sufficient. Write immediately for list positions now obtainable. Franklin Institute, Dept. L 82, Rochester, N. Y.

**CATTLE.**

**HOLSTEIN CALVES, 15-16THS PURE,** \$20 each, express prepaid. Write us for Holsteins. "Edgewood," Whitewater, Wis.

**GUERNSEY HEIFERS OF DESIRABLE** breeding and promising development. Registered. Soon to freshen. J. W. Marley, Oswego, Kan.

**HOLSTEIN COWS AND HEIFERS—TWO** carloads. Fancy grades. What do you want? Paul E. Johnson, South St. Paul, Minn.

**HIGHLY BRED HOLSTEIN CALVES,** either sex, 15-16ths pure, crated and delivered to any station by express, charges all paid, for \$20 apiece. Frank M. Hawes, Whitewater, Wis.

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**MONOLITHIC SILO BUILDER, BUILDS** a reinforced concrete silo on your ground. Manufactures every detail from chute to window. Any farmer can operate it. Only ten days to have complete silo set up and in use. Is absolutely a great money saver. Details, photographs and experiences of others sent you for the asking. Address E. H. Euler, 114 Kansas Ave., Topeka, Kan.

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Gentlemen: Discontinue all ads with the Saturday, May 27, issue. Will remit in full for balance on account just as soon as I get a "breathing spell." Still shipping every spare egg I can produce and booked ahead as late as hatching will be safe. Thanks in a large measure to KANSAS FARMER. Yours with appreciation,

**MRS. CLYDE MEYERS.**

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**WANTED—FARMS. HAVE 3,357 BUYERS.** Describe your unsold property. 679 Farmers' Exchange, Denver, Colo.

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**WASHINGTON, IDAHO AND MONTANA** red cedar posts in car lots. Pay after inspection. Farmers Co-Operative Co., Sagle, Idaho.

**160 ACRES, 7 MILES MARYSVILLE.** Trading point, school, churches near by. Eight room house, large hay and cattle barn, granary, other buildings; stock scales; good water. Howard Vail, Marysville, Kan.

**FOR SALE—A MODERN HOME IN** Topeka, located on a good street, near school and business district; two lots, modern seven-room house, barn, a choice location. Will sell at a bargain. No trades. Address Z, care Kansas Farmer.

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**ACCLIMATED BERMUDA GRASS ROOTS**—Bran sack full, \$1; six sacks, \$5. Frank Hall, Toronto, Kan.

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**WANTED—TO HEAR FROM OWNER OF** good farm for sale. Send description and cash price. R. G. List, Minneapolis, Minn.

If on the market for pure-bred stock, read KANSAS FARMER live find what you want.

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**NANCY HALL, DOOLY YAM AND** Pumpkin Yam potato slips, any amount, from assorted seed, \$1.75 per thousand f. o. b. McLoud. Satisfaction guaranteed. Orders and correspondence solicited. L. M. Baker, McLoud, Okla.

**PURE NANCY HALL POTATO PLANTS** free from disease, shipped day order received. Millions ready. Two hundred, 50¢; five hundred, \$2.00; per thousand, \$1.25. Everything shipped prepaid, either parcel post or express as wanted. J. S. Norman, Bentonville, Ark.

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**LUMBER! BUY FROM US. HIGH GRADE** Bottom prices. Quick shipment. Keystone Lumber Co., Tacoma, Wash.

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**SEND FOR PRICE LIST. PAUL HAR-** rison, 813 Kansas Ave., Topeka, Kan.

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**LET US TAN YOUR HIDE: COW, HORSE** or calf skins for coat or robe. Catalog on request. The Crosby Frisian Fur Co., Rochester, N. Y.

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**BIG-TYPE POLAND CHINAS. U. A.** Gore, Seward, Kan.

**BEE SUPPLIES.**

**FOR SALE—BEE SUPPLIES. ROOT'S** Good. Send for catalog. O. A. Keene, 1509 Seward Ave., Topeka, Kan.

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**SHETLAND PONIES, GELDINGS, MARES** and colts, all colors. C. H. Clark, Lecompton, Kan.

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**MONEY TO LOAN ON IMPROVED KAN-** sas farm lands. All negotiations quickly closed. No delays. A. T. Reid, Topeka, Kan.

**FOR SALE—ONE J. I. CASE SEPAR-** ator 24 x 42; new Garden City feeder and gearless blower; one Fairbanks & Morse oil tractor 15-25. Both good as new. Also one Case 28 x 50 separator with hand feed. J. A. Haffner, Alta Vista, Kan.

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**FOR SALE—LATEST PLAT BOOK OF** Shawnee County, 44 pages, size 14 x 19 inches. Shows each township in the county, with name of each property owner on his land, also rural routes, school houses, railroads and complete alphabetical list of taxpayers in county outside Topeka and Oakland. Satisfaction guaranteed. Cloth binding, \$5.00. To close out remaining Bristol board binding will sell a year's subscription to Kansas Farmer and Plat Book for only \$1.50. Last previous county map sold for \$10. Send all orders to Kansas Farmer, Topeka, Kan.

**THE STRAY LIST.**

**TAKEN UP—BY CALVIN PRIEST IN** South Brown Township, Edwards County, Kansas, on the first day of April, 1916, one 2-year-old steer, color black; two dim bars above marks unknown on right hip. Appraised at \$40. Florence Erwin, County Clerk, Kinsley, Kan.

**TAKEN UP—BY L. D. BIMUS OF** Scott Township, Scott County, Kansas, on the 21st day of May, 1916, one gray pony mare branded on right hip; one bay pony mare with white streak in face; one sorrel pony mare branded on right shoulder with letter T. Appraised at \$25 each. John L. Whitson, County Clerk, Scott City, Kansas.

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**PATENTS PROCURED. INQUIRE ABOUT** our \$100 cash prize. Free advice. Free search. Free official drawings. Capital Patent Co., Dept. E. Washington, D. C.



## HORSES AND MULES.

Fifty-four extra heavy 3, 4 and 5 yr. old registered Percheron stallions ready for heavy stand; 38 growthy 2 yr. olds ready for some service and develop on. 19 Belgian stallions. Just above Kansas City. **FRED CHANDLER PERCHERON FARM**, Route 7, Chariton, Iowa. 47 Trains Daily

**MORGAN HORSES**—For sale, four-year-old Morgan stallion, Daniel Edwin by Green Mountain 6496. **J. ED BAILEY**, Irwin, Iowa

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## Must Reduce Herd

Forty head of registered cows, heifer and bull calves for sale. Of the best blood lines among the breed.

I am a member of the Southwest Jersey Cattle Breeders' Association.

**SWEET SPRING STOCK RANCH**

Box 241 Monett, Missouri

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Registered Jersey bulls for sale. Flying Fox and Eminent breeding, good enough to head any herd. Also a few females.

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Kansas First Register of Merit, Estab. 1878. If interested in getting the best blood of the Jersey breed, write me for descriptive list. Most attractive pedigree.

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## SUNFLOWER HERD JERSEYS

For sale—Two yearling bulls and a few cows and heifers. All sired by Coster's Splendid. Imported and a grandson of Golden Jubilee.

**H. F. KROLEY - HOLTON, KANSAS**

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Will offer at private sale fifty head cows, heifers, bulls, calves. The famous Blue Belle-Golden Rosebays. Send for special circular before buying elsewhere. Bargains.

**Ennis Stock and Dairy Farm, Horine, Mo.** (Just south of St. Louis)

## SMITH'S JERSEYS

For Sale—White Hall's Baron 138966, solid color, 26 months, fine individual. Sire Blue Boy Baron 99918; dam White Hall Duchess 299731, used on a few of our best cows. Females all ages and three bull calves, \$25 up.

**S. S. SMITH, CLAY CENTER, KAN.**

## REDHURST JERSEYS

Grandsons of Golden Jolly and Noble of Oaklands for sale. Also a few fancy cows and heifers of same breeding. Write.

**REDMAN & SON - TIPTON, MISSOURI**

**FOR SALE**—Nine registered Jersey cows and heifers. Excellent unrelated bull, Oaklands-Bellian 2d.

**PERCY HILL - MT. HOPE, KANSAS**

## Breeders' Directory

**PERCHERON HORSES.**

**M. E. Gideon, Emmett, Kan.**

**ANGUS CATTLE.**

**Geo. A. Deitrich, Carbondale, Kan.**

**D. J. White, Clements, Kan.**

**SHORTHORNS.**

**C. H. White, Burlington, Kan.**

**HOLSTEINS.**

**C. E. Mann, Garnett, Kansas.**

**DORSET-HORN SHEEP.**

**H. C. LaTourrette, Route 2, Oberlin, Kan.**

**JERSEY CATTLE.**

**J. B. Porter & Son, Mayetta, Kan.**

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Twenty years' experience. **Newton, Kansas.**

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Write or wire for date. I can please you.

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Bargains in Bred Sows, Fall Boars and Pigs at auction time. Pair no akin. History free. **Shank's Mulefoot Ranch, Alexandria, Neb.**

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Cholera-immunized young stock of the best type and breeding for sale. Prices always reasonable.  
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**W. J. Cody, Manager, Stock Advertising.**  
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## CLAIM SALE DATES.

**Herefords.**

Oct. 7—J. O. Southard, Comiskey, Kan.

**Poland Chinas.**

Oct. 10—Sigel Brown, Reeds, Mo.

Oct. 16—W. B. Brown, Perry, Kan.

Oct. 13—Dr. J. H. Lomax, St. Joseph, Mo.; sale at farm near Leona, Kan.

Oct. 17—John D. Henry, Leocompton, Kan.

Oct. 19—H. B. Walter, Effingham, Kan.

Oct. 24—Leonard & Russell, St. Joseph, Mo.

Oct. 25—U. S. Byrne, Saxton, Mo.

Oct. 26—Walter W. Head, St. Joseph, Mo.

Oct. 29—James Arkell, Junction City, Kan.

Oct. 21—P. M. Anderson, Lathrop, Mo.

Nov. 1—Fred B. Caldwell, Howard, Kan.

Nov. 4—L. R. Wiley, Sr., Elmdale, Kan.

Nov. 6—A. R. Enos, Ramona, Kan.

**Spotted Polands.**

Aug. 9—H. L. Faulkner, Jamesport, Mo.

Oct. 12—Andrews Stock Farm, Lawson, Mo.

**Durocs.**

Nov. 2—Lant Bros., Dennis, Kan.

Smith & Hughes of Topeka, owners of one of the richly bred Holstein herds in Kansas, report their herd doing well. This is one of the Holstein herds in Kansas that is made up of representatives of the heavy producing families of the breed and are the kind that are profit producers.

Ben Schneider of Nortonville reports his Holsteins doing fine this year. Mr. Schneider owns one of the producing herds and at this time has a choice lot of young stock, including a number of outstanding young bulls.

The Holstein herd owned by McKay Bros. of Waterloo, Iowa, is making a good record again this year. The past records show this herd to be one of the consistent producers that return a profit every year, regardless of conditions.

Alvey Bros. of Meriden, Kan., owners of one of the oldest and best herds of O. I. C. hogs in the state, report their herd doing well. This year they have one of the best lots of spring pigs ever raised on the farm. Their herd has for years furnished breeding stock to start new herds in Kansas and other states. They have the type that are profitable feeders.

George Deitrich of Carbondale, Kan., owner of one of the good Angus herds in this state, reports his herd doing well. He has a very fine lot of calves this year.

Redman & Son of Tipton, Mo., owners of Redhurst Jersey herd, one of the best Jersey herds in Missouri, report their herd doing well this year. They have one of the heavy producing and profitable herds and have a very fine lot of young stock in the herd at this time.

George Sinn of Alexandria, Neb., owner of one of the biggest herds of pure-bred Mulefoot hogs in the West, reports his herd doing well. Mr. Sinn succeeded in saving a large number of spring pigs this year. Tulsa, a noted sow in his herd, farrowed sixteen pigs and saved fifteen of them. His herd now consists of 150 spring pigs, a large number of tried sows and a very fine lot of fall boars and gilts. Last year Mr. Sinn's herd was drawn upon heavily for breeding stock by Mulefoot breeders from a number of states.

Henry C. Glissman, the well known Holstein cattle breeder of Station B, Omaha, Neb., reports that he now has over 200 head of choice registered and high grade cows and heifers in his herd. The breeding of the cows and heifers in the Glissman herd should insure producers. Among Holstein breeders Mr. Glissman is considered one of the best judges of Holsteins in the country. He has been selected to judge the Holsteins at the Nebraska State Fair this year.

P. M. Anderson of Lathrop, Mo., is making a great success with his herd of big-type Poland Chinas. At the head of this herd is the great show and breeding boar, Iowa King 67584. This hog was first prize ag-d boar at the Missouri State Fair, 1915, with a strong class competing for the honors. The entire herd is immune and about sixty head of spring pigs are coming along nicely for a fall sale, which will be held in Lathrop on October 21. As a side line Mr. Anderson has a very fine herd of dairy cows, both Jerseys and Holsteins, that yield a nice profit and furnish milk for the pigs. A feature of the Poland China herd at this time is a number of large growthy fall boars all sired by Iowa King.

H. L. Faulkner of Jamesport, Mo., has a great lot of Spotted Poland Chinas again this year. At the head of this herd is Spotted Prince, a grandson of old Budweiser and a hog now in his three-year-old form weighing about 850 pounds in just breeding condition. He has an extra large bone, strong back, and stands on his toes like a pig. This hog has sired a number of good things in the herd. Spotted Prince is assisted by Honest Abe, by a son of Brandywine and out of a Brandywine dam. Spotted Chief is also used in the herd and has proven a great sire. He puts the spots on all his got and all his pigs have a lot of quality. They grow big and mature quickly. They are a real farmer's hog. Spotted Chief is sired by a son of Brandywine and out of the great herd sow, Carrie M, a full sister to Brandywine. This makes him the most intensely bred Brandywine hog living. All these herd boars are Faulkner bred. Mr. Faulkner is claiming August 9, 1916, for a bred sow sale. On this date he will sell fifty large yearling sows bred to the above boars for early September litters. The catalogs are now in print.

## HOLSTEIN CATTLE.

## CHOICE HOLSTEIN COWS

Two hundred registered and high grade Holstein cows, heifers and bulls for sale, singly or carload lots. Included are ten registered bulls, all out of A. R. O. dams; thirty-five registered females of all ages; several good A. R. O. cows; forty high grade cows; sixty two-year-olds, and seventy-five heifers, one to two years old. All tested by state or federal authorities and priced to sell. Write or come at once.

**HENRY C. GLISSMAN - STATION B - OMAHA, NEBRASKA**

**CLYDE GIROD, At the Farm. F. W. ROBISON, Cashier Towanda State Bank**  
**HOLSTEIN FRIESIAN FARM, TOWANDA, KANSAS**

Pure-bred and high grade Holsteins, all ages. Largest pure-bred herd in the Southwest, headed by Oak De Kol Bessie Ormsby 156789, a show bull with royal breeding.

Pure-bred bulls, serviceable age, from A. R. O. dams and sires. A grand lot of pure-bred heifers, some with official records. Choice, extra high grade cows and heifers, well marked, heavy springers, in calf to pure-bred bulls, constantly on hand. High grade heifer calves 6 to 10 weeks old, \$25. Bargains. Send draft for number wanted. All prices f. o. b. cars here. Inspect our herd before purchasing. Write, wire or phone us.

**GIROD & ROBISON.**

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High grade cows and heifers and registered bulls. The best breeding. Call and see them.

**O. E. Torrey - Towanda, Kansas**

## Regier's Holsteins

Holstein-Friesian A. R. O. bulls ready for service. World's record blood flows in their veins.

**G. REGIER & SONS, WHITEWATER, KAN.**

## BUTTER BRED HOLSTEINS

Buy your next bull calf from a herd that won the butter test over all breeds.

**J. P. MAST - SCRANTON, KANSAS**

## REGISTERED HOLSTEINS

We want to cut down our herd. Will sell ten or twelve choice cows, most of them young, also a few heifers.

**M. E. MOORE & CO. - CAMERON, MO.**

## CORYDALE FARM HERD

Jewel Paul Butter Boy No. 94245

One of the best bred bulls in the state. We offer three bulls ready for service out of good producing dams.

**L. F. CORY & SON, Belleville, Kansas.**

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At the prices quoted herewith you cannot afford to use anything but printed BUSINESS STATIONERY. Write for samples.

**LETTER HEADS**— $8\frac{1}{2} \times 11$  inches. Bond paper. White. 500 for \$2.50, 1,000 for \$3.00, additional 1,000 \$1.50. If you wish ruled stock, add 75c per 1,000.

**ENVELOPES**—No. 1, 6 $\frac{1}{2}$  Commercial size. White. 500 for \$2.00, 1,000 for \$2.75, additional 1,000 \$1.75.

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**ENVELOPES**—No. 6 Special Addressed Envelopes, 500 for \$1.75, 1,000 for \$2.25, additional 1,000 \$1.25.

**BUSINESS CARDS**—Round corner,  $2\frac{1}{4} \times 3\frac{3}{4}$  inches. No. 88. 500 for \$2.00, 1,000 for \$2.75, additional 1,000 \$1.75. These can be supplied in square corners if you wish.

The following items are put up in pads of 100 if you desire, at no extra charge:

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**STATEMENTS**—No. 1, Special, size  $5\frac{1}{2} \times 8\frac{1}{2}$  inches. Ruled. White. 500 for \$2.25, 1,000 for \$3.00, additional 1,000 \$1.25.

**BILL HEADS**—No. 2, size  $7\frac{1}{2} \times 8\frac{1}{2}$  inches. Ruled. White. 500 for \$2.75, 1,000 for \$3.00, additional 1,000 \$1.75.

**BILL HEADS**—No. 1, size  $4\frac{1}{2} \times 8\frac{1}{2}$ . Six ruled lines. White. 500 for \$2.50, 1,000 for \$2.75, additional 1,000 \$1.00.

All prices are quoted delivered to you at your home address, prepaid. For this reason we ask remittance with order.

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## Cards—Free

If you will send us the names of ten persons who are not now subscribers to KANSAS FARMER, we will send you a set of Twentieth Century Travel Cards free for your trouble. Address KANSAS FARMER, Travel Dept., Topeka, Kansas.

Howard Chandler of Chariton, Iowa, owner of one of the largest and best flocks of Shropshire sheep in that state, writes that his sheep are doing extra well this year. This is one of the noted flocks of Shropshire sheep and many of the best flocks in a number of states were started with foundation stock from the Chandler farm. A feature at this time is the large number of spring lambs and yearling and two-year-old rams.

We have just received Volume 49 of the American Berkshire Record. The volume contains 5,000 pedigrees from No. 205001 to 210000, list of transfers of recorded animals since Volume 48 was issued, and other information of value to Berkshire breeders.

R. J. Linscott of Holton, Kan., owner of the great Register of Merit herd in this state, reports his herd doing fine this year. This is one of the great Jersey herds now in existence. Gamboa's Knight, in service in this herd, is more than a half brother to the senior herd bull in T. S. Cooper's herd. At Mr. Cooper's sale on May 30, two daughters of his senior herd bull sold for \$3,000 each and ten head of his get sold for \$16,000. There is a lot of this same blood in Mr. Linscott's herd. Among the recent sales he reports is a bull and two cows to Emery Huff of Oronoque, Kan.

## HOLSTEIN CATTLE.

## HOLSTEIN COWS

Holstein cows, springers or bred heifers. Very large, good markings, out of best milking strains, bred to pure-bred bulls of the very best blood. Special prices on carload lots. **J. C. ROBISON, TOWANDA, KANSAS**

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If you want to buy Holstein calves, heifers or cows, at reasonable prices, write to the Whitewater Stock Farm, Whitewater, Wis. Alb. M. Hanson, Prop.

**RAISING** Registered Holsteins. Trying hard to keep herd healthy. Living close to Nature. Cows calving regularly.

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Best of sires. A. R. O. dams, fourteen over 20 pounds. Seven of the others from heifers with records of 14.89 to 19.2 pounds. The kind you want. We have only two cows in the herd with mature records less than 20 pounds.

**Breeders for Thirty Years.**

**McKAY BROS., Waterloo, Iowa**

## Golden Belt Holstein Herd

Canary Butter Boy King No. 70508 in Service.

Herd has won more prizes from Holstein-Friesian Association for yearly production than any herd in Kansas. Young bulls for sale from heavy producing cows.

**W. E. BENTLEY, MANHATTAN, KANSAS**

## CHOICE HOLSTEIN BULLS

Five registered bulls, out of A. R. O. cows. From 1 month to 2 years. Best breeding. Choice individuals. Price reasonable.

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## IN MISSOURI

Price Segis Walker Pietertje 123955 heads herd. Dam 30.13 lbs. butter in 7 days, milk testing 5.07 per cent. A. R. O. of dam, granddam and ten nearest dams of sire, 29.75 lbs. Six of these are 30-lb. cows. His five nearest dams all test over 4 per cent. Bulls 2 to 8 months old, \$150 to \$350. Always have cows and bred heifers for sale. Everything registered Holsteins. Tuberculin tested.

**S. W. COOKE & SON, MAYSVILLE, MO.**

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For Sale—A number of very fine bull calves, sired by Wauseona King Koradyke and out of cows that produce 80 pounds of milk per day. Price reasonable.

**T. M. EWING, INDEPENDENCE, KANSAS**

**HOLSTEIN BULLS, "REGISTERED"**  
Two ready for service. Smith & Hughes, Breeders, Route 2, Topeka, Kansas.

**BRAEBURN HOLSTEINS** A.R.O. Bull  
H. B. Cowles, 608 Kansas Ave., Topeka, Kan.

## HEREFORD CATTLE.

## Herefords and Percherons

Two choice Hereford bulls, 2 and 3 years old, well marked, both will make ton bulls. The 3-year-old weighs 1,950. Also some choice yearling Percheron stud colts.

**M. E. GIDEON - EMMETT, KANSAS**

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For Sale—Seven cows bred to drop calves in summer. Sixty bulls from 8 to 10 months old. Priced reasonable. Come and see us.

**PAUL E. WILLIAMS, MARION, KANSAS**

## SOUTHARD'S MONARCH HEREFORDS

For Sale—Choice cows and heifers bred to Monarch No. 449994 and Repeater 66th. A few extra good herd bull prospects. Annual sale October 7, 1916. Send for catalog.

**J. O. SOUTHARD - COMISKEY, KAN.**

## RED POLLED CATTLE.

## RED POLLED BULLS

TWENTY yearling bulls, big rugged fellows, sired by ton sires; all registered and priced reasonably. Will sell a few females.

**E. E. FRIZELL, Frizell, Pawnee Co., Kansas**

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FOR SALE—1915 bull calves by Rose's Grand Champion 17998, a 2,400-pound bull; also a few good cows and heifers.

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