

# KANSAS FARMER

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of the Farm and Home

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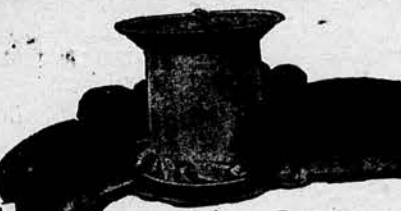
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# FARM POWER

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

ACCORDING to figures given out by the department of agriculture of the state of Colorado 46 per cent of her bread raisers leave all of their machines exposed to the weather, 38 per cent house only their unproductive equipment in the form of buggies, carriages, and automobiles, and only a minority of 16 per cent were found practicing the economy of sheltering all of their equipment. The Minnesota Bulletin No. 117 states that even where machines are properly housed there is an average annual depreciation of 8.86 per cent, and claims that where this detail is overlooked the annual loss is doubled.

Figuring the average equipment on the three million farms without machine sheds at \$200 per farm, there is six million dollars' worth of machines exposed and on the basis of the Minnesota Bulletin's figures, the handsome sum of \$53,160,000 is slipping through the American farmer's fingers each year, because he allows his machines to stand under the great national shed swept by cold blasts, drifting snows, blistering suns, and driving rains.

### Farm Electric Plants

Many people do not appreciate the practicability of electric lighting for country homes in territory out of reach of central station service. There are a number of companies which manufacture isolated lighting plants ranging in price from \$250 up, according to the size.

These plants consist of an electric generator driven usually by a gasoline or kerosene engine. This generator charges a storage battery which furnishes current at times when the engine is not running. The battery may have a capacity as low as two ordinary size, 40-watt lamps burning for eight hours, and as high as 100 or even more ordinary size lamps burning for eight hours. The usual capacity is about twelve or fifteen lamps for eight hours.

When the engine is running, the rating is considerably higher. In ordinary operation, the engine is run only when the battery needs charging. Often, it is necessary to charge the battery only once in several days, depending upon the amount of light used, that is, the number turned on, and the length of time burned.

From a private lighting plant of this kind, motors can also be used for pumping and other purposes, as running sewing machines. If power is required at more than one place, wires can be run very easily, and the motor installed where needed. If a large amount of power is wanted, it can be supplied from the generator and battery operating in parallel, as it is called, that is, both supplying power at the same time to the motor. Electric flat-irons, fans, and other domestic appliances can also be successfully used with a private lighting plant.

The wiring of a house for electricity is easily done, and at small expense. An ordinary house of six or eight rooms can be wired for \$25 or \$35, with inexpensive fixtures.

The plants themselves are simple to set up, as they come practically assembled, and have very complete instructions and diagrams so that an expert, or specialist is not required to install them.

The maintenance cost is amounting to but little more than the cost of the oil and gasoline, or other fuel. They give a minimum of trouble, and the operation requires little knowledge of electricity. They are often arranged to be self cranking so that anyone can start them.—F. E. ANDREWS, Colorado Agricultural College, Fort Collins, Colorado.

### Starting Engines in Winter

In the summer gasoline or other fuel vaporizes readily, but in the winter this process takes place so slowly, due to low temperature, that the engine will not start when cranked.

To start the motor in cold weather, prime the cylinders with a liberal amount of gasoline, and let stand for five minutes. The man who is running the engine can use this time for oiling and making minor adjustments. The gasoline will take up sufficient heat, even from the cold walls of the engine, to

vaporize. The engine will usually start with little trouble after this treatment.

There are a number of other ways to start an engine in cold weather. It can be warmed by pouring hot water into the radiator. Hot water poured over the carburetor will cause the gasoline to vaporize before it passes into the cylinder. Ether vaporizes quickly and can be used for priming but it is expensive.

To save the trouble of draining the radiator in the winter, alcohol and salt anti-freeze solutions are used, but after all the safest and cheapest plan is to drain. The alcohol solution is expensive. The initial cost of the salt solution is less, but it probably will prove expensive in the long run. The salt solution tends to eat or dissolve the metal. This action goes on slowly in the winter when the temperature is low, but the danger is that some of the salt will remain in the engine and radiator during the summer when the action is rapid.

Kerosene can be used in the radiator, and is used in some tractors. A disadvantage is that on warm days the engine will overheat. Where the weather is cold for long periods, kerosene will prove satisfactory, but its use is not advisable under Kansas conditions.

In cold weather care must be taken that the oil is feeding to the cylinders. A number of engines are so constructed that the oil cups are in a position in which they will not readily warm. The best way to overcome this fault is to use a light-bodied oil, preferably the oil recommended for winter use by the manufacturers of the engine.—W. H. SANDERS, Instructor in Farm Motors, Kansas Agricultural College.

### Misalignment Wears Tires

One of the causes of tire treads wearing excessively is the non-alignment of the wheels. The wheels should be in perfect alignment, otherwise the wear is very rapid, and the fabric forming the body of the tire will be too thin and puncture will result.

If non-alignment is suspected, it is well to have the wheels examined and the defect remedied.

### Repairing Farm Equipment

The following timely suggestions are made by F. A. Wirt, who has charge of the farm machinery work at our agricultural college:

"In putting a machine away after a season's work, notation should be made of the parts needed, while the operation of the machine is still fresh in mind. These notes may be made on tags and attached to the machine, but a separate list should be kept on file in case any of the tags are lost. If the farmer waits until spring he probably will forget about the repairs needed.

"In the slack winter season the farmer should go to the shop and put every machine into first class condition. This gives the implement dealer time to obtain the parts needed. Ordering by mail lessens the chance of getting the wrong piece. Parts needed cannot always be obtained from the dealer, but will have to come from the branch house or factory, and plenty of time should be allowed.

"In the busy season, when a breakage occurs, the farmer repairs it as best he can and goes on using the machine. The work may suffice for the rest of the season, but will not last through another year. Such repairs are often the cause of inferior work and make the process of harvesting expensive.

"The farmer does not have time to make repairs in the spring, especially when it is sometimes necessary for his dealer to send to the branch house and the branch house in turn to the factory before spare parts are obtained. Not infrequently a farmer will buy a new machine rather than lose time by waiting for repairs to be made."

Farmers should not attempt to get along without some tools for general repair work. Too often the general repair man is no more competent to repair a piece of machinery than the farmer himself. The time required to remove and take the broken pieces to town is generally much longer than that necessary to do the work at home, were a shop equipped for that work.

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## REVISION OF POSTAL RATES

One of the important matters to be taken up in the next session of Congress will be the readjustment of postal rates. This problem was to have been taken up in the last session but had to be deferred on account of the consideration required by railway mail pay. Since this has been disposed of the committees are prepared to take up the matter of placing the various postal rates on a more equitable basis.

A zone system of rates for second class matter is being prominently urged to take the place of the present flat rate which was adopted nearly forty years ago. The present rate has for some time been regarded as a discrimination against the newspapers in favor of the great national magazines. Like the parcel post, the proposed zone rates would be based on the length of the haul.

The postal committees have been besieged by petitions bearing millions of names and several hundred thousand letters from individuals urging a readjustment of postal rates with a view of making possible one-cent letter postage. A survey of the situation indicates that sufficient changes will be made in the various rates to permit the granting of a one-cent rate on local delivery letters in the next session of Congress.

Chairman Moon of the House Postal Committee recently said: "I think that the committee will take up this second-class mail matter at the next session and press it to a conclusion at once. While I cannot speak for the committee, this is my desire in the matter. I do not know what kind of a bill we will pass, whether it will have a zone feature attached to it or not. This view has been presented frequently in years past, and sometimes received favor and sometimes not. As to what shape the legislation will be in I am not able to say, but I am sure the committee will give it the best possible shape in the public interest."

Senator Norris of Nebraska said: "When fixing rates of postage, more consideration should be given to what it actually costs the government to handle the various classes of mail. Take for instance the point at issue, why should the patrons of the postal service be forced to pay two cents to mail a letter which is to be delivered in the same city or town in which it is mailed when it costs much less than one cent to handle? In fact, postal experts say that such letters are handled by the government at a profit of several hundred per cent. According to official reports of the Department, the profits derived from all first class matter exceeds \$80,000,000 annually. In view of these startling facts, it is my opinion that patrons of the postal service have not been accorded fair treatment in the provision of postal facilities."

Commenting on the pending legislation Senator Curtis of Kansas said: "When I first began boosting for a cheaper letter rate the general public and the members of Congress did not seem to appreciate the injustice of the existing rates of postage. For the first time since I have been connected with the legislative branch of the government, the patrons of the postal service, and apparently a majority of the members of the two houses of Congress, have reached a realization of the true situation and are about prepared to take some definite action on the matter."

People who live in the country will be greatly benefited by postal readjustments along the lines indicated.

## FUTURE OF NATIONAL SWINE SHOW

The National Swine Show held in Omaha brought together an immense exhibition of hogs of the various breeds. The question has been raised as to whether this show can be continued as an independent exposition. The crowds as this show were rather disappointing. If gate receipts are to furnish any considerable source of revenue, a big exposition of this kind must have a large attendance. It has been suggested by

some that the swine show become a part of the International Live Stock Show. This seems impractical for a number of reasons, the principal one of which is that hogs that have been shown on the circuit cannot be held over and shown in proper condition in December. A partnership with the American Royal at Kansas City has also been suggested, and that seems far more feasible if permanent and suitable quarters can be provided for holding these two shows together.

No point in the United States is more central to the beef cattle interests than is Kansas City, and hogs are almost essential to the success of the beef man's business. A hog show is thus naturally associated with the showing of beef cattle. With new and suitable quarters, a combined beef cattle and swine show at Kansas City in October can become one of the great live stock events of this country.

If such a consolidation of interests is desirable it should be agitated now and steps should be taken to bring it about and provide for handling the show in a proper manner.

## ROAD LEGISLATION

At the recent meeting of the Kansas Good Roads Association, held in Lawrence, considerable attention was given to the subject of road legislation. Several of the newly elected members of the legislature were present and they were all asked to state their views on this most important subject.

The most urgent legislative matter at the present time has to do with the administration of the federal money that is to be turned over to the state for road work by the Department of Agriculture. The amount available the year ending July 1, 1917, will be \$143,207.40. This appropriation will increase about \$143,207 a year for five years. This will give Kansas a total of about \$2,150,000 for the construction of substantial roads during this five-year period. This money is not turned over to the state without restrictions. Its use is widely hedged about by various limitations so as to insure its being put into work that will count. The Secretary of Agriculture is asking that some definite scheme or plan covering the whole state be submitted at the outset, and that this plan should cover all the work proposed for the five-year period covered by the act. The state must have some sort of highway commission or department to prepare such state-wide plan and supervise the expenditure of the money.

Technically the act would recognize the state highway engineering department of the agricultural college as the state highway department, but for various reasons it seems almost necessary to have some new legislation relative to such commission or department. Some bills have already been prepared covering this point. This is an important matter and it should be given the most careful and thoughtful consideration.

The fact that the State of Kansas cannot appropriate money for internal improvements, complicates the use of the federal money, since the act provides that the government funds shall not be used to pay for more than 50 per cent of the cost of any improvement or construction carried out. The restriction in our state constitution relative to appropriating money for internal improvements was put there to make it impossible to create great funds for improvement purposes that might lead to various forms of graft. It should be possible, however, to give a state power to invest in such work and at the same time make it impossible for the funds to be corruptly used. This point will of course necessarily come up in the form of a constitutional amendment to be submitted to the voters of the state.

At the good roads meeting the general opinion as expressed by the various delegates, seemed to be that there must be more centralization of authority in our road building work. The possibility of

using prisoners for highway work was also discussed at the meeting. The law passed by our last legislature on this point is a dead letter. No county could afford to take advantage of it.

The legislative program in detail, as recommended by the association, is as follows:

An amendment to the constitution that will permit the state to receive federal aid for highway improvement and co-operate with the counties in building state roads.

The codification of all of the state highway laws.

The establishment of a state highway department.

The enactment of laws establishing an efficient, economical system of road management, which shall require that the earth roads be properly graded, thoroughly drained and constantly dragged.

An enabling act authorizing the creation of good road benefit districts and an equitable distribution of the expense among the county, township and the land within the district.

The employment of city, county and state prisoners on the public highways.

The enactment of such laws by congress as will enable the federal government to participate in building and maintaining systems of improved highways.

J. Frank Smith, of Pleasanton, was elected president to succeed J. T. Kincaid, Olathe, who has held that office the past year. Next year's convention will be held in Fort Scott.

## STATE HORTICULTURAL MEETING

Next week, December 6 to 8, the Kansas State Horticultural Society will hold its fiftieth annual meeting in Representative Hall, Topeka. While this organization is carried on largely by those specializing in the growing of fruit and other horticultural products, the program to be given at the coming meeting will furnish much valuable information that will help the general farmer grow better fruit and vegetables for home consumption.

The first day of the meeting Mrs. George E. Rose, of Rosedale, will give some interesting reminiscences of the early horticulturists of Kansas. In those days all that was necessary to grow fine apples in Kansas was to set out the trees. Fungus diseases and insect pests, which every horticulturist must now fight constantly, had not put in their appearance.

Prof. Albert Dickens of the Kansas Agricultural College, who has probably been more closely associated with the development of horticulture in Kansas than any other man in the state, will give an address entitled "Early Horticulture."

On December 7 the program will be devoted almost exclusively to the apple. All orchardists must now get into the spraying game in order to produce marketable apples, and George O. Greene's address on the spraying schedule will be one of the most important on the program. A. F. Baker, of Baldwin, one of the successful apple growers of the state, will have a paper on the "Apple Orchard from Planting to Production." Mr. Baker is a practical orchardist, familiar with all the details of orchard work, and his experience will be very helpful to those interested in apples.

After the crop is grown it must be marketed so as to return some profit. There is little incentive to grow good fruit if this cannot be done. Senator H. M. Dunlap, of Illinois, will tell of harvesting the crop and will give an illustrated lecture in the evening showing some of the activities of a commercial orchard.

The garden, the greenhouse, horticulture and poultry, the growing of cherries and ever-bearing strawberries, the canning of fruits, the making of jellies and marmalades, are other subjects that will be discussed. Mrs. Massey Holmes will talk on "Perennials for Home Grounds," and Prof. Charles A. Scott, state forester, will tell how the Kansas woodlot may be made a source of profit.

## SEND IN FEED QUESTIONS

This is a year in which feed of all kinds is exceptionally high in price. It is of the greatest importance that the stock farmer make the most of his home-grown feed and select purchased feed with caution. It is easy to lose money through buying the wrong kind of feed. In buying a grain or concentrated feed, be sure it contains the right kind of nutrients to supplement or balance the farm-grown feeds. The price of the nutrients as supplied in different kinds of purchased feeds must also be considered in order to get the necessary nutrients for the least money. If protein is the nutrient needed most to balance the home-grown feeds, the general rule is to buy the feed that supplies the largest amount of this nutrient in digestible form for the least money.

The fact that all feeds contain some of the different nutrients—protein, carbohydrates, and fat—complicates the problem. If protein or carbohydrates could be purchased separately as needed, it would be an easy matter to balance a ration. When you buy cottonseed meal because you need protein, you get a larger amount of that nutrient than you get in an equal amount of corn, but you get some carbohydrates and fat as well. To buy feeds to the best advantage, or even to combine farm-grown feeds so as to secure the best results, it is a great help to know the composition of the different kinds. This sort of knowledge may seem more or less technical, but it is the kind that every stockman should possess.

If you have questions relative to feeds and the feeding of live stock, we will gladly give you all the help possible in solving them. Our live stock editor has had a wide experience in the feeding of stock and is thoroughly familiar with the technical side of the question as well as the practical. Our readers are invited to ask any feed questions that may arise in connection with the handling of their stock during this season of high feed prices. In stating your problems it will help us to answer more intelligently if you will tell what feeds you have on hand, what kinds of feed you can purchase and the prices. Also give details as to the class of animals you are feeding.

In making a trip over the Santa Fe from Topeka to Cottonwood Falls, recently, we noted the number of silos that could be seen from the car window. A good deal of the section passed through has long been devoted largely to the cattle business. As land has increased in price, the silo has come in as the means of getting more feed value from the fodder part of the corn. Scores of silos have been built during the past few years. While they have been a great benefit to the cattlemen doing business on a large scale, it is the smaller farmer who has been most profited by putting up a silo. A cattleman owning 3,000 acres of land between Emporia and Strong City told us he was urging the quarter-section farmers on the upland to build silos, telling them they could easily increase the cattle-carrying capacity of their farms a third by so doing. Making greater efforts to use the low grade roughage to the fullest extent possible seems characteristic of the live stock business of the country around Cottonwood Falls. We observed that the choicest of the alfalfa hay is being marketed while all that is in any way off grade in quality is being fed to cattle.

No one crop will make a people prosperous. If cotton holds the monopoly under conditions that make other crops impossible, or under allurements that make other crops exceptional, its domination will be despotism. Whenever the greed for a money crop unbalances the wisdom of husbandry, the money crop is a curse. When it stimulates the general economy of the farm, it is the profit of farming.—HENRY W. GRADY, Georgia.



# MORE STANDARD SCHOOLS

*Morris County Adds Nine at One Time—Now Ranks Second in State*

**T**HE term "standard school" has little meaning for many people. To others, it conveys the idea of a school entirely robbed of its usefulness in the community by reason of being burdened with "frills" or unessentials in equipment and lines of study. But the one who is interested enough to find out the true meaning of the term, by visiting a standard school and learning in what points it differs from the general type, usually finds the same building that has borne the district number for many years, but it has been remodeled in order to make it more nearly fit the needs of the present in giving the boys and girls a practical educational start. There are new standard schools, but it is not necessary to wait for a new building before bringing the school up to standard requirements, which are as follows:

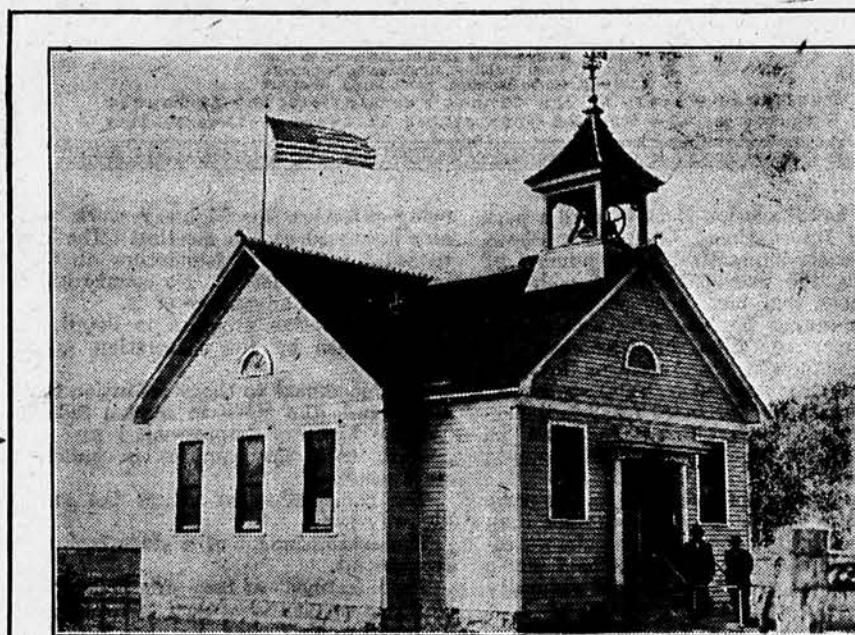
**Yard and Outbuildings.** School grounds at least one acre, and kept in good condition; good approaches to the house; trees and shrubs, where climatic conditions will permit; two well kept, widely separated outhouses, with screened entrances; convenient fuel house properly located; well where possible.

**The Schoolhouse:** House well built, in good repair, and painted; good foundation; well lighted, light from left side or left and rear; adjustable window shades; suitable cloak-rooms for boys and girls; attractive interior decorations; good blackboards (slate preferred), set about 28 inches from the floor; heated by a room heater and ventilator properly placed, or by basement furnace which provides for proper ventilation; floor and interior clean and tidy.

**Furnishing and Supplies:** Desks suitable for children of all ages, and properly placed; good teacher's desk and chair; good bookcase; a good collection of juvenile books suitable as aids to school work as well as general reading; set of good maps, a globe, and a dictionary; sanitary water supply provided by the district board, thermometer, sweeping preparation; sand table.

**The Organization:** School well organized; classification and daily register well kept; definite daily program; attendance regular and punctual; discipline good.

**The Teacher:** Must hold a state certificate, a first-grade county certificate, a normal-training certificate, or must at least hold a second-grade certificate and



MELROSE SCHOOL, MORRIS COUNTY, WHERE VISITORS WERE TREATED TO APPLES. THE SIGN OF STANDARDIZATION HAS JUST BEEN PLACED ABOVE THE DOOR

be a graduate of a four-year high school; must receive at least the average salary of the county, and in no case less than \$385 per year; ranked by the county superintendent as a good or superior teacher; must read Teachers' Reading Circle books, attend institutes and associations, and in other respects show a proper professional spirit.

At the present time, 161 of the 7,800 rural schools of Kansas have been standardized, and this has been accomplished since September, 1915. The number is being steadily increased and the satisfaction of the patrons in these districts bespeaks success for the movement when it is fully understood.

Before passing judgment on the standard school or refusing to have a part in making it possible to have one in the home district, the members of the school board and other patrons should look into the matter carefully and wholly satisfy themselves as to the advantages or disadvantages before casting their votes. This can be best done by visiting some standard school.

Only a few weeks ago, F. H. Manning, superintendent of the Morris County schools, made arrangements for a tour of inspection of the schools of that county by a number of school board members, teachers, and patrons, in company with J. A. Shoemaker, one of our two rural school supervisors. Last year Morris County had two standard schools. At the time of Mr. Shoemaker's recent visit nine others had met the requirements and the name plates for these were put up by him on that trip. Morris County now ranks second among the counties of the state in the number of standard schools. Reno County holds first place. The nine name plates hung in Morris County represent the largest number placed on any one trip. Mr. Shoemaker was advised during the day that many more would soon be added to its list of standard schools.

The party started from Council Grove and sixteen automobiles were in line at the appointed hour. Twelve of these machines made the entire trip, which covered about a hundred miles. To this

number, machines were added at each stop, some staying with the party long enough to visit only one or two schools, others going farther. When the party stopped for lunch at Olive Branch School, District No. 22, there were thirty machines in the line and 150 to 200 people were served with hot coffee by the women of the district. Lunch had been brought along by the visitors. This school has a complete kitchen outfit and hot lunches are provided for the children in cold weather. During the stop for lunch, Mr. Shoemaker and County Superintendent Manning made short talks.

At each school visited, the teacher, members of the board, some of the patrons and school children—in several of the districts all—were at the school to greet the party. Those interested in any particular feature would investigate that and ask questions regarding it. The heating systems, outbuildings, lighting arrangements, seats, and all other parts of the equipment entering into the requirements for standardization, received their share of attention and comment. The seventy teachers, the school board members and others who joined the party, did so for the purpose of acquainting themselves with the advantages of the standard school as they found them in operation in their own county. Seeing these things for themselves and talking with the teacher of the school and the people of the district, about them, gave them a better idea of their real value than it would be possible to obtain in any other way except by actual use.

Only one of the schools visited was found lacking in standard requirements. Clinging to the stove barred this school from having the plate of standardization placed above its door. However, after seeing the more modern heating plants in operation, the members of this school board were convinced their stove could be improved upon, and they stated that on the occasion of Mr. Shoemaker's next visit their school would be ready for the name plate.

This tour was unique, it being the first one of its kind in the state. We predict that Superintendent Manning and his corps of teachers will do better work as a result and will have heartier cooperation from the school patrons. The working knowledge gained of those things necessary to obtain the best results from our rural schools will undoubtedly affect favorably the history of Morris County schools.

## Rice County School and Club Fair

By B. K. BAGHDIGIAN

**T**HE school and club fair held in Rice County, Kansas, recently, marked a new era in the agricultural fairs of that section. It was a reminder that there is always something on the farm worth showing.

Because of crop failure, the annual county fair was abandoned for this year. The general opinion was that not enough material worthy of exhibition could be found.

The abandonment of the fair threatened the success of the boys' and girls' clubs. These clubs had been started in Rice County only this year and the leaders had planned to have the boys and girls exhibit their work at the annual county fair.

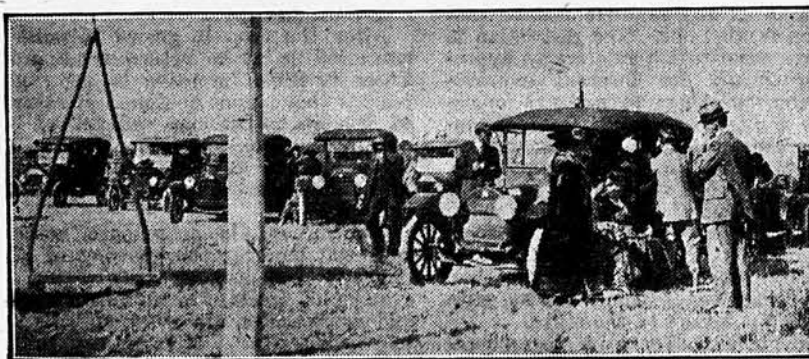
In one way the youngsters were just as unfortunate as were their fathers—the dry weather affected both alike. But because the boys and girls followed the best methods, this being one of the club requirements, and because they had the best land on the farm upon which to grow their crops, pure seeds to plant, pure-bred live stock to look after, they were in position to exhibit many things to good advantage. But they had no place to have their products judged and the prizes and ribbons awarded.

Miss Bertha McCabe, the county superintendent of the county, who has from the beginning of the boys' and girls' club work appreciated its value and realized its important relation to school work, thought that despite the poor crop year, there must be many products grown by the club members, worthy of exhibition. In her mind she planned a

fair the whole attraction of which would be the farm products exhibited by the boys and girls. She presented her scheme to the school children and to the members of boys' and girls' clubs. They were elated to think that they might have a fair of their own and at once pledged their support. Then Miss McCabe took her proposition to the county fair association and to the business men of Lyons. They all approved her idea of holding a county school fair at which to exhibit the school work and the work of clubs. The members of the fair association gave valuable sugges-

tions and the business men offered prizes. The people of Lyons planned a Home-Coming Day during the fair and sent special invitations to prominent men and women who once lived there, asking them to visit the "home folks."

When the fair was opened the exhibits included maps, written work, stencils, sewing, woodwork, drawing, painting; canned fruits and vegetables, preserves, needlework of all kinds, chickens, hens, ducks, pigs, grains and some fresh vegetables. What was lacking in vegetables, grains and fruits, was made up by exhibits of school and home work.



ENJOYING THEIR LUNCH ON GROUNDS OF OLIVE BRANCH SCHOOL, MORRIS COUNTY

It is usually expected that at the county fair one out of about twenty-five families will be represented in the products shown. Contrary to this rule, the free county school fair had an exhibit from practically every child. In many cases more than half a dozen things were shown by one boy or girl. The children prevailed upon their parents and grandparents, other relatives, neighbors, and all who could be persuaded, to go and see their exhibits and their winnings in prizes and ribbons. Every school in the county was closed and the children came to Lyons in wagons. In the parade of the first day there were 1,800 children, and this aroused great enthusiasm in the community over their work. Consequently, the whole town did its best to make the new undertaking a success and encouraged the youngsters in every way that was within the power of the people of Lyons. They were all most cordial and hospitable.

A fair of this kind cannot help emphasizing the possibilities through special and careful work, and a greater interest in the work of the children and in their development will be the natural result.

Otis E. Hall, director of boys' and girls' club work in Kansas, said the Rice County fair was excellent. Miss McCabe was highly pleased with the success of the undertaking, the results of which exceeded her expectations. Many favorable comments were made by those who attended this fair at which the boys and girls made so creditable a showing.



# GENERAL FARM INQUIRIES

*Something For Every Farm—Overflow Items From Other Departments*

**S**UBSCRIBER R. W., McPherson County, asks for suggestions as to the cheapest feeds to use in keeping work horses in good condition through the winter.

There is probably nothing that will give better results in proportion to its cost than will alfalfa hay. Good, bright alfalfa can be used to very good advantage in wintering farm work horses. Grain feeds are very high in price and horses fed alfalfa require little grain to keep them in proper condition. Even though feeds are high in price, it is not a good plan to let work horses run down during the winter season. Very little, if any, grain will be required with the alfalfa ration when horses are not working or doing only light work.

Those who have silage can further cheapen the ration by feeding some of this to their horses. Horses, however, should never be fed any silage that is mildy or spoiled in any way.

## Hog House Plan

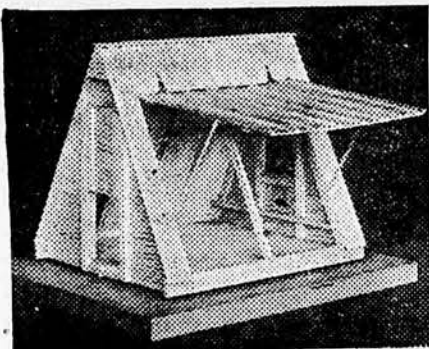
B. H. P., Commanche County, asks for a plan for a farrowing house for brood sows. He wants something not very expensive.

If pigs are to come early, warm houses for the brood sows are necessary. In raising pigs, sunshine, dry floors, warmth, fresh air, freedom from draft, and plenty of exercise, are important factors. In building a farrowing house, all of these points must be given consideration. Not one can be safely neglected.

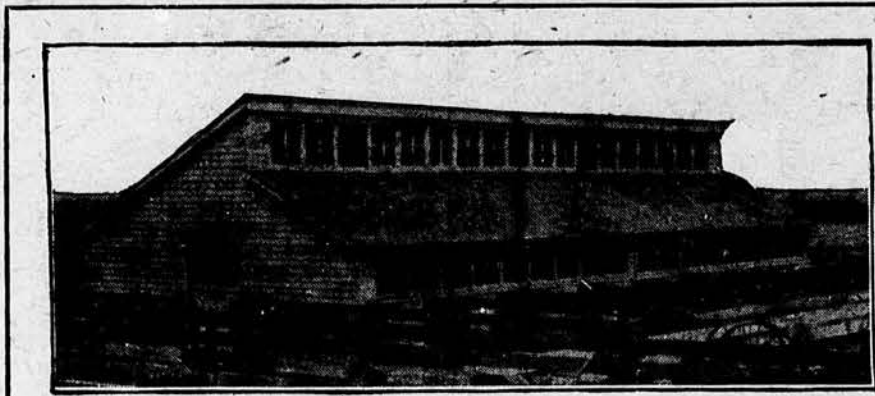
There are two general plans for housing brood sows at farrowing time—the individual house or cot, and the larger house having pens for all the sows under the same roof. It is more convenient to care for the sows and pigs when all are together, but the individual farrowing house has some advantages over the large house, and many hog raisers prefer to use the individual house for brood sows.

The most commonly used type of large house, and one giving good satisfaction, is one having a central alley with a row of pens on each side. It should be built the long way east and west. In order to get sunlight on the floors of the pens on the north side of the house, it is necessary to have a break in the roof so a second row of windows can be placed. It requires careful planning to get the sunlight where it is needed. In many houses the sun never reaches the floor of the back pens, due to improper planning. In a house where the distance from the window line at the floor to the north wall, is 10 feet, the bottoms of this middle row of windows should be 8 feet 9 inches from the floor and secure the largest amount of sunlight where needed. This is for Latitude 40 degrees—the north line of the state of Kansas. In Latitude 38, which is approximately that of our correspondent, the height should be 9 feet 4 inches. This placing of windows permits the sun from the full length of the window to fall on the floor of the back pens for over four hours during the day on March 1. The placing of the windows would necessarily have to be varied to secure this result at different seasons of the year. This point is carefully worked out in the Federal Department of Agriculture Bulletin No. 438, entitled "Hog Houses." We would suggest that all our readers interested in providing suitable quarters for their brood sows, write to the Department of Agriculture, Washington, D. C., for a copy of this bulletin.

The hog house should always be located on well drained ground, preferably



FARROWING HOUSE FOR BROOD SOW



THIS TYPE OF HOG HOUSE GIVES GOOD SATISFACTION.—WINDOWS MUST BE SO PLACED THAT SUNSHINE CAN STRIKE FLOOR WHERE MOST NEEDED

with a southern slope. The front row of pens will always be best for the early litters because it will give a chance for an outdoor run on the sunny side. The pens in a house 24 feet wide can be made 8 x 8, and the house made as long as necessary to provide room for the number of sows kept. It is a very good plan to use movable partitions for the pens on the north side. It is quite often convenient to use this part for housing bunches of hogs. A feed bin at one end of this part is desirable, and some hog men like to have a platform at one end upon which a stove can be placed for warming the house if pigs come in very cold weather.

Each pen should have a door opening into the alley, and the pens on the south should all have doors to the outside run. It is not advisable, as a rule, to have an outside door for each of the pens on the north, but there should be an outside door at each end of this row of pens.

The front and back walls of such a house as is described, should be about 5 1/2 feet high. Of course, the roof to the front will have only a slight pitch, this being necessary to provide for the break in the roof.

The cheapest type of house is one only 7 feet wide with a double pitch roof having a short slope to the south. Such house can be divided into pens 5 x 7. Doors should be placed in the south slope of the roof. On sunny days these can be opened, letting the sunlight into the sow's nest. Such a house can be made very warm, but lacks ventilation when the roof doors are closed. An opening 12 inches square just under the eaves on the south side of each pen, covered with cloth, helps to overcome this difficulty. The sows must of course be fed in a pen on the outside.

The individual farrowing house preferred by many hog men is small enough so it can be moved wherever desired. The A-shaped cot shown in the cut on this page is one of the most widely used of the individual houses. The framing consists of two-by-fours mounted on a 1-inch floor nailed to 4 x 4 runners. A doorway is provided in the end. On one of the sloping sides doors may also be provided, although these are not necessary.

## Fertilizer for Wheat

A. L. B., Franklin County, asks if it will pay to use commercial fertilizer on wheat.

We do not have much information on this point for Kansas. Fertilizers experiments are being conducted, however, by our experiment station. In counties where farm bureaus are organized with agricultural agents at work, local tests or experiments are being made. This is quite important work since there are many soil types and a test in the home community supplies more valuable information than one conducted under different conditions. We recently noted that the agricultural agent of Wilson County has reported some work done in that county. Several men used commercial fertilizer this year and obtained yields of 18 to 22 bushels an acre, the wheat testing 60 pounds to the bushel. In the same neighborhood on similar land prepared equally well but without the use of fertilizer, the yields were only 6 to 10 bushels to the acre and the wheat tested only 43 to 48 pounds to the bushel.

These tests were made on upland soils. One of the millers stated that he paid \$1.50 a bushel for the wheat on the fertilized ground and only \$1.40 for the wheat on the unfertilized ground. One of the men who made a test used 125 pounds of fertilizer to the acre, at a cost of \$1.75.

The time is probably coming when the judicious application of fertilizer in combination with proper rotation and use of manure and organic matter will be profitable on the soils of our state. These local trials should be encouraged and the information thus secured given as much publicity as possible in the community.

## Corn Smut Not Poisonous

M. L. S., Pottawatomie County, asks if corn smut will kill cattle.

Corn smut, so far as known, does not cause disease. A number of experiments have been made to test this point. In some of these, cows were fed several pounds daily of corn smut without harmful results. Indigestion seemed to be caused in some cases where the large amounts were fed. The smut left in the average corn field is not likely to be in sufficient quantity to cause any serious trouble. There are many losses in pasturing cattle on corn stalks but these are not due to the presence of corn smut, but to what is commonly called "corn stalk disease," and this is spoken of in answering another inquiry on this page.

## Corn Stalk Disease

B. T. N., Jackson County, asks if there is any remedy for "corn stalk disease" and whether he can take any precautions to avoid loss. His feed is scarce and he wishes to pasture a stalk field with cattle.

This disease, which is more or less prevalent every year where corn stalks are pastured, is not very well understood. The exact cause has not as yet been positively determined. In some cases it may be simply acute indigestion, but the more likely cause is that some form of fungus growth on the stalk produces the effect that is spoken of as corn stalk disease. It seems to be more prevalent in seasons when there has been considerable injury from corn ear worm. Whenever this occurs there are various molds or fungus growths that develop on the stalk.

There is no known remedy. The use of preventative measures is necessary to avoid loss. Cattle are much more apt to be affected if turned into a fresh stalk field when very hungry. In pasturing corn stalk fields the following rules are suggested: Be sure the cattle have plenty of salt and water; feed some hay before turning them into the field; do not turn them in until after 10 o'clock; get them accustomed to the field gradually by leaving them in only a short time the first day, lengthening the time a little each day until at the end of a week or two, depending on the size of the field and the number of cattle, they can be allowed to pasture at will.

Cattle should always be watched closely when being pastured on fresh stalk fields. At present prices the loss of a single animal represents quite a sum.

The silo is the best and safest means of getting full value from corn stalks

and in the long run cattle men will find it much more profitable to provide silage for their cattle instead of having to take chances on pasturing them in stalk fields.

## Charcoal for Hogs

P. S. W., Saline County, asks if it is worth while to provide charcoal and wood ashes for hogs.

Charcoal and minerals of various kinds are very essential to the health and proper development of the hogs. When running at large, hogs usually get all of these materials they need, but when kept under artificial conditions, mineral matter and charcoal must be supplied.

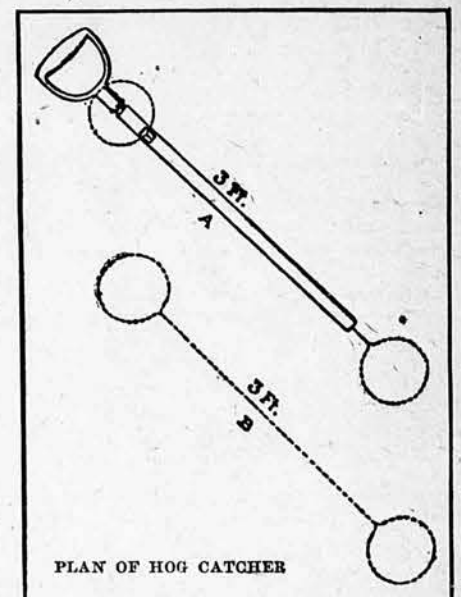
Wood ashes and soft coal or slack are relished by hogs and are valuable correctives. These materials can be placed in the pen in piles. There is no danger of the hogs eating too much. Charcoal may be made right in the pen by piling the cobs in heaps and burning them until they are a cherry red throughout the pile and then covering with damp earth. Charcoal in the digestive tract acts as an absorbent of gases and other undesirable products of digestion. When charcoal must be purchased it is sometimes supplied in a mixture containing salt and ashes. Lime and bonemeal are also important additions to such mixture. Probably the best plan of all is to provide a self-feeder in which these different materials are placed in separate compartments. The hogs can then make their own selections according to their appetites.

When hogs are kept in close quarters as is usually necessary during the winter, it is very important that these various materials be supplied. Without them they cannot keep healthy and make good growth.

County Agricultural Agent Taylor, Atchison County, reports that Earl Delfelder has a pig 7 1/2 months old that weighs 355 pounds.

## Handy Hog Catcher

A Texas hog man describes a hog catcher which he finds very handy. "To make this hog catcher, take a piece of gas pipe about three feet long and slip into the end of it an iron handle of an old shovel or scoop. Usually a three-quarter inch gas pipe will fit an iron handle of this kind. Cut a hole about an inch long in the pipe six inches below the handle. Then take a piece of wire, preferably a twisted clothes line, as it is softer and more pliable, and make a loop about six inches across in one end—a loop that will not slip. Pass the other end into the lower end of the pipe and let it come out at the hole below the handle. Make another loop in the wire at this end so that when this upper loop is pulled up even with the end of the handle the knot of the lower loop will be well up into the pipe. To use the catcher, pull the wire loop down as far as it will come, slip it over the hog's nose when he opens his mouth, and pull up on the loop at the handle. This brings his nose up against the end of the pipe. You can easily hold a hog of almost any size, with one hand."





# Arrow form fit Collars

Are cut to fit the neck  
and shoulders perfectly—  
They sit and fit remark-  
ably well and comfortably.

15c each 6 for 90c

CLUETT, PEABODY & CO., Inc. MAKERS



BERWICK

## War on Hog Cholera

There's only one way to fight  
**Cholera — VACCINATE!** Sanitary  
methods help to diminish death loss, but Vaccination  
saves hogs, prevents spread of disease.

Observe these rules: Keep Hogs Clean; Disinfect  
Yards and Pens; See That the Water Supply is Pure and  
Plentiful. Vaccinate with

### FOWLER'S ANTI-HOG SERUM

Fowler's Serum has the quality of being Uniformly Pure, Potent  
and Safe to use. Made by competent Veterinarians, under U.S.  
Veterinary License No. 103. It is Government Inspected and  
Fowler Inspected. Vaccinate with Fowler's Serum and keep  
your hogs in salable condition—worth their market price.

Further Information Sent on Request.

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Your  
Veterina-  
rian can obtain  
Fowler Serum through  
any Armour & Company  
Branch House, or direct.

## Here Is What You Have Been Wanting

A perfect riveting machine, uses tubular rivets, no punch or rivet set required,  
one pressure on the handle and the job is done.  
It will save you many dollars in repair bills  
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Made of jappanned iron with steel plunger.  
This riveter, measuring 12 inches long and 6  
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Send us \$1.50 for two years' subscription to  
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With the new FIRE BUILDER. Re-  
quires no paper or wood kindling.  
Starts the coal directly. Directions  
sent. Price 25c, no stamps accepted.

BOX 398, CLAY CENTER, KANSAS

## FARM AND HERD.

J. H. Becker, of Newton, Kansas, is  
among the successful breeders of pure-bred  
big-type Polands. He breeds the big, smooth,  
easy feeding type that are the profitable  
feeders. The blood lines of his herd are  
the best of the big-type breed, A Wonder,  
Mastodon, Expansion and Perfection strains  
predominating. This year he raised the  
best lot of spring pigs in the history of his  
herd. He also has a very choice lot of fall  
pigs.

O. H. Fitzsimmons, of Wilsey, Kansas,  
owner of one of the good herds of big-type  
Polands, writes that his herd is doing well  
and that there is a good demand for strictly  
high-class boars. Mr. Fitzsimmons has sold  
a number of spring boars to be used in  
some of the best big-type herds and has a  
large number of the best pigs ever raised  
on the farm.

G. Regier & Sons of Whitewater, Kansas,  
report their Holstein herd making a banner  
record this year. They own one of the best  
producing herds in the state. The cows in  
this herd have seven-day butter records of  
from 19.116 pounds to 20.658 pounds, and  
milk records of from 9 to 10 gallons per  
day. A feature of the herd at this time is  
the very fine lot of young stock, including  
bulls backed by world's records.

Samuel Drybread, of Elk City, Kansas, is  
one farmer that has made a great success  
with Hereford cattle. Mr. Drybread started  
about eighteen years ago with only a few  
registered cows and by careful mating and  
the selection of only the very best blood  
lines he has bought and paid for two good  
farms with Herefords. The herd cows now  
on the farm number more than a hundred  
head and are headed by a great breeding  
bull, Red Hampton, a Gudge & Simpson

bred bull. Other stock bulls used in the  
herd are of Beau Brummel, Imp. Bridgman  
and Prince Rupert breeding. A feature of  
the herd at this time is the splendid lot of  
extra fine bulls and heifers in the herd.

R. E. Atteberry & Son, of Lancaster, Mo.,  
well known as successful breeders of pure-  
bred Hampshire hogs, report their herd doing  
well. This is one of the good herds of  
Hampshires now in existence. They have  
the best blood lines of the breed in their  
herd and have found them profitable. A  
feature of their herd at this time is the  
choice lot of early spring and July pigs.

The Shorthorn sale held by Tomson Bros.  
at their farm near Wakarusa, Kansas, on  
November 22, was one of the successful sales  
of the season. The total proceeds from the  
sale of forty-three Shorthorns was \$19,780,  
an average of \$459.20 a head. The highest  
price paid was \$1,000 for a heifer by a  
Missouri breeder. An Oklahoma man paid  
\$725 for a yearling bull. The lowest price  
paid was \$200. Kansas breeders were  
among the heaviest buyers at the sale, other  
purchasers being from Iowa, Illinois, South  
Dakota, Missouri, Ohio and California. The  
weather for the day was disagreeable, but  
apparently did not seriously limit the at-  
tendance, which was good. The offering  
was one of the best sold this season and an  
offering with the individual merit is very  
unusual.

Carl F. Smith of Cleburne, Kansas, owner  
of one of the high-class herds of old origi-  
nal Spotted Polands in this state, reports  
his fall pigs growing out fine and weighing  
from 45 to 65 pounds. He also reports a  
big demand for the popular Spotted Polands  
and has sold completely out of spring pigs.  
Mr. Smith has developed a type that ma-  
tures early at a good weight and that is  
proving profitable as a market hog.

T. M. Ewing, of Independence, Kansas,  
owner of the noted Cedar Lane Holstein  
herd, reports his herd doing well. This is  
one of the richly-bred heavy-producing  
herds in the Southwest. Mr. Ewing has a  
choice lot of young stock, including young  
bulls sired by a 294-pound grandson of  
Pontiac Korndyke.

Please Mention Kansas Farmer  
When Writing to Advertisers.

## Kansas Farmer Dairy Club

### Winter Dairying

WE presume most of our Dairy  
Club members have the idea  
that the pasture season is the  
most profitable time in which to milk  
cows. In your experience you found  
that when pasture was abundant, the  
feed cost of producing the product was  
low.

We would like to suggest a few  
thoughts along this line, which have per-  
haps not occurred to you. Even though  
you did produce butter fat cheaply while  
your cow had pasture, few had pasture  
that was good enough to supply all the  
feed the cow could profitably turn into  
milk. The season in which pasture is  
good is not very long, and then most  
important of all, there is the price you  
received for the product. Butter fat is  
always lowest when cows are on grass.  
This is because more cows are milked at  
this particular time, resulting in more  
butter fat being produced.

The whole year's production of butter  
fat is also to be considered. The cow  
that freshens in the fall will usually  
produce more butter fat in her lactation  
period than the one freshening in the  
spring. This involves, of course, giving  
the cow suitable shelter during the win-  
ter and feeding her a good ration. Dur-  
ing the early part of the lactation period  
the general tendency is for the cow to  
give a good flow of milk if she has a  
chance in the way of feed and care.  
When the pasture season comes to the  
fall-freshening cow she receives a new  
start in milk production and quite often  
will increase during the season of good  
pasture.

The cow will not only produce more  
butter fat in a year's lactation when  
freshening in the fall, but the largest  
production will come at a season when  
prices are higher, so there is a chance  
to make a larger profit from the butter  
fat produced. Labor also enters into  
the matter of winter dairying. Where  
general farming is practiced the busiest  
time of the year is the spring and sum-  
mer season. There is less time to milk  
and care for cows. During the fall and  
winter season work is not so rushing  
and on some farms there might be  
nothing much to do if there were no  
cows to milk and feed. If milking some  
cows during the winter furnishes a pay-  
ing job for those who would otherwise  
be loafing, it means profit, for the one  
who has no employment must be fed  
and clothed while in idleness the same  
as when working. The man who has a  
paying job the year around is a good  
deal better off than the one who has  
work only a part of the time and must  
use up during his idle days what he  
earned while working.

Probably you have not thought of this  
point in this way because you had more  
time to care for your cow before school  
began than you have now. You will not  
always be in school, however, and when  
you get to farming for yourselves, if you  
should follow that occupation, you will  
find that it will pay to do as much win-  
ter dairying as possible.

Of course, those who sell milk have a  
little different problem than those who  
separate the cream and sell butter fat.  
Dairymen who sell milk are compelled  
to supply a fairly uniform quantity the  
year around in order to keep their trade.  
Most of the dairying, however, is that  
involving the milking of cows in con-  
nection with general farming, separating  
the cream, and selling the butter fat.

This season the price of butter is  
higher than it has ever been known to  
be before. Some are predicting that it  
will reach 50 cents a pound before the  
winter is over. This should be a great  
encouragement to those who are feeding  
high-priced feeds to milk cows. With  
such prices for butter, there is every  
reason for feeding the cows good rations,  
giving them the best of care, and mak-  
ing the most of such feeds as can be used  
for milk production.

### Kindness Pays

Kindness increases the yield of milk  
and its richness, and costs nothing. Pet-  
ting a cow is profitable.

Nature constructed the cow to give  
milk for her baby—the calf. The cow  
loves her calf and is happy when the  
calf is drawing milk from her. When  
the dairyman takes the calf away and  
milks the cow himself, for the time he  
becomes a second-hand calf. The more  
he can make the cow love him as she

loves her calf, the more milk she will  
give and the richer the milk will be.

There is sound reason for this. Much  
of the milk is formed while the cow is  
being milked. The glands of the udder  
at milking time are enlarged and the  
milk is formed from the blood and from  
the material in these glands. The  
greater the flow of blood through the  
udder at milking time, the larger the  
quantity of milk that is created. The  
flow of blood through the udder is con-  
trolled by the nerve centers, acting on  
the muscles around the blood vessels.  
When the cow is happy and contented  
and enjoys being milked, the blood ves-  
sels are kept open to their fullest ca-  
pacity and a large yield of milk follows.  
When the cow is excited or worried, the  
blood vessels are contracted, less blood  
flows through the udder and less milk is  
formed. If the cow is badly frightened  
or angered, the flow of blood is stopped  
entirely and no milk is formed. The  
dairyman says that the cow is holding  
up her milk, when in reality no milk is  
being made.

Petting increases the richness of the  
milk in another way. The strippings,  
or the last milk, is two or three times  
as rich as the rest of the milk. When  
a cow is petted and loves her milker, she  
yields the last possible drop of strip-  
pings and their great richness makes the  
whole milking richer. When the cow dis-  
likes her milker, or is afraid of him, the  
rich strippings are not secured.

A cow should never be driven faster  
than a walk. She should be petted in  
every way and made to like her milker  
and treated so that she will enjoy being  
milked.—H. M. COTTELL.

### Cottonseed Not Good for Calf

One of our Dairy Club members who  
is feeding his cow corn chop, bran and  
cottonseed meal, wrote that he was feed-  
ing his calf the same mixture he fed  
his cow.

Cottonseed meal is not a good feed for  
young calves, and besides the calf get-  
ting skim milk does not need feed rich  
in protein. The skim milk supplies all  
the protein necessary. The calf needs  
something to take the place of the cream  
or fat that has been taken from the  
milk. Corn supplies this lack and gives  
the best results if fed without grinding,  
because the act of chewing mixes the  
grain with the saliva, which is an impor-  
tant part of digestion. After the calf  
has acquired a taste for grain it would  
not be difficult to shift him to shelled  
corn. He may not like it at first but  
will come to it later.

### Uses Typewriter Well

One of our Dairy Club boys, Harvey  
Russell, Scott County, has been sending  
in typewritten feed and milk records.  
As Harvey is only fourteen years old, we  
wondered if some older person were not  
making his reports for him, and we  
wrote him asking about this. He re-  
plied as follows:

"I got your letter about my reports.  
I make my own reports, and I don't get  
any help at it either. I make them at  
home. We have a writing machine at  
the house to write our school work and  
letters on. I am sending my October  
reports today. I like to make them with  
the machine, then I know you can read  
them. I am glad you think they are  
neat."

Harvey's reports are always received  
promptly. But neat reports sent in on  
time are possible for all members if you  
will try just a little harder. Most of  
you are sending in neat, accurate rec-  
ords by the tenth of the month, but a  
few are not doing your best in this.  
Try a little harder for November, won't  
you please?

The time of year is now close at hand  
when the dairy farmer who has pro-  
vided plenty of good silage for his cat-  
tle will have abundant cause for rejoic-  
ing. Aside from the assurance of plenty  
of the very best feed for winter use, he  
will not be compelled to chop corn from  
the ground when the weather is at the  
freezing point or below, but will have  
his supply always readily accessible.

### Raise Calves at Half Cost!

By using "Brooks' Best" Calf Meal, 100  
pounds, \$3.25; 500 pounds, \$15. Brooks  
Wholesale Co., Ft. Scott, Kansas.—Adv.





## Feed Prices vs. Poultry Profits

**T**HERE has never been a time in the history of this nation when the price of grain has been higher, and in a few cases it was only equalled in short periods during those uncertain days that marked the closing of the Civil War. Certainly there has never been a time when grain prices were so universally and consistently high as they are now.

It is little to be wondered then, that many poultry owners have viewed the situation with alarm, and deeming the time unprofitable for the keeping of poultry, have marketed large numbers of their fowls in order to pare down the feed bills.

In ninety-nine cases out of a hundred, such action has been the result of the impulse of a moment and not the result of analysis of the true situation or of mature deliberation. Mistakes at their best are costly and nowhere more costly than in the poultry industry. Wisdom would not seem to dictate the reduction of flocks until feed prices became normal.

In these days of "wars and rumors of wars," these days of lightning changes, no man can honestly attempt to pre-empt the future, but the present situation as well as the past certainly does afford ample facts for a careful consideration of the case and a basis for a conservative decision.

Admit prices are high and are going to remain so, should we reduce or increase our flocks? The poultry business is subject to just the same laws as any other business. One of these is that the cost of raw materials is of no importance so long as the selling price of the finished article is correspondingly changed. Has this been the relation between poultry feed and poultry products—that is, eggs, dressed fowls, and live stock?

Figures are apt to be tiresome and are so easily obtained by inquiry or consultation of the papers or dealers, that we will not cite them here other than in a general way. Egg prices have never been so high as today. Moreover they are rising rapidly, with a much greater demand than supply. New York, Boston and Philadelphia poultry dealers predict "eggs at a dollar a dozen by Christmas." Nay, this is not a prediction, but a cold accomplished fact according to the report of the State Poultry Adviser of Pennsylvania who cites actual cases. Nor is this in the East alone. Today's mail brings the writer a report from Nevada of a poultryman getting 90 cents a dozen for eggs and can't supply the demand. A day or so ago came a report from the primitive Ozark Mountains of Missouri wherein the dealer complains of offering 60 cents a dozen for eggs and can't get enough of them. Eggs generally sell in that district at about a quarter dollar a dozen. These are not isolated but typical cases, and are not due alone to lessened supply. No student of the problem will deny that prices are going up and that this year's average price is going to mark a high water mark away above anything in the past.

When we search for the cause of this condition we are immediately confronted with several facts. First, the average income today is greater than ever before and everybody knows that the better off a family is the more eggs they use. Again government figures show several million less dozens of eggs in cold storage this year than last, as well as a vastly increased exportation. Prior to the outbreak of the great war, several foreign countries were dependent upon the Scandinavian countries, Germany, Russia and the Balkan States for a goodly portion of their egg and poultry supply. This was particularly true of Great Britain. Today that supply is almost completely cut off, and the United States called upon to furnish every egg she can spare. Again, due to the snap judgment, cited in the beginning of this article, many have disposed of considerable numbers of their layers due to the high price of feeds so that the supply of eggs has been curtailed. These are but a few of the more important causes of the great demand and high prices for eggs. Do they make it appear that eggs are going to be cheaper or dearer as time passes? Wise poultrymen in all sections say it is a favor-

able time to keep more fowls rather than fewer, for while feeds cost more, the prices of eggs have risen in far greater proportion and the poultryman's books are showing greater profits than ever before. It is an almost criminal mistake at this time to send to market any hen that can reasonably be expected to lay a fair number of eggs during the next few months.

In this connection there is another very interesting and important phase that should not be overlooked. The high price of eggs, attractive profits, and great demand for poultry products is going to create great interest in the industry and cause many persons to take up poultry raising next year. This always happens. That means this spring is going to see a tremendous demand for hatching eggs, baby chickens, and breeding fowls. As with eggs a heavy demand for these will mean higher prices. Does that make it seem as though it would pay to keep your flock intact?

When we speak of "keeping" the flock, however, do not understand that we advocate housing and feeding them for months if they are drones or unfit. Maximum profits come from closest and best attention. Every unproductive fowl should be culled from the flock and marketed while the prices are high. Housing should be carefully looked after to insure against profit consuming disease as well as increasing egg production. Greatest of all, the closest attention should be given to feeding. Give your birds all they need, but do not waste nor underfeed. The greatest production always accompanies the best feeding. Last but not least, watch the health of your fowls. The adoption of any reasonable method to insure the health of your birds is justified. Husky, healthy, vigorous fowls, unbothered by parasites or disease, can do good work for you and coin golden dollars. Poultry health is more essential than ever before, for healthy fowls digest all their food and consequently require less to get the same amount of nourishment. You can't afford to waste high priced feed on sickly, non-productive fowls.

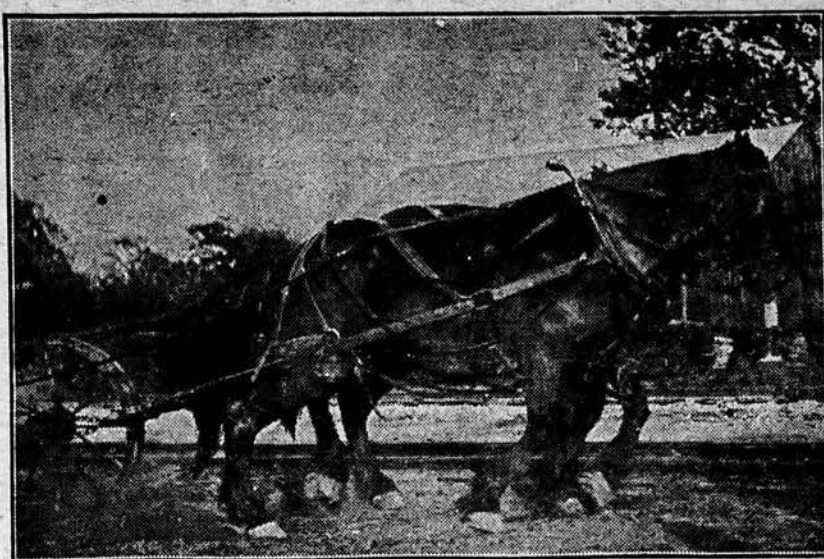
Now, if ever, is the Golden Age at hand for poultrymen. Keep every good fowl you can procure, increase your flock if possible, if you can read the handwriting on the wall and have faith in the poultry industry, the conditions are all present for such a period of prosperity as poultrymen have never known before.—J. W. KELLER, Pennsylvania.

Plenty of nests should be provided for the early layers. It is better to have the nests in a month early than a day late. Chickens don't like change, especially the pullets when they are beginning to lay. They are nervous, worried, wild, and very particular. By having plenty of good places for them to lay, the pullets will not feel so strongly the impulse to leave home at this critical time. Pay especial attention to placing them. Choose the secluded, quiet, out-of-the-way places.

Hens have just passed through the moult and require special feed and care. Beef scrap and sour milk should be fed liberally. A small amount of oil meal is beneficial as it helps produce a good coat of feathers in the shortest possible time.

The ideal hen house in Kansas would face the southeast. This would allow the sun to shine on all sides of the building at some time during the day. With the south exposure, the north side of the building never receives any sunshine and is cold in the winter and more or less damp except in the heat of the summer. As the prevailing wind is southwest, it does not as freely enter a building facing the southeast. Another desirable feature is the preference hens show for the morning sun on winter mornings. A fowl seldom seeks a sun bath in the afternoon.

The old hen is at last coming into her own. At no time has there been so much interest taken in the care and feeding of hens as this fall. The high price of eggs and the lack of other sources of income this season have caused farmers



## You Cannot Break Them

The picture shown above was taken during a test of the celebrated Anderson Doubletree, made by Mr. J. F. Ellis, of Osage City, Kansas. Read what he has to say:

Osage City, Kansas.

### TO WHOM IT MAY CONCERN:

This is to certify that I own a team of horses weighing 2,640 pounds with harness on. They have been on heavy work for a number of years and are well used to pulling, and I will put them against anything their weight for a pull. I had the pleasure of testing a pair of doubletrees for the Anderson Manufacturing Company of Osage City, Kansas. The doubletrees in question weighed ten pounds, completely ironed. I hitched them to a traction engine, and the brake was set unknown to me. The horses made as hard a pull and repeated pulls on this doubletree as I ever saw them make. I made at least a dozen hard pulls and at a few times the team lunged, but could not break it.

(Signed) J. F. ELLIS.

We, the undersigned, employees of the Anderson Manufacturing Company, witnessed the above when Mr. Ellis of this city tested the doubletrees, and will say that every word in the above statement is true.

(Signed) OSCAR JOHNSON

(Signed) CARL GREENQUIST

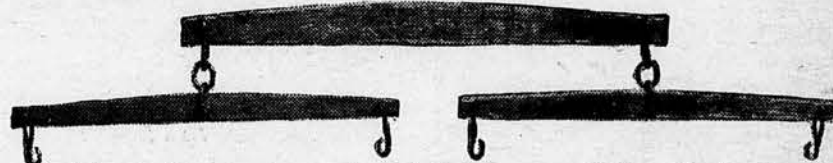
(Signed) FRED ANDERSON

(Signed) CHARLES C. ANDERSON

(Signed) J. D. RAMZY.

Here is one of the most practical doubletrees ever made for all ordinary work on the farm: Plowing, harrowing, lead team work, road work—in fact any work requiring a double-tree of medium weight and extra strength.

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KANSAS FARMER takes pleasure in offering its readers a doubletree which cannot be equalled for less than \$1.35, absolutely free. For a short time, and while our supply lasts, we will send one pair of doubletrees complete, all charges prepaid, to anyone sending us only \$2.00 for a three-years' subscription to KANSAS FARMER. This offer is open to all, new or renewal. If you are already paid in advance, we will extend your subscription. Don't delay, but order now, for this offer may not appear again.

**Kansas Farmer**  
Circulation Dept. Topeka, Kansas

to turn their attention to poultry. In handling several thousand chickens at the poultry shows this fall it has been noticeable that most of them were too thin to be in a laying condition. Hens that are poor will not lay. There is no

danger of hens becoming too fat if they are compelled to scratch for all the grain they get. Scatter the grain in some deep litter where the hen is compelled to work for it and she will repay you well if you feed with a liberal hand.



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

## Search for Thirty-Pound Bull

**A**LTHOUGH a surgeon by profession, Dr. J. T. Axtell of Harvey County, Kansas, has long been interested in the breeding of pure bred-live stock. He brought in the first Holstein bull owned in Harvey County. He formerly was greatly interested in the breeding of horses and in this work learned the value of performance records in animal breeding. No other phase of stock breeding has furnished so much evidence of what it means to have a long line of performers in the pedigree, as does the breeding of fast horses. (Dr. Axtell acquired quite a reputation as a breeder of fast horses, but we believe he has now taken up a line of animal production that will mean far more in the up-building of Kansas' agriculture, than would the breeding of fast horses. The dairy cow yields a product that is almost essential to the life of man. Of no other product can this be more positively stated.

Dr. Axtell is ambitious to build up a high producing herd, and from the lessons learned in breeding trotting horses, he has set a mark for the bull that will head this herd. At the meeting of the Kansas State Dairy Association recently held in Mulvane, he stated he had made up his mind to have a 30-pound bull, or, in other words, a bull the dam of which at least had produced thirty pounds or more butter fat in one week.

His search for this bull took him first to Iowa, where he visited a number of herds in which there were cows that had passed the 30-pound mark. He saw bulls from some of these cows and found that individually they were not always up to what he considered necessary in a herd bull, even though coming from record cows. Some lacked in capacity, others had sloping rumps or similar defects, and all were high-priced, although he found that on the whole Holstein cattle were not so high in price in Iowa, Illinois, Wisconsin and New York, as in Kansas, Oklahoma, or Texas.

He found everybody talking about certain famous bulls of the breed as he visited these leading herds of the country. These exceptional animals have become famous because of the large number of high record cows they have produced. All the leading breeders are using official records as a means of increasing the fame and popularity of their stock. This commercializing of the official record has led to some abuses as Professor Reed pointed out at the same meeting. Dr. Axtell kept his eyes open as he visited these various herds, and the fact that animals had remarkable records back of them did not prevent him from studying the animals carefully as individuals. We recollect that he spoke of one young bull by one of the most famous sires of the breed, as a veritable "pure-bred scrub".

The lesson in all this is, that the beginner while recognizing the value and importance of official records, should scrutinize carefully the individuals and

learn all he can of the manner in which the records have been made and as much of the history of the record animals as possible. He may learn of things that will make the records of little value. It is also well to seek advice from those who have had much experience in breeding and handling dairy cattle.

Dr. Axtell learned another lesson on his bull-buying trip, which he passed on to the dairymen present at the meeting. He found that \$200 or \$300 could be saved in purchasing a bull of the kind he wanted, by buying him while young. The common practice is to wait until a herd bull is needed and then go out and buy him. This means that the bulls just reaching serviceable age are in strong demand while few people are looking for the calf under a year old. To save money, buy your herd bull young. Of course, you must look ahead and make your purchase several months before you really need the animal. It will save you money, however, and also give opportunity for more careful selection.

Those who listened to this address were led to see more clearly than ever before, the importance of the herd bull in bringing about higher dairy production. We hope Dr. Axtell will make a wise choice and bring a sire to Kansas that will leave a line of high-producing offspring behind him.

### Cow Testing Report

The following is a record of cows in the Dickinson County Cow Testing Association which produced more than 40 pounds of butter during the month ending September 30, 1916. "J" is for Jersey, "H" for Holstein:

| Owner—                     | Pounds of Milk | Per Cent Fat | Pounds of Butter |
|----------------------------|----------------|--------------|------------------|
| Mr. Minch, J. ....         | 759            | 4.4          | 41.8             |
| A. H. Diehl, H. ....       | 840            | 4.0          | 42.0             |
| Dr. S. Nichols, H. ....    | 1,215          | 3.2          | 48.6             |
| Mott & Seaborn, H. ....    | 984            | 3.4          | 41.8             |
| Hoffman Bros., H. ....     | 885            | 3.9          | 43.1             |
| Hoffman Bros., H. ....     | 804            | 4.0          | 40.1             |
| Hoffman Bros., H. ....     | 1,011          | 3.3          | 41.8             |
| Hoffman Bros., H. ....     | 882            | 3.8          | 41.9             |
| Hoffman Bros., H. ....     | 804            | 4.3          | 43.3             |
| Hoffman Bros., H. ....     | 777            | 4.4          | 42.7             |
| L. E. Elliott, H. ....     | 801            | 4.6          | 46.0             |
| George Lennert, H. ....    | 978            | 3.6          | 44.0             |
| John Collins, H. ....      | 1,062          | 3.4          | 45.1             |
| E. S. Engle & Son, H. .... | 1,317          | 3.3          | 54.4             |
| E. S. Engle & Son, H. .... | 1,317          | 3.3          | 54.4             |
| E. S. Engle & Son, H. .... | 825            | 4.4          | 45.4             |
| E. S. Engle & Son, H. .... | 1,389          | 3.6          | 62.5             |
| E. S. Engle & Son, H. .... | 1,170          | 3.0          | 43.9             |

Alfalfa hay is an ideal milk producing feed. It is rich in protein—the material that makes blood, milk and lean meat. It has a rich aroma and is appetizing. It is a mild laxative, causing the cows' droppings to be about the same as when sh is on June pasture. It is rich in the mineral matter necessary for a large flow of milk and for the unborn calf. Alfalfa hay grown on the farm will produce milk and butter fat cheaper than any other feed. A ton of alfalfa hay, cured green, so as to retain the leaves, will produce as much milk as a ton of bran.



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## GRAIN PRODUCERS CONFER

THE billion bushel shortage in the world's wheat crop and the possibility of the 7-cent loaf of bread have suggested the embargo of grain exports as a means of relief. A special cost-finding conference of the organized grain growers of the country will take place in Chicago, December 8-9, and some steps may be taken to relieve the situation. The meeting is called by the National Council of Farmers' Co-operative Associations representing 300,000 organized grain farmers in nine leading grain states whose business this year, according to Department of Agriculture estimates, will total one and a half billion dollars. The grain farmers will come together under the auspices of the National Conference on Marketing and Farm Credits in the fourth annual session at the Hotel Sherman, December 4 to 9.

"The organized grain growers are not in favor of an embargo on grain exports," according to Herman W. Danforth of Washington, Ill., president of the National Council. "They contend that the law of supply and demand should be allowed to work unhampered. They maintain that an embargo on one product would be class legislation. Our farmers prefer to overhaul present marketing methods from country elevator to export markets."

The Equity Co-operative Exchange, representing 70,000 organized farmers of the Northwest, will participate in the conference. The Canadian grain growers will send a delegation and a speaker. The Farmers' Grain Dealers Associations of Illinois, Kansas, Indiana, Minnesota, North Dakota, Ohio, Nebraska and Iowa are arranging to send delegates. Two train loads of northwestern grain farmers will be headed by Governor Lynn J. Frazier.

"It was the grain marketing problems of the North Dakota farmers that finally brought about the revolt of the farmers, the formation of the Citizens' Non-Partisan League that endorsed farmer candidates for political offices from top to bottom and split old political alignments up in the election just held," said Secretary Charles W. Holman of the National Conference on Marketing and Farm Credits. "The farmers now are ready to take hold and run their state with men who will see that laws will be written on the statutes of the state to solve grain marketing problems, and supreme judges who will see that those laws are constitutional when they are passed."

The call issued by the National Council of Farmers' Co-operative Companies states that "conditions among the farmers of America have reached a state of development where all grain growers should become actively interested in marketing their own grain co-operatively. The advantages which have come to the farmers of the Middle West through co-operative grain marketing should be shared by all grain growers."

Over 2,000,000 American farmers will be represented by delegations at the coming conference, according to reports received by the officers. Live stock producers and feeders will attempt to get the moral support of the conference in their fight to get a Federal Trade Commission probe of the live stock situation from start to finish. Whole milk producers will have a national gathering to discuss reorganizing their methods of marketing.

### Sow Rye on Bare Cornfield

Cornfields that lie bare all winter will cost thousands of dollars through the loss of soil fertility. This is especially true in rolling sections. Unless some crop is grown on this land, the action of rain and other weathering agencies will destroy unnecessarily an enormous amount of plant food. A great deal of this waste may be saved by planting rye. Not only will washing be largely stopped but a great amount of humus will be returned to the soil by plowing under rye in the spring, and humus is greatly needed.

Rye can be grown on almost any well drained soil. One of its advantages is its adaptability. It can be used to fill gaps between other crops. Sown early

or late in the fall, on land either rough or well prepared, it can be depended upon to make a good growth in almost every instance, at the same time conserving fertility and preventing washing during the winter. It may be given the same fall and winter treatment, whatever use is to be made of it, and the farmer need not decide until spring whether to pasture it, cut and feed it green, plow it under, or harvest it as a straw and grain crop.

### Silos in Kansas March 1, 1916

The following table gives the number of silos in Kansas counties as reported to the State Board of Agriculture by the assessors:

| Counties.   | No. | Counties.    | No. |
|-------------|-----|--------------|-----|
| Allen       | 120 | Linn         | 99  |
| Anderson    | 239 | Logan        | 84  |
| Atchison    | 267 | Lyon         | 332 |
| Barber      | 178 | Marion       | 165 |
| Barton      | 62  | Marshall     | 88  |
| Bourbon     | 108 | McPherson    | 228 |
| Brown       | 92  | Meade        | 46  |
| Butler      | 279 | Miami        | 142 |
| Chase       | 160 | Michell      | 128 |
| Chautauqua  | 90  | Montgomery   | 86  |
| Cherokee    | 81  | Morris       | 121 |
| Cheyenne    | 81  | Morton       | 9   |
| Clark       | 61  | Nemaha       | 109 |
| Clay        | 58  | Neosho       | 114 |
| Cloud       | 70  | Ness         | 18  |
| Coffey      | 152 | Norton       | 130 |
| Comanche    | 34  | Osage        | 205 |
| Cowley      | 199 | Osborne      | 102 |
| Crawford    | 68  | Ottawa       | 74  |
| Decatur     | 49  | Pawnee       | 71  |
| Dickinson   | 238 | Phillips     | 149 |
| Doniphan    | 57  | Pottawatomie | 164 |
| Douglas     | 175 | Pratt        | 107 |
| Edwards     | 52  | Rawlins      | 15  |
| Elk         | 149 | Reno         | 392 |
| Ellis       | 22  | Republic     | 84  |
| Ellsworth   | 35  | Rice         | 167 |
| Finney      | 48  | Riley        | 110 |
| Ford        | 196 | Rooks        | 159 |
| Franklin    | 47  | Rush         | 31  |
| Geary       | 29  | Russell      | 23  |
| Gove        | 29  | Saline       | 128 |
| Graham      | 47  | Scott        | 6   |
| Grant       | 2   | Sedgwick     | 426 |
| Gray        | 29  | Seward       | 64  |
| Greeley     | 16  | Shawnee      | 154 |
| Greenwood   | 232 | Sheridan     | 31  |
| Hamilton    | 6   | Sherman      | 42  |
| Harper      | 87  | Smith        | 89  |
| Harvey      | 107 | Stafford     | 69  |
| Haskell     | 5   | Stanton      | 1   |
| Hodgeman    | 27  | Stevens      | 32  |
| Jackson     | 128 | Sumner       | 322 |
| Jefferson   | 135 | Thomas       | 32  |
| Jewell      | 228 | Trego        | 57  |
| Johnson     | 148 | Wabaunsee    | 178 |
| Kearny      | 25  | Wallace      | 20  |
| Kingman     | 253 | Washington   | 128 |
| Kiowa       | 35  | Wichita      | 3   |
| Labette     | 251 | Wilson       | 86  |
| Lane        | 21  | Woodson      | 105 |
| Leavenworth | 211 | Wyandotte    | 23  |
| Lincoln     | 140 |              |     |

### One-Crop System Unsafe

Bradford Knapp, of the United States Department of Agriculture, gives the following seven reasons why a one-crop system of farming is unsafe:

First—Because the system depends upon market and crop conditions of the one crop alone. Failure of crop or failure of market alike bring serious disaster.

Second—Because it does not provide for the maintenance of soil fertility.

Third—Because it fails to provide for a sufficient live stock industry to consume the waste products of the farm and make its waste lands productive.

Fourth—Because it does not provide for a system of farm management under which labor, teams and tools may be used to the fullest advantage.

Fifth—Because it brings return in cash but once a year instead of turning the money over more than once a year.

Sixth—Because it does not produce the necessary foods to supply the people upon the farm and keep them in health and strength.

Seventh—It limits knowledge, narrows citizenship, and does not foster home building, but does encourage commercial farming.



### Cream separator, \$17.95

—sold on easy payments at \$19.45. That is the remarkable proposition we offer in our new No. 10 Economy King Cream Separator. See page 1478 in our big General Catalog. Satisfaction guaranteed. Sears, Roebuck and Co., Chicago.

# STOP!

Man! Here's Greatest Offer You Ever Saw! Read!

Send me your name now—on a postal—and you'll get FREE, the surprise of your life.

First—I will prove that your straw—every ounce of it—is worth \$2.50 to \$3.80 a ton! Then I will show you how to prove to yourself that you can get \$2.50 to \$3.80 per ton for it. Easily! Quickly! Surely!—before you have spent or risked one little cent!

MANSION CAMPBELL

Yes, Sir, I take all the risk—you take none! Furthermore, if you decide to buy my "SIMPLEX" I'll trust you and

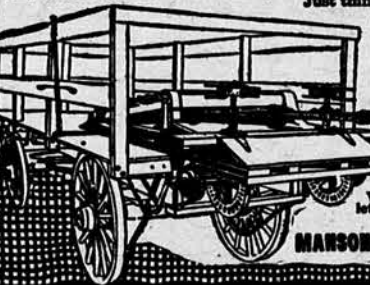
not a cent do I ask till next October! As a money-maker the Simplex will skin any machine on your farm.

WRITE ME AND I'LL PROVE IT!

## Simplex Straw Spreader

Makes Straw Worth \$2.50 to \$3.80 per Ton

Straw as a fertilizer, a conservator of moisture, a protection against "winter kill" and "soil blowing", is easily worth \$2.50 when spread on your land. And spreading is easy with a SIMPLEX. Just think! Twenty feet at a time! Thick or thin! Twenty acres per day! Machine pays for itself in three working days! Fits high or low wagon! Has double-drive both rear wheels and double-width carrier! Five years' proven success behind it! Thousands already in use! Thirty days' FREE TRIAL—no money in advance! Plenty of time to say! Man, it's the biggest and best offer you ever saw!



### MY SPECIAL OFFER

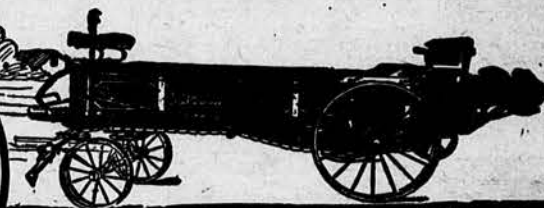
I've got a very Special Proposition for the farmer in each township. I won't make it public. But when you write—I'll explain all. I'll send you my new Straw Spreader Catalog together with several hundred actual letters from owners—greatest bunch of letters you ever saw! Can't help convincing any man that it's folly to burn straw or allow it to rot.

Write! Do it now. You'll get the big book—the interesting letters—my special proposition—by return mail—ALL FREE!

MANSION CAMPBELL, President

MANSION CAMPBELL CO., 599 Trade Bldg., Kansas City, Mo.

## A WIDER AND MORE EVEN SPREAD



Flying Dutchman Wide-Spread Spreader makes a load of valuable manure go farther, produce better crop results—saves time and labor.

### Double Beater Handles Manure Twice

Pulverizes it thoroughly. Second beater running at high speed makes a wide even spread—covers the field in less time. Separate Direct Axle Drive for beater and apron prevents heavy strain on beater mechanism.

A Low Down spreader with ample clearance between apron and ground—safely carries 4,500 pounds.

Exceptionally Light Draft. One lever controls operation.

Built almost entirely of steel—nothing to warp, sag or rot.

See it at your Moline Dealer's or write us for Illustrated literature.

Moline Plow Co., Dept. 10 Moline, Ill.

## New KEROSENE LIGHT BEATS ELECTRIC OR GASOLINE

10 Days FREE—Send No Money



TWICE THE LIGHT ON HALF THE OIL

We don't ask you to pay us a cent until you have used this wonderful modern white light in your own home ten days, then you may return it at our expense if not perfectly satisfied. You can't possibly lose a cent. We want to prove to you that it makes an ordinary oil lamp look like a candle; beats electric, gasoline or acetylene. Lights and is put out like old oil lamp. Tests by U. S. Government and 84 leading Universities show that it

**Burns 50 Hours on One Gallon** common kerosene (coal oil), no odor, smoke or noise, simple, clean, won't explode. Three million people already enjoying this powerful, white, steady light, nearest to sunlight. Won Gold Medal at Panama Exposition. Greatest invention of the age. Guaranteed.

\$1000 Reward will be given to the person who shows us an oil lamp equal to the new Aladdin in every way (details of offer given in our circular). We want one user in each locality to whom we can refer customers. To that person we have a special introductory offer to make. Yours under which one lamp is given free. Write quick for our 10-Day Absolutely Free Trial Proposition and learn how to get one free. FREE

MANTLE LAMP COMPANY, 315 Aladdin Building, CHICAGO, ILL.

Largest Kerosene (Coal Oil) Mantle Lamp House in the World

Men With Rigs Make \$100 to \$300 Per Mo. Our trial delivery plan makes it easy. No previous experience necessary. Practically every day home and small town home will buy after trying. One farmer who had never sold anything in his life before writes: "I sold it the first even day." Christensen, Wis., says: "Have never seen an article that sells so easily." Norring, Iowa, says: "25 per cent of homes visited bought." Phillips, Ohio, says: "Every customer becomes a friend and booster." Kemmerling, Minn., says: "No money talk necessary. Sell itself." Thousands who are sending money endorse the Aladdin just as strongly. NO MONEY REQUIRED. We furnish stock to reliable men to get started. Ask for our distributor's plan, and learn how to secure an appointment and make big money in unoccupied territory. State occupation, age, whether you have rig or auto; whether can work spare time or steady; when can start; townships most convenient for you to work.

## HARLEY-DAVIDSON SERVICE STATION

PARTS For Kansas REPAIRING

SHAWNEE CYCLE CO. TOPEKA KANSAS

READ KANSAS FARMER'S CLASSIFIED ADVERTISING PAGE FOR READY BARGAINS



# Classified Advertising

## HELP WANTED.

**GOVERNMENT FARMERS NEEDED.** Big salaries. Permanent job. Light work. Write Ozment, 44 E., St. Louis, Mo.

**THOUSANDS U. S. GOVERNMENT JOBS** now open to farmers, men and women. \$65 to \$150 month. Write immediately for list positions easily obtained. Franklin Institute, Dept. S-82, Rochester, N. Y.

**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.

**NURSERY SALESMEN WANTED—HOME** territory; highest commissions, payable weekly. No investment. We deliver and collect. Perry Nurseries, Rochester, N. Y. Established 21 years.

**MEN WANTED AS WAGON RETAIL** merchants to sell to farmers, our line of one hundred and nine articles of every day need on the farm and in the home, embracing home and veterinary remedies, extracts, spices, toilet articles and sundries. Every man that is earning only a small salary should send for our free booklet describing the Haller Way that helps a man to help himself, and how he can get into a good permanent business on our capital, if he is progressive and desires to save money for the future. The Haller Proprietary Co., Blair, Nebraska. Established in 1888.

## TO FORD OWNERS

**STOP FOULING OF SPARK PLUGS AND** pumping of oil by attaching a White's Oil Distributor to your Ford. Saves its cost in thirty days in oil alone. Price \$3 prepaid or sent collect on delivery if you write your name on a postal. Evapco Manufacturing Company, 416 Grand River Ave., Detroit, Mich.

## CATTLE.

**REGISTERED JERSEY CATTLE. PERCY** Lill, Mt. Hope, Kan.

**FOR SALE—REGISTERED JERSEY** bull, 1½ year old, gentle. Also one bred heifer. R. O. McKee, Marysville, Kansas.

**FOR SALE—AN EXCELLENT REGISTERED** Shorthorn bull, of serviceable age. Red in color. C. W. Merriam, Columbian Building, Topeka, Kansas.

**FOR SALE—ONE 2-YEAR-OLD HIGH-** grade Holstein cow, will be fresh inside of three weeks, for \$125. G. H. Regier, Whitewater, Kansas.

**FOR SALE—TWO 1-YEAR-OLD HOL-** stein heifers, well-bred grades, nice color, \$75 per head. G. H. Regier, Whitewater, Kansas.

**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.

**HOLSTEIN COWS AND HEIFERS FOR** sale. Eleven cows, all young; thirty yearlings, twenty-one calves. All high grade and priced to sell. Write for prices. Gust A. Nelson, Sharon Springs, Kansas.

**HOLSTEIN SALE—AT FARM THREE** miles northeast of Richmond, Kansas, Friday, December 15, 1916. Sixteen high grade Holstein cows and heifers, fresh or bred to my great herd bull, Carlotta Henry Pontiac 148234, grandson of the champion college cow, Maid Henry. Free conveyance from Richmond. F. E. Patten, Richmond, Kan.

## REAL ESTATE.

**TRADES EVERYWHERE—EXCHANGE** book free. Bersie Agency, El Dorado, Kan.

**WANTED—TO HEAR FROM OWNER OF** good farm for sale. State cash price and description. D. F. Bush, Minneapolis, Minn.

**640 ACRES, EASTERN KANSAS IMP.** 300 acres in wheat, 100 in alfalfa. Price, \$75 per acre. Can take in 160. Write P. O. Box 125, St. Marys, Kansas.

**FOR SALE—IN CATHOLIC COMMUNITY,** improved farms. Small payments, easy terms. Write for list and prices. L. E. Pendleton, Dodge City, Kansas.

**FREE GOVERNMENT LAND—300,000** acres in Arkansas now open for homesteading. Send for revised township map of state and copy Homesteaders' Guide. L. E. Moore, Little Rock, Ark.

**FARM LANDS THAT WILL SOON DOUBLE** in value and raise from fifteen to forty bushels of wheat to the acre while doing so, is the proposition I have to offer. Your investigation will prove my statement. J. H. Morison, Sterling, Colorado.

**FARMING IN FLORIDA—OUR LANDS** are extremely fertile, clay or marl subsoil. Practically twelve months growing season. Abundant, well distributed rainfall. Good for trucking and citrus culture. Close to transportation, on branch of Dixie Highway, settled and prosperous community. Chance for big profits to right men. Our book, "Farming in Florida," tells all. Write for free copy today. O. P. Swope Land Company, Oviedo, Seminole County, Florida.

## FARMS WANTED.

**FARMS WANTED—HAVE 7,000 BUYERS.** Describe your unsold property. 514 Farmers Exchange, Denver, Colo.

## POULTRY.

**BOURBON RED TURKEYS, HENS AND** toms for sale. W. H. Oliver, Reger, Mo.

**BOURBON RED TURKEYS, LARGE** with splendid color and markings. Mrs. Elmer Nicholson, Route 5, Wellington, Kan.

**R. C. BUFF WYANDOTTE COCKERELS** for sale cheap before winter. G. G. Wright, Langdon, Kansas.

**FAWN INDIAN RUNNER DUCKS BY** hundred or small lots, \$1.00, \$1.50 each. Mrs. E. C. Wagner, Holton, Kansas.

## POULTRY.

**ROSE COMB RED COCKERELS, \$1** each. J. W. Warner, La Crosse, Kansas.

**BARRED ROCK COCKERELS, \$1.50, \$2.00,** \$2.50. Mrs. E. C. Wagner, Holton, Kansas.

**LARGE BUFF LEGHORN COCKERELS,** \$1.25 each. C. Kissinger, Homewood, Kan.

**FINE BUFF ORPINGTON COCKERELS,** \$2 each. Mary E. Price, Route 7, Manhattan, Kansas.

**EXTRA GOOD BOURBON RED TURKEY** toms, prices reasonable for immediate sale. Julia Haynes, McDonald, Kansas.

**BOURBON RED TURKEYS, DARK RED,** white wings and tall. Hens, \$3 to \$5; toms, \$5 and \$6. J. W. Warner, La Crosse, Kan.

**FOR SALE—BUFF WYANDOTTE COCK-** erels, price \$1, and also White Pekin ducks and drakes, price \$1. Address Gus Sauer, Belvue, Kansas.

**BARRED ROCK COCKERELS, PRICED** reasonably. Chas. Kolterman, Route 5, Onaga, Kansas.

**FOR SALE—TWENTY-FOUR PURE-** bred white pullets at \$1 each. Mrs. J. L. Yordy, Tescott, Kansas.

**WHITE ROCKS, SIZE AND QUALITY,** priced reasonable. Write G. M. Kretz, Clinton, Kansas.

**HEAVY BONED FANCY AND UTILITY** R. C. Reds, guaranteed satisfactory. Highland Farm, Hedrick, Iowa.

**YOUNG WHITE HOLLAND TOMS, \$4.00;** hens, \$2.00. Bertha Ballinger, Garden City, Kansas.

**IMPERIAL PEKIN DUCKS, STANDARD** weight, large Toulouse geese. Prices reasonable. Mrs. F. Bender, Hampton, Iowa.

**FOR SALE—300 SINGLE COMB WHITE** Leghorn cockerels, \$1 each. East Oklahoma Hospital for the Insane, Vinita, Okla.

**BIG BONED BARRED ROCK COCK-** erels, fancy breeding, \$2 each. Bred to lay strain. C. D. Swalm, Geuda Springs, Kan.

**GOOD BLACK LANGSHAN COCKERELS,** \$1.50 each. Mrs. Geo. W. King, Solomon, Kan.

**GEESSE, EMBDEN, TOULOUSE, CHINA;** turkeys, ducks. All leading breeds of poultry. Emma Ahlstedt, Roxbury, Kan.

**UTILITY SINGLE COMB WHITE LEG-** horn cockerels, Young's strain, \$2.00 each. Mrs. C. W. Churchill, Route 1, Leslie, Mo.

**FELTON'S MAMMOTH LIGHT BRAHMA** cocks, cockerels and pullets for sale. Mrs. Mark Johnson, Bronson, Kansas.

**ROSE COMB REDS EXCLUSIVELY.** Cockerels for sale. Bean strain. M. L. Puckett, Fuxico, Mo.

**CHOICE WHITE WYANDOTTE COCK-** erels, \$1.25 and up. Mrs. Will Beightel, Holton, Kansas.

**FOR SALE—SINGLE COMB WHITE LEG-** horn cockerels, \$1.00 up. Mrs. H. A. Ketter, Seneca, Kansas.

**OAK HILL FARM—PURE-BRED M. B.** turkeys from high scoring stock. Pure-bred Duroc pigs. Lawson, Missouri, Route 3.

**BIG-BONED BARRED ROCK COCK-** erels, pure-bred, \$2 each. Would like to buy a few pure-bred pullets or exchange. J. P. Alpers, Hudson, Kan.

**PURE BARRED ROCK COCKERELS** from prize winning stock. Farm raised. \$1.50 each before January 1. Mrs. H. B. Buchanan, Abilene, Kansas.

**BARRED ROCK COCKERELS FROM** well bred stock. No better for the money. \$2 to \$5. Satisfaction or money back. R. D. Ames, Walton, Kansas.

**SIXTY VARIETIES PRIZE WINNING** geese, ducks, turkeys, chickens, peafowls, guineas, stock, eggs. Cheap. Write wants. F. J. Damann, Farmington, Minn.

**MAMMOTH WHITE HOLLAND TUR-** keys from 35-pound toms and 17-pound hens. Write me at once, going fast. C. G. Cook, Route 5, Lyons, Kansas.

**CHOICE S. C. WHITE LEGHORN COCK-** erels from prize winners and heavy laying strains, \$1.00 each. Pullets, \$5.00 per dozen. Mrs. H. Buchanan, Abilene, Kansas.

**WHITE PLYMOUTH ROCKS, EXTRA** large pure white hens, cockerels and pullets for sale. Write. Originator of Ivory strain. Chas. C. Fair, Sharon, Kan.

**S. C. RED COCKERELS, BIG, DEEP** red, exceptionally good birds. Price, \$2.50. Creighton Harper, Oak Leaf Poultry Farm, Roca, Neb.

**WHITE ROCK COCKERELS, SIZE,** quality and color. Fawn and White Runner ducks, all prize winners. Mrs. Ben Miller, Newton, Kansas.

**YESTERLAI D STRAIN SINGLE COMB** White Leghorn cockerels from hens with trap-nested record of more than 440 eggs in two consecutive years. Price, \$2 or \$4. Mrs. John Hanni, Mayetta, Kansas.

**BARRED PLYMOUTH ROCK COCK-** erels—Grand breeding birds, large and well marked. Dams have trap nest record 225 eggs in year. \$3 each, two \$5.50, four \$10. Ike Hudnall, Milan, Mo.

**SINGLE COMB REDS—FINE BREEDING** cockerels at reasonable prices. This is the last chance this season. Order early and you will not be disappointed. Fine colored, large size birds, guaranteed to please. Write for prices. H. H. McLellan, Kearney, Neb.

## POULTRY WANTED.

**WE BUY 'EM ALL—CAPONS, GUINEAS,** turkeys, geese, ducks, chickens, eggs. Cash prices on request. The Copes, Topeka.

(Continued on Next Page.)



We desire to make this department just as helpful as possible, and believing that an exchange of experiences will add to its value, we hereby extend an invitation to our readers to use it in passing on to others experiences or suggestions by which you have profited. Any questions submitted will receive our careful attention and if we are unable to make satisfactory answer, we will endeavor to direct inquirer to reliable source of help. Address Editor of Home Department, Kansas Farmer, Topeka, Kansas.

Whatever the weather may be, says he—  
Whatever the weather may be—  
It's the sing ye sing  
And the smile ye wear,  
That's a-makin' the sun shine everywhere.  
—James Whitcomb Riley.

The work of making sandwiches will be easier if each slice of bread is buttered before being cut from the loaf. Cream the butter with wooden spoon or potato masher.

When grown-ups walk with children the little ones should not be compelled to run or dog-trot in order to cover the ground so easily covered by the long strides. This is a wrong commonly practiced. If anyone doubts that this is an injustice to the child, let him try running or dog-trotting an hour or more each day. To be sure, the child's joints are not as stiff as those of the grown-up, but neither is he sufficiently hardened for the endurance required by this practice.

## Setting Colors in Cotton

At the present time we hear much about the poor quality of dyes used. It is possible to set some colors in wash materials. An authority on the subject says salt will set browns, blacks, and pinks. Definite proportions cannot be named, but two cupfuls of salt to one gallon of cold water will be enough in most cases. If this amount does not stop the bleeding of the color, add more until this is accomplished.

One-half cupful of vinegar to one gallon of water will be effective for setting blues.

One tablespoonful of sugar of lead to one gallon of water should be used for lavenders. The sugar of lead should be handled carefully, as it is deadly poison if swallowed.

## Mothers' Confidential Registry

We wonder if all the mothers who are numbered among our readers, know of the Mothers' Confidential Registry recently established in connection with the work of the Division of Child Hygiene of the Kansas State Board of Health.

Each mother who registers will receive a series of nine letters covering the care of the expectant mother and her unborn child, and in addition to these, valuable printed matter issued by both the Division of Child Hygiene of the State Board of Health and the Children's Bureau of the U. S. Department of Labor. A letter will also be sent each mother on the birthday of the child, including the fifth year.

In addition to the regular letters, the director of the Division of Child Hygiene will answer requests for special information regarding the needs of mother and child, unless these requests are of such nature that they should be brought to the attention of the family physician, in which case the correspondent will be advised to consult him.

At this time there are about 350 names registered. The letters received from these correspondents express their appreciation of the service and gratitude for the help received through this source.

Expectant mothers and mothers of children up to five years of age may register at any time. There is no cost in connection with this service. Send name and address, also name and age of baby, to Division of Child Hygiene, State Board of Health, Topeka, Kansas.

## State Traveling Libraries

Mrs. C. L. G., a Saline County reader, makes this inquiry:

"Am seeking information concerning traveling libraries. Could you please tell me where to write? Our young people in this community are perfectly contented if supplied with good reading."

We have in Kansas a State Traveling Libraries Commission, which has in its custody about 50,000 volumes for distribution among Kansas communities. These are sent out in sets of fifty books each, and the cost for the use of a set

for six months is only \$2, which amount covers transportation only.

The collection is made up of books of history, travel, biography, poetry, art, popular science, essays, and fiction, by standard authors. Orders specifying authors desired will be so filled if the books are on hand. It is well to name a second choice in ordering, as this may save time and will help the librarian to give better satisfaction in filling the order.

The only requirement in taking advantage of this state traveling library is that the application for books be signed by some responsible person representing the community and who will assume charge of the books and see that they are returned in good condition and any lost ones replaced or the price sent to the State Commission.

In many neighborhoods the condition stated by our correspondent prevails. The young people will become interested in good literature if it is within their reach and it will be satisfying to them. This state collection placed at our disposal makes possible a year-round library for the community which takes advantage of its opportunities.

Anyone wanting to obtain a set of these state-loaned books should write Secretary of Kansas Traveling Libraries Commission, Topeka.

Another offer made by this same commission is the use of fifty reproductions of paintings of the great masters of Italy, Belgium, Holland, Germany, France, England, and America, for one week for \$5. This art collection contains 468 pictures 22x28 inches, uniformly matted, and ten 28x38 inches. With each set of fifty pictures are sent lectures explaining them and telling something about the artists. Local organizations will be permitted to charge admission to these pictures if they care to do so.

Write to the same address, given above, for information concerning either pictures or libraries.

## Doctor's Advice Valuable

Home doctoring is all right so long as those administering the remedies understand the ailment and know that the manner in which they are treating it is right. Beyond this point it is dangerous to go without consulting a physician. It is only reasonable to believe that one who has devoted years to the study of the human body and its enemies, can better define and treat symptoms than can we, and if time is lost in bringing the patient to the attention of a doctor, his best efforts may be hindered by our ignorance and the disease may get an unnecessarily strong hold.

Certain diseases require certain treatment, and the quicker the disease is understood and the proper remedy used, the more effective it will be.

Last summer there came to our notice a case of an affection of the skin, which, under the care of a physician, would probably have been cured in a short time, but the home treatment given it seemed to aggravate it and prolonged it through many months. The mother in the family first noticed the irritation on her face. She had no idea what the trouble was or where it was contracted by her. It never occurred to her that



## America's most popular buggy

is shown on page 1489 of our big General Catalog. It is illustrated in colors with full description of material and construction. Look in the catalog and see the price that made this buggy so popular.

Sears, Roebuck and Co., Chicago.



she should be careful about it in the use of towels or wash cloths. She applied some strong ointment she happened to have in the cupboard, without knowing the nature of either the trouble or the ointment. It was not long before she had similar ugly spots on her hands and her two children also had many of them on their hands and faces. Each neighbor or friend who happened in had a different remedy to suggest and all were purchased and tried—some for only one or two applications, some longer, depending upon the amount of time between suggestions. Late in the fall the three members of this family were still worrying with this skin trouble and new spots were appearing every week. Undoubtedly many times the cost of a first class physician's advice had been spent for ineffective ointments, salves, and soaps, but neither the irritation nor the inconvenience it had caused, had been lessened.

There may be products on the market that would effect a cure in this case, but under the circumstances—knowing absolutely nothing about the trouble—much time, annoyance, and money would have been saved had a good doctor's advice been sought in the beginning.

Most mothers know the simple remedies for the simple ailments which find their way into every family, but when in doubt as to either, the surest way to find relief is through bringing the case to the attention of one whose business is the mastery of disease.

### Surprise Cake

- 1 egg
- 1/2 cupful butter
- 1 cupful sugar
- 1 cupful milk
- 1 1/2 cupfuls flour
- 2 teaspoonfuls baking powder
- 1 teaspoonful cloves
- 1 teaspoonful allspice
- 1/2 teaspoonful nutmeg
- 1/2 teaspoonful ginger

### CARAMEL ICING

- 1 cupful sugar
- 1/2 cupful cream

Cook until the mixture hairs when dropped from a spoon.

The habit of starting fires with kerosene is one to be shunned. Of course, we all think we know how to do it safely, but this is something about which we can have no assurance. Damage to the amount of \$6,456 was caused by kerosene in Kansas during the month of September this year.

In case of sickness, the patient's room should have in it only the necessary pieces of furniture—bed, one chair, and table—no carpets and no draperies. It can then be easily kept clean and sanitary. Scrubbing should take the place of sweeping and the dusting should be done with a cloth wrung out of a disinfectant solution. Care used in the sick room and about the things used by the patient, will have much to do with checking the spread of disease.

A few minutes' relaxation each day should be one of the housewife's rules.

## 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 Dressmaker," 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. 7994—Girls' Coat: Cut in sizes 4, 6, 8, 10 and 12 years. This coat is in the popular fashion for fall. Double-breasted style, hanging straight and loose from the shoulders. The sailor collar and cuffs in contrasting color, patch pockets and covered buttons have much attractive value. The ripple effect so dominant in models for grown-ups is featured in this model. No. 7986—Ladies' Shirts: Cut in sizes 36 to 42 inches bust measure. The hood collar is only one of the attractive features of this shirtwaist. The smart and popular frill effect is given by the revers in material of coin-spot design, stitched to the fronts that are gathered at the shoulder seams. No. 7977—Girls' Dress: Cut in sizes 8 to 14 years. There is real beauty in the design of this frock with the collar, cuffs, and the facing which simulates a vest, in contrasting goods; edging and insertion add much to the dainty effect. The blouse body is gathered at the waistline and belted, and a modified ripple flare is the result. No. 8001—Ladies' Dress: Cut in sizes 36 to 42 inches bust measure. A proper autumn model for practical wear is shown in this illustration. The blouse is made with body and short sleeves in one piece or with set-in long sleeves. The skirt is cut in three gores. Linen, gingham or serge can be used to make this dress. No. 7993—Ladies' Skirt: Cut in sizes 24 to 30 inches waist measure. Especially to be favored because it may be made with or without the applied yoke—a noteworthy fall feature in separate skirts. This model is cut in three gores and has two forward and two backward turning plaits introduced at each side. No. 7967—Ladies' Apron and Dust Cap: Cut in sizes 36, 40 and 44 inches bust measure. So trim and neat an outfit as this will greatly add to the worker's comfort. The fullness is unconfined but a fitted effect is given across the back and chest to advantage. The neck may be high or low.

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## OVERLAND RED

A Romance of The Moonstone Canon Trail

Then Williams did an unaccountable thing. He hunted among the crowd till he found the man who had said, "Why, that ain't ridin'." He asked the man quietly, if he had made such a remark. The other replied that he had. Then Williams promptly knocked him down, with all the wiry strength of his six feet of bone and muscle. "Take that home and look at it," he remarked, walking away.

Through the dusk of the evening the Moonstone boys jingled homeward, the horses climbing the trail briskly. Two of them worked the outlaw up the hill, each with a rope on her and each exceedingly busy. Collie was too stiff and sore to help them.

Miguel, hilarious in that he had ridden Boyar to second place, and so upheld the Moonstone honor, sang many strange and wonderful songs and baited Collie between-whiles. Proud of their companion's conquest of the outlaw colt, the Moonstone boys made light of it proportionately.

"Did you see him reclinin' on that Yuma grasshopper," said Bud Light, "and per-tendin' he was ridin' a hoss?"

"And then," added Billy Dime, "he gets so hot up and proud that he rides right over to the ladies, and 'flop' he goes like swatting a frog with a shingle. He rides about five rods on the cayuse and then five more on his map. Collie's sure tough. How's your mug, kid?"

"It never felt so bad as yours looks naturally," responded Collie, puffing at a cigaret with swollen lips. "But I ain't jealous."

"New, ain't you?" queried Williams, who had ridden silently beside him. "Well, now, I was plumb mistook! I kind of thought you was."

## CHAPTER XXIII

## SILENT SAUNDERS SPEAKS

Meanwhile Collie kept a vigilant eye on Silent Saunders. The other, somewhat sullenly but efficiently, attended to his work. Collie's vigilance was rewarded unexpectedly and rather disagreeably.

One day, as he stood stroking Black Boyar's neck, he happened to glance across the yard. Saunders was saddling one of the horses in the corral. Louise, astride Boyar, spoke to Collie of some detail of the ranch work, purposely prolonging the conversation. Something of the Collie of the Old barbecue had vanished. In its stead was an inexplicable but positive quality of masterfulness, apparent in poise and manner.

Louise, because she knew him so well, was puzzled and curious. She could not account for the change. She was frankly interested in him in spite of, or perhaps because of, his early misfortunes. Instinctively she felt that he had gained a moral confidence in himself. His physical excellence and ability had always been manifest. This morning his grave, dark eyes, upturned to her face as he caressed Boyar, were disconcertingly straightforward. He seemed to be drinking his fill of her beauty. His quick smile, still boyish, and altogether irresistible, flashed as she spoke humorously of his conquest of the outlaw colt Yuma.

"I learned more—ridin' that cayuse for two minutes—than I ever expect to learn again in that time."

Remembering that she had been first to reach him when he was thrown, the fresh bloom of her cheeks deepened. Her eyelids drooped for an instant. "One can learn a great deal quickly, sometimes," she said. Then added, for he had smiled again—

"About horses."

"And folks." He spoke quietly and lifted her gauntleted hand, touching it lightly with his lips. So swift, so unexpected had been his homage that she did not realize it until it was irrevocably paid.

"Why, Collie?"

"Because you wasn't ashamed to help a guy in front of the others."

"Please don't say 'guy.' And why should I be ashamed to help any of our boys?" she said, laughing. She had quite recovered herself.

"Course you wouldn't be. But this is a kind of 'good-bye,' too. I was going to ask you to mail this letter to Overland Red. I told him in it that I was coming."

"We are sorry that you are leaving," said Louise.

"Uncle Walter said you had spoken to him."

"It isn't the money. I could wait. But I don't feel like taking all that money and not doing anything for it. I guess Red needs me, too. Brand says I'm a fool to quit here now. Mebbe I am. I like it here; the work and everything."

Saunders, watching them, saw Collie give Louise a letter. He saw her tuck it in her waist and rein Boyar round toward the gate.

As Collie came toward the corral he noticed that Saunders had saddled the pinto Rally. He was a little surprised. Rally was Walter Stone's favorite saddle-horse and used by none but him. He knew his employer was absent. Perhaps Saunders had instructions to bring Rally to the station.

Collie paid no further attention to Saunders until the latter came from his quarters with a coat and a blanket-roll which he tied to the saddle. Then Collie became interested. He left the road and climbed the hill back of the corral. He watched Saunders astride the pinto as he opened the gate and spurred through without closing it. That was a little unusual.

"I feel almost like taking a cayuse and following him," muttered Collie. "But, no. What for, anyway?"

On a rise far below was Black Boyar, loping along easily. Collie saw him stop and turn into the Old Meadow Trail. He watched for Saunders to appear on the road below the ranch. Presently out from the shoulder of a hill leaped Rally. Saunders was plying quirt and spur. The pinto was doing his best.

"Something's wrong. I'll just take a chance." And Collie ran to the corral and roped the Yuma colt. He saddled her, led her a few steps that she might become used to the feel of the cinchas, and then mounted. He turned the pinto up the hill and sat watching the pinto on the road below. He saw Saunders draw rein and dismount, apparently searching the road for something. Then he saw him mount quickly and disappear on the Old Meadow Trail.

pear on the Old Meadow Trail.

Collie whirled the pony round and down the hill. Through the gateway he thundered. The steel-sinewed flanks stiffened and relaxed rhythmically as the hillside flew past. The Yuma colt, half-wild, ran with great leaps that rate into space. They swept through the first ford. A thin sheet of water spread on either side of them. The outlaw fought the curb all the way up the hill beyond. Pebbles clattered from her hoofs and spun skyward as she raced along the level of the hilltop.

Down the next grade the pony swung, taking the turns with short leaps. On the crest Collie checked her. The road beyond, clear to the valley, was empty.

He examined the tracks entering the Old Meadow Trail. He had not been mistaken. Saunders had ridden in. Mounting, Collie spurred through the greasewood, trusting to the pony's natural activity and sure-footedness.

Louise, sitting on the dream-rock in the old meadow, gazed out across the valley. Black Boyard stood near with trailing bridle-reins.

Despite herself the girl kept recalling Collie's face as he had talked with her at the ranch. Admiration she had known before and many times—adoration never, until that morning.

For a long time she dreamed. The shadows of the greasewood lengthened. The air grew cooler. Louise ended her soliloquy by saying aloud: "He's a nice boy, though. I do hope he will keep as he is."

Boyar, lifting his head, nickered and was answered by Rally, entering the meadow. Silent Saunders rode up hurriedly.

"Why, Saunders—what is it? That's Rally! Were you going to meet Uncle Walter?"

"No, Miss. I'm in a hurry. Just hand over that letter that young Collie gave you at the ranch. I want it. I mean business."

"You want the letter? What do you mean? What right have you—"

"No right. Only I want it. I don't want to make trouble."

"You! A western man, and speak that way to a woman! Saunders, I'm ashamed to think you ever worked for us."

"Oh, I know you got nerve. But I'm in a hurry. Hand it over. Then you can call me anything you like."

"I shall not hand it over."

"All right. I got to have it."

The girl, her gray eyes blazing with indignation, backed away as he strode toward her. "You'd dare, would you?" And as Saunders laughed she cut him across the face with her quirt.

His face, streaked with the red welt of the rawhide, grew white as he controlled his anger. He leaped at her and had his hands on her when she struck him again with all her strength. He staggered back, his hand to his eyes.

A wild rush of hoofs, a shock, a crash, and he was beneath the plunging feet of the Yuma colt. The pony flashed past, her head jerking up. Louise saw Collie leap to the ground and come running back.

Saunders, rolling to his side, reached for his holster, when he saw that in Collie's hand which precluded further argument.

"Don't get up!" said Collie quietly. "I never killed a man—but I'm going to, quick, if you lift a finger."

Saunders kept still. Collie stepped round behind him. "Now, get up, slow," he commanded.

When Saunders was on his feet, Collie reached forward and secured his gun.

"I'll send your check to the store," said Louise, addressing Saunders. "I shall tell Mr. Stone that I discharged you. I don't believe I had better tell the men about this."

"Beat it, Saunders," said Collie, laughing. "You are leaving here afoot, which suits me fine. Red would be plumb happy to know it."

"Red's goin' to walk into my lead some of these days."

"That's some day. This is today," said Collie.

Saunders, turning, gazed covetously at the pinto Rally. Collie saw, and smiled. "I missed twice. The third trick is goin' to be mine. Don't you forget that, Mister Kid," said Saunders.

"Oh, you here yet?" said Collie; and he was not a little gratified to notice that Saunders limped as he struck off down the trail.

## CHAPTER XXIV

## "LIKE SUNSHINE"

Louise drew off her gauntlets and tossed them on the rock. Collie saw the print of Saunders's fingers on her wrist and forearm. "I ought to 'a' made him kneel down and ask you to let him live!" he said.

"I was afraid—at first. Then I was just angry. It was sickening to see the marks grow red and swell on his face. I hit him as hard as I could, but I'm not sorry."

"Sorry?" growled Collie. "He takes your brand with him. He didn't get the letter. I got to thank you a whole lot for that."

"But how did he know I had it? What did he want with the letter?"

(To Be Continued.)



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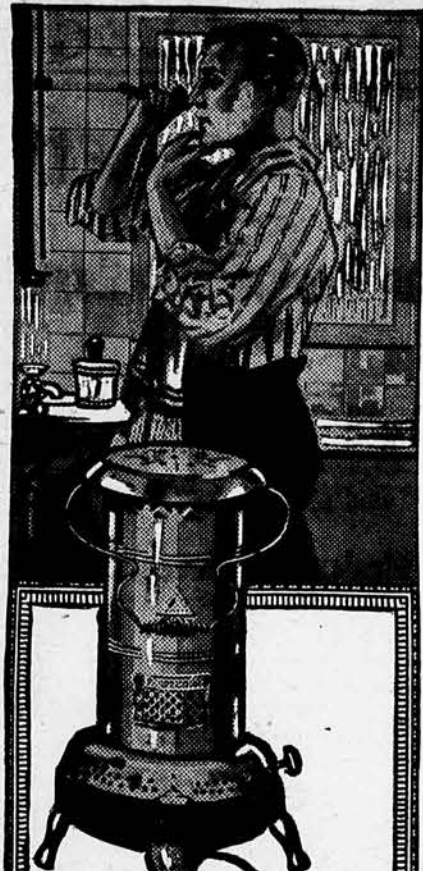
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Originally this list was prepared to gather material for the artists. It has since been printed in book form, and is called the Farm Implements Puzzle Game Key Book.

### THE "KEY" TO SUCCESS

The applicability of the term Key Book is obvious, for as ideas for the pictures were obtained from this book it needs no pointing out that it is truly a "key" to the game and success.

You will see that as the pictures have been drawn from titles listed in the Key Book it follows the titles to the fifty pictures will be found in the Key Book!

Hence our suggestion at the top, "Let's look in the book and see." Playing the Farm Implements Puzzle Game is simply a matter of studying the pictures and then determining which title of those you select from the Key Book is most fitting, appropriate or applicable.

Only titles found in the Key Book can be used, because the judges will be guided in determining winners by the Key Book, just as participants will be guided in preparing sets of suggestions.

### GET A FREE COPY.

The coupon below explains a special offer by which participants can obtain a copy of the Key Book without cost to themselves. Although you are not required to purchase or use the Key Book in order to play the Farm Implements Puzzle Game, its helpfulness, its vital importance, needs no pointing out. So if you want to share in the distribution of \$3,500, you should send in this coupon at once.



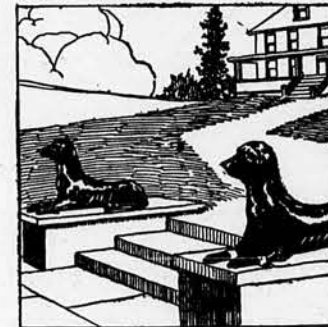
No. 26.—What Farm Implement, Machine Part or Mechanical Term Does This Picture Represent?



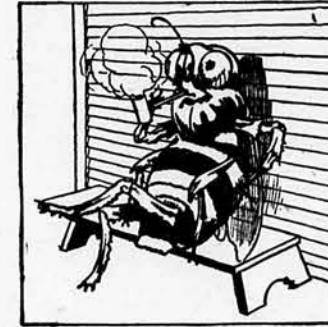
No. 27.—What Farm Implement, Machine Part or Mechanical Term Does This Picture Represent?



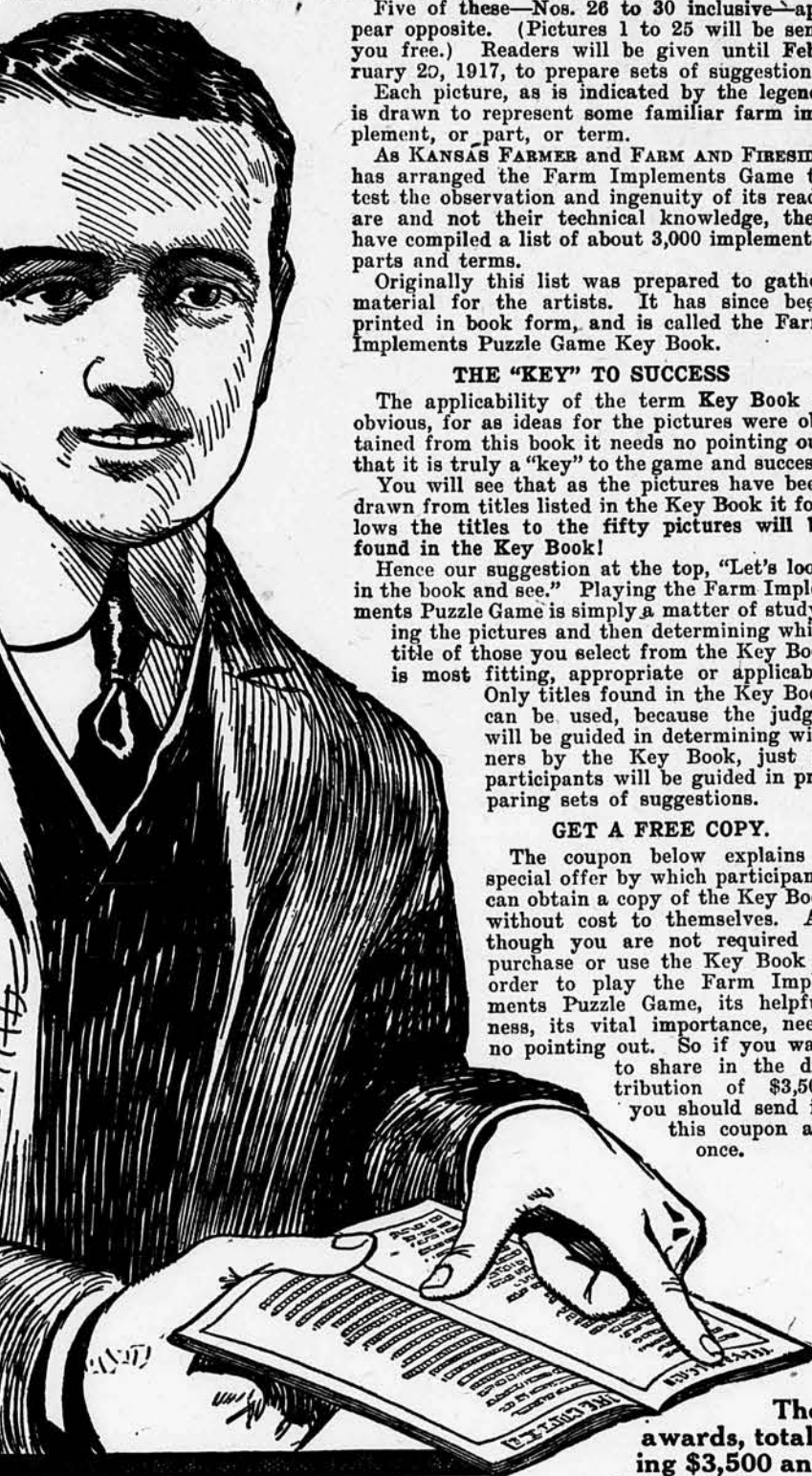
No. 28.—What Farm Implement, Machine Part or Mechanical Term Does This Picture Represent?



No. 29.—What Farm Implement, Machine Part or Mechanical Term Does This Picture Represent?



No. 30.—What Farm Implement, Machine Part or Mechanical Term Does This Picture Represent?



The awards, totaling \$3,500 and to be divided among four hundred participants, follow: For the best set of title suggestions, \$1,000; for the next or second best set, \$500; for the the third best set, \$250; for the fourth best set, \$125; for the fifth best set, \$100; for the sixth best set, \$75; for the seventh best set, \$50; for the eighth best set, \$50; for the ninth best set, \$25; for the tenth best set, \$25; for the eleventh to fiftieth best sets, \$10 each; for the fifty-first to one hundred and fiftieth best sets, \$5 each; for the one hundred fifty-first to three hundredth best sets, \$2 each; for the three hundred and first to four hundredth best sets, \$1 each. Total four hundred awards, \$3,500.

To Get the  
Official  
Key  
Book Free Use  
This Coupon

### KANSAS FARMER, GAME EDITOR, TOPEKA, KANSAS.

Enclosed herewith please find (\$1.00—\$2.00) to cover (one—two) subscriptions to Kansas Farmer and Farm & Fireside, each for one year. (If you enclose \$2.00, two subscriptions to both publications must be included. One can be your own.) This remittance entitles me to a copy of the (Official Key Book—Reprint and Reply Book) to be sent me free and postpaid, together with instructions and information.

NAME.....

P. O..... Route..... State.....

NOTE.—If books and subscriptions are to be sent to different addresses, make this plain. \*Remittance of \$1.00 entitles you to choice of one book. †Remittance of \$2.00 entitles you to both.

If you want information only, simply send your name and address



## A BIG BREEDER'S SALE

—At Wichita, Kansas—

**December 12, 13 and 14**

**On December 12th We Sell at 10:30 A. M.**

Eighteen Hampshires, twenty Polands.

**At 1:30 P. M. December 12th**

Sixty Shorthorn and nine Aberdeen Angus cattle. Some extra well bred pure Scotch and Scotch tops.

**On Wednesday, December 13th, at 10:30 A. M.**

We sell twenty big mammoth Jacks and Jennets.

**On Wednesday, December 13th, at 1:30 P. M.**

We sell five German Coach Stallions, all sired by an undefeated grand champion.

Ten imported, forty American-bred Percherons. High class horses consigned by responsible breeders, including

Seven mares, two of them imported and all safe in foal to the undefeated grand champion, Imp. Jean. He is acknowledged as the best Percheron in Kansas and the greatest son of the \$40,000 champion Carnot.

**On December 14th, We Sell at 1:30 P. M.**

Fifty Trotting Bred Stallions, Mares, Colts, Race Prospects and Developed Race Horses, including Jr. Dan Patch, 2:05½; Charlie A. C., 2:07½; William J., 2:13½; Lucy Hurst, 2:13½; Cecil Kirk, 2:17½; Sally Demington, 2:20½; Vel Hurst, 2:25, etc. Stallions and colts by Zolock, 2:05½; Ashrose, 2:07½; Council Chimes, 2:07½, etc. Separate catalog for each breed. Write for the one you want.

**F. S. KIRK, Sales Mgr., Care Manhattan Hotel  
WICHITA, - - - - - KANSAS**

## 80 Head of Holstein-Freisian Cattle 80

To Be Sold at Big Sale Pavilion at

**Herington, Kans., Wednesday, Dec. 13**

Dispersal of the R. J. Hill Dairy Herd and Consignments  
by F. C. Meyer and Dr. S. Nichols of Herington.

Thirty head of extra choice two-year-old heifers, due to freshen soon.

Fifteen head extra good young cows, fresh now.

Twenty head of cows due to freshen in December, every one a good one.

Ten head of large heifers due to freshen in the spring.

Five head of pure-bred registered bulls, ready for service now.

For detailed information write

**W. H. MOTT, Sales Manager, Herington, Kansas**

Auctioneers—J. T. McCullough, J. G. Engle, L. Lester Lowe  
Sale begins at 12:30. Sale in pavilion, rain or shine. Hot lunch at pavilion

### FARM AND HERD.

Chester A. Chapman, of Ellsworth, Kansas, owner of one of the high class Shorthorn herds in this state, reports his herd doing fine. Mr. Chapman has succeeded in building up a herd of Shorthorns of the profitable beef type. The head of his herd is Abbotsford Lad 2d 395841, one of the good bulls now in service. The young stock in the herd sired by this bull is a choice lot.

W. A. Wood & Son, of Elmdale, Kansas, well known Duroc breeders and owners of one of the richly bred herds in Kansas, report their herd doing fine. They also report a heavy demand for high class Duroc breeding stock and have recently placed stock in a number of good herds in Kansas and other states.

T. J. Wooddall, formerly of Fall River, Kansas, has purchased the old fair grounds at Howard, Kansas, and fitted up an up-to-date Hereford farm. The barns are the best in the country. The herd cows consist of fifty head of splendid cows of the most fashionable breeding, headed by a son of Imported Bridgish. This year's crop of calves are very promising and a feature of the herd at this time is a splendid lot of choice young bulls, many of them real herd header prospects.

W. H. Mott, sales manager, Herington, Kansas, announces a dispersion sale of the R. J. Hill Holstein herd to be held at Herington, December 13. There will also be consignments from the F. C. Meyer and Dr. S. Nichols herds. Fifteen choice young cows just fresh, 20 head to freshen in December, 30 head of choice two-year-old heifers and 10 large well-grown heifers to freshen in the spring have been catalogued for this sale. There will also be five registered bulls. This will be one of the good Holstein offerings sold in Kansas this season.

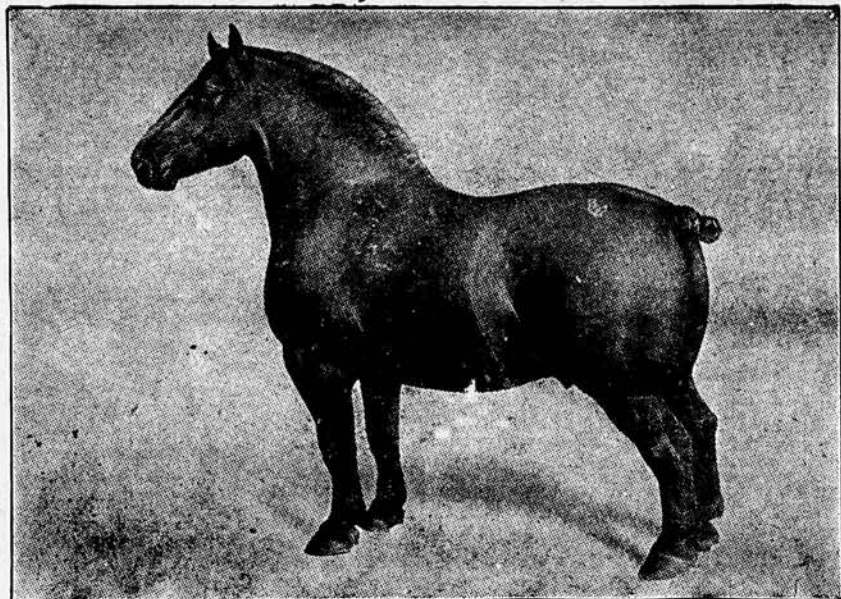
Catalogs are out for the twenty-second annual Percheron sale to be held by J. C. Robison at Towanda, Kansas, December 14. Fifty head of stallions, mares and colts have been catalogued for this sale—twenty stallions from weanlings up and thirty mares from weanlings up. The offering will include stallions and mares sired by Casino and mares bred to him.

H. E. Anderson, of Whitewater, Wis., owner of Clover Valley Holstein Farm and one of Wisconsin's famous Holstein herds, writes that the demand for high-class Holsteins is heavy. Mr. Anderson has sold quite a number of choice animals during the past few weeks to go to herds in Kansas and the Southwest. His herd is famous for rich breeding and high production records.

## TWENTY-SECOND SALE

OF

**50-Registered Percheron-50  
Stallions, Mares & Colts**



**At Whitewater Falls Stock Farm**

**J. C. Robison, Prop., Towanda, Kansas**

**Thursday, December 14**

Twenty Stallions from weanlings to mature age.

Thirty Mares from weanlings up.

Stallions and Mares sired by Casino and Mares bred to him.

There has never been a more useful lot sold in the West. Come where you can get the best that grows. For catalog address

**J. C. ROBISON, TOWANDA, KANSAS**

### AUCTIONEERS

Fred Reppert, J. D. Snyder, W. M. Arnold, Boyd Newcom

Sale to be held in sale pavilion on the farm four miles northwest of Towanda, Kansas. Free conveyance to farm.

### HORSES AND MULES.

### HORSES AND MULES.



## 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 herd 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, People's 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.

### PIONEER STUD FARM

Established 1870

#### FIFTY REGISTERED STALLIONS AND MARES

If you are in the market for a good Percheron stallion or mare, now is the time. We can show you more bone, size, action and conformation than you will see elsewhere. Write or come today.

C. W. LAMER & SON

SALINA, KANSAS

Home-Bred Draft Stallions, your choice \$500 with the exception of two. Also mares for sale. A. Latimer Wilson, Creston, Iowa.



REGISTERED PERCHERONS, 39 heavy 3 and 4 yr. stallions, 68 rugged 2 yr. olds, 41 yearlings. Can spare 25 reg. mares. 24 reg. Belgian stallions. Sires and dams from France and Belgium.  
FRED CHANDLER, R. 7, Charlton, Iowa  
Above Kansas City.

### PERCHERONS FOR SALE

Five head pure-bred Percherons—Two mares, one 2-year-old stallion, two last spring colts. All good ones. Low price to the man that takes all.  
J. W. BARNHART, BUTLER, MISSOURI



### JACKS AND JENNETS

15 Large Mammoth Black Jacks for sale, ages from 2 to 6 years; large, heavy-boned. Special prices for fall and winter sales. Fifteen good jennets for sale. Come and see me.

PHIL WALKER,  
Moline, Elk County, Kansas

#### SIX BREEDS DRAFT STALLIONS

Pedigree and guarantee with each, \$450 and up. Time given.

R. I. LITTLE, Good Block, Des Moines, Ia.

Barn Full of Percheron Stallions and Mares. Twenty-five mature and aged jacks. Priced to sell. AL. G. SMITH, Lawrence, Kansas.



## POLAND CHINAS

## DEAN'S MASTODON POLANDS

Big high-quality spring boars, sired by Big Bone Model by Long Big Bone, champion Iowa State Fair. Others by Smooth Black Bone by Smooth Big Bone, also champion Iowa State Fair. Dams of offering all by noted big-type sires. All have great size and quality. If you want size and high quality, I have them. All immune.

CLARENCE DEAN

WESTON, MISSOURI



## 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.

Brooding stock for sale at all times.  
H. L. FAULKNER  
Box K - Jamesport, Missouri

## POLAND CHINAS.

## OLD ORIGINAL SPOTTED POLANDS

150 choice spring pigs left, sired by seven of the very best boars of the East and West. Priced right. Write your wants to the CEDAR ROW STOCK FARM  
A. S. Alexander, Prop. Burlington, Kansas

## DEMING RANCH POLANDS

Twenty strictly high class boars, bred the same as our grand champion sow and other prize winners. They are herd headers. Also gilts and bred sows and 150 fall pigs. All immune.

THE DEMING RANCH  
H. O. Shelden, Herdsman Oswego, Kansas

## ARKELL'S POLANDS

Big high quality March and April boars, sired by Chief Big Bone, Longfellow Again and the champion Big Timm. These boars are out of big high quality sows and are fine prospects.

JAMES ARKELL, JUNCTION CITY, KAN.

## Poland China Boars and Gilts

For Sale—Two spring boars by Big Bob Wonder; 8 boars and 10 gilts by Mammoth Orange. Prices reasonable. Write at once.  
JOHN D. HENRY, LECOMPTON, KANSAS

## EUREKA POLANDS AND DUROCS

April boars, fancy individuals. Priced for quick sale. Sires, Lafollette's Last, Bader's Golden Model 2d, McWonder and Big Ex Wonder.  
W. H. SALES - SIMPSON, KANSAS

## Becker's Poland Chinas

For Sale—A few fall yearlings and spring boars, ready for service. Also fall pigs at \$10 per head. Leading strain.  
J. H. BECKER  
Route 7 - Newton, Kansas

## PIONEER HERD POLAND CHINAS

Twenty-five choice spring boars sired by the half ton A Wonderful King, the first prize aged boar at Topeka fair and first and grand champion at Kansas State Fair at Hutchinson, 1916. Write for prices.  
F. OLIVIER & SONS, DANVILLE, KANSAS

## LANGFORD'S SPOTTED POLANDS

Boars—Serviceable age, guaranteed to please. Breeding stock, both sexes.  
T. T. LANGFORD & SONS, Jamesport, Mo.

## SPOTTED POLAND CHINAS

Spring boars, one extra good yearling boar by Faulkner's Spotted Chief and one of my herd boars, Spotted Duke, an 800-pound hog. Summer pigs, either sex.  
R. G. SARTAIN, ROUTE 6, FAYETTE, MO.

Old Original Spotted Polands—Choice fall pigs, pairs or trios, no kin. Shipped in light crates. Carl F. Smith, Cleburne, Kansas.

## 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

## HEREFORD CATTLE

150 Head in Herd. A few cows and heifers for sale. Also a lot of farm and range bulls. Priced reasonable.  
B. M. BROWN, FALL RIVER, KANSAS

## The "Oaks" Farm Herefords

For Sale—Twenty-five bulls from 6 to 36 months old. Anxiety breeding, choice ones. Herd bulls, Beau D 37645; Albion 4th 458-303; Lewis Fairfax 622709.  
J. C. DARR & SON, PLYMOUTH, KANSAS

## HOLSTEIN CATTLE.

## HOLSTEIN CATTLE.

Clyde Girod, At the Farm.

F. W. Robison, Cashier Towanda State Bank

## HOLSTEIN FRIESIAN FARM, Towanda, Kansas

Pure-Bred Holsteins, all ages, strong in the blood of the leading sires of today, headed by Oak De Kol Bessie Ormsby 156789. Special offering of choice young pure-bred bulls, ready for service, from tested dams. Let us furnish you a bull and improve your herd. TWENTY-FIVE pure-bred females, young useful Holsteins with A. R. O. records from 12 to 26 pounds butter in seven days.

## BEFORE YOU BUY, TALK WITH US

We have an especially large, choice selection of extra high grade young cows and heifers due to freshen this fall and early winter, all in calf to pure-bred bulls. These females are large, deep bodied, heavy producers, with large udders, all well marked individuals and the right dairy type. Our offerings are at prices that challenge comparison for Holsteins of their breeding and quality. High grade heifer calves, \$25. Send draft for number wanted. Let us know what you want in Holsteins, and we will be pleased to send you descriptions and prices. Keep us in mind before purchasing. Wire, write or phone us.

GIROD &amp; ROBISON --:-- TOWANDA, KANSAS

## HOLSTEIN COWS

For Sale—Holstein springers, fresh cows and two-year-old springers. All bred to registered bull. Also some registered females and bulls.  
BOCK'S DAIRY, Route 9, Wichita, Kansas

## REGISTERED HOLSTEINS

Priced for quick sale, 23-pound bull of serviceable age. Others 5-8 months of age from 20-23-pound dams. Young bull calves sired by a 32.52-pound bull; also a few bred heifers. For further particulars write  
M. E. GUNDERSON & SONS  
Route 25 - Oconomowoc, Wisconsin

## 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.

## JERSEY CATTLE.

## LINSOTT JERSEYS

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.  
R. J. LINSOTT - HOLTON, KANSAS

## 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

## 120 Jersey Cows and Heifers

Pure-bred and high grade. Forty bred yearlings, superior individuals, all from profitable dams, now for sale.  
J. W. BERRY & SON, Jewell City, Kansas

## DORNWOOD FARM JERSEYS

Fine young bulls from Register of Merit and imported cows; descendants of Fontaine's Eminent, Pogs 80th of Hood Farm, and Golden Fern's Lad.  
DORNWOOD FARM, Route 1, Topeka, Kan.

## Bargains in Jersey Cows

From one to a carload of good, young, registered Jersey cows, mostly fresh or soon due. Offered at sacrifice prices because short of feed and cannot winter. Also a few open heifers and young bulls. Write your wants or come and see this stock.  
The Ennis Stock & Dairy Farm, Horine, Mo. (Just South of St. Louis.)

Registered Jersey Bulls, butter-bred, from high producing cows. Photo furnished. Maxwell's Jersey Dairy, Route 2, Topeka, Kan.

## GALLOWAY CATTLE.

## GALLOWAY BULLS

SIXTY yearling and two-year-old bulls, strong and rugged; farmer bulls, have been range-grown. Will price a few cows and heifers.  
E. E. FRIZELL, Frizell, Pawnee Co., Kansas

## AUCTIONEERS.



P. M. GROSS

MACON, MISSOURI

LIVE STOCK

AUCTIONEER

Pure Bred Sales a Specialty

"Twelve Years on the Block"

Sales Made Anywhere

## Live Stock and Farm Auctioneer

Write or wire for date. I can please you.  
LAFE BURGER, WELLINGTON, KANSAS

## FRANK J. ZAUN Live Stock Auctioneer.

Write or wire for date.  
Independence, Missouri

## JOHN D. SNYDER

Experienced Auctioneer, wants your sale.  
Write or wire. Hutchinson, Kansas.

## HAMPSHIRE HOGS

GEO. W. ELA'S HALCYON HERD  
Registered, immune Hampshire boars for sale. Valley Falls, Kansas.

ATEBERRY'S HAMPSHIRE HOGS  
Bred sows, \$25 to \$30 each. July gilts and boars, \$10 each for 30 days. Choice individuals. ATEBERRY & SONS, Lancaster, Mo.



## 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.

## Bonnie Brae Holsteins

A fine bunch of high grade two-year-old heifers coming fresh. Also a few young cows and one well-bred registered bull old enough for light service.  
IRA ROMIG, Station B, TOPEKA, KANSAS

## 23-HOLSTEIN-FRIESIAN BULLS-23

Best of sires. A. R. C. 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

## 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.

## CHOICE HOLSTEIN BULLS

Registered bull calves out of A. R. O. cows. Also a few heifers. Best breeding. Choice individuals. Price reasonable.  
BEN SCHNEIDER, NORTONVILLE, KAN.

## 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

## CORYDALE FARM HERD

Offers for sale four bull calves two to four months, sired by Jewel Paul Butter Boy 94245. These calves are all nicely marked and from good milkers.  
L. F. CORY & SON, BELLEVILLE, 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

Protein Makes Milk. Carbohydrates make heat and fat. It is a "Tredico" bull that is raised in a warm barn. It's a "Tredico" bull that is trained to handle protein, therefore produce the milking off-spring.  
GEO. C. TREDICK  
Route 2. Kingman, Kansas

## The Cedar Lane Holstein Herd

We are now offering some exceptionally good bulls of serviceable ages at very attractive prices. These calves are sired by our 29.4-pound grandson of Pontiac Korndyke.  
T. M. EWING, INDEPENDENCE, KANSAS

## HOLSTEIN CALVES

Registered and high grade Holsteins. High grade heifer calves two to four weeks old, \$20, delivered. We can supply you with anything in Holsteins.  
CLOVER VALLEY HOLSTEIN FARM  
Whitewater - Wisconsin

## GOLDEN BELT HOLSTEIN HERD

Herd headed by Sir Korndyke Bess Hello No. 165946, the long distance sire. His dam, grand dam and dam's two sisters average better than 1,200 pounds butter in one year. Young bulls of serviceable age for sale.  
W. E. BENTLEY, MANHATTAN, KANSAS

HOLSTEIN CALVES—Ten heifers and two bulls, 15-16ths pure, beautifully marked, 5 weeks old, from heavy milkers. \$20 each, crated for shipment anywhere. Write EDGEWOOD FARM, Whitewater, Wis.

## BRAEBURN HOLSTEINS

Four females to spare before stabilizing time. Always A. R. O. bull calves.  
H. B. Cowles, 608 Kansas Ave., Topeka, Kan.

## AYRSHIRE CATTLE.

## AYRSHIRE BULLS

Age two weeks to two years, priced to move quickly at \$40 to \$80. Worth double. Bred for high production. All pure-bred and sure to get high producing heifers. Herd of nearly a hundred, established in 1906, located at Linwood, Kansas, near Kansas City. Tuberculin tested yearly, never found a reactor. Milk test over 4 per cent.  
Dr. F. S. SCHOENLEBER, Manhattan, Kan.

When Writing to Advertisers,  
Please Mention Kansas Farmer

## Herd Boars and Sows

Have a surplus of Poland China herd boars and sows. Wish to move them at prices you can afford. They are as good as grow. Let us tell you about them.

L. C. WALBRIDGE  
RUSSELL - KANSAS

## Poland China Boars and Gilts

Twenty-five early spring boars and twenty-five gilts. Sired by I Am King of Wonder and Watt's King.  
WM. WATT & SON - GREEN CITY, MO.

## DUROC JERSEYS.

## Maplewood Durocs

We have a fine lot of pure-bred Duroc boars ready for service, and some choice spring gilts open, ready for December breeding. Price on boars, \$25; gilts, \$30. Send us your order.

Mott &amp; Seaborn, Herington, Kansas

## A HERD BOAR

We offer the splendid herd boar, Gold Medal 176231, also spring boars by him and the great boar, Country Gentleman 132541. All double immune. Prices reasonable.  
W. R. HUSTON - AMERICUS, KANSAS

## TWENTY FIVE SPRING BOARS

Sired by Crimson Wonder Again Jr., first prize boar at Topeka Fair, 1916, and G. M.'s Crimson Wonder. Big rugged fellows ready for service. Immunized and priced to sell.  
G. M. SHEPHERD - LYONS, KANSAS

## DUROC JERSEY BOARS

For Sale—Fifteen spring boars, two fall yearlings, sired by Wonder of Kansas. All are large and smooth. Priced right and satisfaction guaranteed. Write your wants.  
K. HAGUE - NEWTON, KANSAS

## DUROC JERSEY HOGS

Ten choice spring boars, real herd headers, the tops from forty head. Thirty-five spring gilts. Priced to sell.  
W. A. WOOD & SON, ELMDALE, KANSAS

## UNEEDA HERD

Choice early and NEXCELLED DUROCS late spring boars. Weight 150 to 250 pounds. Not fat. Choice breeding. All rich red, good backs, bone and feet; quality kind; real herd improvers at right prices. Tell us your wants.  
TYSON BROS. - McALLISTER, KANSAS

## GUARANTEED DUROC BOARS

Duroc boars with size, bone and stretch. Immune and guaranteed breeders. Shipped to you before you pay.  
F. C. CROCKER, Box K, Filley, Nebraska

PURE-BRED DUROC BOARS  
Best breeding, choice individuals, priced right. W. J. Harrison, Silver Lake, Kansas.

## STAR BREEDING FARM---HEREFORD PLACE

## FOR SALE--100 BULLS 50 EARLY BULL CALVES

30 COMING 2-YEAR-OLDS  
20 COMING 3-YEAR-OLDS  
Herd headers and range bulls. Ten yearling heifers, twenty heifer calves and a carload of good cows. The very best breeding represented. Come and see me.

SAMUEL DRYBREAD, ELK CITY, KANSAS

## HEREFORD CATTLE

FOR SALE 35 BULLS, 10 MONTHS TO 2 YEARS OLD.  
20 COWS AND HEIFERS.

Best breeding families. Bred to an Imported Bridisher bull. Come and see me. Sale barns right in town.

T. J. WOODDALL, HOWARD, KANSAS

## WALNUT BREEDING FARM



Hereford Cattle, Shropshire and Cotswold Sheep, Berkshire Hogs. Thirty-five grandsons and granddaughters of Beau Brummel 10th for sale. Some extra herd headers at reasonable prices, breeding considered. Come and see my herd. Satisfaction guaranteed.

LEON A. WAITE, WINFIELD, KANSAS

## SEVENTY HEAD REGISTERED JERSEYS

FORTY COWS AND THIRTY HEIFERS FOR SALE.

Nothing over five years old. Richly bred Fox Signal and Fern Lad families. All bred to choice registered herd bull. Must reduce herd.

N. L. DUCHESNE - GREAT BEND, KANSAS



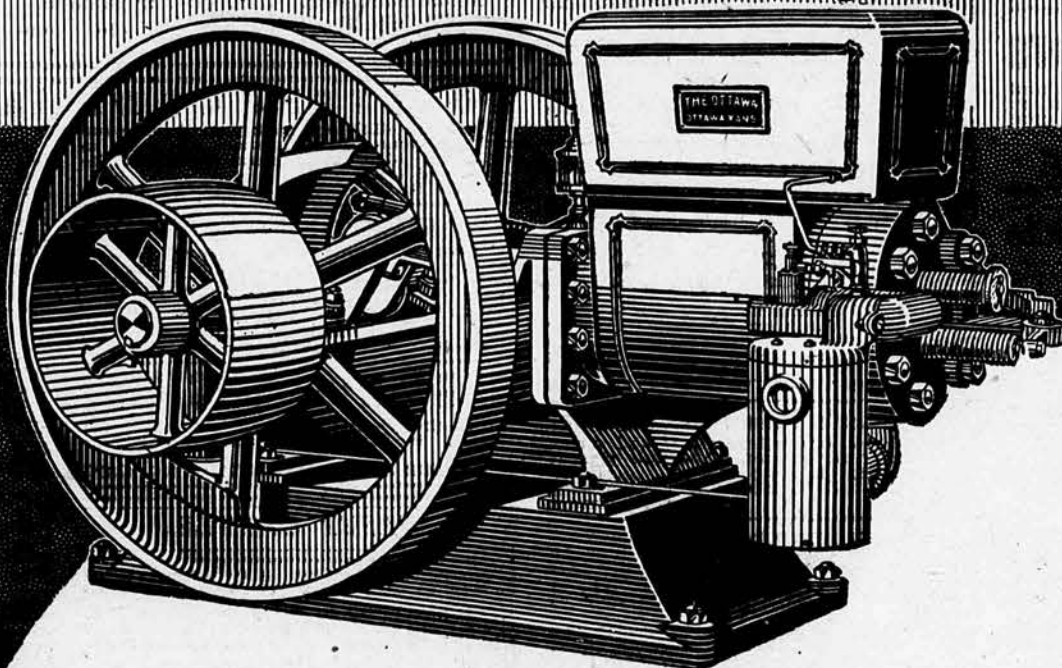




# Let Me Ship You An Engine To Earn Its Own Cost While You Pay For It!

ARE you satisfied to be without an engine? If so, you will be wasting time in reading more. If you are doing your work, in the shortest possible time, without any engine, and have plenty of spare time for all the odd jobs you want to do, then you would not want any engine. Or, if you have an engine, which is easy to start on the coldest morning; operates as easily on kerosene as on gasoline; never gets out of adjustment; and, needs no expensive repairs; then you would not want a better engine. But, if you do not have an engine, or if your old engine is not all this, write me your address, so I can tell you why my engines are better built; and why I am not afraid to let any honest man have my engine on trial.

GEO. E. LONG.



## Here Are My Latest Prices

F. O. B. Factory

### Stationary Engines

|            |         |
|------------|---------|
| 1 1/2 H-P. | \$25.75 |
| 2 H-P.     | 31.95   |
| 2 1/2 H-P. | 38.90   |
| 3 H-P.     | 49.50   |
| 4 H-P.     | 66.75   |
| 6 H-P.     | 72.50   |
| 8 H-P.     | 93.90   |
| 10 H-P.    | 98.50   |
| 12 H-P.    | 124.75  |
| 16 H-P.    | 139.50  |
| 22 H-P.    | 191.50  |
| 22 H-P.    | 245.50  |
| 22 H-P.    | 369.90  |

### Portable Engines

|            |         |
|------------|---------|
| 1 1/2 H-P. | \$30.40 |
| 2 H-P.     | 36.40   |
| 2 1/2 H-P. | 44.90   |
| 3 H-P.     | 58.50   |
| 4 H-P.     | 61.75   |
| 6 H-P.     | 90.75   |
| 8 H-P.     | 119.75  |
| 10 H-P.    | 124.75  |
| 12 H-P.    | 149.95  |
| 16 H-P.    | 174.50  |
| 22 H-P.    | 229.50  |
| 22 H-P.    | 289.50  |
| 22 H-P.    | 439.90  |

## OTTAWA ENGINES

### Kerosene, Gasoline, Distillate and Gas

For almost a quarter of a century, any honest man has been able to get my engine under terms by which the engine paid for itself while he used it—because, OTTAWA engines use less fuel, give more power from a gallon of 6-cent kerosene, than any gasoline engine gives from a gallon of 20 or 25-cent gasoline. Having fewer parts, they are not likely to get out of repair. They are easy to start and operate by the man who has had little or no engine experience. By my liberal plan of selling, it is cheaper to own an engine, than to be without one. In selecting the OTTAWA you are assured a more dependable, better built engine. You can pay more than I ask for an engine, but you cannot get a better engine for twice my price.

Write me your address, so I can send you my whole engine story, and my liberal plans of selling.

### 90 Days Trial, and 10-Year Guarantee

For a longer time than any other engine manufacturer, I have been selling engines on trial, direct from my factory to the man on the farm and in the shop. I have never been afraid to trust my engine in the hands of the man who had little or no engine experience, because I know OTTAWA engines, (either kerosene or gasoline) are easy to start—they are easy to keep running, and are easily understood by the man who has never operated an engine. Now, just as in the past, every OTTAWA engine must make good all I guarantee, and you have 90 days (3 whole months) in which to try the engine at your own work. I want every man who gets one of my engines, to give it an honest, hard working test at whatever he

may have for it to do. Write me your name and address, so I can tell you all about my 90 days trial offer and my very liberal 10-year guarantee.

### Direct From My Factory or Warehouses At Omaha, Denver or Ft. Worth.

From our factory in Ottawa, one of the largest in America manufacturing gasoline and kerosene engines, carload lots are shipped to our branchhouses. You can have your engine shipped from the warehouse nearest you, and make a big saving in freight. You get your engine more quickly—no delay in transferring, but prompt delivery to you at less cost.

OTTAWA engines are built to suit you—not what is the cheapest and easiest for me to manufacture. I give you your choice of fuel-saving Hit and Miss, or Throttle governor; reliable Make and Break or Jump Spark (Automobile) ignition; and, High tension, Gear driven or Friction drive magneto. You have 68 sizes and styles to choose from. OTTAWA engines are built to meet your needs—my new book tells the whole story. Get it before you choose any engine.

### Cash, or Easy Terms.

Longer than any other present manufacturer of gasoline and kerosene engines, I have been making engines and selling them direct from factory to the user. You will find my engines every where you go. Every where they are used, you will find Ottawa boosters. I couldn't have had my thousands of boosters without my engine was worth boosting, and my fair treatment of each customer had made him my friend. Space limits me from telling you here all about my engines—my big factory with its mass of machinery and my plan of selling. My new book shows everything. When you read it you will know better engines where ever you see them.

### Before you choose any Engine, Send for my Money-Saving Offer.

And my newest and best book tells why I use valve-in-the-head motor design—larger valve openings—offset cylinder construction, making a long power stroke and short return stroke—why I use 4 rings on each piston, where others use three—semi-steel castings in place of common iron. Write today. Use the Coupon, or not—as you like.

GEO. E. LONG, Ottawa Mfg. Co.,

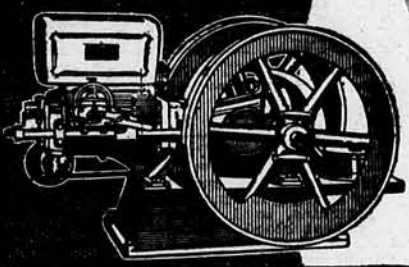
564 King Street,  
Ottawa,  
Kans.

GEO. E. LONG, Pres.  
OTTAWA MFG. CO.,  
564 King St., Ottawa, Kans.

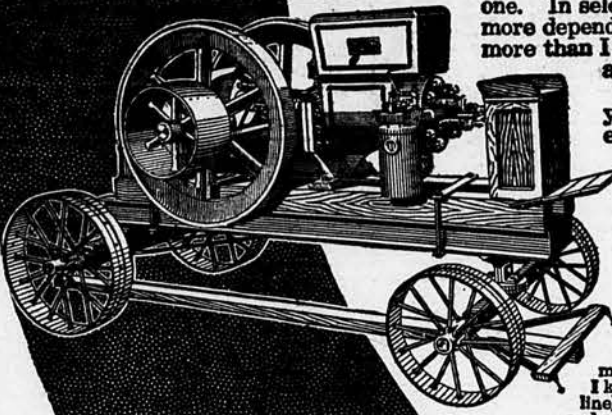
Without obligation to me, I would like to receive your latest and finest book "How to Know Better Engines," and your liberal plans of selling.

Name .....

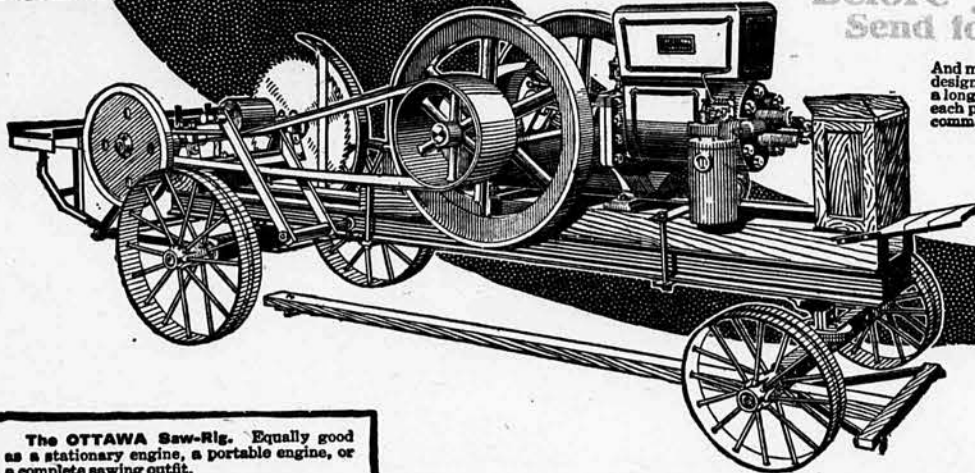
Address .....



The OTTAWA Gasoline Engine, when on subbase—Magneto equipped, requires no batteries for starting or operating.



The OTTAWA Kerosene Engine mounted on a heavy steel truck—complete with all equipment, ready to start as soon as received.



The OTTAWA Saw-Rig. Equally good as a stationary engine, a portable engine, or a complete sawing outfit.

