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Sired by Klever's Model 14664 S., the \$5,100 king of boars; first dam Graceful Maid (43351); second dam Graceful F. 3d (23670), litter sister to Old Look Me Over 9011, the \$3,600 boar. This gives Klever's 1st Model all that could be asked in breeding and sale ring backing. He is black as ink, low down, deep and broad, extra head and ears. His get follows the pattern perfectly. He will be assisted by other good boars in service on thirty matured sows of modern type and breeding. I sell nothing but tops; keep my knife sharp for culls. Free livery at Roberts' stables.
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125 head. The best individuals and most popular strains that money and judgment could buy and experience breed. Thirty choice spring pigs, both sexes, by Black Stop Chief 18316 S., he by the great breeding boar Black Stop 10550 S., a son of the World's Fair winner, Short Stop. Write or visit us
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I have for present sale thirteen pure-bred Short-horn bulls old enough for service, including my herd bull, Imperial Knight 13968, a pure-bred Cruikshank, which I can now spare. I have also twenty cows and heifers bred or will have calves at foot, all of my own breeding. For sale at reasonable prices. John McCoy, Sabetha, Kas

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H. E. BALL, Proprietor.

Registered Jersey cattle. Young bulls and heifers for sale.

Registered Poland-China swine. Young boars for sale.

Farm two miles east of Topeka on Sixth street road.

T. P. CRAWFORD, Mgr., Topeka, Kas.

SUNRISE STOCK FARM.

C. A. STANNARD, Prop., Hope, Kas.

Breeder of Hereford Cattle and Large English Berkshire Hogs.

Bulls in service: Kodax of Rockland 40731, who has won more first premiums at leading State fairs in past six years than any other bull in Kansas; Java 61045. Thirty-five yearling heifers and seven bulls 3 to 7 years old for sale.

Live Stock Artist.

F. D. TOMSON, 514 Monroe St., Topeka, Kas.

Portraits for framing and cuts prepared for advertising purposes. Breeders' correspondence solicited.

Agricultural Matters.

WATERING THE SOIL.

By Prof. W. J. Spillman, Washington Experiment Station, Pullman.

Through every growing plant a stream of water is constantly flowing. This stream begins at the roots and proceeds upward to the leaves, being lost by evaporation from the surface of the leaves. The life of the plant depends on this stream. It brings the plant its food, and the amount of food the plant can obtain depends, among other things, on the amount of water that must flow up through a plant and out at its leaves for each pound of growth produced in the plant. The figures below show the water thus required to make a given growth of dry matter, that is, of plant material free from water. It has been found that to produce one ton of dry matter (equivalent to one and one-sixth tons of ordinary hay) there must pass up through the plant into the air 223 to 912 tons of water.

The dryer the atmosphere, and the more wind there is, the higher these figures, other things being equal. Assuming, then, that in this country the amount is 500, which is not far from correct, this means that to produce one ton of hay on one acre requires 430 tons of water, equivalent to 3.8 inches of rainfall, or irrigation water enough to cover the ground 3.7 inches deep. And this takes no account of water lost by percolation into the soil and by evaporation from the soil surface.

LOSS BY EVAPORATION.

Professor King, of the Wisconsin station, found that in sixty-four days a well-tilled summer fallow lost by evaporation water equivalent to 8.24 inches in rainfall, or .67 pound of water per day from each square foot of surface. "If we take the average daily loss from the soil at only .25 pound per square foot, from May 1 to September 1," says he, "this would be equivalent to 5.27 inches of rain." I am sure it will do no one harm to know how much water a crop really needs; this knowledge ought to be specially valuable to men who pay for water by the inch.

If we could entirely prevent evaporation of water except from the plant itself, we could, on an average, produce five tons of hay with nineteen inches of water—enough water to cover the ground nineteen inches deep. The amount of water used in irrigated countries is usually about fifty inches. We thus see that crops use little more than one-third of the water applied to them under irrigation. Where rain must be depended upon, the proportion is much smaller, for rainfall does not come to order, but much of it comes at a time when it cannot be utilized before it has had time to get away into the soil and air.

BEST CONDITION OF THE SOIL.

Experiments have demonstrated* that crops make the largest growth when the amount of moisture in the soil is between 40 and 60 per cent. of the total amount it can hold, some crops, of course, requiring more than others.

The effort of the farmer should therefore be to maintain this amount of moisture in the soil. The simplest case to deal with, as far as methods are concerned, is that of too much water. Excessive moisture is injurious in two ways: It excludes air, which is as necessary to the roots of plants as it is to other forms of life; and the constant evaporation of water from the surface keeps the soil cold. This cooling effect may amount to as much as 12° to 15°; and we all know what a marked contrast exists between soils where the average temperature differs only two or three degrees.

DRAINAGE.

I have not time here to discuss different methods of drainage, but will refer to them briefly. At one time in English agriculture, a system of cultivation known as the "ridge" system was very commonly practiced. It consisted in plowing the fields in narrow lands, throwing the ridges in the same place each year. Instances are recorded of ridges built up in this way until horsemen riding in adjacent furrows were hidden from each other. On wet lands this resulted in strips of productive soil on the ridges, with bare strips along the furrow. As is apt to be the case with any system that has some merit in it, and with many even that have no merit, this system became a fad, and was used on soils that did not need it. This plan, however, has its value on some lowlands. The ditch system of drainage succeeded this, and was, in most cases, an improvement. But in all cases where the value of the reclaimed land will warrant it, the tile system of drainage is the most effective, though very expensive. The

cost of tile drains properly laid is usually about \$30 per acre.

It sometimes happens, especially in old cultivated soils, that water applied to the surface does not readily enter the soil, thus saturating the top while the soil below remains comparatively dry, or running off and thus becoming lost, while at the same time it cuts up the soil into ditches. Ground that has reached this condition may be improved by deep plowing, and especially by incorporating into it large quantities of barnyard manure.

WASTE OF MOISTURE.

But the great problem before the farmer under ordinary circumstances is how to prevent waste of moisture. Moisture may be lost in four ways.

We have just spoken of loss from running off before having an opportunity to soak into the soil, and pointed out the only remedy we can apply.

It may also be lost by percolating into the deeper layers of soil. We can do little to prevent this. In loose, sandy soils, however, the addition of well-rotted manure gives the soil the power of retaining more moisture and thus prevents percolation to some extent.

A third and serious cause of loss is from weeds. It should be remembered that every pound of dry matter produced in the growth of weeds costs you 500 pounds of water. A ton of weeds on an acre means the loss of from 200 to 500 tons of water. I cannot here go into details as to the best methods of eradicating the various classes of weeds. There is one principle, however, which underlies them all. This consists, as Ben Jonson, whose fame rested principally on his use of big words, would have said, in severing the connection between the growing weed and the matrix in which its roots are established.

The most important of all the causes of loss, however, lies in evaporation from the surface soil; important both on account of the large losses due to it and on account of the control we may exercise over it.

We have already seen that this loss may amount to a rainfall of six inches at a low estimate, while the loss under conditions that favor it may amount to probably twenty inches. By properly controlling evaporation we may save from a third to a half of the water added to the soil by rain or by irrigation. In the one case we can thus double the crop; in the other, save half the expense for water.

PREVENT WASTE BY EVAPORATION.

The loss of water by evaporation may be influenced in many ways, some of which we can control, and some we cannot. To understand what effect tillage may have, we must understand that water is brought to the surface by the force of capillary attraction. When moisture exists in a soil of uniform texture there is a strong force that tends to make the water scatter out uniformly in that soil. If moisture be lost from the surface, other moisture comes up to its place. Soil may be thus dried out to a depth of four feet or more, if permitted to. This force acts much more strongly in a well-compacted, fine-grained soil than in a loose one; also, in moist soil better than in dry one. Rain may cause loss of more than the rain amounts to. Now we want water brought up from below as much as possible for the use of growing crops, and as near the surface as may be, but we do not want it to reach the surface. Hence, we want the surface (two to four inches) to be of such nature, or in such condition, as to prevent the escape of water through it, while all below this should be compact enough to cause capillary force to act with great power, while at the same time the soil must be porous enough to permit ready entrance to the air so necessary to plant roots, and to permit the rootlets of plants to thread their way through it readily. We have now the principles before us. We know what conditions we want in the soil, and why they are necessary. The methods we shall use to bring about these conditions must depend on the kind of soil we are dealing with, and on the season and crop. It is customary to speak of the loose surface portion which is to prevent evaporation as the mulch. This mulch may consist of finely broken soil, or it may consist of litter of any kind. In the case of pastures, meadows, and fall-sown grain, the mulch consists of the mat of green vegetation itself, which, when fully covering the ground, permits little evaporation except through its own leaves, and this is what we want.

The loss of water by evaporation from bare, well-compacted ground in early spring is simply enormous. An experiment by Professor King showed that the upper four feet of such ground lost in one week over nine pounds of water from each square foot of surface. Here was water enough to make half a ton of hay

per acre lost by delaying plowing only seven days after it was in condition to plow. Not only that, but the land plowed as soon as it could be was loose and mellow, and easily worked, while that plowed a week later was rough and cloddy, and required four times as much work to get it in half as good condition for planting as that plowed earlier.

OBJECTS OF PLOWING.

The objects of plowing may then be summed up as follows: To incorporate plant food into the soil; to loosen up the surface to enable it more rapidly to absorb moisture; to give it necessary ventilation and to allow easy passage to plant roots; to pulverize the surface, and thus aid in preventing capillary action from bringing all the moisture to the very surface.

To sum up: It should be our aim in handling soil to maintain a proper moisture content, to have a seed-bed firm enough to cause capillary forces to keep it well supplied with moisture from below, and to prevent such free circulation of air as to dry out the soil, and yet porous enough to admit enough air to permit the growth of roots; and, finally, to keep the surface at all times covered either by a mulch of vegetation, or, lacking that, to keep the surface three or four inches so thoroughly pulverized and loosened up that no water can come through it from below.

I cannot close this paper without paying my respects to those great benefactors of agriculture, the weeds. Had it not been for them man might still be in a state of savagery. But in his eternal battle against them man has fortunately adopted the very methods that we now know to be the most effective in conserving soil moisture, namely, continuously stirring the surface into a mulch. True, we now stir the surface more intelligently than we used to, because we know what we stir it for; but it was the necessity for fighting weeds that taught us the lesson.

Beets for Feed.

Editor Kansas Farmer:—Would it pay me to try to raise some kind of beet for stock feed in our sandy soil? Are they good for horses, and particularly mares in foal? What I mean is, would they be more expensive in hard (hoeing and weeding) labor than some other kinds of feed that would be nearly as good? We have good success with Kaffir corn, sorghum and millet.

I have a few cow peas that were raised here last year; the seed was brought from Arkansas the year before. I was told the name of them was the Whip-poorwill cow pea. Has any of your readers had any experience in raising and feeding them?

In his excellent new work, "Feeds and Feeding," Prof. Henry, the best authority on the subject, speaks of potatoes, carrots, artichokes and rutabaga turnips as feeds for horses, but does not mention beets.

All directions for growing beets make hoeing and weeding essential parts of their culture. Where large areas are cultivated for the sugar factory, implements are provided with which a part of the work is done, but the hand work is considered essential to the successful production of the crop.

Cow peas are highly esteemed further south. They are adapted to field cultivation and they supply the food elements in which Kaffir corn, sorghum and millet, as well as Indian corn, are deficient. They contain in liberal proportions the elements which go to produce muscle and milk.

At the Texas Experiment Station cow peas were reported to have given yields ranging from eight to thirty-five bushels per acre. Some of the earlier varieties are adapted to Northern localities. Medium kinds should succeed in Kansas.

Experience With Kaffir Corn.

Editor Kansas Farmer:—About June 20, 1896, I marked off with cultivator on fall plowing, two rows at a time, fastening the beams about three feet apart, then drilled with one horse, drill in marks, then cultivated same as corn. It made a heavy crop but was planted too late to mature. Frost struck it and all fell down. I also drilled about six acres with grain drill, three pecks to acre, at the same time on fall plowing. It made a heavy yield on thin soil. Cut with mower when nearly matured with some small seed heads; let lay in swath one week; raked in windrows; cocked up and used when needed. All stock ate it well. Pigs liked the seed better than corn and I think is better for them. Calves get as fat as butter on it. I do not consider it a good feed for the milch cows, as it does not increase or even keep up the flow of milk.

In 1897 I listed my ground shallow with

a Deere disk lister, making a fine seed bed, rows three feet apart. Drilled with one-horse drill. This planting was done about last of April, as soon as field corn was planted, and that is none too early. Drilled thin in rows; cultivated twice. It made a heavy yield of seed. We harvested with corn-cutting machine when seed was matured, two rows at a time. Shocks same as corn; tied the top of shocks with binding twine and headed during the winter. The fodder was green and nice, but if raised for the seed I do not consider the fodder worth the sowing, as the stock only eat the leaves and leave the stalk, so will head in the field, leaving stalk standing, and sow broadcast or use grain drill if fodder is wanted. I shall always raise considerable for the seed, as it is a sure crop and takes the place of corn nearer than any cheap grain I have found. Calves and pigs eat it off the head and masticate it quite well. If ground it has to be cooked, then it makes a swill nearly like sweet milk, but uncooked it will settle to the bottom like sand.

C. J. HUGGINS.

Wamego, Kas.

The Stock Interest.

PRACTICAL EXCELLENCE IN BEEF CATTLE.

By Prof. C. F. Curtiss, Iowa State Agricultural College, read at the twenty-seventh annual meeting of the Kansas State Board of Agriculture.

I assure you that it gives me great pleasure to meet with you on this occasion. We, of Iowa, have long entertained a very high opinion of the methods of the Kansas State Board of Agriculture, and look to you as a model in that class of work; and I may say here that the matter of remodeling our own board is now under consideration, and one of the objects of that reorganization is to adopt some of the good things and good methods of Kansas.

GRAIN—PROFIT.

In riding through your State on this and several other occasions I have been struck with the abundance of your grain and forage crops. It requires but a superficial view to recognize the fact that Kansas is one of the leading grain-producing States of the Union, and I presume that you are similarly situated to what we are in Iowa. Last year, the traveling freight agent of one of the leading lines of railway in the State of Iowa made the statement that they had 80,000,000 bushels of grain along their road, and that not one bushel of it could be moved at a profit. These conditions have important significance, and I apprehend that you have a great deal of farm produce in this State that has not been raised at a profit.

THE KIND OF CATTLE.

It is my privilege to speak to you upon the kind of cattle that are the most profitable as grain and freight condensers. In this connection I congratulate you upon the encouraging outlook for cattle and the cattle industry. I think that in all my experience I have never seen a time that offered greater inducements for the production of good cattle than we have in this State and in other States similarly situated to-day; yet I wish to warn you against an element of danger. There is always an element of danger in a period of unusual prosperity; in a period that has a tendency to boom and speculation. That is the condition that is confronting us in the cattle business to-day. I believe that, notwithstanding the encouraging outlook, a great deal of stock that is changing hands is doing so at prices entirely too high. I believe that too much money is being paid for feeders and cattle of a certain class—too much to afford a good market for our grain. I think that the danger is in buying poor or inferior stock for that purpose rather than a good article. I wish to call your attention to some of the characteristic points in making beef at a profit.

IMPROVED BLOOD.

It is commonly supposed, or has been, at least, that the advantage of the stock of improved blood consisted in their ability to make better use of the feed consumed than those of inferior or of common breeding. I think this is a point upon which there is a great deal of misunderstanding. It may seem unreasonable to make this kind of a statement, especially in a body like this and in such a locality as this, but if breeders will look squarely at the facts in connection with this point, I think that the advantages of the improved breeding will be made very clear to their minds.

Now, a course of experiments have been made at the experiment stations and elsewhere by practical feeders, and it has been shown that there is but little, if any, difference in the comparative return

of the animal of improved breeds over those of unimproved breeds; in other words, the animal of unimproved blood will return as much weight for a bushel of corn or grain as the animal of improved blood or of the best breeding. This may sound a little like heresy; but it is the truth we want, for it is the truth that makes us free.

SOME EXPERIMENTS.

I will give some figures tending to bear out this statement, and you need not go outside of your own State for just such results as I am about to state. Within the past few years we have had conducted at the experiment stations tests which showed that, so far as the gain in weight is concerned, the cattle of the unimproved class did as well as those of the improved breeding. At your own station, if I am correct, the unimproved or native cattle made better results than the improved, but I do not think that the conditions were altogether favorable for the improved breeds. The conditions were more favorable, or more like what the native or scrub cattle were accustomed to. A similar experiment was conducted in the State of Missouri by Professor Sanborn, and it caused a general uprising of indignation throughout the entire cattle country. Other experiment stations and a great many practical feeders have tried the same experiment, and with the same results, and the fact remains that the improved breeds have but little if any advantage over the others, so far as return in weight is concerned, compared with the amount of grain consumed. In our experiments we have found a little advantage in favor of the improved breeds, but it is so slight that it has but little significance.

THE BREEDS.

I have here a representation of three of the leading beef breeds of this State and of the other beef-producing States of the corn belt: a high-grade Short-horn, a high-grade Hereford, and next a pure-bred Angus heifer. All these are animals of a high degree of excellence of their respective breeds and types. The first is an illustration of a steer fed in one of our experiments at the Iowa Agricultural College, and is a "skim-milk calf;" he was bought when five days old for \$5 and carried along on separator or skimmed milk until he was ready for grain feeding, and from then on ordinary farm feed until he was 26 months old; when marketed he weighed 1,640 pounds, and was the best in Chicago at a time when there were 26,000 cattle on the market. It is such an animal as any farmer is capable of producing. The next illustration represents a high-grade Hereford steer, marketed at the age of 2 years; weight, 1,624 pounds. The next is the Angus heifer, a prize-winner at the Smithfield, England, fat stock show. Next is a high-grade Jersey steer that was used in one of our experiments at the college. I have the records of this animal (the Hereford) and also of the high-grade Jersey in such form that they are easily compared. They were fed under conditions that were quite uniform, and I will say in this respect that the comparison between the Hereford and the Jersey will also apply to the Short-horn and other improved breeds; so this is probably a fair comparison between the animals of these types. We fed this animal (the Hereford) fourteen months, and we fed the Jersey nine months, and during that period of nine months the Jersey made a gain of two pounds per day for the entire time. This is a fairly good result.

THE GAINS.

Cattlemen will concede that when an animal is fed nine months and makes an average daily gain of two pounds they are getting good results. The other steer made 2.03 pounds daily gain for a period of fourteen months; so the gain was substantially the same in each case. The feed was practically the same in quantity and kind. They were fed in the open feed lot, where the feed, water and all conditions were the same; so, considering the records of these cattle up to that time, there was no material difference in the cost of producing a pound of beef in either the Hereford or the Jersey. We have carried Holsteins that made better records than the Jersey, but the reason is that the Holstein has a larger frame and will probably gain a little more rapidly than the Jersey; and I have seen steers of that class go into the feed lot and gain a little faster than cattle of the beef breeds. Now, if we went no further than the feed lot record, there would be but little difference in the class of cattle which we fed for the market, there would be as much in one class as in the other, for they are capable of making substantially the same gain, so far as weight is concerned, and it would make no difference whether we fed Short-horn, Angus, Holstein or anything else—we might just as well

take any ordinary cattle; but there is too much of that class of feeding being done, and that is the reason that the live stock business is not more profitable.

THE PRICES.

When these cattle went to market the Hereford commanded a price 10 cents in advance of the highest quotation on any other cattle. He was one of a car-load to command that price. His selling represented a premium of 10 cents among 17,000 cattle. Both of these steers sold on their actual merits. The other steer went on the same market, and was obliged to sell \$2.12½ below the top quotation, a difference of \$2.22½; or, in other words, the Hereford brought exactly 49 per cent. more than the Jersey. It has sometimes been suggested that that difference did not actually exist, and that they discriminated between the breeds, giving the preference to the Hereford as against the other class. I at one time thought that there were some grounds for that claim, and that they did discriminate in favor of the so-called improved breeds; but after having charge of a number of cattle, and seeing them fed, and following them through the stock yards and through the slaughter and block tests that we have had conducted, I do not believe that there is any unjust discrimination. The men who buy the cattle know no breeds; they have a practical way of rating animals, on the basis of what they can get out of them; they are trained men—the men who buy these cattle and fix their value; are men who receive large salaries for knowing one thing, and they are obliged to know that well; they have careful and complete records of the cattle they buy each day; and I believe that these cattle were sold upon their merits.

THE SLAUGHTER TEST.

When they were slaughtered, the Hereford steer dressed 67.5 per cent. and the Jersey dressed 57.5 per cent. In other words, there was 10 per cent. more net beef in the Hereford. I will say further, that the Jersey was as well finished as it was possible to make him; no amount of feeding could have made him any better for beef purposes than he was at the time he went to market; both steers were in good form.

In addition to the 10 per cent. more beef in one of them when the slaughter test was made, the Jersey contained 190 pounds of loose fat; and, in addition to that, 55 pounds of suet; and the carcass dressed 763 pounds. This steer (the Hereford) had a carcass that weighed over 100 pounds more, or 888 pounds. He was well finished, and in that carcass we found only 90 pounds of tallow, as against 190 in the other, and 38 pounds of suet as against 55. Tallow, at that time, was worth 4 cents a pound at wholesale, while choice steak was worth 19 cents.

BLOOD AT 49 PER CENT. PREMIUM.

Now, while these steers were rendering equal returns for a bushel of corn consumed in the feed lot, while they were charging the feeder the same price for a pound of beef, in the market one of them commanded 49 per cent. more than the other, and this applied to the entire carcass.

Now you can readily see why the buyers put that difference upon these animals. It is their business to know, and they do know, what an animal will cut out on the block; but when the feeder does not recognize that difference he is obliged to bear the loss. These steers were both good representatives of their respective type and breed, and while this steer had that large quantity of internal tallow, he had not the development and finish in the high-priced cuts that the other had. He had fat deposited around his internal organs to the extent of one-third of his entire weight, while there was not meat enough on his ribs and back to decently cover his bones. The buyers object to that class of cattle; for, while they are finished, in the sense of being fattened, they are not finished in the parts that produce the high-priced beef.

THE HIGH-PRICED MEAT.

Here is a diagram showing the method of cutting the beef, showing the cuts as they are made, and the prices that they bring, and the average weight of each cut. The first cut is called the "chuck," or shoulder, and just back of that the rib roasts; and in these cattle here represented they had an average of 113 pounds of ribs, at 16 cents. They had 183 pounds of "loin," at 19 cents. Their rib cuts they take for rib roasts, and from the loin cuts they take the "sirloin" and "porterhouse" steaks. These are the highest-priced meats. I may say that the man who bought that meat in Chicago furnished the leading hotels with meat. Good meat costs the consumer a high price, and it is always in demand. I may say that there are no

other markets in the world that make as great distinctions as Chicago and New York. Perhaps that is true because there are more American people wanting good things. The country butcher will not make the wide distinction that the Chicago or New York butchers will make, but it is the Chicago and New York markets which fix the value of our beef products, and directly or indirectly fix the value of our stock. So we need to be governed by the demand that governs the value. Chuck steak sells for 5 cents a pound, and round steak for 6 cents, while the loin sold for 19 cents per pound. In separating the loin and the ribs they leave one rib on the loin, and in separating the loin and the round they run the knife as close to the point of the hip as they can; and thus they manage to get as much of the high-priced meats in these cuts as they possibly can and as little as possible of the other. In these two steers we found that these two cuts constituted a little less than one-third of the carcass; so that less than one-third taken out sold for nearly two-thirds of the entire value of the animal.

When we select the class of stock through which we intend to market our grain, we ought to consider the characteristics that will determine their value. The value of the cattle lies in the proper development of these cuts, and the high-priced meat they will furnish.

FEED AND BREED.

We hear a good deal said about feed, and about the necessity of good feeding. I think that I recognize the importance of this. I have seen it tried on representatives of the beef breed, and on representatives of the dairy breed, and of no breed; and when you fatten the latter, there is an accumulation of fat on the internal organs, without a corresponding development of high-priced meat; and it is impossible to take an animal of that kind and in one generation, or in any reasonable number of generations, develop it into an animal of good beef quality. It is unreasonable to presume that an animal which has none of the necessary qualities that go to make up a good beef animal should develop these in a short space of time. They have been trained along other lines, and while in time they might make something of that class, it will take a long time.

It may seem unreasonable to some, and sound like an unorthodox statement, to say that representatives of the beef breeds have not the capability of making any more out of a bushel of corn than the natives or scrubs; but when we look squarely at the facts and the underlying principles, there is no reason why he should. This is a matter governed wholly by the laws of digestion. Is there any reason why the representatives of one of these breeds should do any better than the others? Take the Holsteins; their development has been painstaking and thorough, and they render large returns for the feed consumed. They are vigorous, and capable of digesting just as much as the others. But take one of the inferior class; that animal has developed hardness and a good constitution. Does it not then stand to reason that he should not make as great returns for the grain consumed as the other? Some of the improved breeds have been pampered to the extent that they have lost their vigor. Scientists have discovered that civilized man is incapable of rendering any greater returns for the quantity of food consumed than the barbarian or native Indian.

THE TWO BUYERS.

So we need to look to the value of the product in beef making, rather than to the amount or quantity. These two steers went into the feed lot under the same conditions, and with the same amount of feed, and up to the time they were put upon the market their record was the same; but the distinction came when one of them sold for 49 per cent. more than the other. This is simply one of the methods of marketing our grain crop. If you are at the station, and there are two buyers there for your grain, and one of them is paying 49 per cent. more than the other, you will be pretty sure to look him up. You would do this if it was only 5 per cent. difference. I have seen men haul their grain ten or twelve miles to another market for an advance of 1 or 2 cents, and when they send their grain to market in their cattle they ought to take the same care.

SELLING OFF THE FARM.

I believe that we ought to market our grain in the form of good beef and other live stock products. We have several advantages in so doing. When we send to market \$1,000 worth of corn or wheat we are sending with it from \$300 to \$350 worth of fertility from the farm. Fortunately, you here in Kansas are not obliged to buy fertilizer; but when we

No More Scrofula

Not a Symptom of the Affliction Since Cured by Hood's.

"When our daughter was two years old she broke out all over her face and head with scrofula sores. Nothing that we did for her seemed to do any good. We became discouraged, but one day saw Hood's Sarsaparilla so highly recommended that we decided to try it. The first bottle helped her, and after taking six bottles her face was smooth and we have not seen any signs of scrofula returning." SILAS VERNOR, West Park, New York. Get only Hood's because

Hood's Sarsaparilla
Is the best—in fact the One True Blood Purifier.

Hood's Pills cure nausea, indigestion, biliousness, constipation.

take from the fertility of the farm, as we do when we market the grain products continually, we are taking from the store of wealth that is giving bountiful crops to this section of the country; and while the selection of cattle may not seem so important as the figures which I have given you show, while many of you have prospered without paying much attention to this matter, yet we need to consider the fact that that work was done under conditions different from those of to-day. In earlier days it was easier to produce beef that it is to-day. We had the conditions which enabled us to produce the beef much cheaper.

To me the situation is something like this: A few years ago I was down in the New England States, and while visiting an old Revolutionary cemetery near Boston passed along the gravel walks reading inscriptions on the tombstones. My attention was arrested by one which read like this:

"Behold!
Dust thou art, and to dust thou must return.
As thou art, so once was I;
As I am, thou must be.
Take heed, and follow me."

While I was looking at that inscription, the keeper of the cemetery told me that a young man, after reading the inscription a few days previous, had taken from his pocket a crayon and written below:

"To follow you, I'm not content,
Until I know where you have went."

It strikes me that we are to-day in the same situation in agriculture. While those who have gone before have some of them succeeded, I do not believe, with all due respect to our ancestors and predecessors, that we can afford to follow them, until we know where their methods will land us. We are obliged to solve these problems according to the changed conditions of our times.

I may state that the proposition I have laid down applies not only to cattle, but to all other meat products as well. We have found that there is very little difference in the cost of producing a pound of pork from the various breeds of hogs, but the question that is of the most interest is the value of the product after it is produced. I think this is all I have to say at the present time. I regret that I am unable to stay longer and get better acquainted with you.

Rock Salt for Stock.—Use Kansas Rock Salt for Stock. Best and cheapest way of salting your stock.

BLACKWELL'S
CELEBRATED
FISTULA CURE
For Horses. The only medicine in the world that will CURE YOUR HORSE WHILE IT WORKS. One box will cure the worst case. Price, \$1 a box. Manufactured, Sold and Guaranteed by
Z. T. BLACKWELL, M. D.,
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SAVED FROM
HOG CHOLERA
Many farmers in the West, where hog cholera rages most, have saved their hogs
BY USING McCLEERY'S
HOG CHOLERA PREVENTIVE.
Mixed with the feed it gets into the blood and destroys all cholera and disease germs, kills stomach and intestinal worms, regulates the bowels and stomach and promotes good health.
Free Trial Package Enough to treat 2 hogs mailed for 15c, no pay postage. One dollar's worth will treat ten average cases. Free circulars and testimonials.
T. G. McCLEERY, M. D., EXETER, NEB.

WEEKLY WEATHER-CROP BULLETIN.

Weekly Weather-Crop Bulletin of the Kansas Weather Service, for week ending May 16, 1898, prepared by T. B. Jennings, Section Director:

GENERAL CONDITIONS.

The temperature has been more nearly normal this week, with lighter showers and more sunshine until near the close of the week, when heavy rains occurred in Ford county and from the northern part of Dickinson across Clay into the southern part of Washington, extending thence eastward and southeastward to the Missouri line. Hail storms occurred on the 13th in Dickinson, Marion, Wabunsee, Shawnee, Osage and Neosho counties.

RESULTS.

EASTERN DIVISION.

A good week for work in the southern counties, but too wet in the central and northern. All vegetation has responded to the warmer weather. Wheat maintains the lead in all parts of the division, and is heading in the south. Corn is coming up as far north as Marshall, but is generally an uneven stand; much replanting has been done, while in some of the central counties, owing to the wet season, but little corn has been planted yet. Oats and grass have improved very much. Potatoes and gardens are growing well. Home strawberries are on the market in the southern tier of counties.

Allen county.—Wheat, flax, oats and grass thriving; other crops drowned out; not 5 per cent. of the corn planted yet.

Anderson.—Continued wet weather; farming at a standstill; much corn to plant over, and much not yet planted.

Atchison.—Nights too cool for corn, 50 per cent. planted, early planted is

corn mostly planted and coming up, is being cultivated; wheat-risers are alarmed over chinch bugs in the wheat; apples dropping badly; peaches will be a light crop.

Leavenworth.—Not much corn planted, too wet; wheat looks fine, oats and clover fair; grass backward.

Lyon.—Too wet for corn planting in bottom fields; all other crops are doing well; chinch bugs flying; web worms are working on fruit and shade trees.

Marshall.—Much corn planted during the week; wheat, oats and grass have made a good growth; fruit promises well; potatoes and gardens are good; corn is coming up well.

Montgomery.—A good growing week; corn is growing; wheat is A1, is heading out; home strawberries being marketed.

Morris.—Good week for all crops; wheat and oats doing finely; grass growing slowly; corn mostly planted now, is coming up unevenly and looks poorly.

Neosho.—Very favorable first of week; much damage to fruit and gardens in northeast part by hail; wheat never looked better at this season of year; pastures are fine; corn planting not finished, owing to rains.

Osage.—Wet weather has delayed corn planting, and much replanting to be done; gardens looking well; pastures in fine condition; no damage by hail.

Pottawatomie.—A growing week, but too rainy for corn planting; much of the recent planting is washed out or covered over.

Riley.—A fair week for farm work; warm enough for grass to grow finely; corn mostly planted and is coming up well; fruit prospects very good.

Shawnee.—First of week pleasant and much corn was replanted; fruit, grass and small grain doing well.

Wabunsee.—Too wet to plant corn, some to be replanted, some needs plow-

vation; cattle fattening on pasture; a little alfalfa hay cut; fruit and gardens doing well.

Ellis.—Splendid weather for growing crops.

Harper.—Very favorable week; wheat better than last year and very promising; pasture good; oats improving; corn retarded by cool wet weather, planting not finished.

Kingman.—Wheat and oats doing nicely; wheat in the boot, some pieces commenced heading; corn small, some replanting.

Marion.—Fine growing week, ending with heavy rain; hail in northwest, damaging fruit and gardens; corn not all planted.

McPherson.—A fine week for crops; everything growing nicely; corn is backward; wheat has grown rapidly.

Mitchell.—Crop conditions could hardly be better; many fields of corn are being worked and stand is good; wheat is fine; gardens and fruit prospects very promising.

Ottawa.—Getting a little dry for wheat and oats in central part, heavy rain in southeast part; plums, apricots and some peaches falling off badly.

Pawnee.—Wheat, rye, oats and barley growing rapidly; rye heading; early corn up; corn planting well under way; fruit prospects good; cattle improving rapidly; more moisture in ground than for years at this season.

Phillips.—Everything in fine shape; wheat, rye and oats never better; stock on grass in fine condition.

Reno.—Ground getting in good shape to work again; wheat in excellent condition; oats poor; corn poor stand and not growing much, many replanting; alfalfa fine.

Republic.—Fine growing weather; wheat never looked better; corn planting mostly done, corn beginning to come up.

Rush.—Corn planting in progress; condition of wheat first-class.

Russell.—Wheat doing well; corn mostly planted, first planting coming up slowly; ground in fine condition.

Saline.—Wheat much improved, early wheat beginning to head; corn planting nearly finished, early corn a poor stand; oats a poor stand and small; potatoes and alfalfa doing finely.

Sedgwick.—Wheat, meadows and fruits in good condition; corn a poor stand, much drowned out, some being replanted, some corn ground being put in forage crops.

Smith.—Corn planting nearly done, first planting coming up nicely; wheat, oats and pastures doing well; ground is in good condition.

Stafford.—Wheat in fine condition; crops of all kinds growing finely.

Sumner.—Wheat never looked better; oats all right; busy cultivating corn, most of it in southern part has been cultivated once.

Washington.—Wheat made good growth; oats improved; corn planting being pushed; good prospect for fruit.

WESTERN DIVISION.

With the ground in an unusually fine condition, and good growing weather, crops have advanced rapidly. Wheat and rye are jointing in the central counties; early wheat is in an unusually fine condition, with late wheat rapidly improving. Thomas county reports some wheat killed by electricity generated by high winds. Barley, oats and range grass are growing finely and cattle are fattening on the grass. Alfalfa will be ready to cut in ten days in south, and in two weeks in Wallace. Much corn is being planted, and is coming up, presenting a fine stand. A large acreage of forage crops is going in.

Clark.—Good growing weather.

Finney.—A fine growing week; range grass growing and cattle doing well; no corn planted; wheat looking well, but acreage light; sorghum for feed being extensively sown.

Ford.—Wheat jointing; early wheat never looked better; late wheat improving rapidly; wheat prospect never better in the history of the country; prairie grass, alfalfa, oats and barley are very good.

Graham.—Crops in fine growing condition; corn is unusually fine, a large acreage being planted.

Gray.—Fine rains the first and last of the week; all vegetation growing finely; wheat regaining.

Hamilton.—All crops gaining fast; everything is flourishing; farmers busy and hopeful.

Haskell.—Crops and grass growing finely; farmers nearly all done planting; some complaint of wheat being thin.

Kearny.—Fine growing week, with ground in very good condition; plowing and planting pushed; pastures are splendid; wheat growing fast; ground wet two feet down in north part.

Logan.—Fine growing week and all crops improved.



Some people in the world persist in clinging to old methods. There are men who still use a forked stick in place of a modern plow. There are also men, who, when they are troubled with a disordered stomach or liver, resort to the old-fashioned violent remedies that rack and rend the whole body, and while they give temporary relief, in the long run do the entire system a great amount of harm.

Modern science has discovered remedies infinitely superior to these old-fashioned drugs, that do their work by promoting the natural processes of excretion and secretion and gently correcting all circulatory disturbances. When a man feels generally out of sorts, when he loses sleep at night, when he gets up headache and with a bad taste in his mouth in the morning, when he feels dull and lethargic all day, when his appetite is poor and his food distresses him, when work comes hard and recreation is an impossibility, that man, though he may not believe it, is a pretty sick man. He is on the road to consumption, nervous prostration, malaria, or some serious blood disease. In cases of this description a man should resort at once to Dr. Pierce's Golden Medical Discovery. It is the best medicine for a weak stomach, impaired digestion and disordered liver. It is the great blood-maker and purifier, flesh-builder and nerve tonic. It cures 98 per cent. of all cases of consumption, bronchitis, lingering coughs and kindred ailments. Thousands have testified to its marvelous merits. It is a modern, scientific medicine that aids without goading nature, and that has stood the test for thirty years. Medicine dealers sell it.

Dr. Pierce's Pellets cure constipation.

Monton.—A week of fine weather; plowing and planting being pushed; calf crop good.

Ness.—A good growing week; progress of crops good; corn coming up well, but early corn yellowed by cool weather; wheat and rye are jointing and look fine; barley and oats short, but never better; stock interests advancing.

Scott.—Good growing weather; crops doing well; grass abundant and stock doing finely.

Sherman.—Corn planting about done; crops growing nicely; millet sowing, cane and Kafir planting in full progress.

Thomas.—Considerable wheat killed by high winds and electricity; other crops growing finely.

Trego.—More corn planters going than any other implement; reports mixed with regard to wheat and corn; barley and oats good; large quantities of forage crops being sown.

Wallace.—Everything growing finely; a little cool for best results; apples and cherries in fine bloom; range grass fine; alfalfa will do to cut in two weeks; still planting corn and sowing millet.

1898 Bicycles Down to \$5.00.

New 1898 Model Ladies' and Gents' Bicycles are now being sold on easy conditions as low as \$5.00; others outright at \$15.95, and high-grade at \$19.95 and \$22.50, to be paid for after received. If you will cut this notice out and send to SEARS, ROEBUCK & CO., Chicago, they will send you their 1898 Bicycle catalogue and full particulars.

A Chance of a Lifetime.

Agents wanted to sell the Cunniff Gas Retort and open stores and show the Retort in operation. \$3,000 a year easily made; an opportunity for a permanent, prosperous business that should not be overlooked. Agents are given a good commission. Profits are large.

Thomas Hootman, of Maryville, delivered seven and made \$52.50 the first day, and has orders for 100.

A. E. Benbow says: "People have gone wild over the Retort; will sell a thousand easy."

E. G. Clarke says: "It is the greatest thing in the world for agents; every family will have one."

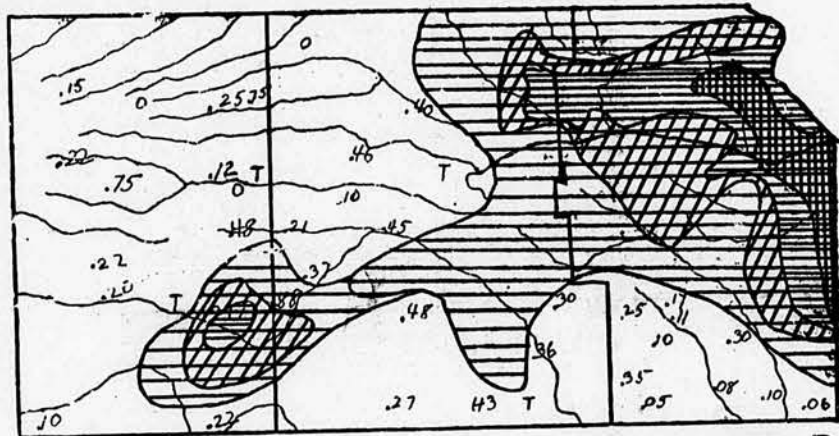
T. O. Yousey says: "It is a world beater; my next order will be for 200."

M. T. Hines says: "Can you ship me 500 Retorts? They are selling like hot cakes."

We send full instructions for the management of the business, and give full details of expenses required and profits to be made. Practical experience is not necessary; any bright man or woman can take hold of the business and make big money.

The Cunniff Gas Retort makes fuel gas from common coal oil by a purely scientific method, and is the cheapest fuel on earth. It is about six inches high, and is to be placed on the grate bars of any cooking or heating stove, range, furnace, or camp stove. Coal oil, unlike gasoline, is not explosive. A lighted match may be thrown into a pan of coal oil and the safe; any child can run it. Every housekeeper will be glad to get rid of the carrying of coal or wood, and the dirt and ashes, and will gladly substitute an apparatus that can be turned on and lighted at will, and which will furnish all necessary heat for baking, cooking, washing, and ironing.

In most parts of the country coal oil of the proper grade can be had at from three to four cents a gallon in quantities. Dealers for this supply furnished on application. The Watt Mfg. Co., 47 East Third Street, Cincinnati, Ohio.



Sheep Department.

Conducted by J. CLARENCE NORTON, Moran, Kas., to whom all letters should be addressed.

ENGLISH PRACTICE.

Ed A. Lord, of Kingman, Kas., kindly sends a very interesting article on how sheep are cared for in southeastern England, and suggests a comparison with the way they are cared for in western Kansas. I feel sure the Kansas Farmer readers will feel under many obligations to Mr. Lord for his exhaustive treatment of the subject and hope he will be a frequent contributor to this department. Now will Mr. Lord or some one else give us the methods usually followed in the short grass country, that the Farmer readers may catch a glimpse of the way sheep are cared for there?

"In southeast England, the sheep that I was acquainted with, viz., Kents, or, I suppose, originally Cotswold—long-wooled white sheep, did not flock. To begin with, I expect that every one knows that sheep have front teeth in their lower jaws only. They are called lambs until they are 1 year old, and by this time they shed two of their center teeth on the lower jaw, called sucking teeth, and get two larger ones, and they are now called 'tegs.' On reaching 2 years old they shed two more milk teeth, one on each side of the two new large ones, and this makes four new large teeth. By this time the ewe 'tegs' are having their first lambs, and from now on are 'one-lamb ewes,' while the wethers are called 'two yearlings,' and are fattened at this age. At 3 years of age the ewes have six large front teeth and their second season to lamb, and are called 'two-lamb ewes.' At 4 years of age the ewes have eight large front teeth and are said to have a full mouth and are known as 'three-lamb ewes.' After this they are fattened as fast as possible, as their front teeth from now on rapidly decay, wear shorter or drop out, consequently they cannot gather grass well enough to keep in good order, although sometimes in a flock of 300 or 400 ewes a few, say forty to eighty, that have good, real sound mouths are found and again bred, usually a month earlier than the rest of the flock, to bring early lambs for the early market, which generally pays well. Each owner had his ear marks as well as his tar marks, i. e., his initials or marks of some sort which is dipped in tar and the sheep or lamb marked with it. All single lambs were marked on one side, while the twins were marked on the other side with their numbers on the same side that the singles are marked, so that in being driven past any one they could tell at a glance whether the lamb was a twin or not, and if twins, their number. They are all docked, trimmed, ear marked, etc., as soon as thought old enough, or at less than two weeks old, and are then walked out singly (that is, a mother and her lamb) as soon as possible from the other ewes and gradually distributed around in the adjoining pastures. The bulk of the lambs come about April 1 to May 1, and are weaned about August 1. sheep are washed in clear running water in May and are shorn about July 1, marked with tar marks on shoulders for one-year-old ewe 'tegs,' for wether 'tegs' on the opposite shoulder. On this same shoulder are marked the one-lamb ewes (the wethers and ewes being in separate pastures, there is no confusion). A two-lamb ewe is marked in middle with a turn mark or brand put on perpendicularly instead of horizontally, as the three-lamb ewes are. During shearing any defective ones are marked with 'tiver' (as a cull) for fattening.

"About August the breeding flock is again looked over, and all those that have any defect, or teeth out of shape, or 'pig-chopped,' or any other deformity, are separated from the rest, lambs weaned, and every one of the flock dipped in a solution that will kill ticks, all parasites, and free them from fleas. This dipping is a great thing, as it is of great assistance to the sheep in keeping them 'doing,' i. e., getting and keeping in good condition. It is used a great deal as a preventive and to keep the sheep easy and quiet. As each sheep is shorn its fleece is folded and rolled up and tied with a wool string twisted out of the fleece, and a neat little bundle is made of it—easy to handle and weigh. If the lambs are shorn their wool is so short that it is put in big bags.

"Later in the fall the whole flock is overhauled again, the lambs marked with a big mark of hot pitch and tar, which, if marked well and high, shows plainly the next spring. This is done so they can be put out to 'keep,' i. e., hired out during the winter at so much a head, about the same way as cattle are here; in other words, taken in to keep.

One man makes it a business, hires help and gathers up a large drove, some from one and some from another farmer or grazier. Consequently they all get rather mixed up by the time they are driven back the next spring and want quite a bit of sorting over. They are driven 'up country' and put out to keep to various folks who have some land—generally pasture—from which they have just had to take off their cows to put in winter quarters.

"One ram is put with about forty ewes in the fall late enough so that in about twenty weeks the lambs will begin to drop and about the time each grazier thinks will suit his case. Sheep are out on the pasture the whole winter, and if the pasture is not sufficient they are fed some hay in portable racks holding enough for a day or for a few days' supply. Later on, especially during lambing time, the ewes are fed lots of mangels or stock beets. A lump of rock salt in a wooden platter is a great item in the sheep business, to which the sheep can have access at all times.

"A person can hardly guess at the amount of attention needed to look after and attend a flock of sheep carefully, especially when they are kept in small bunches. They must be counted at least once every day, their rack refilled, and minor ills attended to. Sometimes one or two have gotten out; this one's feet are to be attended to; some corn or peas must go to this lot of fattening sheep; some bran or oats to a weakly lot of lambs; this bunch of old ewes must have their teeth looked over to see that there is nothing in them to bother them while eating; each lot must be able to get water,

and characteristics of the animal. What we must have in America if our sheep are to be as good as any in the world is the free use of the castrating knife, free culling of ewes and sending of all imperfect specimens to the butchers.

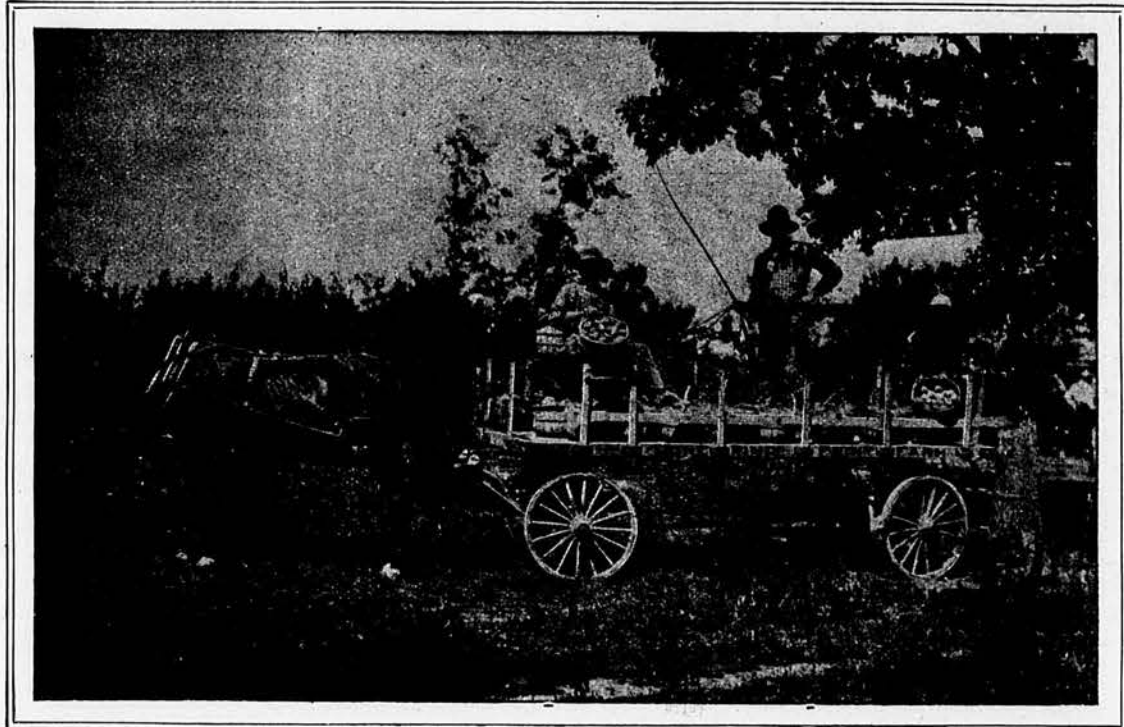
Of docking I will say that it may be attended to at the same time that castration is, or, better, deferred a week. It is hardly worth while to dock the tails of wether lambs that are to be sold under 1 year old; they look more like lambs with their tails on and shear a little more wool.

When lambs are docked I like to dock them close so that the shearer will find nothing at all in his way. Well-bred lambs are quite apt to bleed badly when docked, and a good plan is to tie a string tightly about the tail just above where the cut is to be made. This will need to be removed in a day. A perfect way is to use the docking pinchers, making them red hot or hotter, for then there is no bleeding at all nor any pain if they are hot enough. I have now used these pinchers for two years and find no objection to them. If a good fire with a bed of coals is at hand in which to thrust the pinchers they may be used continuously as fast as the lambs can be caught. The Gazette can supply these pinchers. —Joseph E. Wing, in Breeder's Gazette.

When the cold-water cans took the place of shallow setting, a great advance was made in butter-making. Then came the separator, which replaced the deep cans in creameries and large dairies. Now the small hand separators have found a place and a favor in the small dairy that leaves little room for the port-

atrio is such animals as Matilda 4th, with a butter record of 21 pounds 8½ ounces; Comely of St. Lambert, testing 20 pounds 12¼ ounces, and Ida of St. Lambert, that made 30 pounds 2½ ounces in seven days. Lord Lisgar, Victor Hugo and Rioter 2d make up a pedigree fit for the most critical breeder. Another sire whose worth is noticeable in some of the young animals in this herd is Fancy's Harry 3d 21628, who traces to such noted sires and dams as Fancy's Harry, sire of thirty-two tested cows, Lord Harry, Top Sawyer, Tormentor and Khedive; the last was the sire of Princess 2d, with a record of 46 pounds 12½ ounces of butter in seven days. Duchess of Bloomfield, test 20 pounds; Landseer's Fancy, with a seven days' test of 29 pounds and a yearly record of over 900 pounds; Beeswax, Emblem and Lady Creamly 4th are well known and appreciated by Jersey fanciers everywhere. The cows in milk listed for this sale are as a rule superb animals, and many of them would be capable of producing from fourteen to twenty pounds of butter a week. In blood lines these cows trace to Le Brocq's Prize; Tormentor; Pierrot; Pilot, with seventy-six tested descendants; Top Sawyer; Marius; Rioter 670; Coomassie, champion over all on the Island of Jersey for five years; Emblem, with eighty-one descendants having records; Signal, sire of eleven tested cows; Ida's Stoke Pogis, sire of fifteen; Kathletta, test 22 pounds 12 ounces, and Willie Boy, sire of Albert 44, one of the most noted bulls of his time.

These Jerseys, service bull included, are for sale to the highest bidder, and presents an opportunity to dairymen of



LOADING PEACHES, FRUIT FARM, SOUTHWESTERN MISSOURI.

From a photographic view taken along the line of the Missouri Pacific Railway. Loaned by H. C. Townsend, general passenger agent, St. Louis, Mo.

and there must be everlasting shifting around to keep them 'doing' well. Each bunch must have fresh pasture—sheep twelve hours after sheep and cattle twelve days after cattle is ye old country rule."

Surgery Among the Lambs.

Castration and docking are the serious events in the history of the lamb. Of castration I would say that it had better be performed during the first week of the lamb's life. My method is to cut the end of the scrotum clear off, to withdraw the testicles, separating them from their envelope by using the thumb nail, then withdrawing them, cords and all, by a quick pull.

There is need of thorough disinfection of hands and knife before beginning this operation, so as not to introduce germs of putrefaction or inflammation. After the operation I like to put some lard or tallow in which has been dissolved some disinfecting substance, turpentine being perhaps the most convenient, into the wound. The lamb ought not to suffer much from the operation at this age; the later it is done the greater the risk and the more the lamb suffers.

It is well to be sure that the cords are really drawn out, else they may catch in the lips of the wound and adhere and grow there and perhaps cause serious trouble afterward. I once had lambs bought to feed, some 8 months old, that became sore at the scrotum and some died from apparently imperfect castration.

Speaking of castration, let me urge breeders of pure-bred sheep to use the knife freely. There is no virtue in ped-

able creamery. The tendency of late has been to simplify the separator, and reduce it in size and price so as to meet the requirements of the small dairyman, both in capacity and in price. The United States Butter Extractor Company, Newark, N. J., seem to have accomplished this in their Empire separator. They make the large sizes as well as the smaller machines. Their catalogue will be sent on application.

Deer Park Sale of Jerseys and Poland-Chinas.

No sale of Jerseys ever held in the West has created as much interest among breeders as the one announced of Deer Park Stock farm in the advertising columns of the Kansas Farmer, and no opportunity has ever been offered to secure animals of such royal lineage as will be offered at this sale. The service bull, Business Comatario 38101, is the sire of nearly all the young heifers named in the catalogue, and as to his breeding and individual merits, he has few equals. Among his ancestors are such noted animals as Marjoram, the dam of Stoke Pogis 3d; Charity of St. Lambert, that sold at auction for \$2,750; Michael Angelo, that cost Miller & Sibley \$12,500, and whose dam was Eurotas, claimed by some authorities as the greatest Jersey cow the world has ever known. Her yearly butter test of 778 pounds has rarely been reached or exceeded; but her son Pedro, that sold for \$10,000, in 1883, and was winner in the show ring at the World's Fair at 16 years of age, is final proof of the prepotency and rare qualities of this noted family. But little less famous in the ancestry of Business Com-

securing choice blood which will prove of inestimable value in advancing the quality of their dairy herds.

There will also be offered at this sale fifty head of pure-bred Poland-China swine of choice breeding. Hog breeders should make an effort to be present at this sale.

DIP YOUR SHEEP with Cannon's Sheep Dip (liquid and non-poisonous), easiest to use, cheapest and best made. Cures scab, kills ticks, lice, fleas and maggots. Used by the largest and best breeders. Satisfaction guaranteed. Write to the Cannon Chemical Co., St. Louis, Mo., wholesale agents, for circulars and prices.

Cheap Rates to Denver Col., in June via the Missouri Pacific.

Account of annual meeting American Medical Association, June 7 to 12, at Denver, the Missouri Pacific will sell tickets from all Kansas points at rate of one fare for the round trip, plus \$2. Tickets will be on sale June 5 and 6, and limited to return until July 6. See nearest agent for information regarding diverse routes for returning and side trips from Denver to Colorado points, or write H. C. Townsend, G. P. & T. A., St. Louis, Mo. F. E. NIPPS, Agent, Topeka, Kas.

Ottawa Chautauqua Assembly, Forest Park, Ottawa, Kas., June 13 to 24, 1898. Tickets on sale June 11 to 24, inclusive, at one fare, \$1.59, for round trip, good for return until June 27, 1898. If proximity of station to grounds and perfect train service are inducements, your ticket will read over the Santa Fe. Ask W. C. Garvey, Agent, A. T. & S. F. Ry., about it. W. J. Black, G. F. A.

The Home Circle.

THE VALLEY OF PAIN.

My road lay over the Hills of Joy,
Where the springs of laughter flow;
And I sang and I danced in my careless
glee,
And I ate of the feasts that were spread
for me,
In the sunshine's wonderful glow.

O, the beautiful, beautiful Hills of Joy,
Where pleasure and happiness reign!
The sojourners there give scarce a sigh
To those who live down in the vale hard
by—
Down in the Valley of Pain.

My road led over the Hills of Joy
And down to the barren plain!
But flowers and fruits grew thick in the
way,
And I never knew, till, alack, one day,
I was down in the Valley of Pain!

O, the hunger of hearts in that desolate
vale,
Whose hours are a tortuous chain!
The days are lonely, the nights are long;
There is so little sunshine, so little song,
Down in the Valley of Pain!

And ever I looked toward the Hills of Joy
For a word or a token of cheer;
But they said—who dwelt in the Valley of
Pain—
"You will listen and watch and wait in
vain;
They forget that we live so near."

A few who had lodged in the shadowy vale
Bade us to hope and be brave;
But stout hearts sickened amid the breath
Of doubt and darkness, despair and death,
In the face of an open grave.

And I said, as I traversed that horrible
place,
"If those heights I should ever regain,
Comfort and beauty and song and flowers
Shall grace and gladden the weary hours
Down in this Valley of Pain."

Again I am climbing the Hills of Joy,
And this terrible truth grows plain;
Sympathy dies when we near our goals;
For I am forgetting those suffering souls
Down in the Valley of Pain!
—New England Magazine.

LEGENDS OF THE HOLY GRAIL.

One of the most important medieval legends, that of the Holy Grail, is intimately connected with the Last Supper, to which, as a rule, tradition has ventured to make very few additions. The above-mentioned legend relates either to the dish in which our Lord dipped the sop which he handed to Judas or to the cup in which he gave to his disciples the sacramental wine.

Tradition relates that long before the creation of Adam and Eve God once forsook his throne to view the earth, his new creation, and pronounced it good. Lucifer, one of the highest among his angels, seeing the heavenly throne temporarily vacant, ventured to seat himself upon it and to claim the worship of the angels, some of whom did homage to him. To show their reverence for Lucifer, these subservient creatures further tendered him a marvelous crown, studded with countless stones of great price, which they set upon his head, calling him their king. Such insolence on the part of the angel and his adherents was, however, soon to be punished, for, although the rebels banded their forces together, they could not resist the onslaught of the celestial host, led by Michael, and the war in heaven ended with the downfall of the insurgents.

Lucifer and all his crew were then hurled headlong out of heaven, and in the fall one of the precious stones, detached from the crown, dropped down upon the earth unnoticed. * * *

It was one of the direct descendants of Adam and Eve who found the precious stone which had fallen from Lucifer's crown and fashioned from it a priceless cup. After many centuries this vessel came into the hands of Joseph of Arimathea, in whose house Christ kept the Feast of the Passover with his disciples. When the crucifixion followed so closely upon the Last Supper Joseph took this cup, and, standing beneath the cross, received into it a few drops of the blood of our Lord. It was owing to this circumstance that the vessel was called Sangraal, Sangreal, or Holy Grail, for the Divine blood had not only sanctified it, but had given it miraculous powers, which soon became manifest.

The Jews, afraid lest Caesar should claim the body of Christ—which they could not produce—resolved to kill Joseph of Arimathea immediately after the Resurrection, and then to accuse him of having stolen and concealed the body of our Lord. To keep this murder a secret Joseph was taken by night and placed in a sealed prison cell, where the Jews fancied he would soon die. But here he was marvelously fed and sustained by the Holy Grail, which filled his prison with beams of refulgent, life-giving light.

The medieval legend, regardless of such trifling matters as history, chronology or even probability, now goes on to

relate that a knight, returning from Palestine, related the passion of our Lord to the Emperor Vespasian. * * *

Vespasian set out for Palestine at the head of a large army. Thus, in medieval literature, the siege of Jerusalem by the Romans is made to appear as a holy war, and is called the First Crusade!

When Jerusalem had been taken Vespasian and Titus vainly tried to make the Jews give up the body of Christ, which they wanted to secure as a most precious relic. But all the Jews insisted that Joseph had stolen it, and Vespasian put one of their number under torture to discover the truth.

This man remained silent as long as he could, but finally confessed that Joseph had been secretly walled up in a prison cell about a year before. To ascertain the truth of this confession Vespasian had the wall torn down, and he was surprised to see Joseph of Arimathea come out alive and well, and to hear him greet him by his imperial title and name. Although delivered from prison by miracle Joseph of Arimathea feared further persecutions on the part of the Jews. So he left Jerusalem, went to Joppa and there embarked on a waiting vessel with his sister and brother-in-law. They sailed away, and after a long journey landed at Marseilles, in France, still bearing with them the Holy Grail, which continued to provide for all their wants.

Besides supplying them with the food and drink they liked best the Holy Grail, whose beneficent powers were renewed every Good Friday—because a dove then came down from Heaven bearing a consecrated wafer which was deposited in the cup—cured them when they were ill and served as an oracle. When Joseph and his friends did not know what to do they spent a certain time in preparation and prayer before they uncovered the Holy Grail. Upon its luminous edge they could then read, in letters of flame, commands which none of them ever ventured to disobey.

Joseph of Arimathea and his little band of faithful followers were perfectly happy in France, until one of their number committed a secret but grievous sin. Plague and famine broke out in the country, and Joseph, hoping to discover and punish the sinner, consulted the Holy Grail. By its orders he built a round table and made a supper, to which all were invited. Then, warned by the Holy Grail that the culprit would be designated by a miracle, Joseph watched each guest closely as he took his seat. When it came to the turn of Moses, the sinner, to take his place at the board the ground opened and swallowed him up, and the prediction was made that the seat which he had occupied should be called the "Siege Perilous," because it would be fatal to all sinners who ventured to sit in it.

Shortly after this event Joseph of Arimathea was warned in a vision that the Siege Perilous would be worthily occupied by one of his own descendants, a stainless knight. Then, after sojourning for some time in France with the Holy Grail, Joseph carried it to Glastonbury, in England. Reaching this point, which tradition identifies with the spot where Alfred watched the cakes in the herdsman's hut, and with the fabled land of Avalon, "where falls not hail, or rain, or any snow," Joseph of Arimathea, weary of wandering, thrust his staff of hawthorn deep in the ground, where it miraculously took root and bloomed at Christmas time. The thorn tree thus planted still exists, and on this spot was built the first Christian church in England, if tradition is to be believed.

Joseph of Arimathea and his few followers established the first monastery at Glastonbury, and they mounted guard over the Holy Grail, while preaching the gospel to all the people around them and converting many by the miracles they wrought. Years passed on and the sacred vessel remained visible to all the good; but sin having at last appeared even among its chosen guardians, the Holy Grail was carried away by the angels. It had sojourned so long in England, however, that the monarchs of that country were given the highest seat at religious councils in the Middle Ages, and could claim precedence over even the French kings, the avowed champions of the Virgin Mary.

From time to time some specially favored mortal was permitted to view the Holy Grail, which plays such an important part in the legends of King Arthur, of Parzival and Lohengrin, and, as the Holy Grail legend was incorporated in these chivalric romances, it became the theme of poets and minstrels and was soon familiar to all. In modern times the old legend has been used by Tennyson in his "Idylls of the King," and by Wagner in his last great opera. Mr. Abbey has also availed himself of it for the series of paintings with which he has so



WHAT IS YOUR FORTUNE

A woman's hand tells the tale!
If it is smooth and white it shows she uses her head to save her hands—that she uses

GOLD DUST WASHING POWDER

to do her cleaning. If her hand is rough, wrinkled and shrunken, it shows she is still using the old soap and soda combination. Why don't you use Gold Dust Washing Powder?

Largest package—greatest economy.

THE N. K. FAIRBANK COMPANY,
Chicago. St. Louis. New York.
Boston. Philadelphia.

beautifully decorated the Boston Public library.—Baltimore Sun.

Life in Other Worlds.

During the last twenty or thirty years, observes M. de Kirwan, a French scientific man of note, certain persons have endeavored to transform the graceful, poetic and in itself perfectly inoffensive hypothesis of the habitations of the stars by living beings into an engine of war against spiritual and Christian doctrines. A sort of pantheistic and materialist system founded on an evolution without limits is set up as a substitute for Christianity on the strength of these supposed habitable worlds. A great point has been made of the pettiness of the earth in comparison with other stars, and of the smallness of the human stature. It has been declared to be inadmissible that a universe so infinitely vast should have been made for a little creature like man, and that consequently all that religion and spiritual philosophy affirm about the destinies of man and the part he plays in nature is but a legend which is vanishing in the bright light of science.

M. de Kirwan, in Cosmos (Paris, February), maintains that nothing which science has yet discovered affords the slightest warrant for these attacks on the Christian religion. He begins by claiming that there is as yet nothing to show that organized life—so far as we have any conception of life—exists on any of the bodies composing our solar system. It certainly cannot exist in the sun, a globe of incandescent gases of a temperature in which no possible combination of elements could give birth to and support any organism whatever. Venus, by reason of the great inclination of its axis to its orbits, has summers of intolerable heat, succeeded by abrupt transition by winters of excessive cold, at intervals of about fifty-six days each. These violent and frequent changes of temperature must result in storms to which the fiercest cyclones known on the earth would be child's play. In such an abode how can you conceive of the existence and development of life? The condition of Mercury is still worse. It presents constantly the same face to the sun. One of its hemispheres is constantly calcined by the solar furnace, while in the other hemisphere there is always night and winter. Under such circumstances is life possible?

Mars has an atmosphere, clouds and seas. It does not, however, receive quite half the light and heat which the sun imparts to the earth, and each season in Mars being double what it is with us, it must have a long continuation of terrible cold. The red color of Mars seems to come from the nature of its soil, in which predominates protoxide of iron. If this soil were covered by vegetation the protoxide would be deutoxide, which is black. Without vegetation it is impossible to have inhabitants.

As to Jupiter, it is agreed that it is still in a liquid or at least pasty state. As to Saturn, it is yet a gassy mass, and Uranus and Neptune are nebulous masses, without speaking of their very small participation in the light and heat of the sun.

M. de Kirwan dwells specially on the latest views that science has formed in regard to the moon, because he thinks the case of that heavenly body proves it a gratuitous supposition to believe that the organization and manifestation of life are the principal end of the general creation. That the moon was not created for the purpose of organizing and maintaining life seems, so far as our knowledge extends at present, entirely clear. Without doubt the earth was created for man. Its place in the sidereal universe was determined in view of

man's existence, and in such a manner that he can utilize for his profit, at least in a certain measure, the other creations which are beyond his reach.

That the stars which are improperly called fixed, and which, like our sun, are incandescent masses raised to an extreme temperature, can be the seat of organic life, so far as we know anything about that life, no one is rash enough to affirm. Yet may not these stars have planets gravitating about them? Some of them may. That there are beyond the limits of human observation other earths inhabited by living beings, even by intelligent beings, it is not unreasonable to suppose. Yet, after all, it is but a supposition. It is a matter about which we know absolutely nothing whatever. The not improbable supposition leaves a wide field for the use of the imagination. To pretend, however, to find in the supposed existence of these sidereal humanities arguments against Christianity is absurd.

As to the smallness of the earth in comparison with other heavenly bodies, and the littleness of human stature, M. de Kirwan considers that such considerations amount to nothing. Is the value of beings in proportion to their mass? If that were so, an elephant or a whale would be of much more value than a Socrates, a Virgil or a Pascal. Of what consequence is the stature of the human being if he is able to become acquainted with, more or less, to weigh and number all those immensities which come under his observation? The greatness of man is not in the dimensions of his body, but in the divine torch of reason which enlightens him and aids him in discovering and determining the most secret and most complicated laws of nature and to carry on his investigations in the most distant regions of space.

If there be in other worlds combinations of body and soul, of organism and mind, like or analogous to the human combination which peoples the terrestrial globe, how is the value of the latter attenuated or diminished by such a fact? And if the Creator has deigned to manifest himself specially to the beings of this earth, how is the destiny of the beings in other worlds injured thereby? —Translated for the Literary Digest.

How's This!

We offer One Hundred Dollars Reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.

F. J. CHENEY & CO., Props.,
Toledo, Ohio.

We, the undersigned, have known F. J. Cheney for the last fifteen years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligation made by their firm.

WEST & TRUAX, Wholesale Druggists,
Toledo, Ohio.

WALDING, KINNAN & MARVIN,
Wholesale Druggists, Toledo, Ohio.

Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Price 75c per bottle. Sold by all Druggists. Testimonials free.

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Home-made and the best made for all purposes.

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If your dealer does not carry these goods send direct to

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The Young Folks.

A BOY'S REMEDY.

In thinking over different ways a boy can get relief
To lighten up his load of cares and over-
stock o' grief,
It 'pears to me there's only one that fills
the bill at all,
An' that's to scamper to his ma an' let her
hear him bawl.

It don't need much hard thinkin' to call
sometimes to mind
When I had bitter grievances against the
humankind,
An' how they used to lighten up an' kind
o' float away
When I'd sit down an' bellow near my ma
for half a day.

If you get licked at fightin' or get hit with
a ball,
Or if you're climbin' a tree an' have a
real bad fall,
You don't want patent medicines to sooth
your throbbin' breast,
But what you need's to find your ma an'
bawl your level best.

An' if your ma's away from home don't
waste a single tear,
For not a grain o' comfort comes unless
she's around to hear.
Just tuck your grief away till night, when
she comes home again,
Then run an' jump right in her lap an'
bawl with might and main.

Ev'n now it of'en seems to me, when busy
cares perplex
An' things all work out crisscross, my
peaceful soul to vex,
If I could only bellow like I used to when a
boy,
The noise would scare my grief away and
fill its place with joy.

—Exchange.

Written for Kansas Farmer.

YOUNG FOLKS IN THE OLD COUNTRY.

BY ANNA MARIE NELLIS.

NUMBER 24.

THE REICHSTAG.

German folks are somewhat like Kan-
sas folks in that they need laws to keep
them in peaceful and warlike condition.
One of the important factors in the con-
struction of German laws is the Reichs-
tag, and the building in which it meets
is called the "Reichstagsgebäude."

The Reichstagsgebäude is the capitol
of the North German Confederation, or
German Empire, and it is situated in
Berlin. Its exact location is in Koenig
Platz, which is the northeast portion of
the Tiergarten, and is directly west of
"Brandenburger Thor," with the beau-
tiful "Seigessaule" (monument of victo-
ry) a little ways to the south.

The Reichstagsgebäude has been oc-
cupied since 1888; it is yet unfinished
but it will be completed in two more
years. Its cost will have been 30,000,000
marks; that sounds like a very large
sum, and it is a large sum of money;
but \$7,500,000 would express about the
same value. It does not appear to be
one-half the size of the capitol at Wash-
ington; and while it is a beautiful build-
ing, it impresses one with only about one-
half to less than two-thirds the "awe"
the latter invokes—that is, from the out-
side. It is a square structure, built of
gray stone, with many square towers at
the corners and sides, while the center
looms up a richly-gilded dome which may
be seen at a very long distance from the
city.

The only chance visitors have to be
shown through the Reichstagsgebäude
is at 9 o'clock in the morning, and then
only one party a day is escorted.

On March 16 our party were the fa-
vored ones, and we had a guide who
could tell us all about everything there.
I can only convey a very faint idea of the
appearance of the interior. To fully de-
scribe it would be a task very "schwer,"
as the Germans say.

The gray stone coloring predominates
inside as well as outside. On the four
sides of the building are four immense
halls. In each of these halls are to be
two grand windows of colored glass
which will cost 24,000 marks apiece. Only
two of these windows are finished. One
represents the organization of the many
States and Provinces into one State—
the German Empire. This exemplifies
the meaning of the motto of the United
States of America. The other window
has the large Prussian eagle in the center
and the representation of the coat
of arms of each State of the confederacy.
Both these windows are examples of
exquisite workmanship and are very
beautiful, indeed.

There are many lobbies and waiting
rooms beautifully upholstered and deco-
rated; but the "restaurant" is the finest
and most elegant of the minor rooms.

Eating (and drinking) is the most im-
portant thing in life to the average Ger-
man, and naturally the capitol restau-
rant should be an important affair. It
is finished in carved oak, the ceiling is
decorated in all the colors of the rain-
bow; but the most prominent figure is
the immense Prussian eagle, which bird

—like Uncle Sam's—has his perch on
every side.

Each party, or faction, of the Reichstag
has its own especial table and part of
the room.

Leaving the restaurant we passed
through "Wandel Hall." This is the
center of the building under the dome.
The floor is of beautiful marble, but
there is no furniture except at the sides
are placed very large walnut chairs, up-
holstered in leather with the black eagle.

Directly under the center of the dome
is a large stone, and this marks the place
where the statue of the "Old Emperor"
will be placed. It is a noticeable fact
that nowhere in this large building is
there a picture, statue or inscription
representing Bismarck—the man who
made it possible for that building to be
needed. The guide said he could not
give any explanation of the omission; he
merely mentioned it as a fact.

After passing through many halls and
ante-chambers we came to the entrance
of the "Hof," or court loge. This is a
little room (comparatively) with many
large mirrors and much red satin and
marble. The walls between the mirrors
are marble, the upholstering all in red
brocaded satin with an immense "W.
R." worked on the left-hand corner of
each piece. Our guide said the initials
belonged to William Rex, but he did
not explain who Mr. Rex was—possibly
"a man formerly of Kansas."

The court, and nobility generally, often
attend the Reichstag; but the Kaiser,
never. If he wants to see the Reichstag
or the Reichstag wants to see him, why,
the Reichstag must go where he is. Then
when he gets them in the palace they
have to be humble and listen to his wise
remarks something like: "Suprema lex
regis voluntas." This he wrote in the
golden book of Munich, and our guide
said it means that the wish of the King
should be the most important law. You
see, William Rex has been clear through
the high school and knows Latin.

We next visited the diplomatic ante-
chamber. This is also finished in red,
but has not the grand appearance pre-
sented by the "Hof."

Descending a flight of stairs, we were
ushered into the "House," or where the
Reichstag sits. The seats are 500 in
number and range fan-like from the pre-
siding officer's tribune. Between the
tribune and the members' seats are a
couple of terraces of desks for the of-
ficers of the law-making body. There
are 397 members proper of the Reichstag,
but the members of the "Bundesrath"
are also entitled to seats on certain oc-
casions. The latter body (fifty-nine in
number) is made up of representatives
of the various States, while the Reichstag
members are representatives of the peo-
ple.

There is a large gallery which will
accommodate 500 spectators. The ceil-
ing is of glass, to permit the light of
day to enter. On dark days the room is
lighted by sixteen immense electric chan-
dellers. On the left of the presiding of-
ficer is a door called the "nein" door.
On the right is one called the "ja" door.
Our guide said that when the presiding
officer was in doubt as to the vote on
any question he would have the members
get up and go out at one or the other
of the doors. Those dissenting to the
question voted on would go out slowly
through the "nein" door, those assent-
ing through the "ja" door; in this way
the clerk could easily count them. This
reminded me of a visit down at my
grandpa's home in New York State, when
he had all the sheep driven into a pen
and then let one out at a time and
chalked it so as to get the correct count;
but this Reichstag business was different,
of course.

We had taken nearly two hours in our
visit through the building, and now it
was nearly time for the Reichstag to
convene. Already many members had
come into the hall and were occupying
their seats.

We were provided with the proper
credentials, which admitted us into the
"Diplomatic Loge," where we now ad-
joined and watched the gathering of
the German solons. Our capitol guide
had left us, but we had one member in
our party who could tell us about many
of the people who composed the Reichs-
tag.

I was informed that there were var-
ious parties in German politics as well
as in American politics. There are the
Social Democrats, the Liberals, the Ul-
tramontanes and various other names.
These parties are again divided into fac-
tions. For instance, the Liberals are
either "Süddeutsche Volkspartei," or
"Deutschesfreisinnige Volkspartei," or
"Freisinnige Vereinigung." It is easier
to be a "Pop" or a "g. o. p." than all
that.

I asked who is that man with a large
head, high forehead, with hair parted

low down on the right side and combed
up over the bald "dome of thought."
Why, that was Eugen Richter, the man
who controlled the Deutschesfreisinnige
Volkspartei.

That old man over there to the left is
William Liebknecht, a leader of the So-
cial Democracy; he is over 70 years old
and has just been imprisoned for a short
term because he said something which
didn't please Mr. Rex.

That nice, pleasant-looking old man
over to the right is Rudolf von Bening-
sen, who is the head of the National
Liberal party, and that fierce-looking
gentleman who is tall, and has his hair
combed back over his head with beard
parted in the middle, is Count Kanitz,
leader of the "Junkers." Over at the rear
of the seats stands a "heavy set" man,
with short, bristly hair, full heavy beard,
moustaches twisted like a shoemaker's
awl. He wears a pair of gold-bowed
spectacles and is talking quite animat-
edly to a group of gentlemen—that is
Dr. Lieber, the leader of the "Center"
party. Others were pointed out to me,
but it would not be interesting to in-
troduce all of them.

It would be too wearisome to wait for
the proceedings to begin, so we all ad-
joined for lunch and came back in an
hour. We found the Reichstag in fair
working order and they had not waited
for our return.

The President of the Reichstag was "in
the chair." He is Freiherr von Buol-
Benberg. He is an elderly man with
scanty locks, beard full, short and bristly.
His nose and facial expression generally
is "heavy," but his eyes are keen and
he seems to see every movement in the
house. We were favored with a view of
Prince Hohenlohe-Schillingsfuerst, the
Chancellor of the Empire, who sat near
the Speaker's rostrum. He did not seem
to be taking any part in the proceedings.

The question under discussion was con-
cerning pensions for army officers, and
during the debate reference was made
several times to the United States. One
man said: "Our military appropriation
exceeds 600,000,000 marks, but we con-
sole ourselves that it is the price of
peace and that other nations pay still
more for similar objects. The pension
list of the United States shows a greater
expenditure." Then he managed to use
a bit of Latin, too, like William Rex.
He said: "Si vis pacem, para bellum,"
and its meaning was explained to me that
if we build up lots of strength in time
of peace we could whip the Spanish in
case of war.

The principal speaker of the afternoon
was Dr. Goetz, who is a very small man
with gray hair and beard, and he is
exceedingly nervous. Members in ris-
ing to speak do not first address "the
chair," but just begin to speak their
pieces without as much as saying "by
your leave." Little Dr. Goetz spoke for
over an hour just as vehemently and ex-
citedly as it would be possible for a
little German man. Then while he
stopped for a few minutes to catch a
breath or two an officer took the floor
and contradicted everything Dr. Goetz
had said. The little fellow sat and fig-
eted and as soon as there was an oppor-
tunity he bobbed up again. His party
cheered him and the others hissed and
called him down—just like they do in
civilized countries. Then the President
would try to calm all parties, but with
little effect. It was very exciting and as
good as a circus, every bit. The whole
afternoon was used up in this discussion
and the question stood just as it had at
the beginning. Poor little Dr. Goetz was
tired and cross and called everybody sev-
enteen or eighteen different kinds of
names. The time for adjournment was at
5 o'clock, and while Dr. Goetz was try-
ing to recover some more breath for a
new attack his opponents managed to
pass a resolution for adjournment, and
the excited Doctor had to leave the rest
of his speech unspoken.

Elevating the Elevator.

"Little boy," she exclaimed, "you ought
to be at school instead of trying to run
an elevator."

"I'm not trying to run it," was the an-
swer. "I'm running it. And if you wish
to ride I will be happy to accommodate
you. So far as any obligation to be at
school is concerned, allow me to remind
you that this is a legal holiday, and I am
exempt from attendance at an institution
where I am pleased to say I am at the
head of most of my classes."

"You have no business trying to run
that elevator, anyhow."

"You couldn't very well run it for
yourself, could you?"

"I'd rather try it than depend on you."

"For what reason?"

"Because you are too young to know
anything about it."

"Madam, allow me to reassure you.

This elevator is operated by hydraulic

PIMPLES

"My wife had pimples on her face, but
she has been taking CASCARETS and they
have all disappeared. I had been troubled
with constipation for some time, but after tak-
ing the first Cascaret I have had no trouble
with this ailment. We cannot speak too high-
ly of Cascarets." FRED WARTMAN,
5708 Germantown Ave., Philadelphia, Pa.



Pleasant, Palatable, Potent, Taste Good, Do
Good, Never Sicken, Weaken, or Grip. 10c, 25c, 50c.

... CURE CONSTIPATION. ...
Selling Remedy Company, Chicago, Montreal, New York, St. L.

NO-TO-BAC Sold and guaranteed by all drug-
gists to CURE Tobacco Habit.

pressure, the principle relied on being
that water exerts pressure in proportion
to the height of a column rather than in
proportion to the diameter. In making
use of this characteristic, water is ad-
mitted into a cylinder, the pressure being
regulated by the use of valves, and a
stable equilibrium being made possible
by an ingenious system of counter-
poises. I could go further into the
minutiae of this particular machine,
which, of course, has its variations from
other models," he added as she gasped in
astonishment, "but I doubt if you could
follow the technical terms whose use an
accurate description would necessitate.
But I wish to assure you that if, after
what I have said, you think you know
more about this elevator than I do, you
are at perfect liberty to step in and take
its management out of my hands."—Bos-
ton Journal.

Value of Advertising.

D. M. Osborne & Co. who manufacture
the largest line of farm implements made
by any one concern in the United States,
and whose attractive advertisements
have been appearing in our columns for
the last two months, have been forced
to acknowledge that these advertise-
ments have been seen and read by a
multitude of people, if inquiries can be
any criterion to go by. In their adver-
tisements they have incidentally offered
to send free of charge a book six inches
by nine inches, entitled "Handy Book for



House and Farm," which is complete in
its information for farm and housekeep-
ing and particularly in cooking and bak-
ing receipts. The number of inquiries
for these books have been and still re-
mains something enormous. The unex-
pected part of the program is that many
of the ladies, after trying these receipts,
have sent to the advertising manager
sample boxes of cake of different kinds,
pressed chicken, etc. The illustration
given shows his desk nearly covered with
these boxes, which speaks imperatively
of the interest the ladies have taken in
the book.

This book also describes in detail the
Osborne implements, which have won
the reputation of "succeeding where
others fail," and are by their excellence
pushing their individuality well to the
front in the agricultural world.

Educate Your Bowels With Cascarets.
Candy Cathartic, cure constipation forever.
10c, 25c. If C. C. C. fail, druggists refund money.

Mothers! Mothers!! Mothers!!!

MRS. WINSLOW'S SOOTHING SYRUP has been used
for over FIFTY YEARS by MILLIONS OF MOTHERS
for their CHILDREN while TEETHING, with PER-
FECT SUCCESS. IT SOOTHES the CHILD, SOFT-
ENS the GUMS, ALLAYS all PAIN; CURES WIND
COLIC, and is the best remedy for DIARRHEA.
Sold by Druggists in every part of the world. Be
sure and ask for "Mrs. Winslow's Soothing Syrup,"
and take no other kind. Twenty-five cents a bottle.

KANSAS FARMER

ESTABLISHED IN 1863.

Published Every Thursday by the
KANSAS FARMER COMPANY.OFFICE:
No. 116 West Sixth Avenue.

SUBSCRIPTION PRICE: ONE DOLLAR A YEAR.

An extra copy free fifty-two weeks for a club of six, at \$1.00 each.
Address **KANSAS FARMER CO.,**
Topeka, Kansas.

ADVERTISING RATES.

Display advertising, 15 cents per line, agate (fourteen lines to the inch).
Special reading notices, 25 cents per line.
Business cards or miscellaneous advertisements will be received from reliable advertisers at the rate of \$5.00 per line for one year.
Annual cards in the *Breeders' Directory*, consisting of four lines or less, for \$15.00 per year, including a copy of *KANSAS FARMER* free.
Electros must have metal base.
Objectionable advertisements or orders from unreliable advertisers, when such is known to be the case, will not be accepted at any price.
To insure prompt publication of an advertisement, send cash with the order; however, monthly or quarterly payments may be arranged by parties who are well known to the publishers, or when acceptable references are given.
All advertising intended for the current week should reach this office not later than Monday.
Every advertiser will receive a copy of the paper free during the publication of the advertisement.
Address all orders—
KANSAS FARMER CO., Topeka, Kas.

It is reported that of the rejections by the examining surgeons of the recruits for the army, 90 per cent. have imperfect action of the heart, which is attributed to the use of cigarettes. This is a terrible indictment of a useless and disgusting habit.

The first summer meeting of the Kansas State Horticultural Society for 1898 will be held at Sabetha, Kas., in four sessions, beginning at 1:30 p. m., Wednesday, May 25, and ending on the afternoon of the 26th. Basket dinner on the 26th. Every citizen of the United States is welcome.

The agent of an English miller reported to his principal in April that not for years has the supply of wheat on storage in the United Kingdom been so scanty as it was during the recent past. It was asserted that during the last four weeks preceding the date of the report, the quantity had been so low that there was not over a fortnight's supply stored throughout the United Kingdom.

High prices of wheat brought into the markets, during the week ending May 7, larger quantities of this grain than during any corresponding week of the last ten years. Indeed, the advancing prices recently have been accompanied by a steady increase in the receipts of wheat. For four weeks these have been: Week ending April 16, 1,660,000 bushels; week ending April 23, 2,161,000 bushels; week ending April 30, 3,063,000 bushels; week ending May 7, 4,676,000 bushels.

The great naval battle, which it was expected, at this time last week, would be fought in a few days, has not, at this writing, taken place. The Spanish flotilla is thought to be maneuvering to land ammunition and supplies for the Spanish forces in Cuba without having to give battle to our fleet. Little doubt is felt as to the outcome of the conflict if one can be had. Our vessels, guns and men are superior to those of the enemy. But for swiftness we are not equal to the Spanish. We are trying, however, to corner the enemy at some distance from Cuba. Should our Atlantic efforts succeed as well in proportion to their advantages as did our exploits in the Pacific, there will scarcely be a Spanish navy after the battle. But it is too much to expect that Dewey's one-sided contest can be repeated. We must expect to hear of loss of men and vessels on our side and that some of the enemy's cruisers will get away.

ALFALFA.

Editor Kansas Farmer:—Can any of your readers give me some light on sowing alfalfa in the fall? Have sowed some this spring, but owing to wet, cold weather, has not done well. Wish to try it again as soon as possible.

Paxico, Kas. O. E. GLOGAN.

Alfalfa may be sown at any time from early spring to August, provided the weeds can be kept in check. Some sowings have been made in August and have made sufficient growth to enable the plants to withstand the winter. September sowings rarely live over winter. If our correspondent can replow his land and give it such cultivation before sowing as will subdue the weeds he may safely sow now. The great advantage of early sowing results from the quick growth made by the alfalfa while weeds are dormant. Alfalfa comes up almost

as quickly as radishes. After it has had possession of the land for a season it is more than a match for both weeds and crab grass unless the grasshoppers come to their assistance. But during the first season the alfalfa is liable to be smothered by weeds. To prevent this it is customary to mow frequently. The writer has succeeded well with alfalfa on newly-broken prairie sod. This was cut fine with the disc harrow and seeded with a drill. The difficulty with weeds was not encountered on the sod land.

CASH FOR LIVE STOCK PRIZE-WINNERS.

The protest of the stockmen of the West against the offer of medals as awards in the live stock department of the Trans-Mississippi exposition has resulted in a unanimous decision of the board of directors to substitute cash for medals. Stockmen declare that this change will result in making the live stock section of the exposition the greatest show of live stock ever held in the United States.

The matter was considered at a special meeting of the board of directors called to consider the matter on May 12th. One of the arguments used in favor of cash premiums was that Kansas City was preparing for a live stock show at which \$75,000 in cash prizes would be offered, and that breeders of stock would not bring their animals to compete for medals. The stock yards and other stock interests of South Omaha and live stock associations throughout the State were fully represented at the meeting and all expressed great satisfaction at the decision, saying that the action would result in bringing thousands of people to the exposition who would not otherwise have come.

The resolution, which was adopted by the directors without a dissenting vote, was as follows:

"Resolved, That this board hereby directs the executive committee to reconsider the subject of live stock premiums and instructs the committee to offer cash prizes amounting to \$35,000 in place of medals."

In addition to the \$35,000 to be awarded by the directors under the terms of this resolution, the Union Stock Yards Company, of South Omaha, will contribute \$1,000 in cash to be awarded in prizes by the executive committee for cattle, hogs and sheep. The announcement of this offer was made to the directors by General Manderson, representing the Stock Yards Company.

SELECTING PUBLIC SERVANTS.

Undoubtedly every citizen owes to society and to his own interest an amount of careful attention in the selection of suitable persons for the various offices which, even under republican forms of government, are necessary for the public service. Experience long since demonstrated that the discharge of the citizen's political duties may not be limited to voting on election day, unless it be conceded that the preliminary work of selecting, in most cases two persons for each office from whom the electors may choose, may properly be left to those who make politics their trade for the sake of what they may make at the public expense. The scandals of politics sufficiently illustrate the error of leaving the selection of candidates to the "machine" politicians. It is surprising that in a country of universal intelligence and universal suffrage so great a part of the selection of public servants is left to those whose interest is not so much in good government as in securing official positions for persons who can be used for the advantage of the machine or those who contribute to its support.

Within a few weeks the political parties of Kansas will each select the candidates to be supported at the polls by the entire force of the party. These nominations will include the officers who come close to the people in their administration of public functions. In very many counties the delegates have been selected for the State conventions. The preferences of probably three-fourths of those who will compose the Populist State convention are known to be for the renomination of Governor Leedy, so that discussion of this point may be considered as practically closed. In the Republican camp it is different. Six Republican candidates are actively striving for the nomination by all the arts of the politician. In addition to these, Secretary Coburn, of the State Board of Agriculture, is the real first choice of more voters than any other man in Kansas. But he has no "machine," has spent no money, is averse to machine methods, and his real strength is likely to be obscured at the beginning of the contest by the political machine methods of the other candidates in insisting that delegates from

their localities "stand loyally by" the candidates from their respective Congressional districts regardless of their judgment or choice. Should this "whipping in" succeed, a deadlock will be inevitable. If the nomination of a candidate who can probably be elected, a candidate who knows more about Kansas, Kansas people, Kansas industrial needs and the promotion of Kansas interests than all the others, be the purpose of the delegates, they will not be long in deciding to cast their votes for Secretary Coburn.

In the county conventions of all parties there will this year be persistent efforts by those who desire the sale of liquor in violation of law and who are anxious to secure the repeal of the prohibitory law to have nominated for County Attorney and for Senators and Representatives men who can be depended upon to neglect the enforcement of the law and to favor resubmission of the prohibitory clause of the constitution, or at least to favor such changes in the law as shall make it more difficult to convict violators. It will be well for good citizens to take an active part in all stages of the process of selecting officers. Nothing so discourages those who have other interests in public affairs than those of good government as "pernicious activity" on the part of good citizens.

A WARNING.

Last year Kansas produced, according to the official report of Secretary Coburn, 50,040,374 bushels of wheat. The government report, just issued, places the present year's acreage in this State at 28 per cent. above that sown for last year's crop. If the present year's yield shall be the same per acre as the yield of last year, we should have a little over 64,000,000 bushels of wheat from the harvest of 1898. But the government estimate places the condition of the Kansas wheat crop, May 1, 1898, at 27 per cent. above the condition May 1, 1897. Should this superiority be maintained until harvest a crop aggregating over 80,000,000 bushels is indicated.

The Kansas crop is harvested early and much of it reaches the markets before the great northern wheat regions can start their reapers. That the Kansas wheat-grower is likely to receive a liberal price for his grain is universally conceded. That his prospects financially are pleasing is appreciated both at home and abroad.

That the Kansas farmer will be able to make good use of the proceeds of his industry need not be stated. The experiences of the recent past will make him wary of over-investing in hazardous and speculative enterprises. The long siege of debt-paying during the depression will be remembered by the present generation as a warning against going into debt during flush or boom times. Has the lesson been so thoroughly learned that it will not be forgotten? When times are easy it is easy to get into debt. It then seems certain that it will be easy to pay and that a liberal profit will remain. Indeed, the creditor acts as if he would never want his principal and would be very accommodating about the interest. Fortunes appear to be springing up all around and seeking the pockets of those who have the "enterprise" to "reach out" and "take chances." It is the haste to be rich that sometimes wrecks even such substantial good fortune as is in sight in the Kansas wheat crop of 1898.

Illustrations might be given in great numbers. The writer knew a sturdy American whose nativity was in Switzerland, and who had, by homestead and timber culture entry, obtained a half section of land near a thriving town. He went into dairying and was doing well, selling all the milk his cows could produce at good prices for cash. Himself and family were prosperous, had a nice home and were happy. The town extended to the lines of his farm, and in an evil moment he was prevailed upon to sell a few blocks of town lots. He got the money, a lot of it, and had to invest it. He built a block of brick business houses and took an interest in a bank. The dairy—well, the dairy was sold. The boom grew bigger. More city lots were demanded. Prices went higher. A syndicate of responsible men finally offered this ex-dairy farmer a round million dollars for a warranty deed to the land he owned. He refused it, but sold considerable quantities of it on easy payments at prices which would aggregate far more than the million dollars for the entire farm. Enterprises were springing up in the rushing city. Our American citizen from Switzerland was not a drone, and he invested in the new enterprises. When the boom collapsed he held much city property supposed to be valuable, a large amount of first mortgage paper, some cash, and the enterprises in which he

was a stockholder owed some comparatively small balances. In five years from the time he refused the million-dollar offer, taxes, interest and expenses had so eaten into his resources that at the depreciated prices obtainable his property would not bring the amount of his indebtedness. Doubtless he and his good wife lament the departure of the happy days on the prosperous dairy farm.

Examples of boom disaster in the cattle business might be written by the page. Generally, debt consumed the entire herd and resulted in a mortgage on the farm. It is to be hoped that the generation of farmers now coming to the front, to whom the experiences of their elders sound like romance, may not presume that they are smarter than those who have gone before and will "know enough to let go" at the proper time. The Quakers of not very long ago had this saw: "Come easy, go easy." The prosperity that does good is the steady-going kind. If the money now flowing into Kansas and likely to come in the near future shall be used in permanent improvements, in making homes better, in educating the children, in books and literature, in better stock and more of it, and not as a basis of credit, the results will be enduring and will be without the sting of subsequent adversity which inevitably follows the artificial activity which results from over-expansion of credit.

Government Crop Report for May.

The May returns to the Statistician of the Department of Agriculture show the acreage in winter wheat to be 5.7 per cent. greater than the acreage last year, the comparison being not with the acreage harvested in 1897, but with that sown in the fall of 1896. While there is an increase of 28 per cent. in Kansas, a more or less marked increase in every Eastern and every Southern State, and some increase also on the Pacific coast, the large expansion thus indicated is to some extent offset by a decrease of 2 per cent. in Indiana, 3 per cent. in Ohio, 12 per cent. in Iowa, 13 per cent. in Missouri and 16 per cent. in Illinois. The reduction in area in these last-named States is due to the fact that the fall of 1896 was one of the finest seeding seasons ever known, whereas that of 1897 was one of the most unfavorable.

The average condition of winter wheat is 86.5, against 80.2 on May 1 of last year. In the nine States, with 1,000,000 acres or upward in their product, the averages are as follows: Kansas, 105; Pennsylvania, 96; Michigan and Tennessee, each 95; Missouri, 88; Indiana, 87; Illinois, 86; Ohio, 82, and California, 26.

Correspondents agree in reports of the crop of California to be one of the smallest ever raised in the State; on the other hand, the crop of Kansas bids fair to be the largest in its history.

The average condition of winter rye is 94.5, as compared with 88.0 on May 1 of last year. The average in the States of principal production are as follows: Kansas, 99; Pennsylvania, 97; New York and Michigan, each 96; New Jersey, 95; Illinois, 89. With few exceptions the reports on the condition of winter rye are exceedingly favorable.

The average condition of meadows is 92.9, against 93.4 on May 1 of last year. In the fourteen principal hay-growing States the averages are as follows: Nebraska, 102; New York, 97; Wisconsin, 96; Michigan, 95; Iowa and Kansas, each 94; Pennsylvania and Indiana, each 93; Minnesota, 92; Illinois and Missouri, each 91; Ohio, 89; South Dakota, 84, and California, 58.

The average condition of spring pasture is 91.2, against 93.4 at the corresponding date in 1897. Among the more important averages are the following: Nebraska, 98; New York, 97; Indiana, 96; Wisconsin and Iowa, each 94; Pennsylvania and Michigan, each 92; Illinois, Minnesota and Kansas, each 90; Ohio, 89, and Missouri, 87.

The proportion of spring plowing, usually done by May 1, is 75.8 per cent. of the whole amount. The proportion done this year by that date is 72.4, against 61.9 last year. Among the States in which plowing is unusually advanced are New York, Pennsylvania, Michigan, Iowa, Nebraska, Wisconsin, Minnesota and North Dakota. Among those in which it has been delayed by unfavorable weather are Ohio, Indiana, Illinois, Kansas, Missouri and South Dakota. In Kansas the proportion done up to May 1 was 12 per cent. below the average. In Missouri it was 16 per cent. and in Illinois 19 per cent.

"BROWN'S BRONCHIAL TROCHES" relieve Throat Irritations caused by cold or use of the voice. The genuine sold only in boxes.

One fare for the round trip to Ottawa via the Missouri Pacific railway for the Chautauque, June 13 to 24. Train leaves Topeka at 8 a. m.

SAVE MONEY. FREE! FREE! FREE!



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One Million Dollars Personal Guarantee at the Back of Every CORNISH AMERICAN PIANO AND ORGAN. Entirely New Catalogue—1898 Models. "An Ancient Egyptian Choir at Early Temple Service," is the subject of the exquisitely beautiful colored art frontispiece presented in the new catalogue of the celebrated CORNISH AMERICAN Pianos and Organs. This interesting picture was designed and painted exclusively for us by an eminent artist and has been reproduced in the original colors. The catalogue contains a complete description of over 50 styles of Pianos and Organs, together with prices and terms of sale. It will be sent to all intending purchasers FREE on application, postage paid. Remember, our vast business continues on the old basis—Pianos and Organs at wholesale cost, direct from factory to family; no agents', music stores' or middlemen's profits to pay. The purchaser of a Cornish American pays only for what he buys.

to suit your circumstances. Pianos and Organs shipped on thirty days' trial in your own home under our special warrant for twenty-five years. NO MONEY REQUIRED in advance. Safe delivery to purchaser guaranteed.

REMEMBER that a prompt response to this advertisement will secure a DISCOUNT OF \$10.00 on the list prices as quoted in our 1898 Catalogue on any CORNISH Organ, or \$20.00 on the list prices if you buy a CORNISH Piano. Owing to the very close margin this leaves for manufacturing, we are obliged to reserve the right to withdraw this special discount at any time.

Washington, N. J. Established nearly Half a Century.



The Scarcity of Wheat.

There is finally dawning upon the commercial reviewers a realization of the fact that at the present time the world is consuming its bread supply dangerously near to exhaustion. The great wheat-growing regions, with abundance of corn in the cribs and a magnificent harvest rapidly approaching, need feel no apprehension on their own account. But people in countries where breadstuffs are partly or wholly imported and where the supplies are consumed as rapidly as obtained—especially the poor, who never have anything ahead, have already felt the pinch. How much worse this may become before it grows better is not pleasant to conjecture. On this subject the New York Evening Post, of May 6, remarked:

"Rise in the price of grain, on the outbreak of war, is one of the most familiar phenomena of trade; therefore, few people were surprised when the wheat market began to advance with some violence last month, immediately before and after our rupture with the Spanish government. What did, however, surprise many people who had not kept close track of the world's current grain statistics, was the failure of the market to decline again after Commodore Dewey's victory, when sentiment rather generally rushed to the conclusion that the Spanish war would certainly be short.

"Not only would such action have been natural, if the advance had been occasioned wholly by the war, but it had already penetrated the minds of most people that in this war the influences which sometimes make wheat dear in such a contest could not operate. Grain may advance, on the outbreak of a war, through belief in a possible blockade of grain-producing States, or misgivings that their grain-carrying ships may be plundered by the enemy. Such expectation would, of course, lead foreign importers to increase their orders for quick delivery of wheat, and thus advance the price. But the notion of a blockade of the United States coast by Spain was immediately seen to be absurd. Moreover, our grain is sent to Europe in neutral bottoms, and is, consequently, exempt from capture. It might, therefore, have been imagined that if the 'war argument' alone were forcing up the price of wheat, a little reasonable afterthought would start the market moving in the opposite direction.

"Nothing of the sort happened. Taking as a measure the cash price of wheat for immediate delivery at New York, we shall find that it actually fell nearly 5 cents a bushel between the day of the Maine explosion and the close of March, that it rose 13 cents before the outbreak of hostilities, advanced some 8 cents further between the departure of our Atlantic fleet and the victory of Manila, and then, instead of yielding after the Spanish overthrow in the Philippines, started this week on a fresh and exceedingly violent advance, which brought the price, by yesterday afternoon, from the \$1.26½ per bushel of last Saturday to the extraordinary figure of \$1.48.

"On the Chicago market for wheat contracts deliverable in May, the advance was even more violent, and yesterday's price touched \$1.50 per bushel, the highest record since a speculative 'corner' brought it to \$2 in September, 1888, and, with that exception, the highest since 1877, before the resumption of specie payments. That our non-commercial readers may not suppose this recent extraordinary movement to be a matter outside their own concern, it may be worth while to add that in consequence of the steady rise in wheat, flour is selling to-day on the wholesale markets \$1.50 per barrel above the price of a month ago, and \$2.50 above its price a year ago this month. That they may not suppose the movement to be a matter of concern to the United States alone, attention may be further called to the fact that this week's mob uprisings in Barcelona and Madrid, which may play an important part in the Spanish-American controversy, partakes quite as much of the

nature of a 'bread riot' as of a popular revolt against an unsuccessful war ministry.

"The undoubted truth of the matter is that the so-called 'war scare' in the wheat market has played this season an infinitely less important part than the extraordinary situation of the world's grain producers. The deficient foreign harvests of 1896, followed by the partial or complete crop failures of last year in France, Austria, India, Argentina and Australasia, left the consuming world necessarily with a very small margin of supplies in storehouse wherewith to tide over the interval until another harvest. The world's total wheat crop of 1897, as estimated by commercial experts, fell short more than 100,000,000 bushels of providing enough of new supplies to meet the average annual needs of wheat consumers. The inevitable result was that the so-called 'visible supply' in home and foreign granaries was drawn to the smallest volume in a generation.

"The price advanced to a higher steady level, and the advance drew into market a good part of these secondary supplies known to the wheat market as 'farm reserves.' In particular, demand increased abnormally for export wheat from the United States, which had the extraordinary fortune, last year, of raising one of the largest wheat crops in its history, in the face of extreme European scarcity. Usually our export of grain slackens in the spring. But during April our wheat exports rose to a magnitude quite unexampled for the season. The weekly estimated shipments from this country last month were double or treble the average shipments of the same weeks during the past dozen years. In March the country shipped abroad, by the returns of the Bureau of Statistics, very nearly twice as many bushels, in wheat and flour, as it sent out in the same month of 1897.

"The question began to be asked, with some uneasiness, how long even the heavy surplus left over from last year's wheat crop in the United States could continue to supply the needs of Europe. The Indian and South American crop, which is harvested between November and April, has this year again turned out disappointing. Our own winter-sown wheat and the crop of southern Europe do not move until June, and meantime, on top of the almost or quite unprecedented volume of wheat exports from this country thus far in the season, the American visible supply has within a fortnight begun to shrink at the rate of more than 3,000,000 bushels weekly. Under the circumstances, it is not surprising that the mere suggestion, however illogical, of a war blockade of American supplies, should have started an advance in wheat prices which gathered force as it continued, and which was not checked even when the 'war scare' itself was dissipated."

Historical Sketch of the Department of Agriculture.

"Historical Sketch of the United States Department of Agriculture; Its Objects and Present Organization," compiled by Charles H. Greathouse, of the Division of Publications, is now in press and will soon be issued by the United States Department of Agriculture as Bulletin No. 3, Division of Publications. This bulletin has been prepared in compliance with frequent demands for information regarding the origin and development of the department.

In the selection of his subjects the compiler has followed as closely as possible the annual reports of the several Commissioners and Secretaries, prominence being given to those features of the work of the different administrations which the administrators themselves appear to have regarded as specially worthy of attention.

The sketch points out that the Department of Agriculture had its origin in the far-sighted wisdom of Washington and the practical activity of Franklin, and reviews the early government aid to agriculture in America, Washington's

views as to a Board of Agriculture and the work of American representatives abroad.

This is followed by an account of the formation of an agricultural division in the Patent Office in 1836 by Hon. Henry Ellsworth, the then Commissioner of Patents, and the appropriation by Congress, at his suggestion, of \$1,000 for the purpose of collecting and distributing seeds and collecting agricultural statistics.

A brief statement is given of the growth of the work in the Patent Office, the organization of an independent department and the appointment of the early officials. After referring to the work of the several Commissioners of Agriculture, the raising of the department on February 9, 1888, to the rank of an executive department and the work performed during the administration of each Secretary of Agriculture, the origin and duties of the several bureaus, divisions and offices of the department are given, together with citations from the laws under which the department has attained its present stage of development. The bulletin is illustrated, and contains portraits of the several Commissioners and Secretaries of Agriculture.

What is Your Vision?

Many persons do not see as well as they should. Others see well, but their eyes soon become tired. Others suffer with constant headache, which medicine does not relieve, because the headache comes from the eye strain, and the proper remedy is a pair of glasses properly fitted. If for any reason your sight is not good, call on James B. Hayden at 727 Kansas avenue, Topeka, and visit the optical department in charge of Dr. W. J. Lewis, optician, where you can receive a scientific examination, be told plainly what is wrong and advised as to the best course to pursue to reach the most satisfactory results. This examination and advice is absolutely free. They have all the modern appliances, skill and experience to fit any eye that glasses will help. The Kansas Farmer has no hesitation in recommending our readers to consult and advise with them.

The jewelry establishment of James B. Hayden is one of the best equipped and metropolitan stores in the West. You always get what you pay for and prices are reasonable. When in the city give them a call.

Gossip About Stock.

The nineteenth annual sale of Short-horn cattle by H. F. Brown, Minneapolis, Minn., held last week, resulted in thirty-seven head bringing \$8,255, an average of \$223.10. The ten bulls averaged \$162 and twenty-seven females averaged \$245.75. The sale was topped by Wild Eyes 23d, a heifer sired by Knight of the Thistle 108656, who went to H. W. Stone, of Benson, Minn., for \$650.

We call attention to the grand closing-out sale of the entire Poland-China herd owned by C. J. Huggins, of Wamego, Kas., to be held on Saturday, May 28, 1898. This is a good, useful lot of Poland-Chinas that, owing to the lateness of the season, will afford a rare opportunity for buyers. The stock is in fine shape and the breeding is such as should attract a good attendance. The terms offered are quite liberal: on sums under \$10, cash; over \$10, four months time, with 8 per cent. interest. For details write Mr. Huggins.

Those large irregular and unsightly blotches of bare skin seen on the animals now being turned to pasture indicate ravages of lice during long confinement in winter quarters. Practically none of our farm animals are immune from these pests, and they may be present in great numbers when least expected. No farmer willingly suffers the loss incident to the presence of lice in his flocks and herds, but often quietly submits to it because he does not know a ready and safe means of relief. He knows that most of the ordinary home

remedies are ineffective, and he also knows that such as are effective cause the loss of hair where applied, and frequently otherwise do more harm than good. It happens, therefore, that a remedy which will remove the trouble surely and without injury to animal or operator is of undoubted value. Such a remedy is Zenoleum, the well-known disinfectant, germicide and insecticide. It kills completely lice, ticks, scab, foot-rot, etc., in sheep; red lice, blue lice, ticks, etc., on cattle; lice on horses; lice mites, scurvy, scaly legs, etc., on poultry; fleas on dogs; lice, scurvy, etc., on hogs. Given internally it drives out all stomach and intestinal worms, kills disease germs, and leaves the general system in a much improved condition. Zenoleum is not expensive; when one considers its multitude of uses, it becomes almost indispensable to the owner of live stock. Write the Zenner-Raymond Disinfectant Co., Detroit, Mich., for circulars, prices, etc. Mention this paper, please, in writing.

Harness the Wind.

Nature works for nothing. She charges you for no fuel; she collects no interest or toll; her forces are never exhausted. She will irrigate the farm in a dry season, saw the wood, churn the butter, pump water for the house and stock, grind the grain, turn the grindstone, or chop the fodder. Harness the wind and it can be depended upon. The Perkins Windmill Company, of Mishawaka, Ind., is manufacturing a direct-motion steel mill that is simple, strong and effective.



Seventy-five thousand Perkins windmills have been erected in this country during the last quarter of a century, and the splendid business reputation of the company is a fair index of the character of the work they turn out. The tower is made with four corner posts of angle steel, bands and braces of channel steel, and all the parts are so arranged that they will fit exactly. The sections of the wheel are made with two-inch steel bands for outer and inner rims, and the sails are riveted to these rims. The governing device is made by setting the wheel at one side of the turn-table or vertical axis, and thereby doing away with all side vanes, levers, balls, etc. When at work the wheel is square with the wind, and when at rest is edgewise to the wind. The company has issued a fully illustrated catalogue showing the various windmills, pumps, tanks, and spare parts to the machinery which they manufacture.

Feed hogs liberally but never more than they will eat up clean.

Horticulture.

RAISING POTATOES.

Editor Kansas Farmer:—The potato is grown in every State and Territory, and naturally on a great variety of soils. Indeed, it has been grown on every class of soil, but this fact does not minimize the importance of selecting for the potato the kind of soil best adapted to it. The ideal soil for this crop is a rich sandy loam, abundantly supplied with organic matter and naturally well drained. Very heavy clay should be avoided, if the farm contains any lighter soil. Recently cleared ground suits the potato best. It is claimed that potatoes grown on sandy land are of a better quality than those grown on stiffer soil. In order to obtain the best results, thorough preparation of the land must be followed. Deep plowing in the fall, followed by the subsoil plow, is undoubtedly the best, for a deep soil will hold the moisture and thus be in a better condition to withstand drought. Potatoes are a deep feeding crop, and for this reason require a deep mellow soil, in which their roots may branch in all directions. Two years is as long as a field should be devoted to continuous potato culture; although this crop is sometimes grown for many years in succession on the same land, but this taxes heavily on the fertility of the soil; moreover, it involves considerable risk of injury from fungous diseases, especially from potato scab.

BARN-YARD MANURE.

The potato requires liberal manuring. Barn-yard manure usually affords a large increase in the crop. However, its direct application to the potato affords conditions favorable to potato diseases, and thus injures the quality of the crop. For this reason the best practice is to apply barn-yard manure to corn or grass the year before potatoes are grown. If it is considered necessary to apply it directly to the potato crop it should first be well rotted. If good results are to be obtained perfect seed must be chosen.

SEED POTATOES—SCAB.

Select medium-sized, well-formed, smooth potatoes, free from scab. If this disease is feared the most successful remedy is found by immersing the potatoes to be planted in a solution of corrosive sublimate. This substance is a heavy white powder, which can be obtained at any drug store for about 10 cents per ounce. It is a deadly poison and must be used with great caution. The strength recommended is one part of the sublimate to 1,000 parts of water; that is, dissolve two ounces of the sublimate in fifteen gallons of water. An hour and a half is usually sufficient to kill the majority of the spores. Place the seed in a loosely-woven sack or crate (the solution corrodes all metal, and therefore must be placed in a wooden vessel such as a large barrel or tank); allow the potatoes to soak the required length of time, then take them out and spread where they will dry quickly. If the potatoes have unfortunately sprouted before treatment the length of time they will remain in the solution must be reduced. The cost of treating seed will not exceed 15 cents per acre. Another equally as good remedy and less dangerous is, after cutting the seed, sprinkle liberally with sulphur so that all parts are well covered. This is less work, but more expensive.

CUTTING SEED.

Practical growers advise different methods of cutting, while some do not cut at all. The usual method, however, with the best growers is to cut in pieces containing from two to three eyes; but good results will be obtained if more care is given to have each piece of good size than to have a certain number of eyes to each piece.

PLANTING.

In planting, the rows should be laid off as close together as practicable without interfering with horse cultivation—usually from thirty-two to thirty-six inches apart and the hills from eleven to thirteen inches apart in the rows. The depth of planting differs with many growers. The roots of a young potato plant grow, not directly from the seed piece, but from the underground joints or nodes of the stem. From these underground nodes also grow the short stems which bear the tubers at their extremities, hence the seed pieces should be placed deep enough in the soil to permit several of these joints to form below the surface, so as to afford room for an ample supply of tuber-bearing stems to grow. When potatoes are grown for the early market, the aim is to plant as early as possible without subjecting the young plants to severe cold. The main crop should be planted at such a date as

to bring the stage of the growth during which the tubers are rapidly developing and at a time when there is ordinarily an adequate supply of moisture.

CULTIVATION.

Soon after planting, and again just when the young plants are beginning to appear above ground, the field should be harrowed with a light harrow, or better still, gone over with a weeder. This is a cheap method of cultivation, since a wide space is covered. It is also effective in destroying small weeds, in leveling ridges left in planting, in preventing the formation of a surface crust, and in keeping the land covered with a mulch of loose earth—thus conserving moisture within the soil below. Subsequent cultivation should be frequent to accomplish these same ends. Almost any pattern of cultivator may be used, provided it is made to do shallow work. However, if the ground has become packed, the first cultivation may be deep and close to the plants. Experience and exact experiments generally favor level, or nearly level, cultivation. Excessive hilling during cultivation intensifies the injurious effects of dry weather. It also results in breaking many of the feeding roots between the rows. The conservation of moisture by frequent tillage cannot be too strongly enforced. The old notion that tillage must cease as soon as the potato blossoms, is wrong; it should be continued as late in the season as the growth of the vines will permit. As the vines spread out and begin to cover the space between the rows they partially shade the soil and thus lessen the loss of moisture by evaporation. The cultivator should be narrowed and the middle of the open space kept covered with a loose earth mulch. The implement best adapted to this work is one having many small teeth, so that it will leave the soil perfectly level. And will say in conclusion, remember the golden receipt, "Cut your coat according to your cloth." If you cannot properly care for forty acres, try twenty.

Oakland, Kas. M. T. KELSEY.

It is a good plan to start in the fall; not to plant in the fall, but to select the ground to be planted. Having determined this, it is best to cover with cattle yard manure, then plow good and deep. The object in so doing is that the winter elements may unlock the soil and cause it to become mealy. Potatoes require loamy, loose soil to make a perfect growth. Nature causes them to heave up and then they become sunburned and are not marketable. They are also deformed and small, more or less, in a sad, heavy soil. They require and must have a chance to "breathe." I consider it a good plan to select a plot that water cannot stand on very long if the season should be wet; neither would a side hill be a proper place, as it would not hold the moisture sufficiently to insure a good crop. The happy medium would be preferable, in my judgment. The varieties are numerous. Any that are well bred will do. It is poor economy to use scrub seed unless you prefer to trot in the scrub race. I have a notion that it does not matter so much how many eyes there are to a set as that the plant be of good size. It seems to me it is a matter in which it would be easy to go to extremes. To select the medium sized, say the size of a goose egg, halved the long way, would make a good, reliable set, and these should be dropped in a drill about two feet apart and rowed three and one-half feet apart. In drawing the rows a stirring plow or a large single-shovel plow is best, for several reasons. One is that it stirs the soil deep and wide and makes a trench, so the coming crop will all lie in it, and won't scatter out, which makes harvesting easier. Another reason is that if, about the time they are setting, the weather should be a little too dry and only an occasional shower, the surplus will find its way to the loose soil in the trenches. We usually plant in the field from the middle of May to the first of June. Prior to planting the ground should be disked and all weeds and grass destroyed, and make a resolution to keep it perfectly clean for all time. As soon as the young plants show up so that you can follow the row, take your corn plow and plow so as to cover them all under. Keep them back as much as possible till they get good roots and the vines won't be "spindling." Heavy, stiff vines mean a good "hill." We always have potatoes to sell and potatoes to keep. Like everything else, special attention at the right time is required.—H. A. Arnold, Manson, Iowa, in Indicator.

Every animal on the farm should have salt within easy reach.

To Cure Constipation Forever.
Take Cascarets Candy Cathartic. 10c or 25c.
If C. C. C. fail to cure, druggists refund money.

About Pruning Roses.

A great many persons miss having fine roses in their gardens from not knowing how to prune them. It is often a sorrowful sight to pass a place in which are handsome shrubs and roses and see the ruin and disfigurement caused by a lack of knowledge of what pruning is for. It is not always the proprietor who is at fault altogether. It is sometimes the case that one looking for work comes along and, professing a knowledge of pruning, is set to work to prune the roses and shrubs. It is strange that in nearly every case of this kind the pruner's idea of what is the proper way to prune is that all young shoots of the previous season's growth should be lopped off. This is sometimes done, leaving the shrub ball shaped, at other times with a flat top. These notes are on the pruning of the rose, but it may be said here that most shrubs must not have the young shoots of last season's making cut away, or there will be no flowers the coming summer.

As to roses, the pruning must depend entirely on what class they belong to. What are known as daily roses, which are those that flower all through the season, and embrace Teas, Bourbons, Chinas and Noisettes, and some hybrids, need close pruning. The flowers come from young shoots of the same season. Cut down almost to the ground, strong shoots will succeed, which will bear flowers on their ends. Not that they need such close cutting down as that; if the branches are cut down to half their length it will be found to answer very well. Few other roses need cutting back as much as these do, so that after determining whether a certain bush is an ever-blooming one or not, the question of how to prune it can soon be settled. It may be added here that these roses are the least hardy of any. They do fairly well without covering in Pennsylvania, some of them being hardier than others.

The next important class consists of what are called Hybrid Perpetuals, or June roses. They are so named because they flower freely in June, but hardly at all after that, excepting a stray bloom or two. The flowering is quite different from that of the others. They are like almost all flowering shrubs, producing their blossoms from the shoots made the previous season; therefore these shoots must be well looked after. The character of this rose is to make a few strong shoots, of a length perhaps three to four feet. These shoots should be cut back to leave about two-thirds of what there were. Leave two feet of what was a three-foot shoot. From these pruned stems there should come an abundance of flowers. If cut down as low as the ever-bloomers should be, there will be no flowers. What are called climbing roses should be pruned in the same way as June roses. A little cutting back of strong shoots, and a close cutting of weak ones, is the rule. Such old sorts as the Prairie rose and its seedlings, climbing Teas and Noisettes come into this class.

Of late years the Russian roses, known as Rugosa, have become well known. These are very hardy, and have given a desirable lot of seedlings of different colors. They do not need very much pruning, but should have a little. Very often a bush may be unshapely, and a pruning, to give it good shape, may be a great help to it. The old sweetbrier rose and the Austrian brier are valued in every garden. They need little pruning; neither does the beautiful hardy yellow one, called Persian Yellow. There are a few wild roses bearing single pink flowers,

which are often found in gardens, both because of their flowers and their having numerous red berries on in the fall, which last all winter. These, too, need but little pruning.

As a rule, roses are pruned in spring. It is thought that as hard winters are apt to injure the shoots, it is better to wait until freezing weather is over to see what injury, if any, has been done, and then cut away the injured part. In the case of those mentioned as better for a good cutting back of the branches, some practice the pruning back early in the winter, and then cover up completely all that is left of the bush. On the other hand, a rose or any other bush pruned in the fall pushes into growth earlier than a spring-pruned one, and this early growth is not desirable where late frosts sometimes occur.—Joseph Meehan, Germantown, Pa., in Country Gentleman.

INSECTS

Will not touch trees treated with VITA-NOVA.
One dollar's worth treats twenty-five trees; last four years.
J. WILLIAMS BROS.,
Danville, Pa.

Port Arthur's Prosperity Is Based on Business.

Over 12,000 tons of export and import freight now being handled over its docks per month.

Three steamship lines now running to British, Continental and Mexican ports.

Over one-half the canal completed to a depth of sixteen feet.

One hundred thousand dollars' worth of property sold in March.

Go to Port Arthur and see what the backing of a 1,227 mile trunk line means.

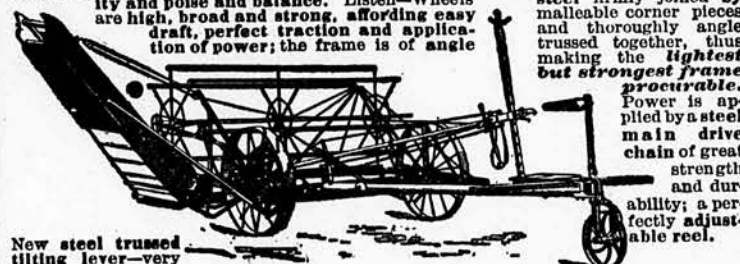
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HODGES NEW STEEL HEADER CHAIN DRIVE HEADER

In the cut here shown we present to the trade, the very latest and the best production known to the art of header construction.

This is the accumulated experience of 33 years of header manufacture. We claim for it that it is perfect in material, construction, working ability, ease of draft, durability and poise and balance. Listen—Wheels are high, broad and strong, affording easy draft, perfect traction and application of power; the frame is of angle steel firmly joined by malleable corner pieces and thoroughly angle trussed together, thus making the lightest but strongest frame procurable. Power is applied by steel main drive chain of great strength and durability; a perfectly adjustable reel.



New steel trussed tilting lever—very sensitive to touch; a new, simple and positive lever within easy reach for throwing in and out of gear. In short, it is intended to be a PERFECT HEADER and we believe it is such. Ask your dealer for THE HODGES, insist upon having THE HODGES and buy nothing but THE HODGES if you wish the most perfect HEADING MACHINE ever produced. Manufacturers also of the Hodges Hercules Mowers, Hodges "Lad" and "Lassie" Hand and Self Dump Rakes, Monarch and Acme Sweep Rakes and Acme Stackers. Our handsome new illustrated catalogue explains them all fully. Write for it before you buy; it is free.

ACME HARVESTER COMPANY, PEKIN, ILL.

In the Dairy.

Conducted by A. E. JONES, of Oakland Dairy Farm.
Address all communications Topeka, Kas.

Kansas Butter at Omaha.

The Kansas Omaha commission has secured 200 square feet of space in the dairy building at the Trans-Mississippi exposition in addition to the space already secured in the other buildings, and Kansas' important dairying interests will be given a first-class representation. The arrangement of this exhibit has been left entirely with the Kansas Dairy Association, and Mr. F. S. Hurd, of Meriden, Secretary of the organization, will at once take steps to have the material for the exhibit prepared.

The high scoring and fine qualities of Kansas butter exhibited at Chicago in 1893 was worth millions of dollars to the State, and there is no reason why this record should not be surpassed at Omaha the present year.

Treatment of Milk Fever.

I am not a doctor of any kind, but wish to give your readers a home treatment for milk fever which I have never known to fail. Make a brine of the strength used for curing meat and with a soft cloth or sponge swab internally. Then take a sheet or hemp carpet, dip in a tub of strong brine and fold several thicknesses so that the brine will be retained as long as four or five hours and place over the loins. The water used for both internal and external treatment should be fresh from the well.

If the swabbing is done in a proper manner and promptly and the pack kept in place for a few hours the patient gets well every time. I would suggest, however, as fat cows are more liable to attacks of this fever, that corn should not be fed in any form for three or four weeks before and a week or ten days after calving.—Samuel A. Thayer, in Breeder's Gazette.

About Pasteurization.

H. Olsen, the De Laval expert in Australia, says the Western Creamery in its Australian and New Zealand notes, referring to the Pasteurization of cream, says:

"The greatest difficulty in connection with Pasteurization is to obtain the proper fermentation of the cream after it has been Pasteurized. But this difficulty may easily be overcome when the process is in more general use. The Pasteurized cream requires a different treatment from non-Pasteurized, and it is no use attempting to make butter from it until the factory has been properly prepared. The principal matter to attend to in regard to the fermentation of Pasteurized cream is the preparation of a proper starter. When cream is Pasteurized the lactic acid ferments are destroyed, and likewise all other bacteria, and you must, therefore, apply a prepared culture of lactic ferment before any fermentation can take place in the cream. An artificial lactic ferment that is prepared in Europe may be used, or a starter specially prepared from skim-milk, from which equally good results may be obtained if the milk at hand is of suitable quality and the surroundings of the factory are favorable to the process of preparing the starter."

Beef vs. Butter.

Prof. T. L. Haecker, of the Minnesota Experiment Station, in a recent address, said:

"Does it cost as much to produce a pound of meat as it does a pound of butter? This question is asked at nearly every dairy meeting, and I am free to confess that I have never been able to answer the question intelligently, because I have never known a case where cows and steers had been fed similar rations under like conditions. I had a desire to do a little work in this line, so I made a special request to be allowed to step outside of my regular line and feed a few steers with my dairy cows; the request was generously granted and four steers were turned over to me that had been kept during the summer on some forage plats in the agricultural division. The were about 2½ years old, were only ordinary scrubs in fair growing condition. I was instructed to feed the steers a beef ration, and the ration was prescribed—bran, corn and oil meal. I fed my cows the same ration, exactly. I have not figured up what the average cost of the herd was, but it cost about 3 cents to produce a pound of butter with the above ration. After carrying on the experiment for six weeks I found that the steers had made a gain which had cost me 3.4 cents for each pound of beef, showing that there would not be

one-fourth of a cent difference in the cost of production of a pound of beef and a pound of butter with this ration."

How the Cow Was Fed and Handled.

At the Pennsylvania Jersey Cattle Club meeting, Mr. E. H. Sibley, of the firm of Jersey breeders, Miller & Sibley, gave an instructive talk on "Improvement of Jersey Cattle as Milk Producers," in which he gave, as an illustration of his theory, how the champion milk-producing Jersey, La Petite Mere 2d, was cared for and fed during the year that she made her remarkable milk record of 16,999½ pounds in 365 days. During this period the largest yield for one day was fifty-seven and one half pounds. The amount of butter made during the year was 664 lbs. 4 ozs. This test was made, Mr. Sibley said, because there had grown up a demand for large-milking Jerseys, those unfriendly to the breed reproaching Jersey breeders for producing cows that gave so little milk. The test was to show that Jerseys could produce milk as well as butter, and resulted in establishing a record that no other cow has reached. In preparing for the test it was arranged that the cow should become fresh in the fall. She was kept in high condition, meantime, and was fed regularly, as it was thought necessary to take this risk of losing her from milk fever. The feed given was a mixture of corn, oats, bran, oil meal and a concentrated corn meal, made from corn hearts. At first the feed contained a large proportion of bran, but this was gradually reduced and the concentrated corn meal substituted for it. For the first few months the cow was fed three times a day, but latterly was fed at regular intervals of six hours, thus making four feeds in twenty-four hours. The grain fed consisted of six quarts of the above-mentioned mixture. In the summer time the cow was turned on pasture, and in the winter succulent food was furnished in the form of sugar beets, one peck daily, cut in strips; clover hay was fed.

During the winter the cow was exercised by walking at least a full mile every day, and of course there was plenty of natural exercise among pasture in the summer. It was necessary to milk three times daily, and Mr. Sibley recommends this in all cases where the cow yields more than fifty-five pounds per day. In such tests it is important, he said, to keep the cow in prime, healthy condition all the time, and if she slacks or clogs the food should be at once changed. The regular exercise that was given greatly assisted in maintaining strength and in improving digestion, and was, no doubt, an important factor in leading to this extraordinary record.

Dairy Notes.

The war with Spain will have no depressing effect on dairy products in the far West, but may be somewhat prejudicial to the price of beef for a short time.

It is always poor policy to keep a large number of cows on the feed that will properly support only half the number. It is a losing business from the outset, and is a straight road to bankruptcy.

Obadiah Sands, of Chicago, owns eighty creameries and controls the output of as many more. These creameries are scattered over the entire State of Illinois, and their annual product amounts to 14,000,000 pounds. The yearly sale of this vast quantity of butter brings its price up to \$2,500,000. If all this butter were spread upon a piece of bread one

foot wide there would be enough of it to cover a loaf 56,000 miles long.

When milk is made into butter at home do not think that a little extra pains will not pay. This determines the value of home-made butter and cheese. Have the butter molded into regulation size bricks, then have parchment wrappers with the name of the farm and address of the owner printed thereon. This alone will be sufficient to enable patrons to refer some friend to this brand of butter, or other things produced at the dairy.

At the Nebraska Experiment Station cattle not accustomed to alfalfa pasture have a common, straight-bar bridle bit put in their mouths before turning into the field. They are compelled to wear this bit for several days, or until they become accustomed to the green alfalfa. This treatment is believed to be efficient in preventing bloat, as no cases have occurred since the method was adopted. The theory of prevention is that in eating with the bit in the mouth an animal is compelled to eat slowly, so that an abundance of saliva, to counteract acids which might be generated in the stomach, is swallowed along with the food. When the animal system becomes accustomed to the alfalfa there is little danger of bloating, and the bit may be removed with safety.

Good Results.

Wellsville, Kas., May 7, 1898.—J. W. Montfort, box 159, of this place, was afflicted with rheumatism. He was weak, dizzy and nervous and could not sleep. A friend advised him to take Hood's Sarsaparilla, and he did so, and it helped him from the start. He is now well.

Don't buy an inferior boar, even if you can get him for a cent a pound.

Beauty Is Blood Deep.

Clean blood means a clean skin. No beauty without it. Cascarets, Candy Cathartic clean your blood and keep it clean, by stirring up the lazy liver and driving all impurities from the body. Begin to-day to banish pimples, boils, blotches, blackheads, and that sickly bilious complexion by taking Cascarets,—beauty for ten cents. All druggists, satisfaction guaranteed, 10c, 25c, 50c.

If your hogs are not doing well perhaps they are too closely inbred.

Among the Ozarks,

The Land of Big Red Apples, is an attractive and interesting book, with views of south Missouri scenery. It pertains to fruit raising in that great fruit belt of America, the southern slope of the Ozarks, and is of interest to fruit growers and to every farmer and homeseeker looking for a farm and a home. Mailed free. Address J. E. Lockwood, Kansas City, Mo.

'ALPHA-DE LAVAL' CREAM SEPARATORS.



De Laval Alpha "Baby" Cream Separators were first and have ever been kept best and cheapest. They are guaranteed superior to all imitations and infringements. Endorsed by all authorities. More than 125,000 in use. Salesmen to one of all others combined. All styles and sizes—\$50. to \$225.—Save \$5. to \$10. per cow per year over any setting system, and \$3. to \$5. per cow per year over any imitating separator. New and improved machines for 1898. Send for new Catalogue containing a fund of up-to-date dairy information.

THE DE LAVAL SEPARATOR CO.
RANDOLPH & CANAL STS., CHICAGO. 74 CORTLANDT STREET, NEW YORK.
Mention Kansas Farmer.

Avoid Competition



Did you ever notice that the best articles are out of competition? Competition always reduces prices. It's so with butter. Best separator butter is out of competition. The best way to make the best butter is with a

SHARPLES SEPARATOR.

Either the LITTLE GIANT or SAFETY HAND will place your product beyond "shoe box" competition.

BRANCHES: P. M. SHARPLES, West Chester, Pa.
Elgin, Ill.
Omaha, Neb.
Dubuque, Iowa.

"AMERICAN" CREAM SEPARATOR

was awarded
FIRST PREMIUM

at St. Louis Fair, 1897,
as the

BEST

Farm Cream Separator.

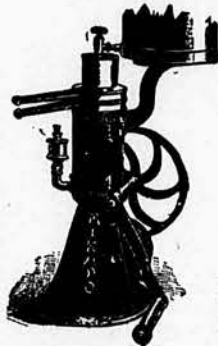
Correspondence solicited.

FOR SALE BY

S. F. WICKER,

MADISON,
KANSAS

Mention Kansas Farmer.



The
Empire
Cream
Separators.

Perfection in cream separators has been attained in the light running Empire Cream Separators. The Mikado has two less bearings and smaller diameter of bowl than any other, making it the lightest running hand separator in the world. Its record for close skimming has never been equalled—leaving scarcely a trace of butter fat in the skim-milk.

All sizes for hand and power use at prices that will interest you. Agents wanted in territory where not represented. Write to-day for our 1898 catalogue.
U. S. BUTTER EXTRACTOR CO., Newark, N. J.

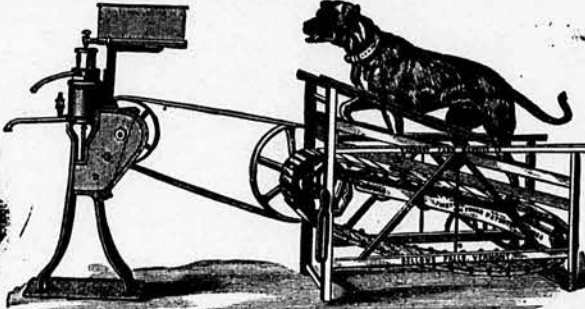
C. E. HILL & CO., Western Agts.,
KANSAS CITY, MO.

Works Speak Louder than Words

This is especially applicable to

The Improved U. S. Separator

Anything we may say of its good qualities would be inadequate to fully express the superiority of its work. We are receiving constantly letters from users telling how well pleased they are with the Improved U. S.; how clean it skims; how easy it runs; how little work it is to take care of—there being so few parts; how it has increased the yield and improved the quality of the butter, so that they not only have more butter to sell, but it commands a higher price; how little the expense of running is—few repairs, and that they would not have any other make of Separator.



More Improved U. S. Separators are being sold than ever before, which is a sure sign of their popularity among Dairymen and Creamerymen. We also manufacture the

First Prize Dog or Sheep Power

which is the finest thing of its kind made. It is not only unequalled as a power for light-weight animals to run machinery with, but Dog Breeders say it is a fine thing to exercise dogs on.

Clinton, Conn., March 10, 1898.

The goods have arrived and been set up. Mr. Pratt is much pleased with the Improved Separator, and thinks the dog power the finest he ever saw. He is a large dog breeder, and considers it a fine thing to exercise his dogs on.

HENRY M. MARSH.

If you wish anything in the Dairy line, it will pay you to investigate our goods before purchasing elsewhere. Catalogues free on application.

VERMONT FARM MACHINE CO., Bellows Falls, Vt.

Horse Owners! Use



GOMBAULT'S Caustic Balsam

A Safe Speedy and Positive Cure
The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUSTIC OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price, \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., Cleveland, O.

The Veterinarian.

We cordially invite our readers to consult us whenever they desire any information in regard to sick or lame animals, and thus assist us in making this department one of the interesting features of the Kansas Farmer. Give age, color and sex of animal, stating symptoms accurately, of how long standing, and what treatment, if any, has been resorted to. All replies through this column are free. In order to receive a prompt reply, all letters for this department should give the inquirer's postoffice, should be signed with his full name, and should be addressed direct to our Veterinary Editor, Dr. Paul Fischer, Professor of Veterinary Science, Kansas State Agricultural College, Manhattan, Kas.

DYING PIGS.—A two-year-old thoroughbred Duroc-Jersey sow farrowed a litter of pigs about two weeks ago (eleven head), all strong, and did well till about four or five days ago, when one began to act curiously, being stupid and would not move, only trembled all the time. Lived two or three days and died. Some more would take sick the same way and would act the same way and die. They had good dry bed, and when I turned them out to exercise they acted as though they were blind, and wouldn't follow the dam at all and seemed lost. Some would get poor before ready to die, while the most of them were good and plump before they would die. The sow was treated good, had corn and oats, good milk in moderate quantities, and she had a good appetite. I have been a breeder of nearly all breeds for thirty years and never saw anything like it. Four pigs are alive to-day, only one well; the rest are sick. They will eat out of a teaspoon all the milk they ought to have, but I believe they all will be dead before many days.

Answer.—Small pigs die from so many different ailments that the incomplete symptoms you give will not suffice to base a diagnosis upon them. The commonest cause of death among these animals (aside from infectious diseases like swine plague, etc.) are worms, indigestion or improper nutrition from other causes. The character of the food of the dam is of the greatest importance in this respect. Catching cold in damp and poorly-kept pens is a prolific source of evil, but it does not seem to apply to your case. Sometimes inbreeding produces these results. Sometimes milk and slops contain poisonous products that affect the little pig through the dam. Examine carefully into all these details and possibly you may discover some irregularity somewhere which, when removed, will do away with the trouble. If you fall in this and the trouble continues, make a post-mortem examination of one of the pigs just after death and report the results to me. Notice especially the condition of the membranes of the stomach and intestines, size, color, consistency, etc., of the liver, spleen, kidneys, etc. Examine lungs and observe whether their color is the same all over the surface or whether dotted with red points; observe the presence of worms in the intestines and anything else abnormal.

LUMPY JAW.—I would be pleased to have you inform me how to cure lumpy jaw of one year's standing on cattle. Also, will the animal do to slaughter and eat?
P. K.
Utica, Kas.

I have lumpy jaw among my cattle to a great extent; about one-third of

the number are affected. Have had half a dozen of the worst ones treated by our nearest veterinary surgeon, and I don't think he is very capable. He didn't cut it out but merely cut into it, then applied medicine which must be of a very poisonous nature, as their heads are swollen to a great size. One, I think, will die. The first lumpy jaw we ever noticed was on one cow about two years ago. About one year ago this same veterinarian commenced treating her, but he has made no success of it so far. It was a hard case, being of one year's standing. The second animal, also a young cow, showed signs about a year ago, was treated soon afterward, and I think is well now. Not more than ninety days ago I saw some new cases among my cattle—about two or three, but at this time there are from twelve to fifteen. Before this occurred I could never be convinced that lumpy jaw was contagious, but now I am almost sure it is.

Answer.—This is an infectious disease produced by a vegetable parasite known as actinomyces bovis. This parasite vegetates on various kinds of plants, but especially on certain species of barley. This parasite enters the tissues of the animal body through small wounds, usually in the mouth, at the tongue, cheeks, the small spaces between the gums and the teeth, the ducts of the salivary glands, etc. Wounds at the surface of the head and neck, or any other part of the body, may be infected in a similar way. As a rule, infection takes place at some point of the head or neck. Rye and barley that grew in wet or swampy places are said to be most likely to contain this germ. When such grasses are fed to stock in a dry state the peculiar structure of the awns of the protective scales of the grain enables them to bore their way into the tissue (carrying the germ with them) and be retained there. In this way the animal becomes inoculated and the germ then begins to grow and produce the disease that bears its name (actinomyces). This disease does not seem to spread from one animal to another; germs in order to produce the disease must come directly from some vegetable host; after once entering the animal and producing actinomyces they are harmless as far as direct infection of other animals is concerned. Nothing, therefore, can be expected from the isolation of affected animals from a herd. But when this disease breaks out in a herd, careful examination should be made into the character and condition of the food supply—whether it consists chiefly or largely of barley, rye, etc., and whether these have been raised in wet or swampy places. Again, old straw stacks that contain rye or barley straw must be regarded with suspicion. When lumpy jaw appears on a farm cattle had better be kept away from such places. Other (as yet unknown) sources of infection by this parasite no doubt exist, but the best we can do at present is to take advantage of the knowledge we have. I might add that this disease sometimes occurs in pigs and other animals—even man. In horses the same and another similar disease is observed. In no animals, however, do we meet with it as often as in cattle. Meat from otherwise healthy animals, when they are locally affected, and when the affected parts are carefully removed, may be considered as perfectly wholesome. Treatment may be local or general. Up to within a few years ago local treatment, either with violent caustics or extirpation of the tumors by means of the knife, was the only remedy applied. Very successful results are obtained by daily two-drachm doses of potassium iodide administered in the drinking water and continued for ten or twelve days or

Farmers Break the Buggy Monopoly.

It is claimed that for years buggy manufacturers have secured exorbitant prices for their goods, but recently through the combined assistance of the farmers of Iowa, Illinois and other States, SEARS, ROEBUCK & Co., of Chicago, have got the price of open buggies down to \$16.50; Top Buggies, \$22.75; Top Surries, \$43.75 and upwards, and they are shipping them in immense numbers direct to farmers in every State. They send an immense buggy catalogue free, postpaid, to anyone who asks for it. This certainly is a big victory for the farmer, but a severe blow to the carriage manufacturers and dealers.

DEAD SHOT for HOG CHOLERA is guaranteed to cure and prevent cholera in hogs or fowls. Never fails. 25 and 50 cents per bottle, by all dealers, or the Cannon Chemical Co., St. Louis, Mo., wholesale agents.

Don't Tobacco Spit and Smoke Your Life Away.

To quit tobacco easily and forever, be magnetic, full of life, nerve and vigor, take No-To-Bac, the wonder-worker, that makes weak men strong. All druggists, 50c or \$1. Cure guaranteed. Booklet and sample free. Address Sterling Remedy Co., Chicago or New York

Veterinary Column.

J. F. H., Cambridge, Mass.—A sprain such as you describe is not incurable. Use Tuttle's Elixir.

Horseman, Elgin, Ill.—There is only one sure way to locate a lameness. Apply Tuttle's Elixir, and it will remain moist on the part affected.

Mrs. F. S. T., Richmond, Va.—If you find a case of colic that Tuttle's Elixir will not cure, it will entitle you to the \$100 reward offered by Dr. Tuttle.

Wilbur S. Davis, M.D., Alton, N. H., writes:

"To whom it may concern:—This certifies that my horse, on the twentieth day of January, 1892, ran away with a hitching post and injured her knees so badly that she was pronounced worthless by several horse doctors. I tried various remedies for six weeks and she grew worse. I at length used Tuttle's Elixir, and in three weeks from the time I commenced to use it I had her on the road ready for work. The knees healed so nicely that it is difficult to find the scars."



Tuttle's Elixir

will do all that we claim for it, or we will refund your money. It will cure all forms of lameness, colic, sprains, cockle joints, etc. Send to us for full particulars, MAILED FREE. Tuttle's Family Elixir cures Rheumatism, Sprains, Bruises, Pains, etc. Samples of either Elixir free for three a-cent stamps for postage. Fifty cents buys either Elixir of any druggist, or it will be sent direct on receipt of price. DR. S. A. TUTTLE, 27 Beverly Street, Boston, Mass.

longer. The dose must, of course, be varied with the size of the animal. External application of tincture of iodine on the tumors aids the internal treatment. Most animals in a herd usually recover by this treatment, but not all.

Quinn's Ointment



is a boon to suffering horse flesh and yield-er of profit to man. It cures all diseases of the legs and feet, making lame horses sound, thus converting loss into profit.

All Druggists
Sell It.....

If by chance you should not find it there we'll mail you package for \$1.50. Smaller size 50 cents.

W. B. EDDY & CO.,
WHITEHALL, N.Y.

It rests with you whether you continue the nerve-killing tobacco habit, NO-TO-BAC removes the desire for tobacco, without nervous distress, expels nicotine, purifies the blood, restores lost manhood, makes you strong in health, nerve and pocket-book. **STOP SMOKING.** sold, 400,000 boxes. NO-TO-BAC from your own druggist, who will vouch for us. Take it with a will, patiently, persistently. One box, \$1, usually cures; 3 boxes, \$3.50, guaranteed to cure, or we refund money. Sterling Remedy Co., Chicago, Montreal, New York.

THE STRAY LIST.

FOR WEEK ENDING MAY 5, 1898.

Coffey County—Dan K. Swearingen, Clerk.

MULE—Taken up by Daniel Leggett, two miles east of Hartford, in California tp., one brown mare mule, 3 years old; no marks or brands.

Sumner County—W. E. Wood, Clerk.

MARE—Taken up by C. Hutton (P. O. Rome), April 11, 1898, one gray mare, 17 hands high, shod all around; valued at \$15.

HORSE—By same, one sorrel horse, 14 hands high, blaze face and three white feet; valued at \$35.

Labette County—E. H. Hughes, Clerk.

HORSE—Taken up by Caleb Loop, in Hackberry tp. (P. O. Bartlett), April 25, 1898, one brown horse, gelding, 15½ hands high, no marks or brands; valued at \$25.

FOR WEEK ENDING MAY 12, 1898

Montgomery County—D. S. James, Clerk.

HORSE—Taken up by W. B. Adams, in Faw Creek tp. (P. O. Coffeyville), April 16, 1898, one mare, 3 or 3 years old, 13 inches high, no mark brands except harness marks; valued at \$15.

MARE—Taken up by A. E. Canfield, in Fawn Creek tp. (P. O. Tyro), April 26, 1898, one dun mare, 4 or 5 years old, 15 hands high, no marks or brands; valued at \$15.

MARE—By same, one iron-gray mare, 4 years old, 14½ hands high, no marks or brands; valued at \$15.

HORSE—By same, one bay horse, 4 years old, 16 inches high, star in forehead; valued at \$15.

Labette County—E. H. Hughes, Clerk.

MARE—Taken up by J. D. Hite, in Mound Valley tp. (P. O. Mound Valley), April 25, 1898, one dark bay mare, 5 or 6 years old, white in forehead, legs black up to knees; valued at \$30.

FOR WEEK ENDING MAY 19, 1898.

Labette County—E. H. Hughes, Clerk.

TWO MARES—Taken up by C. Y. Davis, in Hackberry tp. (P. O. Bartlett), April 18, 1898, two bay mares, each 14 hands high, some white in face and on feet; valued at \$20.

Cherokee County—S. W. Swinney, Clerk.

MARE—Taken up by G. W. Howell, in Lowell tp., May 14, 1898, one black mare, 12 years old, branded with letter "S" on both shoulders; valued at \$12.

MARE—By same, one dun mare, 12 years old, dimly branded; valued at \$12.

Elk County—J. A. Benson, Clerk.

MARE—Taken up by J. W. Bauder (P. O. Howard), May 16, 1898, one gray mare, no marks or brands; valued at \$10.

MARE—By same, one bay mare, no marks or brands; valued at \$20.

COLT—By same, one sorrel colt, no marks or brands; valued at \$5.

Brass, Aluminum, Grey Iron Castings

Patterns, Models, Machine Work.

TOPEKA FOUNDRY,
TOPEKA, KAS.

BEE SUPPLIES.

I have every thing that is needed in the Apisary. Send for CATALOGUE. B. W. DUNHAM, 106½ W. 5th St., Topeka, - Kansas

THE BEST CREAMERY BUTTER SALT

In the world is manufactured in Kansas. INSIST on having RIVERSIDE brand. A free sample will be gladly furnished on application by Kansas Salt Co., Hutchinson, Kas.

BLACK LEG PREVENTED BY PASTEUR "VACCINE."

Write for particulars, prices and testimonials of thousands of American stockmen who have successfully "vaccinated" their stock during the past three years in Dakota, Nebraska, Wyoming, Colorado, Kansas, Texas, etc. PASTEUR VACCINE CO., 52 Fifth Avenue, CHICAGO.

Kansas City Stock Yards

are the most complete and commodious in the West and second largest in the world. The entire railroad systems of the West and Southwest centering at Kansas City have direct rail connection with these yards, with ample facilities for receiving and reshipping stock.

	Cattle and Calves.	Hogs.	Sheep.	Cars.
Official Receipts for 1897.....	1,921,962	3,350,796	1,134,236	123,047
Slaughtered in Kansas City.....	965,287	3,084,623	905,288	
Sold to feeders.....	665,615	341	151,389	
Sold to shippers.....	216,771	263,592	91,576	
Total Sold in Kansas City 1897.....	1,847,673	3,348,556	1,048,233	

CHARGES: YARDAGE—Cattle, 25 cents per head; Hogs, 8 cents per head; Sheep, 5 cents per head. HAY, 80c per 100 pounds. CORN, 60c per bushel. OATS, 60c per bushel.

NO YARDAGE CHARGED UNLESS THE STOCK IS SOLD OR WEIGHED.
C. F. MORSE, E. E. RICHARDSON, H. P. CHILD, EUGENE RUST,
Vice Pres. and Gen. Mgr. Secy. and Treas. Asst. Gen. Mgr. Traffic Manager.

Spring Dipping

The Shearing Season

will soon be upon us. This brings to mind the advantage and necessity of dipping all sheep as soon as the fleece is removed. Particularly should this be done with all ewes and lambs. Just after shearing is the best time to dip.

CHLORO-NAPHTHOLEUM

is the best dip to use. It kills all lice, ticks and skin diseases. It produces a healthy condition of the skin and promotes the growth of the wool. You can get it from the nearest dealer.

WEST DISINFECTING CO.

206-8 E. 57th St., New York City.

MARKET REPORTS.

Kansas City Live Stock.

KANSAS CITY, May 16.—Cattle—Receipts since Saturday, 1,581; calves, 52; shipped Saturday, 438 cattle; no calves. The market was 10 to 15c higher in extreme cases. The following are representative sales:

SHIPPING AND DRESSED BEEF STEERS.			
No.	Ave. Price	No.	Ave. Price
37 Neb.	1,476 \$4.70	34	1,143 \$4.55
6	1,151 4.50	19	1,293 4.50
41	1,131 4.40	1	1,240 4.35
5	1,300 4.30	1 Jer.	590 3.75

WESTERN STEERS.			
No.	Ave. Price	No.	Ave. Price
81	1,133 \$4.40	19	1,043 \$4.40
52	1,094 4.20	4	1,122 4.15
63	1,055 4.15	80 fdr.	705 3.85
2	870 3.75		

NATIVE HEIFERS.			
No.	Ave. Price	No.	Ave. Price
16	635 \$4.50	1	940 \$4.15
1	590 4.10	3	630 3.75
3	800 4.15	11	606 4.25
1	650 3.75		

NATIVE COWS.			
No.	Ave. Price	No.	Ave. Price
3	1,150 \$4.00	1	1,170 \$3.90
4	952 3.75	3	1,213 3.75
1	1,100 3.65	2	1,055 3.40
1	970 3.30	2	935 2.90

NATIVE FEEDERS.			
No.	Ave. Price	No.	Ave. Price
2	1,090 4.35		
2	450 \$5.00	4	577 \$4.55
37	673 4.55	12	847 4.15
2	785 4.35		

Hogs—Receipts since Saturday, 12,461; shipped Saturday, 1,336. The market opened strong to be higher and closed 10c higher. The following are representative sales:

128	266 \$4.45	78	270 \$4.45	59	300 \$4.45
158	289 4.40	61	309 4.37½	77	253 4.37½
69	233 4.35	77	244 4.35	82	205 4.35
82	220 4.30	128	225 4.27½	97	207 4.27½
223	228 4.25	72	212 4.25	74	220 4.25
79	196 4.22½	86	207 4.22½	77	217 4.22½
78	193 4.20	79	222 4.20	78	203 4.20
88	203 4.17½	90	193 4.17½	83	201 4.17½
90	180 4.15	86	193 4.12½	82	188 4.12½
96	179 4.12½	85	184 4.10	80	170 4.10
17	162 4.05	133	160 4.03	88	182 4.03
102	148 4.00	94	140 3.97½	90	148 3.93
146	144 3.85	120	138 3.85	107	152 3.85
20	122 3.75	12	138 3.75	1	610 3.75
20	129 3.65	10	130 3.65	16	118 3.55
46	111 3.50	4	107 3.45	9	120 3.40
2	275 3.25	2	105 3.25	1	203 3.25
2	105 3.00	3	200 3.00	80	101 2.80

Sheep—Receipts since Saturday, 5,585; shipped Saturday, 465. The market was strong and active. The following are representative sales:

518 Col. lbs.	82 \$5.25	481 Col. lbs.	84 \$5.25
242 Tex. cls.	97 4.30	244 Tex. cls.	97 4.30
269 Tex. cls.	82 4.20	245 Tex. cls.	86 4.10
601 Tex. cls.	59 3.70	57 Tex. cls.	86 3.50

St. Louis Live Stock.

ST. LOUIS, May 16.—Cattle—Receipts, 1,200; market strong; native shipping steers, \$4.50@5.35; light steers to dressed beef grades, \$3.75@5.00; stockers and feeders, \$3.50@4.60; cows and heifers, \$2.00@4.70; Texas and Indian steers, \$3.75@4.45; cows and heifers, \$2.50@3.80.

Hogs—Receipts, 6,500; market active and stronger; yorkers, \$4.10@4.25; packers, \$4.20@4.45; butchers, \$4.40@4.50.

Sheep—Receipts, 1,800; market strong; native wethers, \$3.00@4.50; Texas, \$3.50@4.25.

Chicago Live Stock.

CHICAGO, May 16.—Cattle—Receipts, 15,000; market strong to 10c higher; beefs, \$4.00@5.30; cows and heifers, \$2.50@4.75; Texas steers, \$3.90@4.50; stockers and feeders, \$3.90@4.85.

Hogs—Receipts, 45,000; market active, 5 to 10c higher; light, \$4.10@4.45; mixed, \$4.30@4.55; heavy, \$4.25@4.65; rough, \$4.25@4.35.

Sheep—Receipts, 17,000; market steady to 10c higher; native, \$3.10@4.45; western, \$3.75@4.35; lambs, \$3.75@5.30.

Chicago Grain and Provisions.

	May 16.	Opened	High'st	Low'st	Closing
Wht.—May	1 45	1 50	1 43	1 50	
July	1 07½	1 09½	1 06½	1 09½	
Sept.	90	92	89	91½	
Dec.	85½	87½	85½	87	
Corn—May	36½	36½	36½	36½	
July	36½	37½	36½	37	
Sept.	37½	37½	37½	37½	
Oats—May	29½	30½	29½	30	
July	29½	30½	29½	30	
Sept.	28½	29½	28½	29½	
Pork—May	11 05	12 47½	11 05	12 40	
July	12 50	12 62½	12 50	12 55	
Sept.	6 70	6 80	6 70	6 80	
Lard—May	6 70	6 80	6 70	6 80	
July	6 80	7 00	6 77½	6 90	
Sept.	6 47½	6 55	6 47½	6 55	
Ribs—May	6 25	6 60	6 25	6 55	
July	6 40	6 67½	6 40	6 62½	
Sept.					

Kansas City Grain.

KANSAS CITY, May 16.—Wheat—Receipts here to-day were 313 cars; a week ago, 98 cars; a year ago, 37 cars. Sales by sample on track: Hard, No. 1, nominally \$1.19; No. 2 hard, \$1.17@1.19; No. 3 hard, \$1.15½@1.17; No. 4 hard, \$1.12@1.15; rejected hard, \$1.10@1.14½. Soft, No. 1 red, nominally \$1.20@1.21; No. 2 red, \$1.17@1.23; No. 3 red, \$1.13@1.17; No. 4 red, nominally \$1.13@1.14; rejected red, nominally \$1.10@1.12. Spring, No. 2, \$1.15@1.15½; No. 3 spring, \$1.14; rejected spring, nominally \$1.08@1.10.

Corn—Receipts here to-day were 188 cars; a week ago, 108 cars; a year ago, 148 cars. Sales by sample on track: Mixed, No. 2, 34½@34½c; No. 3 mixed, 33½@34c; No. 4 mixed, 33@33½c. White, No. 2, 35½@36½c; No. 3 white, 35½@36c; No. 4 white, 35c.

Oats—Receipts here to-day were 30 cars; a week ago, 22 cars; a year ago, 22 cars. Sales by sample on track: Mixed, No. 2, 31½c; No. 3 mixed, nominally 30½c; No. 4 mixed, nominally 30c. White, No. 2, nominally 32½@33c; No. 3 white, nominally 32@32½c; No. 4 white, nominally 31c.

Rye—No. 2, nominally 63c; No. 3, nominally 60c; No. 4, nominally 59c.

Hay—Receipts here to-day were 42 cars; a week ago, 54 cars; a year ago, 51 cars. Quotations are: Choice prairie, \$9.50; No. 1, \$9.00; No. 2, \$8.50; No. 3, \$8.00; choice timothy, \$11.00; No. 1, \$10.00@10.50; No. 2, \$9.50; choice clover and timothy, No. 1, \$9.50@10.00; No. 2, \$8.50@9.00; pure clover, \$8.50@8.75; packing, \$6.50@7.00.

Kansas City Produce.

KANSAS CITY, May 16.—Butter—Extra fancy separator, 14c; firsts, 12½c; dairy, 10½c; country roll, 11c; store packed, 10c; packing stock, 9c.

Eggs—Strictly fresh, 8c per dozen. Poultry—Hens, 7c; broilers, \$3.00@4.00 per doz.; roosters, 15c each; ducks, 6c; geese, 4c; hen turkeys, 7c; young turkeys, 6c; old turkeys, 5c; pigeons, 75c per dozen.

Apples—Choice to fancy Ben Davis, \$3.00@3.25; Winesaps, \$3.50@4.00; Willow Twigs, \$3.50@4.00. In a small way varieties are selling at 40¢@50¢ per half bu.

Vegetables—Lettuce, home grown, 45¢@60¢ per bu. Spinach, home grown, 25c per bu. Asparagus, 15¢@25¢ per doz.

Potatoes—New, Texas, \$1.00@1.25 per bu.; old northern stock, fancy, sacked, Burbanks, 75¢@85c; choice to fancy mixed, bulk, 65¢@70c; Minnesota and Dakota, bulk, 65¢@70c; Colorado stock, fancy, sacked, 80¢@90c; home grown, sacked, 40¢@50c. Sweet potatoes, 60¢@75c. Seed potatoes, northern grown, Early Rose, 75c; Early Ohio, 75c; Red river stock, 80c.

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Makes the wagon pull easier, helps the team. Saves wear and expense. Sold everywhere.

MAKE CHEESE AT HOME.

Send One Dollar to C. E. KITTINGER, Ipswich, S. Dak., For ten rennets, with complete instruction for making and curing cheese at home with such simple apparatus as most farmers now have. Full cream factory cheese the kind made, and your money refunded if you fail.

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The Dogs of War

Let loose will increase the need to farm carefully to "make ends meet." Good fences save temper, time, stock and crops. See our ad. in next issue. PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

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Through Chair Cars and Sleepers are now run from
Kansas City TO Niagara Falls and Buffalo
OVER THE

WABASH.

Chautauqua Assembly, Winfield, Kas.,

Opens its session June 14th and the exercises continue until June 23d, 1898. Tickets with return limit of June 24th, 1898, will be on sale June 13th to 19th, at the rate of

ONE FARE (\$5.75) FOR ROUND TRIP.

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means actual loss to the farmer and stockman. It is economy to have an ample supply and have it always. Live stock will live longer without food than without water. Cows shrink more in milk from insufficient water than from lack of food. The "Goshen" Tank is a remedy is a does not leak, rot or fall to pieces. Are made of the best galvanized steel. Better replace that old tank with one of these. Don't buy at least until you have seen our circulars and prices. Send 2c. stamp for 48 page illustrated catalogue. **KELLY FOUNDRY AND MACH. CO., 88 Purl Street, Goshen, Indiana.**

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With our Duplex Automatic Machine you can make a genuine Rabbit-Proof fence, and one that is also Horse-Proof and Bull-Proof for a Hog fence for 15c. and a Stock or Chicken fence for 12c a rod. Plain, Colored Spring and Barbed wire to farmers at wholesale prices. Catalogue Free. **KITSLMAN BROTHERS, Box 64, Ridgeville, Indiana.**

Machine \$10
TO BUILD THE STRONGEST AND BEST WIRE FENCE. 16 to 24 Cents per Rod. No farm rights, royalties or patent stays to buy. AGENTS WANTED. Write for circular. **The Bowen Cable Stay Fence Co. NORWALK, OHIO, U. S. A.**



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Cabled Field and Hog Fencing with and without lower cable barbed. Steel Web Picket Fence for Lawns and cemeteries, Steel Gates, posts, etc. **DE KALB FENCE CO., 23 High St., DE KALB, ILL.**

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We have been in the show ring for the last three years, always winning the lion's share of the premiums. If you want prize-winners and pigs bred in the purple, we have them. All ages of Poland-China swine for sale. Write or come and see us. We have an office in the city—Rooms 1 and 2 Firebaugh Building.

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SILBERMAN BROS. 122-124-126-128 MICHIGAN STREET, Chicago, Ill. BROTHERS.

The Poultry Yard

KANSAS STATE POULTRY ASSOCIATION.
President, A. M. Story, Manhattan.
Secretary, J. W. F. Hughes, Topeka.

THE FARMER'S POULTRY.

By Emerson T. Abbott, St. Joseph, Mo., at the twenty-seventh annual meeting Kansas State Board of Agriculture.

(Continued from last week.)

I said a while ago that you needed a house for your poultry. I want to tell you about one or two things that you need about a poultry house. You not only need to keep a hen warm, but you need to give her a comfortable place for the night. She not only needs to be comfortable so far as inclemency of the weather is concerned, but she needs to be in the same condition that a man needs to be in order to rest. If you don't believe it, just go out some night in the barn and lie down on a crooked board or on a pole and undertake to sleep there all night. Well, people will go to the woods and get knotty, crooked poles, and lay them up, starting at the ground and running up at an angle of about forty-five degrees, until the last pole is generally about even with the top of the house. They simply rest on something; they are seldom ever nailed fast, and are large as my wrist at one end and small as my finger at the other end, all filled with knots, with crooked places in them so that as the fowls move from one place to another the poles are unsteady; and yet the people expect their fowls to get up on those poles and rest comfortably during the night. A monkey might wrap its tail around such a pole and hold on, but it is no place for a hen to sit down and rest; and if she did sit down, along would come another hen directly and sit down on a crooked place in the pole, making a leverage and causing the pole to flop over and throw her off, knocking half a dozen others down with it. Not only that, but if you build a roosting place that way—that is the old orthodox roost, the kind they had when I was a boy, the kind that is proper if you follow tradition—not only are they liable to fall off these crooked, unsteady poles, but every fowl tries to get to the top pole. Did you ever go into a hen-house where roosts were made that way and listen to see what a commotion there is? Every hen tries to get to the top pole, and every rooster tries to get there too, and they crowd in, and work and work and push themselves in until one gets pushed off and falls down and creates a great commotion. Why, it takes an hour every night for the poultry to get settled down and become quiet. Now, instead of doing that way, make your roosts all down on a level. Don't make them of little, knotty poles, but make them about two by four, smooth as the top of this desk. There are two reasons for making them smooth: one is, that the hen can sit there comfortably; and another is, that there is no place for lice to hide during the daytime. Use the broad side of a two by four made perfectly smooth, and let it rest on trestles with notches in for the ends to rest in so it can't turn over. Make them all the same height (about eighteen inches) and put a dropping board under, and the hens can get up there and roost with some comfort and pleasure, and there won't be any trouble about their trying to push each other off. I have sometimes thought that it would be a good thing to have the human family worked just in that way, if they could be made to come down over night and all roost on a level. We get a notion that we are away up in the world and ought to roost higher than other people; and it is a peculiarity of the human family that, just as soon as they get away up there, they want to push everything else off and have the pole all to themselves. If we did that, some of us wouldn't put on so many airs as we do now.

AN ITEM OF NEGLECT.

Then, another thing that is greatly neglected, especially by the farmer: They will feed their fowls, many of them, but they will never provide them with water. When I was a boy I never knew that a hen drank. Actually I grew to manhood without knowing that a hen drank. The truth is that a hen will drink a great deal more water in a day than you have any idea of, if you have never been in the habit of giving them water and watching how much they drink. I have fourteen or fifteen hens; usually summer over about that many, and sometimes winter over a few more than that. This winter I have about eighteen or nineteen. I will give these chickens a quart of water in the morning sometimes, and, if it isn't frozen up, by noon it is nearly all gone, even in the winter; and I have known of them using up half a gallon of water in a day during the hot

summer weather. I do not see how the fowls on my father's farm lived, for there wasn't any water that they could get, only as they got it by accident out of a pool or something, any nearer than a quarter of a mile. They didn't go to the creek very often; so they must have lived in some way without water. When I see how much water my own fowls require, I think how cruel it was for us to leave them there without water. But, some one says, "I give them water once or twice a week, and fill the pan full and just let them drink all they want." Yes, they can drink all they want out of a great big vessel like that, but what kind of stuff are they drinking after the first day? A hen not only wants water, but wants clean water, especially if you intend to eat the hen; and if you want a hen to be well and contented and happy she should have just as clean water to drink as you do. While I am on this subject I want to touch on another point. If you think of some of the things that fowls are permitted to eat on farms, to say nothing about their eating each other after they are dead, you wouldn't think a fowl would be very toothsome. If you just draw on your imagination and think of a chicken dying of roup, as hundreds of chickens do, and being thrown over the fence into the alley where other chickens eat it, you will begin to appreciate the necessity of keeping them from eating anything but pure and wholesome food. It seems a little nauseating and like putting it pretty strong, but fowls are doing that every day. They are not real cleanly in their habits, but we ought to force them to be cleanly by burying out of sight everything that is unwholesome and keeping their runs and yards absolutely clean. I want to tell you, if you feed your hens decayed meat you will get tainted eggs; and if you feed them musty wheat you will get musty eggs. There is just as much difference in eggs as there is in any article of food. It isn't true that "an egg is an egg." Some eggs are good and some are bad, and a great many are bad simply because the fowls have eaten filthy food. If you want a clean, healthy, good-tasting egg, you must feed your fowls clean, healthy, good-smelling food. I know of scores of farmers who go to the mill and buy musty wheat and feed it to their chickens, and then bring the eggs to town and sell them for first-class, fresh eggs. I wonder that the city people do not rebel against it. I wonder that we get an egg in the open city market that is fit to eat.

DISEASES OF FOWLS.

Just a few words about diseases of fowls and I will close. This is a matter that every farmer is interested in. There is practically but one disease in the country so far as poultry is concerned. Poultry has all sorts of diseases, and the diseases are classified and given very high-sounding and technical names. Doctor Salmon, of the Bureau of Animal Industry, at Washington, has issued several bulletins; they are exceedingly learned and have some jaw-breaking phraseology in them, and a great many names derived from the Greek and Latin and some from the German. Well, he has classified these diseases and has given the treatment for these various diseases, and the treatments are all very good and very scientific. There is only one thing wrong about them, and that is that every hen and every rooster and every cockerel and every pullet that is treated in that way dies. That is the only bad thing about it. I believe I would be safe in saying that more hens have lived in spite of such remedies as kerosene oil, carbolic acid, and various other nauseating things which I have not time to enumerate—I say more hens have lived in spite of these remedies than have ever been cured. In fact, I do not believe that a hen was ever cured by any of them. When a hen really has a first-class attack of roup, there is only one thing that will cure her in the shape of medicine. I will tell you what that is before I stop. The next best thing is to lay her head on a block and cut it square off and bury her three feet under the ground; for there are germs enough in every drop of blood of a hen that dies of roup to inoculate a thousand hens, if those germs find a proper place for development. So you do not want to leave anything on the ground that has come in contact with a roup hen. Roup is the bane of the poultry-keeper in this country, and I will tell you of the only remedy that I know of that has ever affected roup in the least.

TRIED ALL REMEDIES.

I have tried Doctor Salmon's scientific treatment; I have doctored them according to the latest fads, and I have wrapped them up in flannel cloths, and put them in warm rooms and given them the regulation mash. I have dosed them with kerosene and lard and carbolic acid and all these things, but they always died. Now there is just one thing that you can

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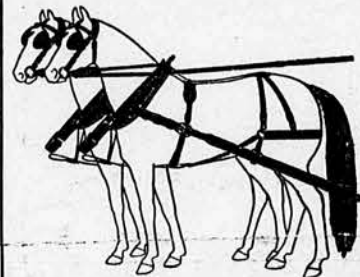
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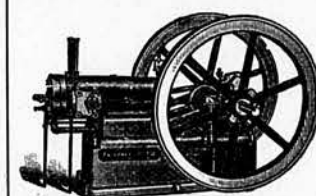
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do for your hens by way of treatment when they get sick, and that is to give them a thorough fumigating with sulphur. Roup is a germ disease; it is not caused by dampness or draughts, but by a fungous growth, which is a living organism, and the only thing I know of in the world that is absolute death to every living organism that it can come in immediate contact with and that can be administered to chickens is sulphurous-acid gas. There are a few other things that can be placed upon the germs and destroy them, but you can't use them in treating poultry. When you smoke the fowls, put them inside of a house at night, and give them a thorough fumigation with this sulphurous-acid gas. Fumigate the well ones also, and if there are any hens that are not well in a few days after such a fumigation chop off their heads and bury them deep in the ground, and do not try to treat them in any other way. An ounce of prevention is worth gallons of cure so far as chickens are concerned. Absolute cleanliness in the house, out of doors, in the drinking vessel and everywhere is all the prevention you need. Fowls are naturally healthy, and they will live long and be happy and lay lots of eggs if you treat them as you should; but they won't lay eggs if you don't.

DISCUSSION.

A Delegate: I would like to ask if, when you fumigate the poultry house, you do so with the poultry in there?

E. T. Abbott: Yes, sir, fumigate the poultry; it won't kill them; the house should be tight, and, say for about twenty hens, take a tablespoonful of sulphur, and put an equal quantity of saltpeter with it, if you wish it to burn well. Set that on fire, and close the doors of the hen-house; some of the hens may sneeze, but so long as they do nothing but sneeze there is no danger; if one of them falls off the perch, open the door and let them get a whiff of air, and they will be all right. If you are troubled with catarrh, you will find this an excellent remedy for that ailment also. If there are any doctors in the audience I hope they will excuse me for interfering with their practice.

THE IMPROVED VICTOR Incubator
Hatches Chickens by Steam. Absolutely self-regulating. The simplest, most reliable, and cheapest first-class Hatcher in the market. Circulars FREE.
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BUY FROM MANUFACTURER DIRECT.

Our No. 201, with one-inch trace, hame and collar, \$6 per set. Our No. 18, with one-inch trace, double hip strap, hame and collar, \$9 per set. Our No. 20, with one and one-quarter inch trace, single strap throughout, with curved breast collar, nickel or imitation rubber, at \$12 per set. Goods shipped anywhere on receipt of price, or C. O. D. if \$1.50 is sent with order. Mention size of collar. A. BURR, 2230 W. Jefferson, Louisville, Ky.

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"Wanted," "For Sale," "For Exchange," and small or special advertisements for short time, will be inserted in this column, without display, for 10 cents per line, of seven words or less, per week. Initials or a number counted as one word. Cash with the order. It will pay. Try it!

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PASTURE for 300 head of steers can be furnished at the rate of 25c per head per month by Conrad Krueger, Pfeiffer, Ellis county, Kas. The same party will also sell ranches and farm lands at reasonable prices.

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JACKSON, ST. FRANCIS, ARK.

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C. J. HUGGINS, Wamego, Kas.

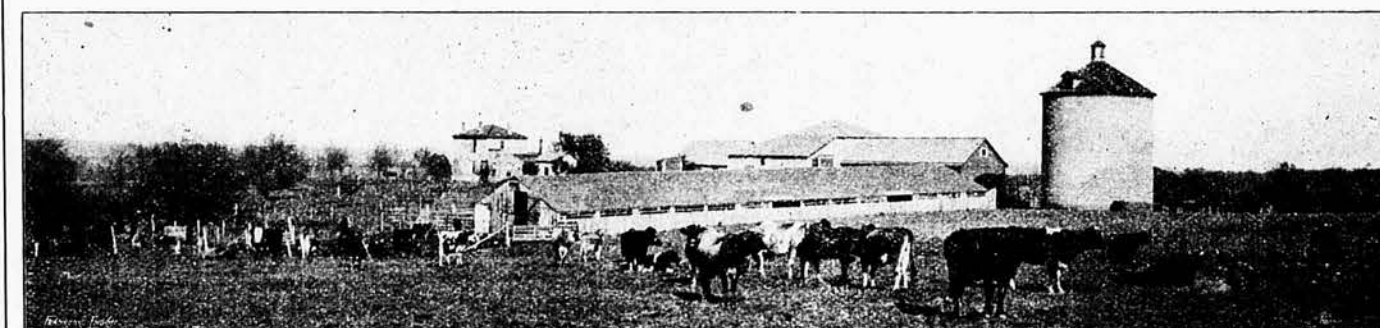
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