

KANSAS FARMER

For the Improvement of the Farm and Home

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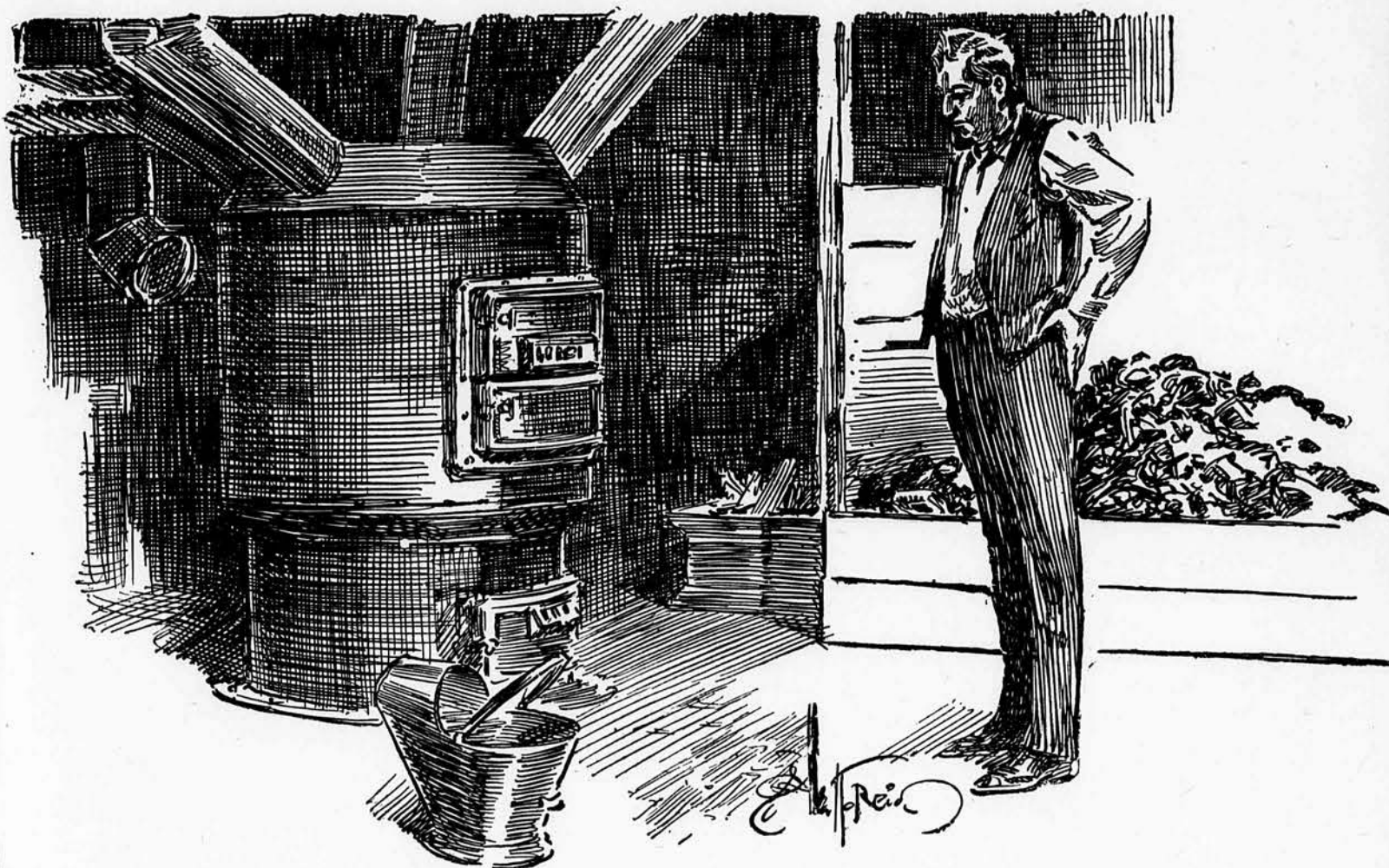
Established 1863. \$1 a Year

WHY not plan for a furnace the coming winter? A modern heating plant will furnish real winter comfort and at less cost than heating the same space with stoves. A properly installed furnace will warm the whole house if desired or at any time the heat may be cut out of rooms where it is not needed.

A central heating plant should be included in the plans for every modern farmhouse built. They have many advantages over the old way of heating. The fuel is stored where it is to be used. This does away with all the labor of carrying coal from room to room. Not only is the labor reduced but much dirt is kept out of the house.

Furnaces are just as well adapted to the farm house as the city residence. They can be installed at moderate cost even in houses already built. This is an improvement that will mean much in the way of comfort and convenience when the cold winter days come.

—G. C. W.



Fully Prepared for the Cold Weather of Winter

**Directors
of the
Kansas
Rural Credit
Association**



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There Are Two Ways

For the Kansas Farmer to Take Advantage of the Farm Loan Act

THROUGH

**The Kansas
Rural Credit Assn. or**

**The Federal
Land Bank**

Operating in Kansas as a Joint Stock Land Bank under the Federal Farm Loan Act.

Requirements:

Must join The Association and buy shares equal to five per cent of loan; \$100 for each \$2,000.

Loans:

To run from five to forty years with amortization and optional pre-payment after five years. No loan shall exceed fifty per cent of the value of the land mortgaged and twenty per cent of the permanent insured improvements.

No restrictions as to residence.

No restriction as to amount.

No restriction as to purpose for which loans may be used.

Interest Rate:

One per cent for expense and profit allowed in addition to the rate at which bonds are issued. The bond rate plus the one per cent can never amount to more than six per cent anywhere in the United States.

(Bonds issued on Kansas Mortgages will have a ready sale and should command as low a rate as those of any state in the country.)

Bonds.

After mortgages are approved by the Federal Farm Loan Board, bonds are issued from the U. S. Treasury on the order of the Board.

Free from Taxation.

Farm loan bonds issued under the authority of this act shall be deemed and held to be instrumentalities of the Government of the United States, and as such they and the income derived therefrom shall be exempt from Federal, state, municipal, and local taxation.

Kansas will be in a District, probably composed of several states in which there will be one Federal Land Bank.

The Kansas Rural Credit Association will apply at the earliest possible moment for a charter under the Federal Farm Loan Act as a Joint Stock Land Bank, and will do business only in Kansas, and among its own members.

Loans Made in the Order Applications Are Received

Loans will be made in the order in which applications are received as nearly as possible and when in the opinion of the Board of Directors the membership is large enough to furnish all the business which can be handled to advantage the books will be closed and no more shares issued.

Share in Its Benefits

Become a member of this mutual organization NOW and be in line to secure a loan and to share in the benefits of the Association before the books are closed.

MAIL THE COUPON TODAY

**The Kansas Rural Credit Association,
Dept. K, Emporia, Kansas.**

Without obligating me in any way please send me your twelve-page booklet which explains in detail the plan of The Kansas Rural Credit Association and tell how I can become a member and enjoy the benefits of this co-operative organization of Kansas farmers.

Name

Address

The Kansas Rural Credit Association
Dept. K Emporia, Kansas

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of the
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KANSAS FARMER

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P. H. ROSS GOES TO MISSOURI

P. H. Ross, who for four years has served Leavenworth County as agricultural agent, goes to Missouri September 1 as state leader of county agent work. This is a distinct promotion for Mr. Ross and is a signal recognition of the splendid work he has done in Leavenworth County. We greatly regret to have Kansas lose a man of such ability, but we heartily congratulate Mr. Ross on this well deserved promotion and wish him continued success in taking up the greater responsibilities the new position brings.

Leavenworth County was the first in Kansas to organize a farm bureau and employ a county agent. The bureau was organized in 1912 and Mr. Ross was made county agent August 1. The Kansas Agricultural College and the United States Department of Agriculture co-operated with the bureau in paying a part of his salary and assisted in directing the work of the agent. The bureau and agent have given constant attention to improving the agricultural conditions of the county and making farming more profitable.

The help that the farm bureau and county agent have rendered in the general improvement of farming conditions in the county has been so effective that not only are the citizens of Leavenworth County well pleased with it, but fifteen other counties in the state have organized farm bureaus with an average membership of 300 families and have county agents at work, while the interest in the farm bureau and farm bureau work is now state-wide. Many other counties are now organizing farm bureaus.

INTERNATIONAL FARM CONGRESS

The Dry Farming Congress will hold its annual sessions and exposition in El Paso this fall. Cash prizes and trophies of great value are offered at this exposition. It is recognized as the leading event of its kind in the world.

Dry-farmed products grown west of the one hundredth meridian, or in sections having less than twenty-five inches annual rainfall, will have the privilege of entering in two separate classifications. There is a special list of premiums for this class of products, not open to other competition, but the products of the dry farmer can enter the general classes.

The best state exhibit will be awarded a silver trophy cup valued at \$500, \$200 in cash, and an engraved certificate. The second best state exhibit will draw down \$150 in cash, a \$200 trophy cup and an engraved certificate. The third prize in this class is a certificate and \$100 in cash.

Nearly a thousand dollars in cash and trophies are offered in the county collective classes.

The farmer exhibiting the best half bushel of wheat will receive \$100 in gold, in addition to the regular class prize of \$15, while the best collective exhibit by an individual farmer will win cash and trophies to the amount of nearly \$200.

The 1916 catalog and premium list is a most interesting little book. Copies may be had free by addressing the secretary at El Paso.

The exposition dates are October 17 to 26 inclusive. The annual sessions of the International Dry Farming Congress will be held October 19, 20 and 21.

TRAINED MEN ARE DEMANDED

Agriculture and the manufacturing industries are more closely bound together than many realize. If the farmer should withhold the necessary raw material, nine-tenths of the factories in this country would be compelled to cease work. Busy factories mean an eager market for farm products.

During the past few months there has been an unusual demand for men trained along engineering lines to work in the various manufacturing industries. Dean A. A. Potter of the engineering division of the agricultural college of Kansas writes that fully a third of the undergraduate students in the engineering division will be taken by the various manufacturing concerns before they complete their courses.

This demand for trained workers is an

indication of the healthy condition of the great industries of the country. It is an encouraging condition both to the agriculturalist and to those interested in engineering work.

WESTERN EWES FOR FARMS

A good many corn belt farmers have made splendid profits the past few years in handling range-bred ewes. Kansas City commission firms dealing in sheep are receiving many orders for this class of stock this season. Handled in small flocks they are almost sure to return good profits.

Here is a sample of what many farmers are doing. A man bought 120 Utah ewes, paying \$5.80 a head. He lost five, leaving 115 head. These produced 116 lambs. The ewes sheared an average of nine pounds of wool apiece, which brought \$2.40, or more than enough to pay for wintering them. About half the lambs were ewes. These were kept for breeding. The wether lambs sold for \$380 and the old ewes \$314. The total amount received for the wool was \$276. The total for wool, lambs and ewes was thus \$970. After deducting the original cost of the ewes there remained a balance of \$274, and he has fifty head of choice ewe lambs on hand. These figures are reported in the Drovers' Telegram.

This man says: "I find these western ewes splendid scavengers in the way of eating weeds and other vegetation. I have handled sheep on a small scale for several years on my farm of 400 acres, and will continue to do so, as no other class of stock compares with them as soil builders and in profits. No farmer ought to be without a band of breeding ewes."

SANTA FE AND BETTER FARMING

The Santa Fe Railway has just announced a movement that shows their great interest in the agricultural development of the State of Kansas. It has created a new department of agricultural demonstration and development in direct charge of C. L. Seagraves, industrial commissioner, and under the general supervision of Vice President Edward Chambers. The real work, however, will be done by H. M. Bainer as chief agricultural demonstrator. Mr. Bainer has thoroughly demonstrated his ability as a practical man in the work he has done in agricultural development at Amarillo, Texas. He has in all his public work kept close to the practical, expounding no theories until he had absolutely proven them to be sound and workable.

Mr. Bainer will have his headquarters in Topeka and will devote his personal efforts to this state, directing the work in other states through assistants.

The chief aim of the movement will be

to bring to the farmers along the Santa Fe lines the very best and most modern methods in agricultural practice. Improved machinery and modern equipment will be advocated, and ways of making the homes more convenient will be demonstrated. The prosperity and welfare of a great corporation like the Santa Fe is closely bound up with the prosperity of the people living along its lines. They have ample right and justification for wanting to work with the people in further developing agricultural progress and prosperity.

HOG CHOLERA ERADICATION

The organization of associations among farmers for the definite purpose of eradicating hog cholera seems to be making considerable progress. These associations are made up of central officers and a vice president for each township. The vice president appoints one man for each four sections of land, who must be a member of the association. In case of an outbreak of cholera or sickness among hogs, it is reported at once to one of these men, who in turn notifies the veterinarian who goes out and vaccinates, quarantines, and gives directions for cleaning up.

This method is working out successfully and many Kansas counties are expecting to get into the game. Records show that nearly 6,000 hogs have been vaccinated in Nemaha County alone within the last three months. The agricultural college has kept a man there directing the work and looking after the sanitary conditions.

Doctor Schoenleber believes the state live stock commissioner should have money enough to send experts to the affected counties and help clean up and disinfect, the idea being that the serum will eradicate the cholera from the hogs but will not eradicate it from the premises. Sanitary conditions are especially important because of young pigs, which should not be vaccinated before they weigh fifty or sixty pounds.

If the principal hog raising counties would join forces through such organization and co-operate with the state and federal departments, there would soon cease to be much cholera in the state except that shipped in.

Millions are lost every year because plowing, tilling, harvesting and threshing cannot be done just when it should be. The remedy is adequate power to perform these various operations at the right time.

Cows require a great deal of water and as this may be obtained on most farms without very heavy expense, the pasture should be provided with an abundance of good, fresh water.

SORGHUMS MAKING GOOD

This is a year that brings out the good qualities of the sorghums as dependable crops.

Subscriber H. Willis Smith of Finney County writes: "Southwest Kansas is getting the reverse of what we had last year. With only three inches of rain in June, only about an inch in July, and practically none during May and in August to date; south winds every day for a month and mercury up to from 90 to 104 degrees, crops do not look very promising. If relief comes soon, however, well kept fields of milo, dwarf kafir, Freed's sorgo and feterita will make fair grain crops. So much for the sorghums under adverse weather conditions."

All over the state reports show the wonderful resistance of these crops. Upland corn in most sections can only produce a light grain crop even if plenty of rain comes from now on. The sorghums everywhere are being reported as standing still but not drying up or materially hurt. The long-headed Kansas farmer with a good acreage of the sorghums has still the chance for a lot of feed and grain also where the crop was planted for grain.

We wish Kansas farmers would place more dependence in kafir and the other sorghums. They are being more generally grown because it is hard to get away from the fact that they can be depended on year in and year out as feed and grain crops. On many farms in the central and western part of the state the sorghums must be looked to for feed the coming winter.

We have seen kafir cultivated with profit as late as the first week of September. When a good rain comes, a kafir field scarce a foot high will shoot up and do a lot of growing in the few remaining weeks of the season. If such a field is weedy it may pay big to run through it with the cultivator.

SAVE THE FEED CROPS

An abundance of rough feed is indispensable to the live stock business. In spite of the continued dry weather, a lot of rough feed has been produced. All kinds of hay has been harvested in ideal conditions.

Even if the grain crop is light, a big crop of fodder has been produced or will be before frost. It is largely a matter of saving this fodder crop so its feed value will not be wasted. Left standing in the field it will have little value. It will pay to carefully preserve in some manner the feed that has been grown. The silo is an ideal means of storage, but fodder cut and shocked and then stacked and protected from the weather will make excellent rough feed for cattle.

The stock farmer with plenty of rough feed is fairly independent. If a little concentrated feed is necessary to supplement the roughage, it can nearly always be purchased with profit. The present indications are that mill feeds of various kinds will be fairly abundant. There should by all means be as full a utilization of the rough feed produced as possible. In this lies the greatest possibilities for profits in the live stock business. Corn is not nearly so essential to success as was supposed eight or ten years ago.

PRIZES FOR KANSAS-BRED SHEEP

The Kansas State Fair Association is to be specially commended for its action in offering prize money in the sheep division only on sheep bred or owned in the state. There have been exceptionally good exhibitions of breeding sheep in Kansas for the past two years, but they have been made mainly by outside breeders. It has served to arouse interest in breeding sheep in the state and a few Kansas breeders have met the outside competition with considerable success.

At Hutchinson this year the Kansas sheep breeders will have a clear field. There will be a full classification in all the leading breeds. To be eligible the sheep must either be bred in Kansas or owned by a Kansas breeder thirty days prior to the show.

Such an opportunity should bring out the breeders of Kansas, many of whom have been too modest in the past.

Special Sheep Feeding Article

ON PAGE 4 of this issue is an article on sheep feeding by A. M. Paterson. It is time for sheep to go into the corn fields to clean up the weeds and grass. Range-bred sheep can be used for this purpose most successfully. Feeding sheep have been high in the market for two years and some may be afraid to buy for that reason.

We believe the safest proposition is to buy western lambs of rather light weight and carry them along on the undergrowth in corn fields and other vegetation about the farm that ordinarily goes to waste. By this system of feeding they can be made to make very good gains without much grain. Sometimes the surest money will come from turning them back early in the season as soon as they have consumed all the green material available. If you decide to feed, go cautiously. Follow the advice given by Mr. Paterson. If in need of further information, do not hesitate to ask. We will see that you receive the best of advice from those who have had long experience in handling sheep.

Do not fail to consider carefully the matter on page 5 of this issue. The silo is a wonderful means of preserving feed value. Fully 10,000 are now in use in Kansas and their owners are fully satisfied that the money invested in them is bringing big returns.

SHEEP PROFITABLE PRODUCERS

Put Lambs on Feed Slowly—Must Have Well Drained Feed Lot



SHEEP HAVE BEEN GRAZED ON THE CAMPUS AT THE KANSAS AGRICULTURAL COLLEGE SINCE EARLY SPRING.—IT IS NOT AN EXPERIMENT, SIMPLY A MATTER OF DOLLARS AND CENTS TO THE ANIMAL HUSBANDRY DEPARTMENT.—THE SHEEP ARE SAVING MONEY BY CONVERTING INTO CASH VEGETATION THAT WOULD OTHERWISE GO TO WASTE.—SHEEP WILL DO THIS ON THE FARMS OF KANSAS IF BUT GIVEN THE CHANCE

SHEEP raising and feeding has never been practiced to any extent by the average Kansas farmer, but this phase of the live stock industry could be materially increased with much profit. Kansas is particularly adapted to the production of mutton and wool. It has short, open winters, dry feed lots, abundance of roughage and excellent market facilities.

SHEEP YIELD TWO CASH CROPS

Sheep have the advantage over other classes of live stock, as they will make fairly good gains on roughage alone, will make a greater gain on a given amount of grain than will cattle, and require a much shorter feeding period than any of our other meat-producing animals. Sheep will produce two cash crops annually, wool in the spring and lambs in the fall. Not only will sheep prove valuable as money makers, but will also render a valuable service in clearing the roads, lanes and field from weeds and other forms of roughness that other animals will not eat, thus turning a waste product into mutton and wool and at the same time increasing the fertility of the soil. Sheep also have their disadvantages, but with proper care and management the disadvantages may be overcome. Before a man goes into the sheep business he should take an inventory of himself in order to determine what he knows about sheep and then seek all the reliable information possible on the various phases of sheep production. After so doing he should determine what branch of the sheep industry he will follow and the kind and number of sheep to purchase.

The greatest drawbacks in the production of sheep in Kansas are intestinal parasites, lack of fences and predatory animals. The intestinal parasites are troublesome only in sections of the state where low, wet lands are used for pasture. This may be prevented by changing pastures and by proper feeding. As to fences, they will soon be paid for from the profits of the sheep. If the proper kinds of fences are built there will be no trouble from predatory animals.

FEEDING RANGE-BRED LAMBS

The sheep industry of Kansas may be treated under three heads—the farm flock, grade or pure-bred; lamb feeding, and the raising of feeding lambs. In this article I will deal only with lamb feeding and raising lambs for feeders.

The feeding of native or western lambs is an industry which can be made very profitable in Kansas if properly managed. In order to make a maximum profit the feed lots should be properly selected and arranged. They should be dry, well drained and clean. A location having a southern slope makes an excellent feed lot. The feed lot should be protected on the west and north by some sort of a windbreak. An open shed affords excellent protection from dampness. Above all things, keep the feed lot and shed as dry as possible. Feed bunks should be arranged so that the sheep may have free access to the feed without crowding. Clean, fresh water should be before the sheep at all times.

SELECTING FEEDERS

The majority of feeder lambs are range-bred and can be purchased at any

By A. M. PATERSON. K. S. A. C.

of the live stock markets or on the range. The small feeder, as a rule, buys his lambs on the market, while large feeders contract a certain number on the range.

Fifty to sixty-pound lambs are the most desirable weights to put in the feed lot. Where grass and other roughage is abundant a lighter weight should be preferred. In the selection of lambs for the feed lot, care should be taken to get strong, healthy, vigorous lambs with plenty of constitution and vitality. They should be as uniform in size and conformation as possible, as the more uniform they are, the more money they will bring when fattened.

If a large band of lambs is to be fed it would be a good policy to divide them into two lots, putting the stronger lambs in one lot and the weaker ones in the other. By so doing you can give the weaker lambs a little more care, at the same time avoiding the danger of the stronger lambs crowding the weaker ones from the feed bunk.

PUT ON FEED SLOWLY

Lambs that have never had grain should be put on feed slowly, gradually increasing to full feed. Less than one-quarter of a pound per lamb daily would be plenty for the start, increasing the ration slowly until they are on full feed of about two to three pounds of grain to each lamb daily. The amount of grain fed will depend upon the kind of roughage fed. Lambs fed good alfalfa will not need as much grain as will lambs fed roughage of less value. Corn, silage, alfalfa and cottonseed meal has proved to be a good ration for fattening lambs. In a test conducted at the Kansas Agricultural College the past winter

kafir was as good a grain as corn for fattening lambs. Do not feed too much roughage toward the close of the feeding period or the lambs will not consume enough grain. This is especially true if roughage is very palatable.

The length of the feeding period will depend on the condition of the lambs and the feed. Finished lambs weighing from seventy-eight to eighty-five pounds bring the most on the market. Fifty-five-pound lambs ought to be made to weigh eighty pounds in seventy or eighty days with proper care and feeding. Twenty pounds of gain should be made in eighty days.

BUYING THIN EWES

Another phase of the sheep industry which has proved very profitable, especially in Central and Western Kansas, is the practice of buying good, thin, strong western ewes in the fall that are not over four years old, and breeding them to good pure-bred rams of the mutton type, preferably Shropshires or other down breed. These ewes are carried through the winter, shorn in the spring, and both ewes and lambs sent to market in the fall. This practice gives two cash crops, wool and lambs, besides an increase in value in the ewes if they are properly handled.

The success of this plan will depend a great deal on the buying of the ewes. Ewes may be bought on any of the live stock markets or on the range. The time of buying will depend on local conditions and prices. They may be bought early in the fall if pasture and roughage are abundant. They should be bought a little later if feed is scarce. Great care should be taken in the selection of the ewes. They should not be

over four years old and should be strong and healthy with plenty of constitution and vigor. The wool should be fine, dense and not open.

TIME TO BREED EWES

The time of breeding the ewes will depend on the housing facilities on the farm. The gestation period of ewes is from 145 to 150 days. Where there are good sheds it is a good plan to have the ewes lamb in February and March. On the other hand, where the sheds are poor it is safer to have the ewes lamb later in the spring when the weather is warmer.

The flock should be given a little extra care during the breeding season. If the ewes are thin some grain should be fed a couple of weeks before breeding, as this tends to put the ewes in a more thrifty condition.

The rams should be of good mutton type, having plenty of size, vigor and constitution. A mature ram should not be allowed to breed more than forty to fifty ewes. It is a good policy to turn the rams with the flock at night, taking them away during the day and feeding them some grain. If the ewes are in good condition they may be maintained on roughage alone after they are bred. However, if they are very thin it would be a good plan to feed some grain. It is also a good plan to feed the ewes a little grain before lambing, because it tends to give a little larger flow of milk and puts them in a more thrifty condition for the strain of suckling the lambs. The flock should be watched very closely at lambing time. They should be provided with a clean, dry bed and quarters that are well ventilated. A little extra care at this time will result in saving many lambs that might otherwise be lost.

If the ewes and lambs are to be sold in the fall the lambs should be provided with a creep in order that they may have access to all the grain they will eat. Oats, cornmeal and bran make a good ration. Where oats is scarce and expensive, corn, bran and oil meal make a good grain combination. The ewes also should have some grain.

CARING FOR WOOL

The wool crop is something that should not be overlooked, as the wool alone will nearly pay for the keep of the ewes. The ewes should be shorn as soon as the weather is warm in the spring. After shearing the ewes should be protected from cold, damp winds and rain. Care should be taken in shearing and handling the wool. A good plan is to use a shearing machine, as it shears a little more closely than the old-fashioned hand shears and is more easily handled by the inexperienced man. All tags and dirt should be taken out of the fleece. The fleece should be rolled up with the inside of the fleece out, and tied with paper twine and put in wool sacks and shipped to some reliable wool commission company.

Success in sheep husbandry depends upon local conditions, the experience of the man and the general cost of the care and management of the flock.

In the successful dairy, kindness to animals, careful attention to cleanliness and the comforts of the cows are sure to be found.

SHEEP were the first animals domesticated by man. They are pre-eminently adapted to grazing purposes. This has led to the belief that sheep belong only to rough, frontier country. English farmers have demonstrated the fallacy of this belief by making sheep the most profitable farm animals under intensive farming conditions.

The sheep, like the dairy cow, gives two returns annually. The fleece easily pays for the cost of feed and care for a whole year. The product in lambs becomes clear gain. The increase may be as high as 150 per cent and no meat can be placed on the market with so little grain as mutton.

In figuring the returns from sheep, the lambs and wool are not the only legitimate sources of profit. Sheep are continuously at war with weeds of all kinds. Only when they lie down together—with the weeds inside—is there peace. It is impossible to place a money value on this service which they render.

Cattle pastures are becoming more weedy each year. Such pastures judiciously grazed by sheep would soon not only support the sheep, but would support additional cattle as well.

Wherever sheep graze, the land becomes more fertile and productive. Truly "the sheep has a golden hoof."

—G. C. W.

SILO SAVES WHOLE CROP

Immature Crop Returns Maximum Value When Stored as Silage



HOME OF P. W. ENNS, PRESIDENT OF THE KANSAS STATE DAIRY ASSOCIATION.—ON THIS FORTY-ACRE FARM SILAGE AND ALFALFA ARE FED THE YEAR ROUND—THE MILK PRODUCED IS SOLD IN CITY OF NEWTON

WE HAVE been asked if the pit silo is practical and how to build one. The inquiry comes from the Western Kansas county.

The success of pit silos in the semi-arid part of the country has been fully demonstrated. The men who have them are in luck in this year of light rainfall. Undoubtedly many will want to store feed as silage. Last year with a surplus of rough feed there was not the incentive to put up silage that there is this year. Some of last year's surplus, however, would come in mighty handy stored away in silos.

It is getting late in the season to put in silos, but sorghum crops have several weeks to grow before frost. They are just standing still now, waiting for rain, and as soon as it comes they will start in and produce a lot of feed before the season is over. Where there are sorghum crops in this condition it will pay to start on a silo even at this late date.

For the western portions of Kansas the pit silo can be safely used. Its greatest merit, perhaps, is that it costs a comparatively small amount of money. The following description of how to build a pit silo was prepared by Clyde McKee three years ago while he was district agricultural agent in Northwest Kansas:

"After having decided upon the location and size of the silo to be built, the ground must be made perfectly level, as this will help to keep the walls perpendicular in digging. A short stake is driven firmly in the ground where the center of the silo is to be. Assuming that the silo is to be eight feet in diameter, a light board, say a 1x4 about six feet long, is procured. A nail is then driven through one end of the board into the stake. At a distance of four feet from the nail a small hole is bored. Six inches from this point another hole is bored. In these two holes small bolts or heavy nails are placed. By revolving this board around the center stake, two circles will be marked on the ground. The space between these circles is dug out to a depth of eighteen to twenty-four inches, or far enough to come below the frost line, great care being used so that the walls of the trench are perpendicular and as smooth as possible.

"When the trench is completed it will be six inches wide and probably eighteen to twenty-four inches deep, although some men make the trenches deeper than that. This is now ready to be filled with concrete. If hard, flinty rock is available, a mixture of one part cement, two parts sand and four parts broken or crushed rock should be used. Where sand only is at hand, the mixture should be 1:4 (one part cement to four parts sand). If the sand contains considerable coarse gravel, a 1:5 mixture may be used. The mixture should be made quite wet. If the concrete is well mixed and carefully tamped into the trench, little if any reinforcing will be necessary. However, almost every farm has a collection of scrap iron and old wire, some of which can be used in the curb to a very good advantage. This makes the curb stronger and puts to a very good use some of the unsightly scrap iron.

"The curb should always be extended above ground a foot or two, or sufficiently to shed the surface water. If the silo is extended above ground to any considerable extent, it should be of lighter construction than solid concrete,

as it would be very difficult to construct a satisfactory foundation around the pit.

"After the concrete in the curb has set for twenty-four hours, the excavation of the pit may be commenced. Great care must be exercised in digging, in order that the walls be kept absolutely perpendicular. A plumb line or straightedge will be of much help in keeping the walls straight. The inside diameter of the pit must be exactly the same as the inside diameter of the curb. After digging down about five feet, the walls should be carefully trimmed, so as to make them as smooth as possible, and then plastered with cement, mixed as follows: 1:2 (one part cement to two parts of sharp plastering sand). When plastering, it will sometimes be found necessary to sprinkle the walls lightly with water in order that the cement may adhere more readily and prevent its drying out too quickly. If the plaster dries too rapidly it may crumble, crack and come off. The thickness of the plaster will depend somewhat upon the smoothness of the walls, but it should average at least three-fourths of an inch to one inch thick. If the plastering is too thin it is very liable to crack and fall off.

"After the first course has been plastered another five feet are dug out, the walls trimmed carefully and plastered as before. This way of digging and plastering saves building scaffolds, and may be continued until the silo is as deep as desired. After the first course has been dug it will be necessary to use a derrick or other form of hoist to take out the dirt and let down the cement for plastering. The common pole or cable hay stacker can be used conveniently for this purpose. A concrete floor is not a necessity in a pit silo. In order to make the silo as near air-tight as possible, and to have the wall waterproof, so no moisture is absorbed from the silage, the wall should be given a coat of cement wash. This coat is put on with a brush, and should be applied rapidly, in order that it may be put on evenly. The wash coat should be put on after the plaster of each course has set sufficiently so that a brush may be used on it. If light, spongy spots are detected in the wall

when digging, they should be hollowed out slightly and then filled with cement. This will prevent the plastering from cracking when pressure is exerted by the silage in settling.

Several men in a neighborhood should co-operate in silo building. They will also find it almost necessary to work together in the filling. A bulletin on underground silos can be secured from the agricultural college at Manhattan.

Still Time to Build Silo

If you don't get a crop of grain, save your corn forage by placing in silos. If you haven't a silo, there is still time to construct one if you get busy at once.

Corn prospects in many parts of the state are not bright. In fact in some districts injury to the crop is beyond repaid.

It is well known that when the development of the grain is checked but the forage matures normally, the stalk of the corn plant contains a greater amount of food nutrients than when a large ear is produced.

Many farmers in the middle section of the state found that the heavy forage but light grain of the crop of 1914 made the choicest of silage and proved a valuable crop when so handled. Even in 1913 when there was no grain and the forage was small and of inferior quality, the silo proved to be the salvation of many a stockman. Hence, the man who has a silo, or silos, ready for the present crop is not worrying over the present prospects as is the man whose dependence is the grain. Ordinarily the latter realizes on 50 to 60 per cent of what he grows in good years and much less in poor ones, while the former realizes on nearly all the crop all the time.

There is no question about the value of the silo as an investment. The farmers who have tried it are unanimous in their verdict in its favor and the bankers are ready to back it with loans.

The important thing to remember is to get a silo, and have it of as good material and workmanship as possible, considering time and money available. Wood, stone, brick, tile, cement, steel or any other material that will hold water,

keep out air, and have strength enough to withstand the outward pressure, will serve the purpose.—A. S. NEALE, Extension Division, Kansas Agricultural College.

Silo Helps Save Corn Crop

Most farmers feel more or less anxiety about their corn crop at this time of the year, but those who are the least concerned are those on whose farms stand silos. The silo makes it possible to get good returns from a crop that has produced little but fodder.

The farmer, therefore, who has been thinking of building a silo should get into action, and the man who has not been thinking of the silo should think and act promptly. Because many farmers are thinking "silo" these days the following points as to good silos are worth keeping in mind:

The walls must be air-tight.

The walls must be smooth inside.

The best type of silo is round.

The roof should be waterproof.

The substances should be substantial enough to stand great pressure.

The cost should be from \$2 to \$5 for each ton of capacity if the total capacity is to exceed 100 tons.

A silo should be placed as near as possible to the place where the silage is to be fed and should be on the least exposed side of the barn.

One hundred tons of silage will feed twenty-five head of stock for 200 days.

A silo fourteen feet in diameter and thirty-five feet high will hold 100 tons of silage.

Any kind of a good silo is a valuable piece of property on the farm where live stock is to be fed.

Immature Corn in Silo

A Shawnee County farmer came in last week to get our advice on the value of immature corn for silage. Many are confronted with the same question. Much of the upland corn is beginning to fire and the tassels are so injured that there is little chance for grain.

It has been our observation that such corn should be left as long as possible, but do not wait until it is all dried up. There must be juice enough to make it pack solidly or it will not keep and the stock will not eat it as clean as they do silage put in when fairly green. On the other hand, immature corn contains a large amount of juice in the stalk and each day it hangs on and keeps partially green it is maturing more feed value.

A crop that has made a good fodder growth is worth putting in the silo. Three years ago a great many instances were reported where such fields were stored as silage and gave excellent results in feeding stock in the winter. We visited a farm last week where a silo was being filled with corn that did not have an ear started. Anyone could figure out what such a crop would be worth if left in the field. While the silage could not be equal to that made from mature corn with a lot of grain in it, the full value of all that has been produced will be secured and it would be almost worthless if left to dry up in the field. Farmers filling silos with such crops cannot help thinking how much better the silage might have been, but the one up against it the worst is the man with a lot of live stock and no silo in which to store the fodder crop.

THE SILO COMBINES more good things and brings greater profit than any other building on the farm,

HELPS UTILIZE CHEAP ROUGHAGE and makes it possible to keep more stock on the farm, which means manure for the land.

THE SILO INSURES succulent feed in the winter and in dry spells when pastures fail.

PROVIDES A BALANCED RATION when fed with alfalfa, clover, bran, cottonseed meal and other protein feed.

THE SILO PREVENTS WASTE in feeding, keeps stock in good condition, and makes cheap beef and milk.

AN ACRE OF CORN can be placed in the silo at less cost than the same acre can be husked and shredded.

OVERLAND RED

A Romance of the Moonstone Canon Trail

CHAPTER X.

"PERFECTLY HARMLESS LITTLE OLE TENDERFOOT."

WILLIAM STANLEY WINTHROP woke next morning with a vague impression of having lost something. He gazed indolently at the sunlight filtering through the curtains of his sleeping-room. Beyond the archway to the adjoining room of his suite, a ray of sunshine lay like living gold upon the soft, rich-hued fabric of the carpet.

"Gold!" he murmured. "Mojave Desert! Overland Red! Lost gold! No, it isn't the two hundred dollars I invested in the railroad's story, for it was worth the money. I never spent four happier hours in my life, at fifty dollars an hour. The best of it is he actually made me believe him. I think he believed himself."

Winthrop sat up in bed, yawning. "I think black coffee will be about all, this morning," he murmured, as he dressed leisurely.

He was tying a fastidiously correct bow on his tan oxford when he happened to glance out of the window. It was early, altogether too early, he reflected, to appear in the breakfast-room of the hotel. Winthrop's indefinite colloquy melted into the rapt silence of imagination. Below on the smooth black pavement pattered two laden burros. On their packs hung dusty, weather-worn canteens, a pick and shovel, and a rifle in its soiled and frayed scabbard. The sturdy, shaggy burros followed a little, lean old man, whose flop-brimmed hat, faded shirt, and battered boots told a tale of the outlands, whispered of sun-swept immensities, of sage and cacti, sand and silence. Winthrop drew a long breath. Such an adventurer was the Overland Red he had talked with the evening previous. The tramp had mentioned a town far out on the desert. Winthrop sauntered down to the deserted office and secured a timetable.

When the east-bound express left Los Angeles the following morning, Winthrop was aboard, uncomfortably installed in the private drawing-room of a sleeper. He had cheerfully paid the double fare that he might have the entire space to himself, and he needed it. Around him, on the floor, in the seats, in the racks, and on the hooks were innumerable packages, bags, and bundles.

"Very eccentric. He must be rich," whispered the wife of a dry goods merchant from Keokuk, as her husband pushed her ahead of him past the door of the drawing-room.

"Just plain hog!" said the dry goods merchant. "A man that'll pay double fare to have the whole earth to himself when other folks has to be packed into a berth and suffocate! The conductor said he paid double to Chicago to get that compartment, and he's only goin' out in the desert a little ways. I'd 'a' took it myself."

"Well, we could hardly afford it, anyway," said the woman pleasantly. "We've had such a good time I don't mind sleeping in a berth, Hiram."

They crowded on and finally found their seats.

Winthrop smiled to himself. He liked the woman's voice.

He lighted a cigarette and gazed wistfully, even despairingly, at the "outfit" which surrounded him. He sighed. "Awful accumulation of plunder. Wonder what I'll do with it?"

As the train climbed the grade beyond San Bernardino, he grew restless. Flinging down his cigarette, he began unwrapping his belongings. Out came blankets, extra clothing, a rifle, canteens of several patterns, two pack-saddles, a coil of rope, a pair of high lace boots—hobnailed, heavy, and unserviceable—a pocket compass, a hunting-knife, a patent filter, two halters, two galvanized pails, a small, compact, silk tent, an axe, a fishing rod, a rubber cup, a box of cigars, a bottle of brandy, several neckerchiefs, a cartridge-belt, a Colts revolver of large and aggressive caliber, cartridges, a prospector's pick, a shovel, a medicine case, a new safety razor, a looking glass, a clinic thermometer, and a copy of "Robinson Crusoe."

He pondered over the agglomeration of articles pensively. "He was a good salesman," he said, smiling. "I'll be either a juggler or a strong man before I'm through with these things. I think I'll begin now and re-pack. I'll make one glorious bundle of it. That's the ticket!"

Winthrop went to work, whistling cheerfully. He spread the blanket and rearranged his possessions, finally rolling them up into an uncertain bundle which he roped with the weird skill of the amateur packer. He tried to lift the bundle to the opposite seat. He decided to leave it on the floor.

Over the grade and on the level of the desert the train gathered speed. The shimmering spaces revolved slowly, to meet the rushing track ahead. Hour after hour sat Winthrop, reading and occasionally glancing out across the desert. His was the wildest of wild goose chases. A stranger had told him of a mysterious ledge of gold somewhere out on the desert, and the stranger had named a desert town—the town toward which Winthrop was journeying. Would the eccentric Overland Red be there? Winthrop hoped so. He wanted to believe that this Ulysses of the outlands had spoken truth. He imagined vividly Overland Red's surprise when one William Stanley Winthrop, late of New York, should appear, equipped to the chin and eager to participate in the hunt for the lost gold. Then again, the prospector might not care to be burdened with the companionship of a tenderfoot. Still, the uncertainty of his welcome lent zest to Winthrop's enterprise. He closed the door of his drawing-room and wound through the mahogany maze toward the dining car.

Next morning, as the train slowed down for the desert town, Winthrop was in the vestibule, peering out anxiously. It did not occur to him that Overland Red knew nothing of his coming, or that the other would be waiting on the station platform if he did. The tramp had not the faintest desire to make himself conspicuous. Some of Winthrop's enthusiasm had evaporated during the hot night in the sleeper.

SYNOPSIS OF PRECEDING CHAPTERS

A lonely prospector, thinking always of his wife and child left behind, follows the lure of the desert in his search for gold. In the desert town men begin to notice the regularity of his comings and goings. They are green with envy and decide to beat him out of his claim. Meanwhile, in the lonely canon he hoarded the little yellow bits. As weeks rolled by the water decreased; he carefully stowed his gold in a pouch and prepared to leave the canon. After a fateful search he finally comes to a railroad. Here he is found by a man, who gives him water, but being so exhausted the water is of no avail—a flash comes over him and his vision is forever darkened. Louise Lacharme and Boyar of Moonstone Ranch accidentally come upon the camp of Overland and Collie (whom Overland has picked up along the way). Tenlow, the detective, finds the prospector by but after some strenuous arguing, Overland tactfully leaps on Boyar and, through precautions moves, escapes the detective. Tenlow's horse slips and rolls headlong to the bottom of the cliff, leaving Tenlow lying halfway down the hillside. Having turned toward the foothills, Overland releases Boyar and disappears in the brush. At the suggestion of Louise, Collie goes for the doctor and is afterwards arrested. Louise tells Walter Stone, her uncle, about the arrest, and finally coaxes him to go with her and get Collie. Walter Stone, being a very influential ranchman and having secured Collie's release, takes him back to the ranch, where he gives him work to do. After several days work with Williams, the foreman of Moonstone Ranch, Collie learns the "ins" and "outs." He finds Overland Red in the mountains near the ranch. Overland goes to Los Angeles and is grubstaked and returns to find the streak of gold.

"Thank you very much," called the lady from Keokuk, Iowa.

"Don't mention it," said Winthrop, disembarking behind the porter with his "plunder." Then, as the Pullman slid away, Winthrop deliberately and gracefully threw a kiss to the dry goods merchant's wife. "Nice little woman," he reflected. "Too nice to associate with that grampus. Well, I hope they'll enjoy the rest of the trip in the drawing-room. I'm glad I was able to arrange it."

He watched the train crawl down the track. He wondered how long he would be able to distinguish the pattern of the brass-work on the observation car-rail.

Out of the empty distance came the click, clink, clank of hammers and shovels as the section men, a mile down the track, stepped into work behind the train.

"Prospectin'?" queried a lank individual, slouching up to Winthrop.

"A little," said Winthrop. "It's pretty dry work."

"Uhuh. It's goin' to be hot about noon." "I suppose so. Will you kindly give me a hand with this monstrosity," said Winthrop, indicating the pack. "The agent seems to be busy."

"Sure! She ain't roped very tight." Which proved to be true. The bundle, with a kind of animate indifference, slowly sagged, opened, and things began to trickle from it in its journey across the platform. Among the things was the bottle of brandy. The lank individual picked this up tenderly and set it to one side. Winthrop noticed his solicitude, and smiled.

"We can rope 'em up again," said the lank one, suddenly becoming enthusiastic. "My name's Jim. Hicks. I'm constable here."

"I see. Well, I'm William Winthrop, from Los Angeles. I'm a naturalist. Will you accept a cigar?"

"Thanks. You want to pack this here bottle, too?"

"Not right away. Whew! It is getting hot."

"Goin' up to the hotel?" queried the constable.

Winthrop glanced along the street. The hotel did not look inviting. "I don't know. I'd like to get in the shade somewhere."

"There's old Fernando's 'dobe down the track under them pepper trees. He's a friend of mine. He ain't to home today. Mebbe you'd like to set down there and wait for your friend."

"My friend?"

"Why, ain't you waitin' for anybody? You ain't goin' to tackle that bug-huntin' trip alone, be you? It's dangerous out there for a tenderfoot. Now I have took folks out, and brought 'em back all right—gone as far as them hills over there, and that's a good jag from here—and I only charge four dollars a day and grub."

"I thought you said you were constable?"

"So I be. Takin' parties across the desert is on the side. How far you figurin' on goin'?"

"I haven't made up my mind yet. Say we go down as far as the adobe we spoke about, as a beginning. Perhaps we can arrange terms."

"I'm on, pard," said the constable.

Under the pepper trees shading Fernando's adobe sat Winthrop and the constable. The brandy-bottle was half empty and a box of cigars was open beside it on the bench. The afternoon shadows were lengthening. The constable had been discursive, voluminous, in his entertaining. Time was as nothing. He borrowed generously of tomorrow and even the next day. He became suddenly quite fond of this quiet, gentlemanly chap opposite him, who said little, but seemed to be a prince of good fellows.

"S' this way," said the constable, leaning forward and waving his cigar. "You're fren' of mine—sure thing. 'S' afternoon now, but I was plumb fooled this mornin'. Y' know I's afternoon now. Thought you was the guy I'm lookin' for. O'overlan' Red—bum—tram." Wire from Los Angeles to upperhan' him if he shows up here. See?"

"You're not quite clear to me," replied Winthrop. "But never mind about apprehending any one. Let's talk about this glorious prospect of sand, silence, and solitude. I feel like a fallen angel. Never mind about arresting anybody. Life is too short. Let's talk of roses."

"Roshees! Huh!" sniggered the constable. "You're kin' of sof', ain't you? Roshees nothin'! I'm going to talk 'bout business. It's business, my business to talk 'bout it, see? 'T ain't your business. You c'n listen, an' when I get through, then you c'n talk roshees."

"But what is your business?" asked Winthrop, with an indifference that he did not feel.

"S-s-s-h-h! I'm cons'able. Tha's on the quiet. Thousand dollars reward f'r apprehension of 'Verlan' Red. Thought you was him—hic—he! he!"

"Please don't laugh like that. It hurts my feelings," said Winthrop. "It is bad enough to be taken for a—er—tramp."

"Nobody's feelin's—pologish. 'Course you ain't him! You're jus' a li'l' ole ten'erfoot—perfectly harmless li'l' ole ten'erfoot."

"Thanks. May I ask you to have another?"

"Nope. 'Nough's 'nough. 'S time f'r dinner."

"Nearly. Well, if you flatly refuse to drink my health, I'll have to drink it alone, and that's rather egotistical, isn't it?"

"Never. B' Gosh! You're sport. Funny li'l' ole ten'erfoot—perfectly harmless. Sure, I'll drink all th' health you got, 'n then go home—dinner."

"One will be sufficient, I think," said Winthrop.

"Suffice' wha'?" And the constable leered cunningly.

"To drown all pangs. Well, here's pleasant dreams."

Far down the line came the faint thrill of wheels and the distant, clear-cut blast of a locomotive. The local freight from Los Angeles was whistling for the "block."

Winthrop glanced at his watch, then at the constable. "What train is that?" asked the easterner.

The constable's eyelids drooped, then opened languidly. "Railro' train, 'f course."

And he slid forward on his elbow and thence to the bench. Presently he snored.

Winthrop strolled toward the approaching train. "Pretty stiff session," he commented.

"Now if happy chance should bring Overland Red on this freight, with his burro and outfit, I'll have one reason to offer for wanting to go with him. I've probably saved him some annoyance, indirectly, but rather effectively, I think."

The great oil-burning locomotive roared in, casting heat-waves that smelled of steam, iron, and mechanical energy. The hot air sickened Winthrop.

A car was cut out and shunted to a siding. Then the engine, pausing to drink a gargantuan draught at the tank, slithered away in the dusk, clanking across the switch-points. A figure leaped from the freight-car to the ground. Then out came a burro and several bundles. The figure strode to the station and filled two canteens. Winthrop walked toward the burro. When he of the burro and canteens returned, he found Winthrop stroking the little animal's nose.

"What the —! How the —! Who lost you out here?" asked Overland.

Winthrop spoke rapidly and to the point. "Express this morning. Lonesome again. Thought I'd make a change. My outfit is over at the station. Don't say 'No' before you hear me. You're going to need me—tenderfoot and all."

"But you can't!"

"Wait. The local constable has a wire from the Los Angeles police to look out for you. Perhaps you got this far because you're traveling in a freight car. No doubt all the passenger trains have been watched all along the line. The constable has been my—er—my guest since morning. He is asleep now. I had to do it. He told me, after either the sixth or seventh glass, I forget which, that he was looking for you. Come on over to the station and inspect my outfit, please. I think we had better vanish."

Overland breathed once, deeply. "Lead me to it!" he exclaimed. "You got my number. I guess you're some lame chicken, eh? No? I'll never call you a tenderfoot as long as I live. Shake!"

The inspection of the outfit was brief. "Take the Colts and the cartridges, and the blankets and the rope. T' hell with the rest."

CHAPTER XI.

DESERT LAW.

Away out in the night of stars and silence plodded the patient burro, and beside him shuffled Overland Red and Billy Winthrop.

"We'll fool 'em," said Overland. "Keep joggin'. We'll be over the range before mornin'. Then let 'em find us."

Winthrop, staggering along, felt his moral stamina crumbling within him. "I don't know—about that. Perhaps I'll be a drag to the expedition. I'm pretty tired."

Overland, experienced in the remorse that follows liquor on an empty stomach, swore vigorously and picturesquely. "You'll stick! Do you suppose I'd shake you now after you overcomin' a genuine nickel-plated desert constable? Nix. That ain't my style. You believed me when I said I was coming' to this particular town. It's worth somethin' to have a fella around that believes a fella once in a while. But what I want to know is, why you done up the constable so off-hand like, not knowin' whether I'd show up here or not?"

"Why?" And Winthrop smiled wanly. "Because I'm a perfectly harmless little old tenderfoot." And his voice caught as he tried to laugh.

An hour of plodding through the dusk, two hours, and they were at a water-hole near the northern hills. Overland unroped one of the packs, made a fire, and presently had some hot coffee for his companion, who was pretty well used up. Nature was taking inexorable toll for his conquest of the constable.

"You take it easy and don't worry," said Overland.

Winthrop raised on his elbow and gazed at the tiny fire. "Tiger, tiger burning bright!" he quoted.

"This here coffee'll fix you all right," responded Overland Red, grinning. "Didn't

know I was a pote, did you? Now if I was a doc, I'd give you a shot in the arm that would put you to sleep. Seem' I ain't, it's coffee for yours."

"Do you think they will follow us?" Winthrop asked presently.

"As sure as snakes," said Overland. "And this here water-hole is the first place they'll strike for. They'll wait till mornin' to find our trail."

"When they do find it?"

"I'll show 'em a Mexican trick with a hole in it. You go to sleep, pardner."

The moon rolled down to the rim of the world. The infinitesimal mountain peaks rose slowly along the lower edge of the flat silver shield, black and growing bolder in outline as they blotted half, three quarters, finally all of the burnished radiance. Then along the edge of the far range ran an instant delicate light, a light that melted into space and was gone, leaving a palpitating glory of myriad summer stars.

The little fire died down. The barren outland wastes slumbered in the charitable dusk of night.

Overland, cross-legged on his blanket, smoked moodily. His thoughts drifted out on the tide of silence to Moonstone Canon and Collie and the Rose Girl, Louise Lacharme. For them he planned impossibilities. Of them he dreamed absurd dreams.

Out of the flotsam of his pondering came memories of other nights such as this, desert nights on the border ranges of old Mexico—that lost world of his adventurous youth. Mingled with his waking dreams were the sounds of many familiar names—Sonora, Trevino, Nueva Laredo, Nava, San Jose, Las Cruces, Nogales, Yuma, San Antonio—each a burning ember of memory that glowed and faded while the music of silver strings and singing girls pulsed rhythmically in the stillness—to break at last in the querulous wailing of a lone coyote. Winthrop stirred restlessly and muttered.

All at once the tramp realized that this easy-going young easterner, wealthy, unused to hardship, delicate of health, had his battle to fight, as well. "I've knowed 'em to get over it," reflected Overland. "She's high and dry up here on the desert, and I reckon to go where it's higher. He's game, but he's desprate. He's tryin' to dodge the verdict, which can't be did. Well, if excitement will help any, I guess he's ridin' the right range. If he's got to pass over, he might as well go quick. Mebbe he's the best kind of a pal for this deal, after all."

Overland looked across at the muffled form. "Pardner!" he called. Winthrop did not answer.

"Well, it saves explainin'," muttered the tramp, and he rose quietly. He gathered the few camp utensils together, rolled his blankets, brushed sand over the embers of the fire, and groped stealthily toward the burro. He roped the pack, glancing back toward the water-hole occasionally. Winthrop slept heavily.

"Guess I'll go back and get that gun," muttered Overland. "I might need two; anyway, he might wake up and plug his old friend the constable before he knowed it. I ain't givin' a whoop for the constable, but I don't want to see the kid get in wrong."

Then Overland, wily and resourceful in border tactics, led the burro round the camp in a wide circle, from which he branched toward the hills to the north. For two hours he journeyed across the starlit emptiness. Arriving at a narrow canon in the foothills, he picketed the burro. Then he sat down. Why not continue with his pack and provisions? He could camp in the fastness of the mountain country and explore it alone. He would run less risk of capture. Winthrop was not strong. The easterner meant well enough, but this was the desert.

The blue of the eastern horizon grew shallower, changing to a cold thin gray which warmed slowly to the straw color of tempering steel. The tramp, watching the sky, shook his clenched fist at the dawn.

"You, up there!" he growled. "You didn't give me a square deal when I was down and out that time—in Sonora. I had to crawl to it alone. But I'll show you that I'm bigger than you. I'm goin' back to the tenderfoot and see him through if I swing pole-high for it."

It was light when the tramp had arrived at the water-hole. He crept behind a sharp dip in the hummocks. The crest of his hiding-place was covered with brush. It was a natural rifle-pit affording him seclusion and shelter.

With the sun came the faint thud of hoofs as two riders came warily up to the water-hole. One dismounted and stooped over Winthrop. The other sat his horse, silent, vigilant, saturnine.

"Say, where's your pal, that there Overland Red guy?" asked the constable, shaking Winthrop awake and glaring at him with a bleared and baleful eye.

The man on the horse frowned, considering, in the light of his experience as a successful and still living two-gun man, that such tactics were rather crude.

The easterner sat up, coughed and blinked in the dawn. "Where is what? Why, good morning! You're up early." And his eye swept the empty camp. So Overland Red had deserted him, after all. He might have expected as much. "I haven't any 'pal,' as you can see. I'm out here studying insect life, as I told you I would be, yesterday. I can't say that I'm exactly pleased with my first specimen."

"Oh! I'm a specimen, am I? I'm a insect, hey? Well, you're coked, and you just talk up quick or the calaboose for yours!"

"No. I beg your pardon—but, no. You are in no condition, this morning, to talk with a gentleman. However, you are my guest. Have a cigar?"

The horseman's eyes twinkled. He admired the young easterner's coolness. Not so the constable.

"See here, you swindlin' tin-horn shell-shover, you cough up where Overland Red is or there'll be somethin' doin'. You doped that booze yesterday, but you can't throw no bluff like that today."

"I did what? Please talk slowly."

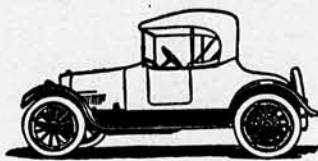
"You doped that booze you—"

[To be Continued.]

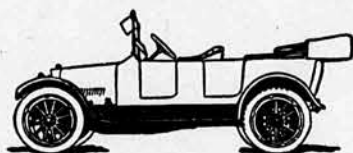


Announcing The Reo Models and Prices

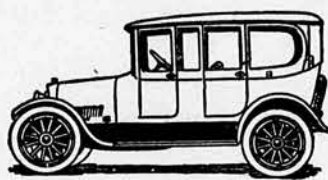
**Two Important Price Reductions
Two Interesting New Models**



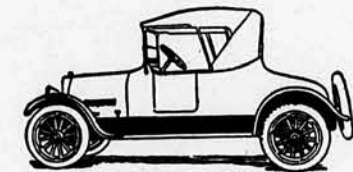
The New Four-Cylinder, 3-passenger Reo Roadster, \$875



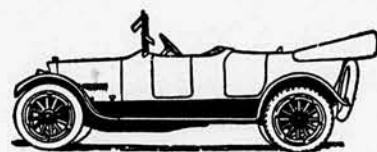
The New Reo the Fifth, "The Incomparable Four," \$875



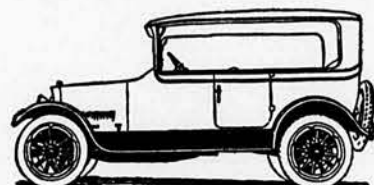
The New Four-Cylinder Reo Enclosed Car, \$1025



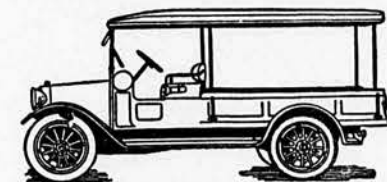
The New 4-passenger Reo Six Roadster, \$1150



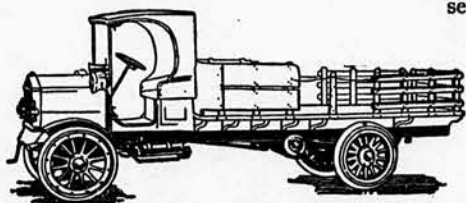
The New 7-passenger Reo Six Touring Car, \$1150



The New Reo Six 7-passenger Sedan, \$1750



1500-pound Reo "Speed Wagon," \$1000



2-ton Reo Truck (Chassis only, with Driver's Seat and Cab), \$1650
(All Prices are f. o. b. Lansing, Michigan)

YOU WANT TO KNOW—everybody always wants to know—what models Reo will make the coming year, and the price of each.

OF COURSE THERE ARE NO NEW MODELS—new chassis models we mean. You do not look for, do not expect, do not want new chassis models from Reo.

THAT ISN'T THE REO WAY. Refinements—of course. Detail improvements—wherever and whenever we can find a place or a way to make them.

NOTHING RADICALLY NEW is ever offered to Reo buyers. For it isn't new when it gets to you—it has been thoroughly tried and conclusively proven before we let it get into a Reo car.

NEW BODY TYPES—YES—and some that put Reo in the highest class of cars in looks as well as in performance and longevity. We'll treat of each in turn.

REO THE FIFTH COMES FIRST, of course. First not only among Reos, but among motor cars.

FOR THIS IS THE GREATEST automobile ever built, we verily believe.

THIS IS THE SEVENTH SEASON that Reo the Fifth has been standard in practically its present form.

NO: THE PRICE WILL NOT BE CHANGED this season. We will not increase—we cannot lower it.

ACTUAL COST OF MAKING is now more (\$50 more) than when the present price, \$875, was set a year ago. And we had made this model so long; had so refined and perfected manufacturing processes; had reached such an high state of efficiency in production; and cut dealers' discounts so low that we had, then, reached rock bottom.

IT WAS AN ACHIEVEMENT of the first magnitude to produce such a car and sell it at such a price—\$875.

TODAY YOU SEE OTHERS increasing prices all along the line. They must do so. They have no choice.

ORDINARY BUSINESS RULES dictate that we also "tilt" the price of Reo the Fifth \$50 at least.

BUT REO PRIDE PROMPTS that we absorb the extra cost, as we have for months past, and keep the price where it is until conditions will, happily, return to normal.

THE FOUR-CYLINDER ROADSTER—same wonderful chassis, same price, is the smartest thing on wheels—the most popular car in the world among physicians, and all professional and business men. Also \$875.

TO SUPPLY A GROWING DEMAND for an enclosed body on Reo the Fifth chassis, we have planned to build a limited number. The quality will be Reo—which is to say, excellent. The top is rigidly supported at front and rear. Removable glass panels convert it into a veritable limousine for winter, and these discarded and with Jiffy curtains (which are also furnished) it is an ideal summer touring car. The price is \$1025.

THE NEW REO SIX will continue in its present popular forms—the 7-passenger touring car and the classy 4-passenger roadster; and we will make a limited number with Sedan bodies to supply an insistent demand for this type of body on this splendid chassis.

THE PRICE IS REDUCED \$100 on the 7-passenger and roadster models. Now \$1150.

NOW YOU WONDER, and naturally, how we can reduce the price of the Reo Six models and not the Four—especially after what we have just told you about the increased cost of production.

SEEMS ILLOGICAL at first blush—doesn't it? But it isn't. For the truth is never illogical. And the truth is that despite the present higher prices of materials and labor still it costs us less to make this six-cylinder model than it did a year ago.

THIS POPULAR REO SIX is now in its third season. It has passed the same stages through which its great four-cylinder namesake went—initial costs have been absorbed, charged off. And in accordance with that unswerving Reo policy we give the buyer the benefit and set the price at \$1150 f. o. b. Lansing.

WE WILL MAKE A LOT MORE of those 4-passenger Six Roadsters the coming season. We underestimated the appeal and the demand for this model. It proved one of the most popular Reos ever built.

THE SIX SEDAN speaks for itself, though, truth to tell, an illustration does it scant justice.

YOU MUST SEE IT where you can study its artistic lines and faultless finish to fully appreciate this latest Reo which we price at \$1750.

NOW A WORD ABOUT THE TRUCKS since 90 per cent of all Reo automobile distributors also handle Reo motor trucks.

PRICE OF THE 1500-POUND REO "Speed Wagon" has been reduced to \$1000.

SAME REASON—SAME POLICY—reduced cost of manufacture despite higher present cost of materials—as enunciated in speaking of the Reo Six.

AND THAT TWO-TON REO. What shall we say? What need we say? We submit, it is the greatest 2-Ton motor truck in existence. Has been standard for longer. Has given greater proof of its sturdiness and efficiency and low cost of upkeep.

IF WE ARE TO JUDGE by that over-demand, we may well assume that we could sell all that we could make were the price \$2500, instead of \$1650.

AND FINALLY A WORD about the big general plan—a brief reiteration of the Reo policy.

WE STILL ADHERE to our determination never to make more Reo cars or trucks than we can make and make every one good.

TEMPTATION IS GREAT of course. Dealers protesting, buyers begging for more Reos. But we know—we know—on what solid foundation this Reo success was built; and we'll jealously guard that policy to the last.

RIGHT NOW—AUGUST—there are more orders on hand at the factories than at any previous time in Reo history. Orders hopelessly in excess of factory output—and that also is greater than ever before.

AND RIGHT NOW Reo stands higher in the esteem of buyers and of the trade than ever before.

\$30,000,000 PER ANNUM is not small by any means. Reo is in fact one of the largest in point of production. We have no ambition, however, to be the largest. Don't want to make all the automobiles—only the best.

RATHER THAN INCREASE the quantity we shall strive always to improve the quality so that, as the art advances and cars generally improve, still Reo will continue to be known as—"The Gold Standard of Values."

**REO MOTOR CAR COMPANY
REO MOTOR TRUCK COMPANY**
Factories: Lansing, Mich.

"THE
GOLD STANDARD
OF VALUES"

Better Oil for Fords



*The vast difference
between oils classed
as "light"*

Your Ford Instruction Book advises the use of "high-grade" oil of "light" body. But a puzzling condition faces you when you look for "high-grade," "light-bodied" oil.

"Light" body is a loose term. It is applied to oils as different from each other as kerosene and gasoline. Sewing machine oil, for example, is a light oil, but it would cause quick trouble in a Ford motor. And many light oils are really not serviceable in an automobile. They vaporize rapidly under the heat of service.

You have a right to expect from your lubricating oil—

- (1) Full power.
- (2) A minimum of carbon deposit on piston heads, spark plugs and valve seats.
- (3) Lowest operating cost per mile and per year.

Let us see how Gargoyle Mobiloil "E" meets these requirements.

Power. The body of Gargoyle Mobiloil "E" has been proven through repeated actual tests to be scientifically correct for Ford engines. It forms a correct piston seal. Thus it assures at all times full and abundant power.

Carbon. The slight carbon left by Gargoyle Mobiloil "E" is a light, dry dust which is blown through the exhaust by the engine action. Ford owners who use Gargoyle Mobiloil "E" are rarely troubled with carbon deposit on piston heads, spark plugs or valves.

Economy. Gargoyle Mobiloil "E" being correct in body, does not work freely into the combustion chambers. The result is oil economy. Furnishing a correct piston seal, it insures full power from the fuel. That means gasoline economy.

And Gargoyle Mobiloil "E" does not "break down" in use. This insures constant protection to the moving parts.

GARGOYLE

Mobiloils
A grade for each type of motor

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

VACUUM OIL COMPANY, Rochester, N. Y., U.S.A.

Specialists in the manufacture of high-grade lubricants for every class of machinery. Obtainable everywhere in the world.

Domestic Branches:

Detroit
Boston
New York

Chicago
Philadelphia
Indianapolis

Minneapolis
Pittsburgh
Kansas City, Kan.

FARM POWER

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

THE greatest advantage the tractor offers lies in the fact that it can do the heavy work of the farm quickly and thus complete it at the proper season. At the present time it is too dry to plow on most farms in Kansas. Only for a very short period following the harvest was the soil in condition to plow. Much plowing will be done late as a result of these conditions.

The tractor to date has not displaced horses to the extent commonly expected by purchasers, but they have been able to do more timely work by reason of having the tractor. A money-making business-like plan would be to keep more good horses, fewer poor ones and a good farm tractor.

The claim is sometimes made that a boy can successfully operate a farm tractor. This is a mistake. It is a job which only a proficient operator can handle properly. Experience in running stationary engines or automobiles, while of some value, is not enough; the mere starting of the motor, changing of gears, and stopping, are simple matters, and any farmer can quickly learn to do these, but the important thing is the ability to detect trouble the minute it begins to develop, and to be able to remedy it promptly instead of allowing it to run along until an expensive delay results.

Two Types of Carbureters

There are two types of mixing valves, or carbureters, in common use on engines, which may be named float feed and overflow mixing valves. These names are good because they indicate the means by which the fuel oil is kept constantly at the level of the needle valve.

The overflow mixing valve is supplied with fuel by means of a pump and has an overflow pipe leading back to the fuel tank. The tank is thus seen to be below the level of the mixing valve. The pump works whenever the engine is in motion, thus keeping a continuous flow of fuel oil through the mixing valve.

The float feed mixing valve is supplied with fuel by gravity or pressure of some other sort. A float in the fuel chamber of the mixing valve acts as a valve, cutting off the supply when the proper level is reached. Most commercial carbureters belong to this class. There are also mixing valves which lift the fuel entirely by suction and hold it at the desired level by means of a check valve. These can be placed only a short distance above the fuel tank.—E. R. GROSS, Fort Collins, Colo.

Oil Farm Machinery

It pays to use plenty of lubricating oil on farm machinery. Where the oil or axle grease is used sparingly the draft or load of the machine is increased at least 20 per cent. Because of its economy hard oil should be used in preference to ordinary machine oil wherever possible. The hard oil will not waste as easily and is cheaper than machine oil.

A well lubricated machine will last longer than one that is not sufficiently well oiled. The dust-proof box on most axles of modern farm machinery has done much to lengthen the life of the machines and is saving the lubricant. Care must be taken to keep this box well oiled or it will wear out.

The cost of repairing machinery is high, but the time that is lost in replacing worn-out pieces may mean a loss of hundreds of dollars to the farmer.—D. E. WISEMAN, Assistant in Farm Mechanics, Kansas Agricultural College.

Tractor in Hot Weather

Aside from the question of dollars and cents, there is a certain moral satisfaction in the use of power. One does not hesitate to crowd an automobile to twenty-five or thirty miles on a hot day, yet he hates to urge a horse to travel more than four or five, and then he must rest him frequently if the day is extremely hot.

The conditions in harvesting are parallel.

No one is receiving any cruel treatment if the tractor runs continuously. The operator of the engine and the operators of the binder are comfortably seated and are in little danger of becoming over-heated, because the work is not especially hard.

With horses, the condition is differ-

ent. The driver must not only handle his team, but handle the binder as well. He must urge the horses continuously, even though they are warm and sweating, and he knows that there is danger of overheating them. Herein lies the satisfaction of the tractor outfit. It can be crowded without feeling that some dumb animal is being abused.

This is one of the advantages of the tractor that appeals to the farmer very strongly. It saves his horses.—Gas Power.

Hauling Wheat in Truck

A farmer in Barton County is hauling his wheat to Great Bend in an auto truck. The distance is sixteen miles and he is making two loads a day, hauling as much as could be hauled in six ordinary wagon loads. One load brought \$189.09, the price being \$1.10 a bushel. This is the most valuable load of wheat ever marketed in Great Bend.

In many places it is reported that wheat hauling is being delayed because it is not safe to risk horses at heavy hauling when it is as hot as it has been the past few weeks.

This is one decided advantage engine power has over horses. Those who used tractors for harvesting this year were able to work steadily all day and in some instances all night. This is a farm job that cannot be delayed. The more rapidly it can be rushed through when the proper time comes, the better.

To Fix Automobile Push Rods

Push rods on an auto engine, after long use, become worn and get noisy.

To adjust them, you will generally find two nuts, or a screw and lock nut which you can adjust by loosening the lock nut, and screw the pin out until you have about the thickness of an ordinary business card between the two, being certain that the push rod is in its lowest position.

If no such adjustments are provided, you will either have to draw out the valve stem or take a rod about one-eighth of an inch larger than the stem, drill a hole in the end the size of the stem to a depth of one-eighth of an inch, then cut off long enough to leave a small cup with the bottom in, then dress with a file until you get the proper clearance.—R. A. BRADLEY, Fort Collins, Colo.

Farmers Use Automobiles

When the farmers of the Middle West began buying automobiles, many lifted up their voices in lamentation. They saw, or thought they did, the beginning of the end for the farmer. He was upon the toboggan slide, skating swiftly and surely down to the gates of financial perdition—to hear them tell it. It was an extravagance too pronounced, too great, too stupendous for the agricultural industry to survive, and the prediction was that the automobile-buying farmer was headed straight for bankruptcy and the poor house.

This imaginary tale of woe failed to materialize. The farmer did not bankrupt; not even a little bit. He paid for his auto and went right straight ahead with his affairs. Incidentally he managed to extract more fun and enjoyment from life than he had known were in store for him, and all because of that same auto. And he turned it to business uses as well as pleasure purposes. When a machine broke down in the haying or harvesting season, the auto hustled the repairs from the nearest town in an hour, when, under the old order, it would have taken an entire day. By means of the auto, the farmer and his family were enabled to get out and into touch with the world and its doings. They visited chautauquas, fairs, shows and dozens of other things that made them better men and women. It enlarged their ideas and widened their knowledge. It increased their interest in the things that make life worth while. It lifted them out of the rut, where they had been grinding along for years without knowing it, and gave them a new zest in life. And along with it all the duties and labors of the farm went forward a hundred times better because of the outings and vacations from the grind of toil.

It may surprise many to learn that the farms of America require more power than is employed in all our factories.



**There's Money in it!
Write to Us**
as to what the farmer
is telling the dealer about

OLD BEN BIG LUMP COAL

**For Threshing and
Home Use**

GET THE MONEY

For the best answer \$50.00
For the second best answer 25.00
For the third best answer 10.00
For the next 25 best answers each 1.00

All answers must be in
before October 1st, 1916

Ask your dealer for the Coal

Send answers to

OLD BEN COAL CORPORATION
1119 McCormick Bldg., Chicago



**ABSORBINE STOPS
LAMENESS**
from a Bone Spavin, Ring Bone,
Splint, Curb, Side Bone, or similar
trouble and gets horse going sound.
Does not blister or remove the
hair and horse can be worked. Page
17 in pamphlet with each bottle tells
how. \$2.00 a bottle delivered.
Horse Book 9 K free.

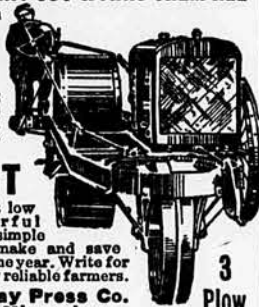
ABSORBINE, JR., antiseptic liniment for
mankind. Reduces Painful Swellings, En-
larged Glands, Goitre, Wens, Bruises, Vari-
cose Veins, Varicosities, heals Old Sores. Allays
Pain. Will tell you more if you write. \$1 and
\$2 a bottle at dealers or delivered. Book
"Evidence" free. Manufactured only by
W.F. YOUNG, P. D. F., 211 Temple St., Springfield, Mass.

K. C. PRAIRIE DOG THE TRACTOR THAT OUTWORKS THEM ALL

Will pull three 14 inch
bottoms under any
ordinary conditions.
25 H.P. Waukesha
Motor—can be used
for operating other
machinery: 2 speeds;
plows at 2 1/2 miles
per hour—on road
work 5 miles. Hyatt
Roller Bearings.

LOW COST

High in quality but low
in price. A powerful
sturdy, enduring, simple
Tractor that will make and save
money every day in the year. Write for
special offer to a few reliable farmers.
Kansas City Hay Press Co.
Kansas City, Missouri.



GET THIS BOOK

Galloway's wonderful book of bargains describes
fully and prices Galloway Cream Separators,
Manure Spreaders, Gasoline Engines, Farm
Tractors. Saves 1-3 to 1-2 on prices
usually asked. Also lists and
prices farm implements, feed-
ing, auto supplies, everything
for farm and household.
SAVE MONEY
By asking for this 260-page
book today. A postal will do.
First edition exhausted; second
edition this bargain book now ready.
W.M. GALLOWAY CO.
Dept. 217 Waterloo, Iowa

Less Grain For Beef Making

TO MAKE beef production profit-
able under present conditions,
greater economy must be exer-
cised in the use of feeds. The old way
of relying largely on grain is too ex-
pensive. Beef cattle must be made to
market large amounts of roughage.

Prof. T. L. Haecker, who has charge
of the animal nutrition work at the
Minnesota Experiment Station farm at
St. Paul, believes that even in that state
beef production can be made profitable
under rational systems of feeding. Pro-
fessor Haecker has for nine years been
experimenting in fattening cattle and as
a result has drawn the conclusion that
the most important point in increasing
the profits is to reduce the amount of
grain nearly half and increase the
amount of roughage. His conclusions
are applicable to Kansas conditions. This
state possesses many natural advantages
for handling beef cattle profitably.

The feeding experiments started by
Professor Haecker in 1907 dealt with 184
beef-bred steers. These were fed in
eight different groups under varying
conditions. In every case the steers more
than paid for the feed given them. Steers
that were stall fed all their lives brought
more at market prices than their feed
cost. Steers run on pasture for two sea-
sons brought from \$20 to \$25 more than
the cost of feed.

Mr. Haecker says that nearly twice
as much grain is given under ordinary
conditions of beef feeding as can be used.
It does not add to the farmer's bank
account to overfeed the cattle and ex-
pect the hogs to dig the waste out of
the manure pile. Feeding experiments
commonly used, before this, from ten to
twenty pounds of grain per day during
the fattening period. Mr. Haecker never
succeeded in feeding eleven pounds. To
feed a steer from the time he weighs
100 pounds until he weighs 1,200 pounds,
according to the tests, requires on the
average the following amounts of feed:
Grain, 2,288.2 pounds—consisting of ap-
proximately 18 bushels of corn, 5 1/2 bush-
els of barley, 9 1/2 bushels of oats, 768
pounds of bran, 645 pounds of oil meal
and 323 pounds of middlings; 2,800.5
pounds of hay, and 3,240.9 pounds of
silage.

The grain cost for the five chief
groups of steers averaged for the first
year \$14.32 a head and for the second
year \$39.92, making a total cost of
\$54.24 for the grain feed for a two-year-
old steer finished for market.

A small daily gain was found to be
most profitable. A gain of a little less
than two pounds a day was kept up on
these steers. It gave better results than
heavy gains for a few weeks that could
not be maintained.

The cost of producing additional gains
increases as the cattle become heavier.
The tests show that the cost of feeding
calves to a weight of 100 pounds is
about 10 cents a pound. From 200 to
300 pounds the feed costs 4.9 cents a
pound. A pound in the 900 to 1,000-
pound period costs 9.3 cents and in the
1,400 to 1,500-pound period it costs 15.4
cents.

Heavy grain feeding is wasteful and
increases the cost of the cattle without
making the product any bigger or any
better. The problem is to use the rough-
age to the best advantage possible and
reduce the more expensive grains to a
minimum.

New Four-Year-Old Record

Another Holstein record has been sur-
passed. Malcolm H. Gardner, superin-
tendent of Advanced Registry, writes as
follows:

"I am pleased to be able to report
that the Holstein-Friesian cow Queen
Piebe Mercedes 154610 has broken the
record for fat production in the junior
four-year class of the semi-official yearly
division, by producing in 365 days, 30-
230.2 pounds milk containing 1,111.56
pounds fat. She freshened at the age
of 4 years, 4 months, 22 days. Her sire
is Sir Pietertje Ormsby Mercedes 44931;
her dam is Queen Piebe of Fairview
71624. She was bred and is now owned
by E. C. Schroeder, Minnesota. In the
junior four-year class of this division
she displaces Milanhurst America De Kol
143441, whose record, strictly official for
365 days, is 26,433.4 pounds milk con-
taining 985.08 pounds fat.

"If computed on the 80 per cent basis,
the equivalent butter produced by Queen
Piebe Mercedes would amount to 1,389.45
pounds; while in milk production she
far exceeds any other cow of like age."

The dairy cow must have green forage
or other succulence at all times if she is
to hold up in her milk production. It
is not uncommon for many cows to drop
in their milk flow during hot, dry
weather, but this can be prevented by
providing something to take the place
of pasture.

A Silo Will Pay For Itself This Year

BUY A SILO NOW

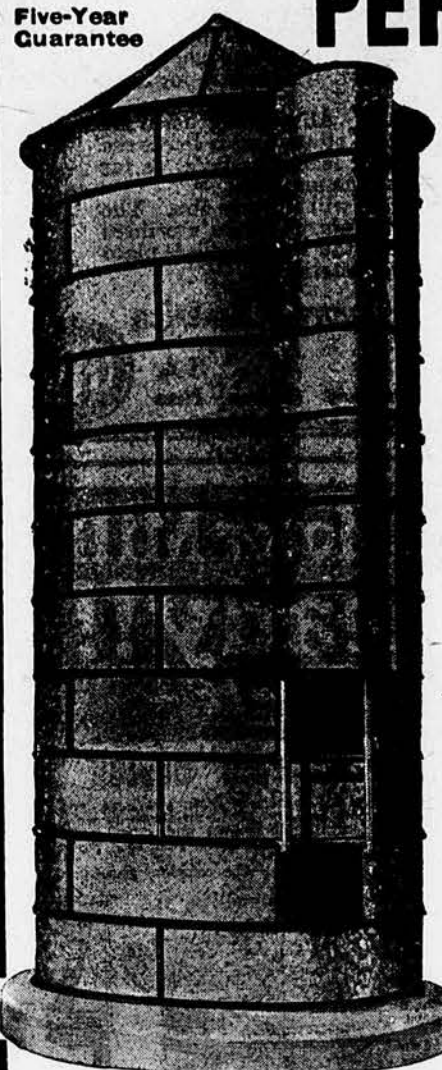
**Your Need Was Never
Greater—Your Oppor-
tunity Never So Good!**

If you will sell yourself this Perfection Metal Silo we will
pay you the same commission that we otherwise would have to
pay a traveling representative.

That's a proposition worth looking into.

Don't let your corn crop be an utter loss. Sixty per cent of
its feeding value can be saved if it is converted into silage.
There is a bunch of big green backs burning up in your fields.
Don't let them go to waste. Turn loss into profit by getting a

Five-Year
Guarantee



PERFECTION METAL SILO

You can buy it today at a
special discount price. We can
ship it tomorrow and you can
start filling within a few hours.

No delay in shipment—no
trouble to erect.

If you get busy now you can
save that corn crop.

We will save you money, if
you order promptly and will give
you a silo that will save you 15
per cent to 18 per cent more feed
than any other type.

**DON'T DELAY—
Get Our Special Prices!**

New Improvements.

The Perfection Metal Silo in ten
years' use has demonstrated its
superiority in strength, durability
and convenience. Made of copper-
alloy metal. It is absolutely air-
tight and by actual test saves more
feed than any other type. No staves
to shrink—no hoops to tighten.
Crack and crumble proof. Easy to
erect—no rivets—no cutting or fit-
ting. Rigid reinforcements around
the silo every 30 inches; vertical re-
inforcements every 90 inches. Proof
against all strains and big pres-
sure of sweating silage. Absolu-
tely rigid against WIND. We give
paid-up insurance against tornadoes
and cyclones. Five year Guarantee.

You Need A Silo —Sell It to Yourself

If you are willing to sell your-
self, we will pay you the sales-
man's commission. YOU CAN SAVE
THAT EXTRA CHARGE IF YOU ACT AT ONCE. In other words, we will
give you a special August discount from our price list equal to our cost of
selling through traveling men. In this way you get the famous Perfection
silo at a lower price than we have ever sold it before, even in spite of the
advance price of materials. But the time is short. Send today for our
special discount sheet.

A SILO TO FIT YOUR NEEDS

No matter how many or how few head of stock you have, we can furn-
ish you the silo you need. Perfection Metal Silos are made in sizes from
9 ft. 6 1/2 inches inside diameter to 21 ft. 6 in. The "Perfection Junior,"
built for the farm with but a few head of stock, in sizes from 9 ft. 6 1/2
inches to 14 ft. 4 in. "Silver King Silos" (on which we make a special
price while they last) in sizes 12 ft. 5 in., 14 ft. 10 in. and 17 ft. 3 in.

**Remember—The Silo Is the Only Salvation For Your
Corn Crop This Year**

There is no other way by which you can save the crop. The Perfection
Metal Silos will not only save a larger percentage of the feed, but they
are the easiest to erect, the most convenient to use, and are by far the
cheapest in the long run. Our special discount (given you in place of
a commission to traveling men) puts the Perfection within reach of
every farmer in the Corn Belt.

SEND FOR PRICE LIST AND DISCOUNTS

The Perfection is shipped complete, including chute, ladder, swing-
hinge, air-tight doors, top-bracing and tools. All materials, bolts, cement
for the joints, paint—everything but the foundation.

— USE THIS COUPON OR SEND A POSTAL CARD. —

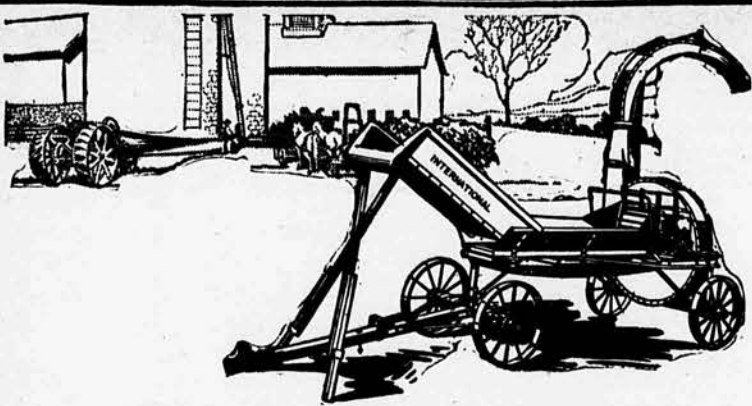
PERFECTION METAL PRODUCTS CO.
1002 Jefferson Street, Topeka, Kansas

Gentlemen: Please send me price list of your line of silos and SPECIAL
DISCOUNT to men who sell themselves.

Name

P. O.

Rural Route or Box No.



Fills Highest Silo

AN International ensilage cutter, Type A, filled a Pennsylvania silo 110 feet high and 27 feet in diameter, said to be the highest silo in the world. This machine has tremendous capacity. It pours a stream of ensilage into the silo at the rate of 16 to 25 tons an hour, cutting as fine or as coarse as may be desired. This is our largest cutter. Type B cuts 12 to 16 tons; Type E, 10 to 12 tons; and type F, 3 to 6 tons per hour. On all models knives and blower are attached to the flywheel, the simplest arrangement and the one that uses the least power. The knives can be adjusted to absolute accuracy, and, once set, are held firmly in place. Their clean shear cut begins at the outer edge, throwing most of the work close to the center, where the power is greatest. No power is wasted.

International ensilage cutters are safe. All working parts are carefully housed. The lever that starts, stops, and reverses the machine is so placed that a man cannot reach his hand as far forward as the knives without stopping the machine.

The power cost is low. The machine will fill any silo. The operators are carefully protected from injury. Here are three good reasons for seeing the machine at the local dealer's place of business, or writing to us for full information.

International Harvester Company of America

(Incorporated)

CHICAGO

SA

Champion Deering McCormick Milwaukee Osborne Plano

My Wonderful Motor Mill Now Ready!! It Runs Itself—

Campbell
Manson
says:
"If you want
to clean-up
money,
clean up
your
grain."

GREATEST GRAIN CLEANING DEVICE

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Kansas Farmer Dairy Club

WE HAD something to say in a recent issue regarding the importance of producing clean milk. The use of a pail with a covered top is a great aid in keeping milk clean. The greatest source of danger to milk is while it is being drawn from the cow and while it is being handled till cooled. Since this is the case it will be seen that the covered milk pail is a factor in reducing danger.

By a covered top pail is meant a milk pail so constructed that it has only a small opening in the top, the rest of the top being covered with metal of which the pail is made.

The object of such a pail is to prevent dirt and hair from falling into the milk. As the old saying goes, "An ounce of prevention is worth a pound of cure." This is surely one place where the saying holds true. Dirt and hair mean bacteria in the milk, and bacteria cannot be strained or filtered out. Bacteria are always more or less injurious to the quality of the milk and to all milk products. This means a lower price for the milk, and eventually a lower price for the milk products. But this is not all. Dirty, bacteria-laden milk products oftentimes are quite injurious to health, and especially the health of the children.

Of course a great deal depends upon the milk as to whether or not the milk is clean or dirty, but under average conditions a covered milk pail with an opening six inches in diameter stands only one chance in four of catching hairs or other foreign material that a pail twelve inches in diameter would. In other words, a pail with a six-inch diameter will catch only about one-fourth as much dirt and hair as a pail with a twelve-inch diameter.

Shortsighted Bankers

I had made arrangements with the cashier of our bank to borrow the money needed to buy a cow and take part in the Kansas Farmer Dairy Club, but I just heard today that the directors of the bank said they did not want to begin loaning money to boys for such purposes. Cows are hard to get out here, but even if I could find a cow, I could not buy her, as I have no money.—G. R. C.

EDITOR'S NOTE.—This boy writes from a Western Kansas county where there should be a great increase in the amount of dairying done. It would mean more money for everyone, the banks included. The boy may not have any money now, but he will have some day, and when he is establishing his banking connections he will probably remember how the directors of this bank ignored him when as a boy he was trying to get a start.

Remedy for Scours

A Pottawatomie County reader offers his remedy for calf scours. He puts two tablespoonfuls of white flour in a pail and stirs it up with water, then puts in the feed of milk. He says he has never known this remedy to fail.

Cow Making Good Record

I am sorry I did not send you a picture of my cow, "Daisy," and her calf before, and also write something about the contest. But the hot weather and the busy season on our farm did not make one feel much like writing. Then the flies and hot weather cut down the milk flow so much that I felt discouraged. When Daisy had been fresh three weeks we took a picture of her, but when father discovered that it showed two broken window panes that had not been fixed, he would not let me send the picture. After the panes of glass were put in we took some more pictures. The calf is a bull. He is large and well marked.

My sister, my two brothers and myself have a cow that was given to us as a calf by papa. She has one yearling heifer and now has a heifer calf. She is a grade Holstein and produces fine calves, but up to now she has not given as much milk as we expected. We are hoping she will do much better this time.

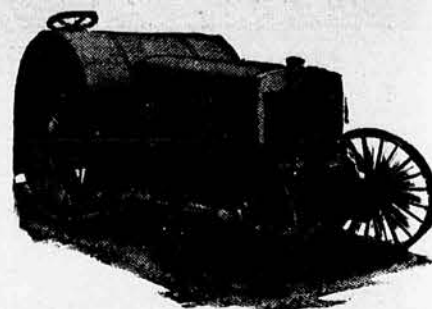
In June my contest cow, Daisy, gave over seventy pounds of milk a day for the first week, but she would not eat much grain and her record went down. It is a hard matter to get it back again.

During June and July I fed her a mixture of one part bran and two parts corn chop. She will not eat a grain ration having any cottonseed meal in it. Can you give me a reason for that?

She has shade and all the water she wants.

I am sending a picture of our house and barns also, and will send the milk and feed records soon.—RUDOLF ENNS, Harvey County.

Some cows do not like cottonseed meal and cannot be induced to eat it. Lin-



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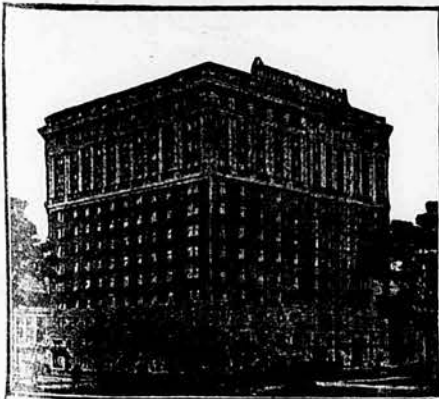
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seed oil meal can be used in its place and stock of all kinds like it. The past year it has been as cheap as or cheaper than cottonseed meal. Try putting a little linseed oil meal in your ration.

Flies and Milk Production

A decrease in milk production is to be expected during the hot summer season. This is one good reason why cows should be so bred as to have the dry period come when conditions for milk production are poorest. Dry pastures, insufficient water and improper feeding methods always cut down the milk flow in hot weather.

Flies are held responsible for the decrease in milk flow by many, and they do greatly annoy cattle, but they are not the sole cause of falling off in milk. We agree with Prof. O. E. Reed of the agricultural college that lack of proper feed is the big factor in lowering milk production at this season of the year.

"We have received many letters asking for our recipe for fly repellent," says Professor Reed. "Just the other day a farmer wrote in for the formula for a repellent to use on his herd because of a falling off in milk flow, which he attributes to flies. Those cows didn't need anything but plenty of feed. If that man would pay more attention to feeding his cows and less attention to flies, he would see the difference between a well fed cow plus flies and a poorly fed cow minus flies. The difference would soon show up in the milk sheet if he has one."

Fly repellents give the animals relief and indirectly help in keeping up the milk flow. The following repellent has been used at the college animal husbandry barn for a number of years and is very effective: Dissolve two cakes of laundry soap in warm water. To this add and thoroughly mix one and one-half pints of resin, one-half pint of fish oil and enough water to make three gallons, heating the mixture until the resin is dissolved. Then add one-half pint of kerosene oil when ready to use and apply with a brush or spray pump. Half a pint should be used at an application. It will be necessary to make about three applications a week before the hair becomes coated with resin.

Dickinson County Cow Report

Records of cows in the Dickinson County Cow Testing Association which produced more than forty pounds of butter during the month ending June 30, 1916. "H" stands for Holstein; "S. H." for Shorthorn; "Her." for Hereford; "J" for Jersey.

Owner—	Pounds of Milk	Per Cent Fat	Pounds of Butter
George Lenhart, H.....	1,248	3.3	51.5
George Lenhart, H.....	819	4.4	45.0
George Lenhart, H.....	927	3.8	44.0
George Lenhart, H.....	1,200	3.0	45.0
George Lenhart, H.....	1,011	3.4	43.3
George Lenhart, H.....	1,200	3.6	54.0
George Lenhart, H.....	1,029	3.26	41.9
George Lenhart, H.....	1,161	3.56	51.6
George Lenhart, H.....	1,569	3.16	62.2
A. B. Wilcox, H.....	1,122	3.1	43.5
A. B. Wilcox, H.....	1,089	3.0	40.8
A. B. Wilcox, H.....	1,140	3.6	51.2
A. B. Wilcox, H.....	1,428	2.9	52.8
A. B. Wilcox, H.....	1,265	3.8	40.6
A. B. Wilcox, H.....	1,265	2.8	44.2
A. H. Diehl, H.....	1,245	3.8	59.1
A. H. Diehl, S.H.....	798	4.4	43.7
Samuel Mitch, Her.....	801	4.4	44.0
Samuel Mitch, Her.....	969	4.2	50.9
Mott & Seaborn, H.....	1,140	3.2	45.6
Mott & Seaborn, H.....	894	3.6	40.3
Mott & Seaborn, H.....	1,089	3.6	49.0
Mott & Seaborn, H.....	975	3.6	43.9
Mott & Seaborn, H.....	951	3.8	45.1
Mott & Seaborn, H.....	771	4.6	44.6
Mott & Seaborn, J.....	726	5.6	50.7
Dr. S. Nichols, H.....	1,095	3.1	42.5
Dr. S. Nichols, H.....	1,122	3.2	44.9
Dr. S. Nichols, H.....	1,068	4.0	53.4
Dr. E. N. Farnham, J.....	840	4.3	45.1
Dr. E. N. Farnham, H.....	873	3.8	41.4
Hoffman Bros., H.....	1,050	3.9	51.3
L. U. Hoffman, H.....	1,044	3.8	40.7
L. U. Hoffman, H.....	861	3.8	40.8
J. A. Weishar, H.....	954	3.4	40.5
William Hause, H.....	879	4.0	44.0
William Hause, S.H.....	864	3.9	42.0
William Hause, H.....	1,221	3.4	51.9
William Hause, S.H.....	900	4.1	46.1
William Hause, J.....	750	4.9	46.0
William Hause, S.H.....	807	4.1	41.4
William Hause, S.H.....	771	4.4	42.4
William Hause, S.H.....	1,038	3.6	46.6
William Hause, S.H.....	903	3.9	44.0
Ira Zercher, H.....	837	4.5	47.1
Ira Zercher, H.....	1,101	3.6	49.5
Ira Zercher, H.....	960	5.3	63.6
L. L. Engle, S.H.....	882	4.6	50.8
L. L. Engle, S.H.....	1,215	3.7	56.2
H. S. Engle, H.....	908	4.2	47.5
H. S. Engle, H.....	1,017	4.4	55.9
D. S. Engle & Son, H.....	1,095	3.6	49.3
D. S. Engle & Son, H.....	1,320	3.5	57.8
D. S. Engle & Son, H.....	1,443	3.1	55.9
D. S. Engle & Son, H.....	1,080	3.6	48.7
Joe Pryor, H.....	768	5.7	54.8
Joe Pryor, H.....	954	3.8	45.4
Ralph Sterling, J.....	909	4.2	47.8
Ralph Sterling, J.....	768	4.8	46.1
Ralph Sterling, J.....	696	4.6	40.0
Ralph Sterling, J.....	705	4.6	40.5
Ralph Sterling, J.....	1,326	3.9	63.5
John Collins, H.....	1,101	3.4	46.7
E. S. Engle & Son, H.....	1,725	4.1	88.4
E. S. Engle & Son, H.....	1,266	3.8	60.1
E. S. Engle & Son, H.....	1,413	3.6	63.6
E. S. Engle & Son, H.....	735	4.7	43.1
E. S. Engle & Son, H.....	825	4.2	43.4
E. S. Engle & Son, H.....	813	4.1	41.6
E. S. Engle & Son, H.....	816	4.2	42.9
E. S. Engle & Son, H.....	1,260	2.88	45.4

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TOPEKA BARBER COLLEGE, the one place where you can learn the barber trade (earn while you learn). Write today. Topeka Sanitary Barber College, Topeka, Kansas.

"Dinah," inquired her mistress, suspiciously, "did you wash this fish carefully before you baked it?"
"Law ma'am!" said Dinah. "Wot's the use of washin' er fish dat's lived all his life in de watah?"



Little Talks to Housekeepers

Helpful Hints Here for the Women Folks of the Farm

The task before us, which is to endure with our existence, is rather one of microscopic fineness and the heroism required is that of patience. — ROBERT LOUIS STEVENSON.

Several Leavenworth County women who were present at a canning demonstration given in the Lansing neighborhood by County Agent Ross last summer have been successful in canning beans and corn for the first time, not a single jar of the vegetables being lost. This spring they have planned their gardens especially for the canning work.

Reports have been received from 3,156 homes in the Northern and Western states which show that 275,856 quarts of fruits and 270,659 quarts of vegetables were canned during the season of 1915. The canning was done by adults who requested the home canning instructions furnished by the department to club members.

Mold on Canned Goods

Mold may develop on canned goods—
(1) If the seal is defective.
(2) If, after sterilizing, tops are removed from jars to replace rubber ring. Jars should be returned to the canner for at least five minutes when this is done.
(3) If jars are kept in a damp place where the rubbers may decompose, mold may enter through these decomposed rubbers.

Good Kitchenware Pays

It is not economy to buy the cheapest kitchenware though in the beginning it may cost less than half as much as the better ware. Pans, kettles, frying pans, and the tea and coffee pot are used hard, and these utensils made of the better materials will outwear many of the poorer ones.

It may not be possible to buy a whole outfit, but by getting a piece at a time when the set is complete it will stand for a permanent investment and if given good care re-stocking should not be necessary for many years.

Syrup Density Table

To enable canning-club members to prepare syrup of any desired density the federal department of agriculture through the Office of Extension Work, furnishes the following table. No allowance has been made in the table for evaporation.

Percentage (or degrees) of density.	Sugar.	Water.
12 per cent.....	1 1/2	5 1/2
15 per cent.....	3	8 1/2
18 per cent.....	4 1/2	10 1/2
24 per cent.....	6	9 1/2
28 per cent.....	7	9
35 per cent.....	7	6 1/2
40 per cent.....	2	1 1/2
50 per cent.....	1	1/2
60 per cent.....	6	2
64 per cent.....	16	4 1/2

Club Buys Co-operatively

Mrs. Nellie Snyder, from the States Relation Service, spent three days in June giving demonstrations to canning clubs in Leavenworth County. In spite of heavy rain and muddy roads, the first day there were fifty present at the demonstration, and questions were asked from the moment Mrs. Snyder started work until she left in the evening after 5 o'clock. Her work, which was of the highest character and intensely practical, aroused the greatest enthusiasm among the club members, and will be a decided help to the Mother-Daughter and canning club work in the county.

Mrs. Snyder stated that the Glenwood club is the largest club of its kind in the United States, and the first club she has found in the United States ordering a uniform jar for exhibition purposes and ordering the same make of rubber for each member. By clubbing their orders the members obtain superior materials cheaper than the ordinary makes can be secured at retail. The Glenwood ladies have also combined their orders for sugar, which they will get at wholesale prices.

The Invalid's Tray

Each bit of nourishment offered the sick should be served attractively.

Usually the appetite needs coaxing at such times, and well cooked food well served will stimulate it.

If there is a particularly dainty piece of china among the dishes, let it be used, also the prettiest spoons and knife and fork, and see that the silver is bright and shining.

The tray should be one that can be easily cleaned and should be light in weight and in color, if possible. If there is not a tray cloth among the linens, a clean white napkin neatly folded will make an attractive covering for the tray.

Perhaps a change of dishes or silver will add interest to the invalid's meal.

And don't forget to add a flower or a sprig of green to the tray. Flowers always have a message of their own and will be doubly appreciated when the meal is eaten alone and amid unusual surroundings as is the case in the sick room. Just one pansy, a mint leaf, or a clover blossom and leaf will answer the purpose, and will in fact be daintier than many of the more pretentious flowers.

All these things affect the appetite favorably, and the satisfaction felt by those waiting upon the invalid, when their efforts result in creating a desire for food, will far more than offset the little extra work.

Many Uses for Honey

Bee and honey enthusiasts have long made wonderful claims for honey as food and especially as a substitute for sugar. In the face of the present extremely high price asked for sugar, a study of the uses of honey and its comparison with cane sugar as to food value, might result in making possible a material reduction in the amount of sugar used.

A comparatively recent bulletin issued by the Federal Department of Agriculture—Farmers' Bulletin No. 653—and which was prepared in the Office of Experiment Stations, gives some very helpful facts regarding honey and its uses. As is the case in the preparation of all federal bulletins, the subject is treated fairly. The careful study was made for the sole purpose of determining the real value of honey in the diet and the conclusions set forth in the bulletin are conservative and will be helpful to those searching for reliable information as to the extent to which honey can take the place of sugar.

The bulletin states the following as to the difference between the use of honey and sugar in cooking:

"The fact that honey consists principally of sugar and water and is slightly acid, suggests that it is a suitable substitute for molasses in cookery. As a matter of fact, it can be used in the place of molasses in all forms of breads, muffins, and cakes, and makes a more delicately flavored product. It contains less acid than molasses, however, and so requires less soda when it is substituted for molasses in recipes which do not include sour milk or other acid, and the cook must be careful about the amount of soda used. Many trials were made with different kinds of honey in this laboratory which showed that the allowance of soda to a cupful of honey very generally ranges between one-fourth and one-half of a level teaspoonful. Unless the cook is thoroughly familiar with the honey, she would do well to mix and bake a small sample of dough before she decides on the amount of soda to be put into the main portion.

"When honey is to be substituted for common sugar it is desirable to know not only how it compares in sweetness, but also how much allowance must be made for the water which it contains. Assuming a cupful of good honey to measure one-half pint, it should weigh about twelve ounces. Of this, nine to ten ounces, roughly speaking, is sugar. A cupful of honey, therefore, corresponds to a little more than a cupful of cane sugar. Hence it is safe to estimate that a cupful of honey will sweeten a dish just about as much as a cupful of sugar. Besides the sugars, there is about one-fifth cupful of water in a cupful of honey. Theoretically, therefore, in making cake one should substitute honey for sugar cupful for cupful, and for each cupful of honey use one-fifth cupful less of the milk or other liquid which the

recipe names. For practical purposes, however, it is accurate enough to consider that the water in a cupful of honey is one-fourth of a cupful. This rule was found to hold good with a large number of ordinary cake recipes which were tested in this laboratory. These facts, if kept in mind, make special honey recipes unnecessary and enable the cook with very slight calculation to modify ordinary ones so that honey can be used in place of sugar. Besides slightly changing the flavor of the cake, honey used in the place of sugar makes it keep moist longer. A honey cake made with butter will keep its quality until the butter grows rancid, and one made without butter will keep fresh for months and even improve in flavor. What is true of the cakes is true also of the dough; it can be kept almost indefinitely. Evidently, then, honey is especially useful in recipes without butter."

The honey recipes on this page are taken from the bulletin.

Honey Drop Cakes

¾ cupful honey
¼ cupful butter
½ teaspoonful cinnamon
½ teaspoonful cloves
1 egg
1½ to 2 cupfuls flour
½ teaspoonful soda
2 tablespoonfuls water
1 cupful raisins, cut into small pieces

Heat the honey and butter until the butter melts. While the mixture is warm add the spices. When it is cold add part of the flour, the egg well beaten, the soda dissolved in the water, and the raisins. Add enough more flour

to make a dough that will hold its shape. Drop by spoonfuls on a buttered tin and bake in a moderate oven.

Honey Sponge Cake

¾ cupful sugar
¾ cupful honey
4 eggs
1 cupful sifted flour

Mix the sugar and honey and boil until the syrup will spin a thread when dropped from the spoon. Pour the syrup over the yolks of the eggs which have been beaten until light. Beat this mixture until cold, then add flour, and cut and fold the beaten whites of the eggs into the mixture. Bake forty or fifty minutes in a pan lined with buttered paper, in a slow oven.

This cake can be made with a cupful of unheated honey in place of the honey and sugar syrup, but the quality is not quite so good.

Grape Marmalade

Wash very ripe Concord grapes. Separate skins from pulp, put pulp in preserving kettle, cook slowly till seeds separate from pulp, rub through sieve. Add skins, measure, and add equal measure of sugar. Cook slowly half an hour, stirring to avoid burning. Will keep in tumblers or jars.

A fly had fallen into the ink well of a certain author who writes a very bad and very inky hand. The writer's little boy rescued the unhappy insect and dropped it on a piece of paper. After watching it intently for a while, he called to his mother: "Here's a fly, Mamma, that writes like Papa."

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.



7802—Ladies' Shirt-Waist: Cut in sizes 36 to 44 inches bust measure. Very pretty in a characteristic quality to this model that will readily win you over to making it. In the combination effect, white galatea and linen in your favorite color will be well chosen. The blouse slips on over the head and long or short sleeves may be used. The shoulder fronts are gathered and the back fullness is gathered at the waistline under a stay-belt. No. 7817—Girls' Apron: Cut in sizes 6, 8, 10, 12 and 14 years. This apron is cut in one piece, with a square neck, cut outside sections and epaulet shoulder, telling that the cape effect is fashionable in aprons too. Edging and insertion very effectively trim the neck and sides—front and back. No. 7802—Ladies' Shirt-Waist: Cut in sizes 36 to 44 inches bust measure. Very pretty for plain and figured material. The large cape collar, in contrasting note and finished with edging, extends almost to the waistline in back—in square outline. The sleeves may be long or short. No. 7152—Ladies' Dress: Cut in sizes 34 to 44 inches bust measure. This serviceable frock has a plain blouse, with a collar of moderate size at the neck, which is somewhat open. The sleeves are plain and may be long or short. The skirt has a two-piece yoke and to this the three-kore lower portion is attached without fullness. No. 7073—Ladies' Skirt: Cut in sizes 22 to 32 inches waist measure. In adding fullness to the walking skirts, many of the new designs are found with plaits, as in the illustration. This skirt has a double box plait in both front and back, and is made with the raised or regulation waistline. It has six gores and measures three yards around the lower edge in the medium size. No. 7821—Ladies' Dress: Cut in sizes 34 to 42 inches bust measure. Convincing as to the popularity of the "over-effect" in one-piece dresses. The surplice closing of the overblouse gives a neat vest effect to the separate gumpie which is of different material and has full sleeves gathered to deep cuffs. The skirt is cut in three gores.

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THOUSANDS U. S. GOVERNMENT JOBS now open to farmers, men and women, \$75 month. Common education sufficient. Write immediately for list of positions obtainable. Franklin Institute, Dept. N-82, Rochester, New York.

CATTLE.

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

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.

REAL ESTATE.

WANT TO BUY GOOD FARM, WELL LOCATED, direct from owner. A. Affke, Box 754, Chicago.

WHILE STUDYING AGRICULTURE, lease fifteen acres, Cuba, West Indian, 50 dollars yearly for poultry and dairy farming. Ivar Stueford, Oak Mills, Kan.

FOR SALE—RANCH, ¼ MILE FROM Sharon Springs, Kansas; 1,520 acres, fenced, clear, all tillable; 700 acres bottom land with sheet water; improved; \$23 an acre. Would take in a smaller place. P. G. Davis, Manhattan, Kan.

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

POULTRY.

SINGLE COMB BROWN LEGHORNS—Pullet mating only. Tiff Moore, Osage City, Kan.

MACK'S S. C. REDS—FALL SALE OF April and May-hatched cockerels and pullets; 200 cockerels, 200 pullets. Ten utility pullets and two utility cockerels for \$15. Write for prices on exhibition birds. H. H. McLellan, Box K, Kearney, Neb.

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

POULTRY WANTED.

PIGEONS, BROILERS, HENS, DUCKS and guineas wanted. Coops loaned free. Cash offers on request. "The Copes," Topeka.

HORSES AND MULES.

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

FARMS WANTED.

FARMS WANTED—HAVE 4,000 BUYERS. Describe your unsold property. 514 Farmers Exchange, Denver, Colo.

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

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FINEST EXTRACTED HONEY, GATHERED by bees and sent to you direct from the hive. Rich, smooth, delicious. Purity and weight guaranteed according to law. Following prices are f. o. b. Hotchkiss, Colo. One can containing 60 pounds net, \$5; case of two cans, \$9.50; two to four cases, \$9 each. Special price on larger lots. Ten cents brings sample. Frank H. Drexel, Crawford, Colorado.

HOGS.

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

DOGS.

TRAINED RABBIT HOUNDS, FOX hounds, coon, opossum, skunk, squirrel dogs, setters, pointers. Pet—Farm dogs; ferrets. Catalog, 10c. Brown's Kennels, York, Pa.

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MISCELLANEOUS.

TOMATOES PICKED FOR SHIPPING, two cents a pound by express. T. F. Pine, Route 2, Lawrence, Kan.

FERRETS, SINGLE, PAIRS AND DOZEN lots. Guinea pigs, rabbits, Toulouse geese, fox terriers and Angora kittens. Jewell, Spencer, Ohio.

HORSE OWNERS—GOOD SOUND FLESH guaranteed from my fattening recipe. No matter how old the horse, results guaranteed. Mailed for \$1. Chas. Smythe, Ardmore, Okla.

LEARN AUTOMOBILE TRADE AND you learn all about the farm tractor, and all makes of stationary gas engines. Why pay a fancy price when you can get reduced rates for the summer and fall months? Enter any time. Write Berry Auto School; established 1904; St. Louis.

FOR SALE—240-EGG QUEEN INCUBATOR; 100-egg Sure Hatch incubator; 100-chick Sure Hatch brooder; Humphries green bone grinder; lot chicken wire; lot of chicks, laying strain Single Comb Reds. All priced reasonable. Fred B. Gebhart, Sixth and Swygart, Topeka, Kan.

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PURE-BRED UNREGISTERED SHROPSHIRE ram lambs, extra good. K. Hague, Route 6, Newton, Kan.

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

LUMBER DIRECT FROM MILL TO consumer. Send us your itemized bills for estimate. Our specialty, mixed cars. McKee Lumber Co. of Kansas, Emporia, Kan.

BUY DIRECT AND SAVE SEVERAL profits. Lumber, lath, shingles, moldings, doors, windows, frames and finish at rock-bottom prices. Quality and satisfaction guaranteed. Send your lists for estimate. Sam Connell Lumber Company, Portland, Oregon.

PET STOCK.

FERRETS—BREEDER OF ENGLISH and Fitch Ferrets. Write for prices. H. G. Hardy, Wellington, Ohio.

FOR SALE—ALL KINDS OF PURE-bred poultry, turkeys, geese, seven kinds of ducks, guineas, bantams, hares, rabbits, guinea pigs, canaries, fancy pigeons, dogs. Write. Free circular. D. L. Bruen, Platte Center, Neb.

We have just received Volume 88 of the American Shorthorn Herd Book. This volume contains 20,000 pedigrees—bulls from No. 429001 to 437000 and cows from 205001 to 217000.

The counties of Lake, McHenry, Kane, DuPage and Cook, in the state of Illinois, have been released from quarantine for tuberculosis in cattle by an order signed by the Secretary of Agriculture, effective August 1. These counties were the only portions of the state under quarantine. This order revokes the quarantine placed upon these counties by an order signed August 22, 1914, and effective October 1, 1914. This quarantine prevented the interstate shipment from the quarantined area of cattle, for any purpose other than immediate slaughter, unless the cattle had been tested with tuberculin by or under the supervision of a bureau of animal industry inspector and were accompanied by a bureau of animal industry certificate, including a tuberculin test chart, showing the cattle to be free from the disease.

KANSAS STATE FAIR

BY THE STATE BOARD OF AGRICULTURE

Hutchinson, September 16-23, 1916

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THE NATURAL MEETING PLACE OF THE BREEDER AND HIS BUYER.

It is the annual opportunity afforded Kansas breeders to meet and get acquainted with Kansas people, and live stock men of other states of the Great Southwest. Liberal prizes are offered in all live stock departments and good barns and pens are provided. Prizes are offered on Kansas-bred or Kansas-owned sheep only.

TWENTY-THREE GREAT STANDARD BRED AND THOROUGH BRED RACES

Races and heats will be interspersed by high class free attractions and vocal and instrumental music. Seats may be reserved in the grandstand.

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These races will be conducted under the rules of the International Motor Contest Association with cars specially built and driven by the best dirt track drivers in the world.

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Entertainment is demanded and has come to be one of the great features. High class acrobatic acts, comedians, grand opera singers, Florida troubadour singers, and concert bands.

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Classes interspersed with free acts and vocal and instrumental music and each evening closes with grand fireworks.

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For Sale—Ten head of young Duroc Jersey cows, bred to one of the best boars in the state for fall farrow; also spring pigs, both sexes. Price reasonable.

ARTHUR A. PATTERSON, Ellsworth, Kan.

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Eighteen big husky boars, thirty bred gilts, a few tried sows. Crimson Wonder, Illustration II, Colonel, Good Enuff, Defender breeding. Either by or bred to sons of the greatest champions of the breed. Priced for quick sale. Immune.

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BABY DUROCS—Choice April pigs from premium stock, \$10 each. JACKSON & COUNTER, 43 Crawford Bldg., Topeka, Kan.

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MUST SELL. Because of failing health, my fine alfalfa and stock ranch of 2,000 acres. MARY E. KINGORE, WESKAN, KANSAS

FARM AND HERD NEWS NOTES

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O. W. Devine, Representative

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Personal mail may have to be held for several days, or be delayed in forwarding, and Kansas Farmer cannot assume any responsibility for mistakes occurring thereby

CLAIM SALE DATES.

Feb. 9, 1917—Breeders' Combination Sale, Manhattan, Kan.

Oct. 24—John J. Leidy, Robinson, Kan.

Shorthorn Cattle.
Oct. 10—E. E. Carver & Son, Gullford, Mo.
Nov. 22—Tomson Bros., Carbondale and Dover, Kan.

Herefords.
Oct. 7—J. O. Southard, Comiskey, Kan.
Oct. 24—W. L. Bowman & Co., Ness City, Kan.

Poland Chinas.
Sept. 16—T. H. Young, Stahl, Mo.
Oct. 10—Sigel Brown, Reeds, Mo.
Oct. 10—E. E. Carver & Son, Gullford, Mo.
Oct. 13—Dr. J. H. Lomax, St. Joseph, Mo.; sale at farm near Leona, Kan.
Oct. 14—T. J. Dawe, Troy, Kan.
Oct. 16—Walter B. Brown, Perry, Kan.
Oct. 18—Fred G. Laptad, Lawrence, Kansas.
Oct. 19—P. M. Anderson, Lathrop, Mo.
Oct. 19—H. B. Walter, Effingham, Kan.
Oct. 20—James Arkell, Junction City, Kan.
Oct. 24—Leonard & Russell, St. Joseph, Mo.
Oct. 23—Forest Rose, Hemple, Mo.
Oct. 25—L. S. Byrne, Saxton, Mo.
Oct. 26—Walter W. Head, St. Joseph, Mo.
Oct. 27—T. E. Durbin, King City, Mo.
Oct. 28—H. H. Foster, King City, Mo.
Oct. 31—Harry Wales, Peculiar, Mo.
Nov. 1—W. R. Webb, Hiawatha, Kan.
Nov. 1—Fred B. Caldwell, Howard, Kan.
Nov. 4—L. R. Wiley, Sr., Elmdale, Kan.
Nov. 6—A. R. Enos, Ramona, Kan.
Nov. 9—Herman Groniger & Sons, Bendena, Kan.
Feb. 28—Clarence Dean, Weston, Mo.

Spotted Polands.
Oct. 12—Andrews Stock Farm, Lawson, Mo.
Oct. 24—Everman Poultry Farm, Gallatin, Mo.

Durocs.
Oct. 18—Fred G. Laptad, Lawrence, Kansas.
Nov. 3—W. W. Otey & Sons, Winfield, Kan.
Nov. 2—Lant Bros., Dennis, Kan.
Feb. 10—W. W. Jones, Clay Center, Kan.

Waterman & Brown, of Lakin, Kan., own one of the great herds of pure-bred Berkshire hogs in the West. They have one of the best arranged hog ranches in the state and their pure-bred Berkshires are proving a profitable investment. This year they have a very fine lot of spring pigs sired by Charming Duke C, one of the good sires of the breed and out of sows by noted Berkshire sires.

I. W. Poulton of Medora, Kan., one of the practical farmers and stockmen of this state, has made a success with his herd of Red Polled cattle. He has developed a herd of that popular dual purpose breed that are heavy producers and a number of cows in his herd have high production records. For over fifteen years Mr. Poulton has made it a rule to cull out all poor producers and a feature of his herd at this time is the large number of cows and heifers of uniform milk producing types.

S. S. Smith of Clay Center, Kan., reports his Jerseys making a good record again this year. Mr. Smith has built up one of the richly bred heavy producing herds of Jersey cattle in this state. The cows are a rugged lot and for years have returned a good profit each year, regardless of conditions.

E. D. King of Burlington, Kan., owner of one of the best flocks of Rambouillet sheep in the West, has demonstrated in a practical way the value of sheep on Kansas farms. Twenty years ago Mr. King founded his flock with breeding stock from the best flocks in Michigan and Ohio. He has always used the best rams to be obtained and there has never been a year that his flock did not return a good profit. A feature of his flock at this time is the number of choice young ewes and rams.

H. H. Holmes of Great Bend, Kan., will take out a complete herd of Shorthorn cattle to the leading state fairs this fall. Mr. Holmes is the owner of one of the good herds in Kansas and finds them very profitable out in the wheat belt of Kansas. Good cattle and alfalfa return the greatest profits from the Riverside Farm.

Howard Martendale of the Hillside Farm, Madison, Kan., is one of the successful stockmen of Greenwood County. Mr. Martendale knows the value of good live stock on the farm. He is building up a splendid herd of the big Spotted Poland China hogs. He has been breeding Shorthorn cattle and Poland China hogs for twenty-five years in Greenwood County and he finds it a great pleasure as well as a source of profit on his farm. Mr. Martendale recently added three good sows to his herd, bought in the H. L. Faulkner sale held at Jamesport, Mo., on August 9.

The following directors for the Standard Poland China Record Association were elected at a special meeting of the shareholders held at Maryville, Mo., July 15, 1916: Three-year term—L. E. McLarnon, Braddyville, Iowa; T. J. Dawe, Troy, Kan.; and N. I. Staples, Burlington Junction, Mo. Two-year term—W. B. Gex, Maryville, Mo.; J. C. Meese, Ord, Neb.; and T. J. Meisner, Sabatha, Kan. One-year term—H. C. Lookabaugh, Watonga, Okla.; W. A. Baker, Butler, Mo.; and Sam McKelvie, Fairfield, Neb.

Wisconsin is noted for its fine herds of dairy cattle, and herds in that state are drawn upon heavily by dairymen and breeders in the Southwest. Among the herds in Wisconsin contributing cattle in large numbers to southwestern territory is the White-water Stock Farm herd at Whitewater, Wis. Both Holsteins and Guernseys are handled on this farm, and some of the best high grades of both breeds in the Southwest are from this farm.

WHEN WRITING TO ADVERTISERS PLEASE MENTION KANSAS FARMER

Herman Groniger & Sons, of Bendena, Kan., are fitting a small herd of Poland Chinas for the Brown County fair. Mr. Groniger is one of Kansas' oldest breeders and during the past few years they have demonstrated that in founding a herd of Poland Chinas it pays to start with the very best foundation stock, then give the business the very best of attention in order to make a complete success. Groniger & Sons have in Futurity Rexall one of the great boars in the state, and he looks like a good prospect for state fair champion. This hog's greatest value is in his get. He is siring a splendid lot of pigs that are full of quality. They announce November 9 for their annual fall sale, and on this date they will sell a draft of boars and gilts.

Albert S. Ennis of Ennis Stock Farm, Holme, Mo., is one of the progressive breeders of pure-bred stock in that state. His herds of Jersey cattle and Spotted Poland China hogs are among the best in the assembled. His Jersey herd, which is one of the heavy producers, now consists of 120 head. Mr. Ennis has recently issued a neat booklet describing his herds.

Dr. George C. Pritchard of Topeka owns one of the strictly high class herds of Holsteins in this state. The individuals that make up his herd are representatives of the best producing families of the breed and are backed by high production records. A feature of his herd at this time is the choice lot of young stock, including a number of young bulls that are fine prospects.

R. A. Gilliland is making a success with his herd of registered Jersey cattle. Mr. Gilliland has about forty head. They represent the leading families and are bred for type, production and constitution. This herd is headed by one of the good bulls known to the breed, Cretesla's Interested Owl, a son of Interest Prince. His grand dam won the world's gold medal given by the American Jersey Cattle Club, making a record of 825 pounds of butter and over 14,000 pounds of milk in one year when a twelve-year-old cow. This was a remarkable record for a cow of her age. A feature of the herd at this time is the nice lot of promising young heifers.

W. R. Webb of Hiawatha, Kan., is now located at his new home adjoining the city of Hiawatha. Mr. Webb has about 100 of the best Poland China pigs he has ever raised. One fine litter by Big Price Jr., one litter by Mc-Big Joe, one by Superba 2d, two litters by King of Wonders, one litter by King of All and one litter by Defensive. Mr. Webb is announcing October 31 for a fall date and will offer to the public thirty boars and thirty gilts, the pick from the herd. This offering promises to be one of the best grown out pigs that will be sold this fall.

John J. Leidy of Robinson, Kan., has sold his farm and on October 24 he will disperse his fine herd of registered and high grade Holstein cows and heifers, consisting of ninety-five head. Mr. Leidy has kept up one of the best dairy herds of cattle in Brown County for a number of years. These cows have proven a source of profit. They are high producers with proven tests and milk records. There are forty cows in this herd that are as good as can be found on any farm; forty-five yearling and two-year-old heifers that are very promising, having registered sires and proven dams. All of the cows are bred to the great registered bull, Cornucopia Pontiac Wayne. His dam was the champion dairy cow of Nebraska for two years.

E. E. Frizell of Frizell, Kan., owner of one of the good herds of Red Polled cattle in the West, reports his herd doing well this year. He also reports a heavy demand for high class pure-bred Red Polled breeding stock at very satisfactory prices.

Simpson & Ballou of Dodge City, Kan., own one of the profitable herds of Holsteins in this state. A feature of their herd at this time is the choice lot of young cows and heifers sired by the great bull, Willow Meadow King Pontiac, whose nearest dams have official records of twenty-five pounds of butter and 525 pounds of milk in seven days. Several of the dams hold world's records. This lot of young stock was bred and raised in Kansas.

The ninth annual Bushnell Horse Show will be held at Bushnell, Ill., Thursday and Friday, October 12 and 13. Full classification will be made for Shire, Percheron, Belgian, Suffolk, roadster and saddle horses. Five thousand dollars in prizes will be offered. The show will be under the management of J. G. Trueman.

The sale of old original big-boned Spotted Polands held by H. L. Faulkner, of Jamesport, Mo., on August 9, was largely attended by breeders from Kansas, Missouri, Iowa, Indiana and Ohio. The offering was one of the best ever sold by Mr. Faulkner. The average for boars was \$46; for sows and gilts, \$56. The top of the sale was a March boar. He went to Homer Dickenson of Jamison, Mo., at \$102.50. Three of the sows and gilts offered sold for \$100 or over.

The prospects for exhibits and visitors for the American Royal Live Stock Show, Kansas City, October 2 to 7, are so good that already the arrangements have had to be expanded. Some of the breeding stock will be stabled in Convention Hall. The temporary quarters on vacant property across Thirteenth Street from the hall will be built of lumber instead of canvas as had been originally planned, and the tabernacle used by Billy Sunday during his revival services will be used. There will be additional ground on which tents will be erected for nurse cattle. C. A. Davis, who will be remembered by exhibitors and many visitors for his official part in many previous Royals, has been appointed assistant secretary. W. H. Weeks, secretary, has opened Royal offices at 539 Live Stock Exchange, Kansas City, Mo., with Mr. Davis in charge.

October 24 is the date announced by the management of the Everman Poultry Farm, Gallatin, Mo., for their public sale of big-boned Spotted Poland China hogs. The Everman Poultry Farm, which is the largest in the Central West, noted for its famous Rhode Island Reds, which always take first in the large shows throughout the Central West, also pride themselves on having the best big-boned Spotted Poland China hog. Their foundation stock was the very best money could buy. The foundation hog was Spotted Wonder 71422, a 1,250-pound hog, sired by Bradywin 4796. One of their foundation sows was Spotted Jane 168463. Her first sire was Lucky Prince 58198, who was sired by Bell Prince 47284. Her dam was Pawnee Playmate 12894. Another foundation sow was Fancy Lady 169925. Her first sire was Big Spot 47284, who was sired by Pawnee Blain 4758. The rest of dam was Miss Tip Top 114926. The rest of their herd sows are out of these two foundation sows, and are sired by Spotted Wonder. Their spring pigs are out of these sows and their gilts, and are sired by their famous Spotted John, one of the greatest herd boars known. He weighed 715 pounds at the age of 20 months, and is one of the best breeders of the Spotted breed.

MODERN HEREFORDS

ROBERT H. HAZLETT
HAZFORD PLACE, EL DORADO, KANSAS
World's Largest Herd of Direct Descendants of Beau Brummel, Anxiety 4th and Don Carlos.
WILLIAM CONDELL, Herdsman.

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.

POLAND CHINAS

POLAND CHINAS.

ELKMORE FARM POLANDS

Home of Caldwell's Big Bob 76436 by Big Bob Wonder and Orphan Boy 76818 by The Big Orphan. Will be at Topeka and Kansas State Fair, Hutchinson, and the swine show at Omaha, Neb., with Caldwell's Big Bob and a young herd.

FRED B. CALDWELL

HOWARD, KANSAS



EVERMAN'S FAMOUS BIG Boned Spotted Poland

SALE OCTOBER 24.
Sixty head of sows, the tops of 237 head. Orders taken NOW for spring boars at \$25, to be shipped at once. Write for catalog.
EVERMAN POULTRY FARM, R. 5, GALLATIN, MO.

YOUNG'S BIG POLANDS—SALE SEPTEMBER 16, 1910

Sixty-five Head—Boars, bred sows and spring gilts. Herd headed by C Wonder, a thousand-pound son of the great A Wonder, assisted by Long Jumbo 2d by Halford's Long Jumbo. This will be one of the best offerings of the season. Send now for catalog. H. S. Duncan, Auctioneer. Address T. H. YOUNG, STAHL, MISSOURI

BIG TYPE POLAND CHINAS

For sale, fall boars, price \$35; ten fall gilts bred to A Wonder Special and Rood's Big Joe 2d for September and October litters, price \$40. First check gets choice. O. W. LONG - CRAIG, MISSOURI

OLD ORIGINAL SPOTTED POLANDS

350 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 HILL STOCK FARM. A. S. Alexander, Prop. Burlington, 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. W. W. WATT & SON - GREEN CITY, MO.

BRED SOWS AND GILTS

100 Head, all immune, big-type Poland China sows and gilts, bred for July and September farrow. A few choice October boars. Prices reasonable. THE DEMING RANCH, OSWEGO, KANSAS. H. O. Sheldon, Herdsman

LANGFORD'S SPOTTED POLANDS. Mr. Farmer, look this way. Pigs ready to ship. T. T. Langford & Sons., Jamesport, Mo.

HORSES AND MULES.



Registered Percherons. 39 heavy 3 and 4 yr. stallions. 68 rugged 2 yr. olds. Can spare 25 registered mares. 24 registered Belgian stallions. Priced worth the money. Above Kansas City.

OLD FRED CHANDLER RANCH. Route 7 - Charlton, Iowa

SHORTHORN CATTLE.

Sycamore Springs Shorthorns

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

R. M. HILL - LAFONTAINE, KANSAS

RIVERSIDE SHORTHORNS

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

R. M. HOLMES, Route 1, Great Bend, Kan.

LOWMONT SHORTHORNS.

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

HEREFORD CATTLE.

Herefords and Percherons

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

M. E. GIDEON - EMMETT, KANSAS

AYRSHIRE CATTLE.

AYRSHIRES—A few young bulls for sale of production ability. Write us. Prices low. RAM JONES & SON, JUNEAU, WISCONSIN

POLLED DURHAM CATTLE.

Polled Durham Cattle

HOME OF THE CHAMPION TRUE SULTAN. SEE MY SHOW HERD AT THE LEADING STATE FAIRS

Ed. Stegellin

STRAIGHT CREEK - KANSAS

HOLSTEIN CATTLE.

HOLSTEIN CATTLE.

KANSAS BRED HOLSTEINS

Fifty pure-bred and grade Holsteins for sale, ranging in age from three years to calves. This splendid bunch of helpers was bred in Kansas and consequently acclimated and free from diseases that are common with eastern dairy cattle.

They are sired by Willow Meadow King Pontiac, whose twenty nearest dams have official records of 25 pounds of butter and 525 pounds of milk in seven days, and seven of their dams hold world's records.

If you are interested in this class of stock, don't write, but come and see them, for they will surely please you.

SIMPSON & BALLOU - DODGE CITY, KANSAS

CLYDE GIROD, At the Farm. F. W. ROBISON, Cashier Towanda State Bank

HOLSTEIN FRIESIAN FARM, TOWANDA, KANSAS

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

Pure-bred bulls, serviceable age, from A. R. O. dams and sires.

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

GIROD & ROBISON.

CHOICE HOLSTEIN COWS

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

HENRY GLISSMANN - STATION B - OMAHA, NEBRASKA

TORREY'S HOLSTEINS

High grade cows and helpers and registered bulls. The best breeding.

Call and see them.

O. E. Torrey - Towanda, Kansas



Purebred Registered HOLSTEIN CATTLE

Notable characteristics of the registered purebred Holstein-Friesian cattle are health and a hardiness adaptable to all climates, a high standard of vital force, large and easily raised calves, ability to digest and consume the roughage of the farm and transmute it into the valuable products, milk, butter, veal and beef, and surpassing all other breeds in the profitable production of milk and butterfat. The auction prices of this big "Black-and-White" breed have doubled in the past few years. Investigate them. Send for FREE Illustrated Descriptive Booklets. The Holstein-Friesian Association of America. F. L. Houghton, Sec'y Box 114, Brattleboro, Vt.

BUTTER BRED HOLSTEINS

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

J. P. MAST - SCRANTON, KANSAS

HOLSTEINS BACKED BY RECORDS

Registered bull calves, also a few choice helpers. All modern bred with good butter fat inheritance.

GEORGE C. PRITCHARD - Topeka, Kansas

HOLSTEIN CATTLE SEND FOR PRICE LIST.

WOODLAWN FARM - Sterling, Ill.

JERSEY CATTLE.

Must Reduce Herd

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

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

SWEET SPRING STOCK RANCH

Box 241 - Monett, Missouri

Brookside Farm Jerseys

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

THOS. D. MARSHALL, SYLVIA, KANSAS

LINSCOTT 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. LINSCOTT - HOLTON, KANSAS

Jersey Cows and Heifers

140 head to select from, pure-bred and grade. 20 heavy springers, bred on farm.

J. W. BERRY & SON, Jewell City, Kansas

JERSEY BULLS

That will improve your herd, for sale. Three wonderfully vigorous bull calves from high producing dams, \$55.00 each, registered and f. o. b. St. Joseph, while they last. Satisfaction guaranteed. Write.

Rolla Oliver, P. O. Box 701, St. Joseph, Mo.

SMITH'S JERSEYS

For Sale—Two extra good registered Jersey cows due to freshen about August 25, fit to enter Kansas Farmer contest. One 2-year and three coming yearling bulls, good individuals. S. S. SMITH, Clay Center, Kan.

At Reduced Prices

On account of severe drought and having to buy high priced feed, I have reduced prices on my Perfection Spotted Poland. Boars ready for fall service; bred gilts; spring pigs and some brood sows at sacrifice prices for quick sale. Free circular.

THE ENNIS STOCK AND DAIRY FARM, Horine, Mo. (Just South of St. Louis)

REDHURST JERSEYS

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

REDMAN & SON - TIPTON, MISSOURI

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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.

Choice Holstein Bulls

Pontiacs. Will sell cheap a few young grandsons of the King of the Pontiacs and of Pontiac Korndyke. Will price to suit you

Frank Buzard, St. Joseph, Mo.

Golden Belt Holstein Herd

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In Service.

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

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

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Very High-Grade Holstein Calves, either sex, three to six weeks old, \$20. Express prepaid. If you are in the market for any of these choice calves, send order to Whitewater Stock Farm, Whitewater, Wis.

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REGISTERED HOLSTEINS

Offers young cows due this summer and fall by 29 and 33-pound sires. Several EXTRA young bulls both in breeding and individuality. They are bound to please.

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23—HOLSTEIN-FRIESIAN BULLS—23

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

Breeders for Thirty Years.

McKAY BROS., Waterloo, low

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.

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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

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Herd sire, Jewel Paul Butter Boy No. 94245, who's eight nearest dams average A. R. O. 25.95. Eight bull calves for sale from 2 to 9 months old.

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IOWANA DE COLA WALKER heads herd, has nine half-sisters with yearly tests ranging from 407.53 pounds to 626.21 pounds of 80% butter, the latter a senior two-year record; in fact seven were senior two-year and two were senior three-year-olds.

TREDICO FARM, Route 2, Kingman, Kan.

HOLSTEIN BULLS, "REGISTERED"

Two ready for service. Smith & Hughes, Breeders, Route 2, Topeka, Kansas.

BRAEBURN HOLSTEINS A.R.O. Bull

H. B. Cowles, 608 Kansas Ave., Topeka, Kan.

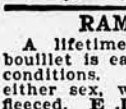
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T. M. Beverly of Texas writes: "Have 600 sheep. The ones I got from you are far ahead of others." Shropshire rams from my flock will suit you. Weight and wool always count. A tried herd ram also for sale. C. W. Chandler, Kellerton, Iowa



REGISTERED SHROPSHIRE RAMS Yearlings and two, square built, rugged, hardy bucks with weight, bone and heavy fleece. Quick shipping facilities and priced cheap. 412 head. Above Kansas City. HOWARD CHANDLER, Charlton, Iowa



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CEDAR HILL SHROPSHIRE For sale, choice rams, bred for wool and mutton. Priced reasonable. B. F. ERWIN, Route 2, Fairfax, Missouri



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RED POLLED CATTLE

FOR SALE—Ten bred cows and ten bred heifers.

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RED POLLED CATTLE

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Offers O. I. C. PIGS at Bargain Prices. BURD ODELL, R. F. D. 1, Marionville, Mo.

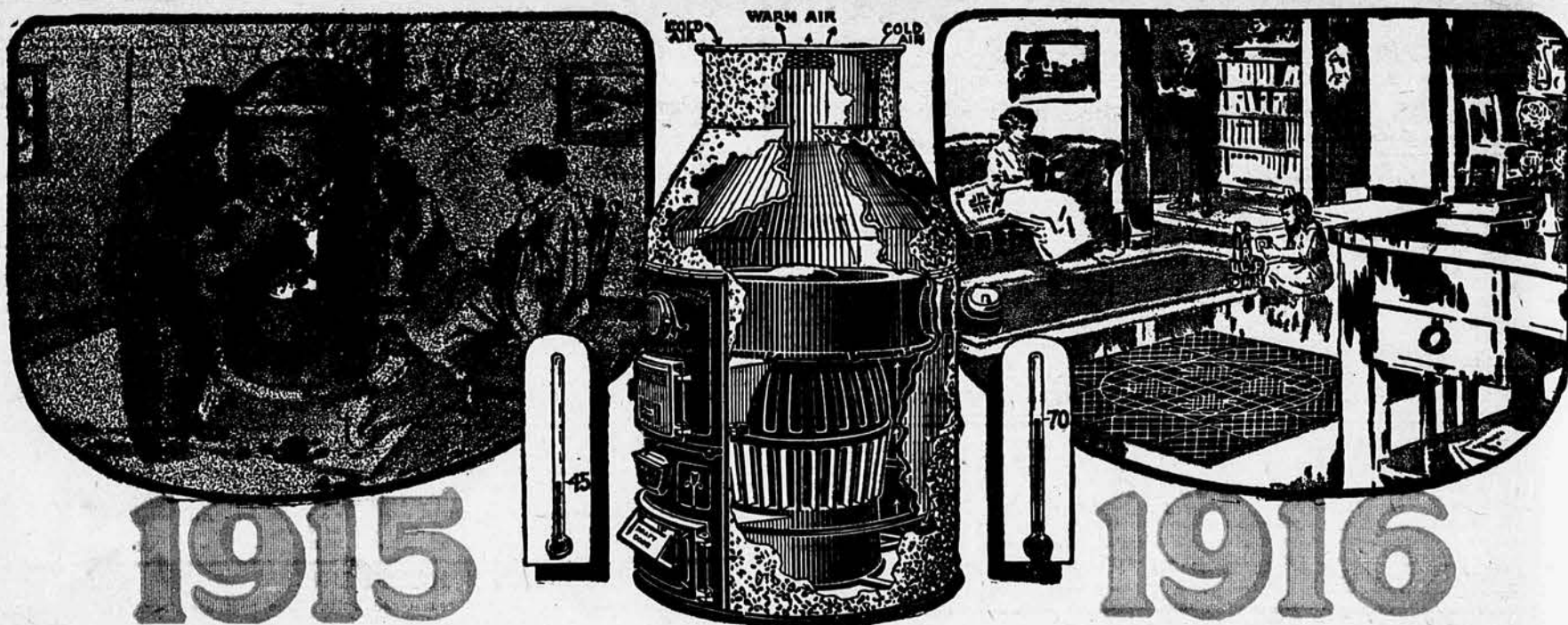
GOOKIN'S O. I. C's.

For Sale—White King 36445 by Chief of All and out of Minnehaha. Spring pigs, pairs and trios, no kin.

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ANGUS CATTLE.
Geo. A. Deitrich, Carbondale, Kan.
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O. H. White, Burlington, Kan.
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Last year you suffered a world of discomfort and trouble from stoves. You carried coal and ashes up and down stairs, spilled dirt on the floor and even then the house was never thoroughly warm.

Take solid furnace comfort this year. It's the modern heating method. No coal to carry, no constant attention, but a steady uniform heat through all parts of the house. Don't say "it can't be done" because your house is already built. The Caloric Pipeless Furnace can be put in any house, new or old, because it heats without pipes—just one register—and you don't have to cut holes for pipes or flues. The modern heating device—the one whose solid merit is gaining favor day by day is the

**The Original
Patented
Pipeless
Furnace**



**Guaranteed
to Save
35% of
Your Fuel**

It heats houses of any size, even churches and schools. No need to mutilate the house. All you have to do is cut a hole for the one register. The heat is distributed by Nature's method—circulation. As fast as the air is warmed it is forced upward, with the result that the entire house is uniformly warmed. There are no cold corners or cold upstairs rooms.

When you put in the Caloric Pipeless Furnace your cellar is not crowded with pipes. You have plenty of storage room, and since the heat cannot escape into the cellar, the cellar is cool, and fruit and produce can be kept there without spoiling. This furnace burns coal, coke or wood and requires practically no attention.

How the Caloric Saves Fuel—There are three reasons for this mammoth 35% fuel saving. First, the warm air reaches your rooms by Nature's method of circulation and there are no pipes to absorb or resist the heat. Second, our double ribbed firepot and specially patented combustion chamber produce perfect combustion, thus insuring thorough burning of the fuel and a much greater heating surface. Third, our specially patented triple casing, insulated with two air spaces, prevents any heat from radiating into the basement. This is the only successful patented one register furnace, and no other furnace can claim these three big features.

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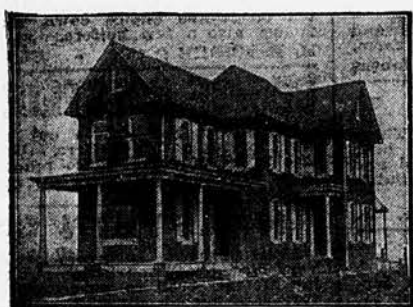
We guarantee that the Caloric Furnace when properly installed will heat any house, church, building, schoolhouse or store. If the furnace is in any way other than satisfactory we'll make satisfactory adjustment without further cost to you.

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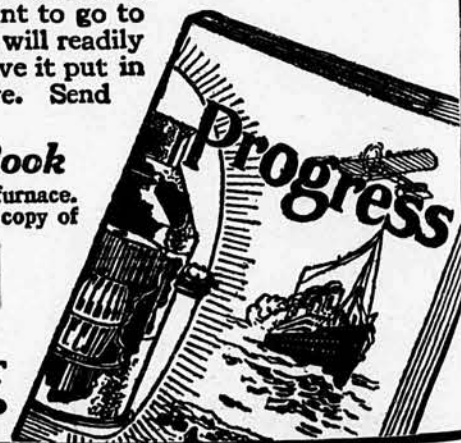
If there is a Caloric dealer in your town he will gladly demonstrate this furnace. If there is none, write us for name of nearest dealer, free catalog and copy of our guarantee.

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Have tested your Caloric Patented Pipeless Furnace during zero weather and find it thoroughly satisfactory. It does all you claim it will do and more besides. This recommendation I cheerfully give.

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