

KANSAS FARMER

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KANSAS FARMER.

Established in 1863.

Published every Thursday by the
KANSAS FARMER CO., - - TOPEKA, KANSAS

E. B. COWGILL.....President
J. B. McAFEE.....Vice President
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H. A. HEATH.....Advertising Manager

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ADVERTISING RATES.

Display advertising, 15 cents per line, agate (fourteen lines to the inch). Continuous orders, run of the paper, \$1.54 per inch per week.
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 agate line for one year.
Annual cards in the Breeders' Directory, consisting of four lines or less, for \$16.00 per year, including a copy of the Kansas Farmer free. Special rates for displayed live stock advertising.
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Objectionable advertisements or orders from unreliable advertisers, when such is known to be the case, will not be accepted at any price.
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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.
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KANSAS FARMER CO.
116 West Sixth Ave., Topeka, Kans.

BLOCKS OF TWO.

The regular subscription price for the KANSAS FARMER is one dollar a year. That it is worth the money is attested by the fact that thousands have for many years been paying the price and found it profitable. But the publishers have determined to make it possible to secure the paper at half price. While the subscription price will remain at one dollar a year, every old subscriber is authorized to send his own renewal for one year and one new subscription for one year with one dollar to pay for both. In like manner two new subscribers will be entered, both for one year, for one dollar. Address, Kansas Farmer Company, Topeka, Kans.

There is a big poultry show in progress at the Kansas State Agricultural College this week. Prizes aggregating over \$600 are offered and competition is strong.

The Oak Grange farmers' institute of Shawnee County will hold its opening session on the evening of December 11, and will continue all day December 12. A general invitation is extended to the public. Baskets will also be welcomed.

On the sitting of Congress, last Monday, several measures for the regulation of trusts were introduced. Some have thought a constitutional amendment necessary. Those who have introduced bills are, apparently, not willing to wait the slow process of amending the national constitution before attempting some remedial legislation under authority already granted by the constitution.

A diligent application of the present powers of Congress will, if made, probably be found sufficient to eliminate the harmful tendencies of the trusts. Of course, nobody wants to cripple their power to add to the general welfare.

An international convention of wireless telegraph people is to be held in Berlin, Germany, next March. Are we presently to speak so as to be heard around on the other side of the world by some system—to be of wireless telephone? It is claimed that the wireless sending and receiving instruments can be attuned in pairs so that every instrument is silent to all but its mate.

The contest for the selection of a U. S. Senator from Kansas has taken a queer turn. On the one side the friends of the candidate speak in the highest terms of the opposing candidates but wage a vigorous war on their supporters. On another side there is some criticism of a candidate but only expressions of cordiality towards his supporters. The bone of contention appears just now to be not the Senatorship but the speakership of the Kansas House of Representatives. What will be the outcome, the KANSAS FARMER is not, just now, in the business of predicting.

Swine advertisers are doing the greatest volume of business ever known in the West. The liberal advertisers are getting phenomenal returns, showing that the demand for pure-bred swine is greater than ever before. One of our advertisers reports that he has sold \$933 worth at private sales this fall. Another advertiser states that he has sold out all boars and returned between 30 and 40 orders which he could not fill. All this is significant, and indicates that owners of first-class pure-bred stock of all kinds can with much assurance reach the buyers by advertising in the KANSAS FARMER.

THE METHODIZER.

The percentage of manufacturers, merchants, and traders who fail is surprisingly large. In many cases the causes of failure are not clearly apparent. Not infrequently they are unknown to the persons most interested. With those who fail may very well be considered those who make only a very moderate success. In another class are those whose success is phenomenal while their industry is recognizable as real and valuable service to their fellow beings.

The percentage of failures among farmers is much smaller than among merchants; the percentage of the moderately successful is very large, while the percentage of phenomenally successful is even smaller among farmers than among those engaged in manufacturing and mercantile pursuits.

The lot of the moderately successful farmer has been often pointed out as that most desirable to attain. But as is the case with the moderately successful merchant, the moderately successful farmer is never willing to join the failures below him and is more than willing to be transferred to the class of the phenomenally successful above him.

In a notable case in which a mother sought peculiar prominence for her two sons, they were asked, "Are ye able?" The inquiry is as pertinent today as 1900 years ago. Is the man who is making a moderate success able to give the strenuous, continuous attention to his vocation that is given by the man of phenomenal success? It is not always—not usually—a mere question of manual labor, but success depends rather upon

the thought put into the work. It is not mere dreaming about one's work that brings success, but systematic thought applied to the details and organization and execution of the work.

In the business world there is an attempt now to find and apply a science of business. Just when or where it originated or by whom first conceived may never be known. Those who teach it do not call it science but method, and instead of calling themselves professors they prefer to be known as methodizers. The man whose business is just jogging along and who is not keeping pace with his neighbor receives a call from a methodizer.

"A methodizer," says a writer in the Saturday Evening Post, "acts as a physician to commercial patients, makes a searching examination of a business, demands of its proprietors their fullest confidence in giving him a clear view of its conditions, and then prescribes a series of changes in the system by which the business is conducted. This generally implies the installation of a new system of office or factory accounting, but it may equally well apply to the arrangement of floor space in a shipping room or of desk space in an office—in fact, to the minutest mechanical details."

Some instances of the beneficial work of the methodizer are given. A methodizer was called to a great factory. He went over the accounts and found that the shop expenses were out of proper proportion. He looked around for awhile and then one day called the officials of the company to meet him at the gate through which the hands must pass when their labor was over. He made each man take off his coat and open his supposedly empty dinner bucket. The result was that more than \$2,000 worth of tools and material, stolen from the shop, were exposed to the astonished officials. For lack of a system in checking up each night, the factory was losing more than half a million a year.

What the methodizer most often finds is a clinging to old and antiquated ways. He naturally first examines the books of the concern. These may show what is the matter or they may be so kept as to fail to show conditions which must be known before the cause of the lack of success can be discovered. The methodizer's remedy for this case is not hard to guess. It is a modern keeping of accounts. This requires less work in many cases than was devoted to the antiquated system which had failed to disclose the sources of losses or of lack of profits.

If the methodizer does his client any good he does it by getting him out of the ruts in which the majority of cases he has been traveling, shows him where to apply the strenuous effort; how to use his energies and his resources according to modern methods.

Possibly the professional methodizer will not immediately receive calls from farmers. But the fact that these shrewd detectives of the causes of lack of success in business and manufacturing are able to rejuvenate almost dead concerns and put them in the way of rendering valuable services to mankind for which mankind is willing to award them abundant prosperity, this fact ought to suggest to the farmer who has made only a moderate success that a careful examination of his methods, conducted by himself and wife with the assistance of the older children, may point to the use of some "home remedies" with good results. In a majority of cases the farmer who wishes he were in the class of

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the eminently successful will find that he has neglected entirely the important matter of keeping books. Now, keeping books consists not merely in making a rigid account of household expenses. Important as this is, it may much better be omitted than may those accounts which show how much a product costs to produce it and market it and how much was received for it. Such a record will necessarily show the dates of all that is done on the farm. This record of dates is in itself most valuable.

To turn one's gaze upon mistakes made is not pleasant; neither is it necessary nor is it wise to continually look at one's mistakes or failures. They should be among the things left behind, while one presses forward along the line of his successes. If anything "costs more than it comes to" and there is no way of reducing cost of production, produce something which the accounts show to be profitable.

The farmer may well be his own methodizer. It is the man who knows how his interests are progressing, knows where his profits and losses occur, knows their amounts in detail, knows when and how he is going to do things; it is this man who is able to stop the losses, to increase the profits, to reduce his cost of production, and to increase his returns for his products.

Farming, having to be done out of doors and being subject to interruptions on account of the weather, would probably seem like an unsolvable puzzle to the business methodizer. To make farming a pronounced success requires the highest order of talent, the readiest power of adaptation to changing and unforeseen conditions and the same strenuous activity that characterizes the preeminently successful man in any other line of endeavor. The farmer whose alert-

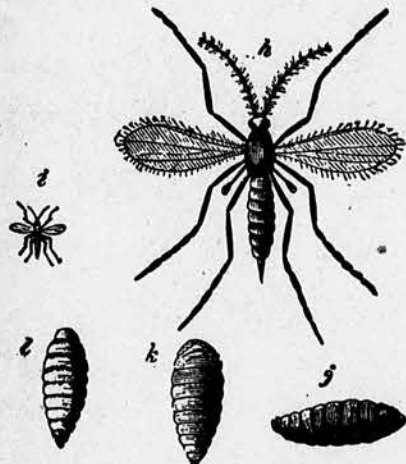
(Continued on page 1191.)

THE HESSIAN FLY.

EDITOR KANSAS FARMER:—Will you please describe the Hessian fly that lays the egg in the wheat? A. T. T. Winfield, Cowley County.

The accompanying illustrations should enable our correspondent to recognize the Hessian fly, especially when in the so-called "flaxseed" stage of its development.

The eggs of the fall brood are probably all laid before the first of October in most parts of Kansas. These are minute, slender, pale red to brownish, and are usually laid in rows of three to five or more on the upper surface of the



The Hessian Fly (*Cecidomyia destructor*, Say.)
a, Fly of natural size; b, the same, magnified; c, k, Maggots, magnified; d, i, the "flaxseed" state, enlarged.

leaves of the young wheat plant. In the case of the spring brood they are sometimes thrust beneath the sheath of a leaf on one of the lower joints of the wheat. A single female may lay 100 to 150 eggs.

Very small greenish-white maggots hatch in three to five days. These crawl down the leaf to the base of the sheath embedding themselves between the sheath and the stem. They draw their substance from the stem. This causes more or less distortion and enlargement of the stem at the point where the maggot lives. In the fall the maggots work close to or beneath the surface of the soil. In the spring brood the maggots usually establish themselves just above the first or sometimes the second joint, but they are occasionally found just at the surface of the ground as in the case of the fall brood.

The maggots feed on the juices of the wheat stem for about twenty days when they contract and their outer skin forms a hard brown sheath. From its resemblance to flaxseed this state is called the flaxseed state of the Hessian fly. In this state the fly is easily found just under the lower sheath of the wheat.

I Will Cure You of Rheumatism

Else No Money Is Wanted.

After 2,000 experiments, I have learned how to cure Rheumatism. Not to turn bony joints into flesh again; that is impossible. But I can cure the disease always, at any stage, and forever.

I ask for no money. Simply write me a postal and I will send you an order on your nearest druggist for six bottles Dr. Shoop's Rheumatic Cure, for every druggist keeps it. Use it for a month and, if it succeeds, the cost is only \$5.50. If it fails, I will pay your druggist myself.

I have no samples because my medicine that can affect Rheumatism quickly must be drugged to the verge of danger. I use no such drugs, and it is folly to take them. You must get the disease out of the blood.

My remedy does that, even in the most difficult, obstinate cases. No matter how impossible this seems to you, I know it and I take the risk. I have cured tens of thousands of cases in this way, and my records show that 39 out of 40 who get those six bottles pay gladly. I have learned that people in general are honest with a physician who cures them. That is all I ask. If I fail I don't expect a penny from you.

Simply write me a postal card or letter. I will send you my book about Rheumatism, and an order for the medicine. Take it for a month, as it won't harm you anyway. If it fails, it is free, and I leave the decision with you. Address Dr. Shoop, Box 529, Racine, Wis.

Mild cases, not chronic, are often cured by one or two bottles. At all druggists.

if present in considerable numbers. Usually this flaxseed state is reached before zero weather occurs. The fly passes the winter in this state.

The spring brood of flies come out from these "flaxseeds" with the return of warm weather in May, probably in April in southern Kansas. These lay eggs from which the spring generation of maggots develop to turn to "flaxseeds" and, later, to flies.

Some think there is an intermediate brood between those from eggs laid in the spring and those from eggs laid in the fall. In any case, when flies prevail there are plenty of them in September to lay the eggs which shall transform to flies the next spring.

From the illustrations and these descriptions our correspondent ought to be able to recognize the fly if his wheat is seriously infested. Reports indicate that considerable damage has been done. This can not now be helped. The question as to whether the yet more serious injury likely to be done by the spring brood can be guarded against is now the important one.

Some farmers have reported good results from pasturing fly-infested wheat. From the foregoing description, it will be seen that unless the wheat be grazed down to the roots the parts of the plants in which the flies now live will not be eaten by the animals. The suggestion that the maggots are liable to be crushed under the feet of the animal is scouted by some and believed by others. Many writers advise the use of commercial fertilizers to stimulate a vigorous growth of the fly-weakened wheat plants.

With this as with many other pests the only really effective measures are those of preventive character. If the fall brood can be trapped and destroyed their share of the damage will be avoided and there will be no spring brood. It is possible to trap the fall brood. It has been observed that where flies abound volunteer wheat is certain to be infested. Early-sown wheat is more liable to attack than late-sown. Wheat sown in October is rarely affected unless there be volunteer wheat in the field. Observation has shown that where wheat is sown early the flies lay their eggs early and die. Deprived of the opportunity to deposit their eggs they live to a later date.

These facts have led to the trial of the plan of sowing narrow strips throughout the field very early. The flies lay their eggs in these and die. The strips may be pastured closely and plowed and again sown to a late crop or planted to some other crop in the spring. Of course the remainder of the field must be kept free from volunteer wheat, otherwise the decoy strips will have been used in vain.

If all wheat sowing could be deferred until after the death of the flies and all volunteer wheat were kept down there would soon be an end of the Hessian fly. But the advantages of fairly early sowing may be had with fair immunity from the pest by the use and sacrifice of the very early decoy strips.

VACCINATION OF CATTLE AGAINST TUBERCULOSIS.

There are those who object to vaccination as a preventive of smallpox. Most of the objectors admit the general efficiency of the prevention, but are opposed to its use because afraid of the introduction of some other disease with the vaccine.

It was long after the use of vaccination against smallpox had become quite general before it was found that its efficiency in preventing the disease was only one instance among many. Vaccination, or inoculation, is now used in combatting very many of the ailments of men and animals. The malignant blackleg in cattle is, in general, powerless for harm in animals which have been recently vaccinated with a good blackleg vaccine. The bite of the mad dog is combatted in a similar way.

The disease which has received most attention of late on account of its destruction of both human and animal subjects is tuberculosis, or consumption. For several years it was held that this disease in man and beast resulted from identical bacteria and might be communicated from man to beast or from beast to man. Recently Dr. Koch, the discoverer of the bacillus which causes consumption, raised a storm in medical circles by claiming that the tuberculosis of cattle is different from the tuberculosis of man and that they are not intercommunicable. A discovery recently announced by von Behring, of the University of Magdeburg, lends confirmation to Koch's claim, and is, at the same time, of immense importance to the cattle industry. In writing of this recent discovery in the Breeder's Gazette, E. V.

Willcox, of the United States Department of Agriculture, says:

"For five years Behring has been carrying on experiments at the University of Marburg in vaccinating, or as he calls it, 'jennering' cattle.

"The method may be described as follows: One milligram of tubercle bacilli obtained from the sputum of consumptive of human beings is injected under the skin or into a vein of cattle preferably about 5 to 7 months of age. This inoculation causes a mild attack of the disease, from which the animals recover within a week or ten days. After a period of four weeks a second much larger inoculation is given. The animal quickly recovers from this injection and is then perfectly immune to tuberculosis. Von Behring and his associates have treated a large number of cattle in this manner. After such treatment the cattle are not affected even by inoculation of enormous quantities of virulent tubercle bacilli which kill other unvaccinated animals within two weeks. Van Behring subjected his vaccinated animals to natural infection by association with cattle in the last stages of tuberculosis. No case of infection has occurred, although some of the animals have been exposed for two or three years.

"This method of immunizing cattle against tuberculosis is considered by von Behring as strictly analogous to vaccination against smallpox in man. The modest announcement of the method in a small pamphlet gives little hint of its immense value to cattle-raisers and dairymen. While it may be some time before the method is so perfected as to be safe in the hands of the stock-raiser it can readily be applied by veterinarians. The matter should be immediately tested by American veterinarians. When von Behring's method comes into general use tuberculosis of cattle will be placed in the same category as a disease preventable by vaccination."

The November Kansas Issue, just out, tells how the late election is likely to affect the enforcement of the prohibitory law in the State. An investigation by the State Temperance Union reveals that in thirty-six out of eighty-two counties reporting, the enforcement of the prohibitory law was more or less an issue in the campaign, while in forty-six it was not an issue. Of the eighty-two counties, thirty-two are likely to have a better enforcement of the law under the new than has been had under the outgoing officers. In six counties the conditions are expected to be worse. In forty counties they will be about the same. In some of these forty counties the law is now well enforced, in some, poorly enforced, and in some enforced hardly at all. The Issue says that temperance people ought to be encouraged by this report, as five times more counties reported a better than a worse outlook. But it also suggests that the report should spur the friends of prohibition to renewed and united effort, inasmuch as in many localities the law is but feebly enforced.

Corn thrown into a well-bred pig is cash. The hog is a patented machine, fully capable of taking care of all the raw material set before it. It is self-regulating, and self-oiling, never gives out and is perfectly reliable. The machine can take ten bushels of corn and put them into the room that the bushel will require. Take a good hog and fill him with corn and fatten him. Seven pounds of corn will make one pound of fat, and that pound worth many times seven pounds of corn. The hog is a condenser of freight rates. Ship him to England and the freight on him would be much less than on the corn it took to fatten him, and he will bring several times the amount of money.—Coburn.

Farm Notes.

N. J. SHEPHERD, ELDON, MO.

Young and growing animals are the most prolific.

Unless manure is under shelter, the sooner it is spread upon the fields the better.

No class of grains will bear pasturing closer than rye.

The best method of making the farm profitable is to make it productive.

The good farm horse is of medium size, well muscled, active, and of a good disposition.

It is not what is eaten, but what is digested that furnishes the strength and muscle.

Most farmers can raise young colts and develop them into mature and thoroughly broken horses.

Send the corn to market by way of the fat hog or steer.

In the management of pastures sufficient growth should be left on the sod



In Olden Days

men were broken on the wheel, now they buy Electric Steel Wheels, and save money. They fit any wagon. Made with either staggered or straight spokes. Let us tell you how to make a low down wagon with any size wheel, any width tire. Catalog tells. It's free. Electric Wheel Co., Box 48, Quincy, Ill.

to protect the roots from the action of frost and the scorching sun rays.

The advantage of soaking or grinding grain is that it is more easily masticated.

Give the stock all the salt they will eat before turning them into the stalk fields, and all the day plenty of water.

It is very essential that calves dropped in the fall should have a warm shelter during the winter.

Cleanliness is a specific preventive of many diseases to which animals on the farm are liable.

Oats contain the greater proportion of flesh-forming elements, and corn the greater proportion of fat-forming elements.

During the winter is a good time to clear up the old fence rows, and corners that have been allowed to grow up in weeds.

Three table spoonfuls of sweet spirits of niter and laudanum in a pint of hot water is one of the best remedies for colic in a horse.

Growing animals especially like a variety and do better thus than to be fed on one kind of grain.

It is very essential to milk clean, as retention of milk in the udder injures it and tends to decrease the yield.

Manure adds to the productiveness of the land as soon as it is applied, but all the substance is not used up in one season.

The time to shape the heads of trees is while they are young. Then the tops can be easily trained in almost any shape desired.

In profitable farming the farm products must be put in form in which they will command the most money and yet leave the farm in the most productive condition.

In a Missouri town there are two John Smiths; one is long and thin, and the other is short and stout. Until lately they have been very friendly, but now they are foes. It appears that a green-goods letter came to town, addressed to John Smith, and was delivered to the fat John. After reading it, he sent it to the thin John, with the words "Opened by mistake," written on the envelope. Then the thin John walloped the fat John for the supposed insult.

TO CURE A COLD IN ONE DAY

Take Laxative Bromo Quinine Tablets. All druggists refund the money if it fails to cure. E. W. Grove's signature is on each box. 25 cts.

KANSAS FARMER'S NEW WALL ATLAS.

The KANSAS FARMER has arranged with the leading publisher of maps and atlases to prepare especially for us a New Wall Atlas, showing colored reference maps of Kansas, Oklahoma, Indian Territory, the United States, and the world, with the census of 1900. The size of the New Wall Atlas is 22 by 28 inches and it is decorated on the outer cover with a handsome design composed of the flags of all nations.

Tables showing products of the United States and the world, with their values, the growth of our country for the last three decades, and a complete map of the greater United States are given. This is an excellent educational work and should be in every home. The retail price of this New Wall Atlas is \$1.

Every one of our old subscribers who will send us \$1 for two new trial subscriptions for one year will receive as a present a copy of this splendid New Wall Atlas postpaid, free.

Any one not now a subscriber who will send us 50 cents at once will receive the KANSAS FARMER for five months and will be given a copy of our New Wall Atlas free and postpaid.

Wouldn't you like one of those dollar magazines like Munsey's, McClure's, Everybody's or the Cosmopolitan for the next year? Send us \$1.75 and we will send the KANSAS FARMER and your choice of them.

The Nickel Plate Road

will afford its patrons an opportunity to take advantage of low rates for Christmas and New Year holidays, by selling tickets at a fare and a third for the round trip to all points on their line, December 24, 25, 31, 1902, and January 1, 1903. Return limit including January 2, 1903. Through service to New York City, Boston, and other Eastern points, Chicago passenger station, Harrison Street and Fifth Avenue. For further information address John Y. Calahan, General Agent, 113 Adams St., Chicago. (66)

One Step Nearer Cost

Our New General Catalogue No. 71 brings our 2,000,000 customers nearer than they have ever been before to the actual manufacturing cost of everything they eat, wear or use.

We buy in largest quantities for spot cash, besides having many factories of our own, and sell direct to our customers, saving them the profits of the jobber, wholesaler and retailer—that's the secret.

CHRISTMAS BUYING

has already begun. Retailers are advancing their prices for the holiday trade. Our prices are never advanced, our goods are of the very latest style and best quality, and our customers save one-fourth to one-half on the orders they send us.

AVOID DISAPPOINTMENT

Send for Catalogue TODAY and get ahead of the Christmas rush.
Montgomery Ward & Co., Chicago.
Enclosed find 15 cents, for which please send me Catalogue No. 71.

Name _____ Write very plain.
Express Office _____ Post Office _____
County _____ State _____

Our catalogue pictures and describes different grades of anything you want, to suit all tastes and purses. Every article we offer is reliable, and you can have your money back willingly and cheerfully if you are not satisfied.

Hadn't you better send for our catalogue today?

Fill out the slip to the left and send to us with 15c and the catalogue is yours.

Montgomery Ward & Co., Chicago

Our Catalogue costs us nearly a dollar each to print and forward. We charge 15 cents for it to prevent a wasteful distribution to people who would not use it. You can save ten times 15 cts. on your first order.



Agricultural Matters.

Notes on Alfalfa.

EDITOR KANSAS FARMER:—The alfalfa yield reported in the FARMER of a few issues back is explained as follows: The amount of hay harvested from eight acres was seventy-two loads in four cuttings. The first cutting was twenty-eight loads harvested from the 19th to the 31st of May, and thoroughly drenched with several rains. The second cutting, July 1 to 4, was seventeen loads, well cured and harvested without rain. The third cutting, July 30 to August 1, was ten loads, well cured and stacked without rain. The fourth cutting, September 1 to 4, was seventeen loads, not completely cured, but stacked without rain. In addition three acres was mown October 16 and put into the mow October 18, yielding three and one-half loads.

In considering the yield per acre of hay in the absence of scales, we have the ever-present element of uncertainty in farm operations. I believe, however, the hay weighed on an average a ton to the load as it went into the stack.

The hay was cured largely in the winrows by turning it back and forth with a horse rake.

The first cutting was thoroughly wet before it was wilted, and following this was repeatedly wet and aired during a ten-days spell, after which it was stacked with the leaves intact and the color medium. The stack settled very low but did not heat much. The second and third cuttings were cured in the wind and sun. The hay did not settle so much and is in good shape. The fourth cutting was not thoroughly cured, owing to the humid condition of the atmosphere. It handled gummy and heavy, heated considerably in the stack, but at present is in good shape as far into the stack as one can reach.

Wind and intermittent turning cures the best hay. Horse power airs it cheaply and effectively, and in these days of scarcity of labor, horses must load it and haul it away.

However well stacked too much hay is wasted. It should be housed.

This yield of hay narrated above is due to the soil formation on which it grows. Two years ago large partially decayed walnut stumps were pulled from the alfalfa sod, removing the last traces of the timber growth that has occupied the ground. The subsoil is a loamy clay underlaid, at a depth of twenty-three feet, with a bed of gravel filled with water.

This soil will yield good paying crops of grain. But what other crop will yield in the aggregate what is here recorded for alfalfa, be it seven or nine tons to the acre?

At present the cattle are grazing the sixth growth of alfalfa following the five cuttings of hay, and we find but little danger from bloat.

If hogs are shifted year for year, they do not injure the growth except such plants as they dig out. In the fall of the year breeding hogs crave the roots and if unrun will root them out in quantities.

On subsoil, we find a spring seeding of fifteen to twenty pounds of seed to the acre on growing wheat quite satisfactory. Three acres of the above eight

were seeded in this manner on the 12th of April, 1900, the seed was sown. In June thirty bushels of wheat with heavy straw were harvested, and September 1 two and one-half loads of stubble and hay to the acre were stacked. Alfalfa hay is essential in fattening cattle economically.

The hay is a great conditioner for stock and breeding cattle.

The fifth cutting is cleaned up greedily by stock and breeding hogs. However, I experienced trouble last winter with sows that were eating the hay. Farm horses do well on the hay with corn, but fall off on the hay with wheat. The free kidney action produced by the hay does not seem to injure the horse, as does that produced by the feeding of millet hay.

I believe nothing will flesh up a horse so quickly as a run on green alfalfa. It does not produce bloat as with cattle. Milch cows pastured on alfalfa during the summer must have corn to do well. Alfalfa pasture is usually overrated for hogs. They require corn to make the best gains. They will devour the hay greedily while running on the green pasture.

Nothing except horses that have been highly grained are satisfied on the green grass alone. The ration is altogether onesided.

A man would not be satisfied on an exclusive diet of eggs. The two rations are much alike.

The farmer who is toiling onward and upward without alfalfa should mend his ways. If your soil will not grow this crop profitably, get soil that will; for Farmer Smith is quite right when he says:

"Alfalfa! the first thing up in the spring morning, the last to go to rest in the winter evening. Oh! alfalfa, thou art the whole thing!"

WALTER J. BURTIS.

Fredonia, Wilson County.

Princely Farming in Illinois.

The farms of the Funk family are among the largest in the State of Illinois. There are eight of them, and in the aggregate they cover 48 square miles of territory. All this land belonged originally to one family. In that family were seven sons and one daughter. The daughter married L. H. Kerrick, well known as a very successful farmer and stock breeder. In time the one immense farm of 48 square miles was divided up into eight, approximately equal, though the eldest son was given 1,000 acres extra by the heirs out of consideration for his hard work for the estate while the other children were yet small. At the present time these farms each comprise between 3,000 and 4,000 acres. This means about six square miles on the average for each farm. When eight of these farms are in one group they form almost a principality. The present owners of these farms are sturdy men of sterling character, looked up to by those with whom they come in contact. Some of them have been well known in public capacities of various kinds for a generation. One of them, Lafayette Funk, served on the Illinois State board of agriculture for many years, and, after a short rest, has been again made a member of the board. Mr. Kerrick is one of the trustees of Wesleyan University, and has just been elected trustee of the University of Illi-

nois. He has made his record as a farmer, as a stock-feeder, as a stock-breeder, and best of all, as a man.

Over 100 persons in attendance at the recent Illinois Stock Breeders' Convention at Bloomington, accepted the invitation of the Funk Brothers to visit their farms. A special train was ready at the Bloomington depot at 8:30 a. m. A run of several miles brought them to the first of the Funk farms. This is owned by J. Dwight Funk, a man about 24 years of age, graduate of a noted university. The guests were taken in carriages, of which there were forty or fifty in waiting, and were started on their journey over the farm. Over the beautiful rolling land they were driven, past the homestead surrounded by trees and shrubbery and into an immense field of Boone county white corn. This was one of the test plots. Each row had been planted with a single ear of corn, to test the individuality and the prepotency of the ears. This difference was found to be very great. One row yielded at the rate of 47 bushels per acre, and another row at the rate of 132 bushels per acre. This was a revelation; no one would have suspected that two ears looking alike and of the same size would have had such difference in potency. It shows how much depends on the seed. We have believed that a bushel of corn, if its germinating power had not been impaired, was as good as any other bushel of corn, but this test seems to show that the prepotency of corn (its power to reproduce like) is a thing that must be considered. The farmers that take this lesson to heart will no longer shovel the seed out of their bins. They will wisely use good selected seed. It is cheaper to pay \$2 per bushel for seed that will yield 132 bushels to the acre than to get for nothing seed that will yield 47 bushels per acre.

One of the ways of illustrating the differing yields was by having the crops from certain adjacent rows stored in crates by themselves and piled one above the other. Thus in one case a row had yielded three crates of corn while an adjacent row had yielded six crates. These were grown from apparently identical seed, on the same kind of soil, and under like conditions. The object lesson was a very striking one.

On the farm of Eugene Funk the visitors were taken into an immense field of alfalfa and the carriages were bunched in the middle of it. A part of the alfalfa that had been passed over was light in stand and apparently poor in vitality. The place in which the carriages were brought to a standstill was covered with a thrifty growth of the plants. The difference was explained as resulting from the inoculating of the soil with soil brought from alfalfa fields where the nodule bacteria were known to be at work. It was thus demonstrated to the visitors that the soil needs to be inoculated with these bacteria. The failure of many fields of alfalfa in Illinois is attributed to this lack of bacteria suited to development on the roots of the alfalfa.

One of the treats of the day was a sight of the live stock on the farm of L. H. Kerrick. Here was seen at pasture and in the feeding lots 535 Angus cattle. For the most part they roamed at will over the blue grass pastures. It was remarked that the animals were

very tame. As the procession of carriages approached, the animals, instead of running away, showed a keen interest in their visitors. Some of the younger animals acted like boys watching an incoming circus. They stopped feeding, picked up their ears, bellowed to each other and trotted up to get a closer view of the procession. Some of them trotted up to get a closer view of the procession. Some of them trotted along with the visitors as far as the men on horseback would allow. Not an animal displayed sign of fear. This shows the excellent methods in vogue on the farm of Mr. Kerrick. Mr. Kerrick permits no swearing nor rough methods in the men that take care of his cattle. The great glossy black "doddies" were as tame as kittens. They seemed to enjoy being looked at. Many of the visitors got out of the carriages and handled and stroked their black bodies. Mr. Kerrick has a bunch of blacks that he is fitting for the International. Before coming to the field in which those animals were being fed the visitors were requested by the horsemen not to get out of their carriages, as it might excite the animals, and they would not get over that excitement for two weeks. As they were on high feed and preparing for the International any excitement would mean derangement of appetite and that would mean ceasing to gain in weight and plumpness. Yet when the bunch was reached the animals of their own will stopped feeding and seemed to be anxious as any others had to entertain their visitors.

At another field the visitors were separated from a lot of feeding cattle by a fence. On the approach of the carriages, the animals stopped feeding, walked to the fence and ranged themselves along it, gazing at the passers with their large gentle eyes, and pricking forward their ears to catch every sound. A guest laughingly remarked, "We are their live stock show."

On one of the farms is a most perfect arrangement for the storing and drying of seed corn. It is a building constructed for that purpose. Cracks a foot apart were left in the floor, and these extend the length of the building. This is to permit the air to pass upward through the floor, through the racks of corn and out of the ventilators at the top of the barn. The owner said his building would hold 3,000 bushels of seed corn when all racks were filled. The work of putting in the selected seed corn had just begun, but when it is finished almost the entire interior will be full of corn racks and corn. Mr. Frank Funk said that motionless air would never dry corn. To do that the air must be in motion, and this storehouse was built to attain that end.

The Funks will feed, this year, a great deal more corn than they will sell for seed. Some of their fields will go over 100 bushels of corn to the acre. But the selection of seed corn is to be made under most exacting rules. From some of these acres not more than five or ten bushels of corn will be chosen for seed. The rest will be fed to cattle. And here lies the advantage of feeding cattle and raising seed corn. There will be a ready market for all the corn rejected as seed. Moreover, there will thus be no temptation to sell for seed, corn that should be fed to cattle. In connection with the seed storage houses

was given the advice not to buy seed corn shelled, as it is impossible with such seed corn to know the kind of ear from which the seed comes. Farmers will do well, no matter where they get their seed, to buy it on the ear, thus making sure that they do not get seed from "nubbins" and very imperfect ears.

The drive over the farms extended for twelve miles and lasted five hours. Several of the farms were not visited for lack of time. The carriage journey came to an end at the main warehouse, where a lunch had been spread. The meat for this lunch came from one of Mr. Kerrick's Angus steers, he having taken one to Bloomington and had it slaughtered for the occasion. After the lunch speeches were in order. The guests were so enthusiastic at what they had seen that some time was spent in speechmaking and in favorable comments on the work being done by the Funk brothers. Professor Henry compared the work being inaugurated here as similar to the work that had been carried on for 200 years by the Valmorin family of France, which has resulted in so greatly improving the sugar beet. He predicted that what the Valmorins had done with the sugar beet the Funks would do with corn.

From the warehouse a special train took the guests to the city. All were well pleased with their trip. It is confidently expected that the breeding of the corn plant by the Funk brothers and others will assume great proportions. The credit for the inaugurating of this work lies with the University of Illinois, and principally with Professor Hopkins. That gentleman was one of the guests and received much praise from the Funk brothers and others for the good work he had done.

Methods of Cultivating Corn.

PROF. A. D. SHAMEL, ILLINOIS EXPERIMENT STATION.

A test of a few of the different methods of cultivation in use at present resulted as follows:

	Bu. per acre.
Weeds allowed to grow.....	58
Weeds cut out with hoe and a loose mulch made with hoe, "frequent cultivation".....	96
Two inches deep cultivation, small shovels.....	90
Four inches deep cultivation, small shovels.....	91
Six inches deep cultivation, small shovels.....	84
Six inches deep cultivation, large shovels.....	87
Gopher or blade cultivation.....	88
Deep early, shallow late, small shovels.....	85
Shallow early, deep late, small shovels.....	89
Mulched with grass.....	8

The conclusions from this experiment were that the weeds must be destroyed at any cost. A loose mulch, made by stirring the surface of the soil, was very important in a dry season. Injury to the roots by deep cultivation reduced the yield per acre. To demonstrate the effect of root injury an experiment was carried on for three years with the pruning or cutting off the roots of the corn plants. The roots were cut off at different depths in different rows, about six inches from the hill (on all sides of the hill) three times during the season. The entire field was cultivated with a weeder in order that the cultivation would not interfere with the experiment. One row was pruned and one row not pruned throughout the field alternately, so that a close and accurate comparison might be made of the effects of root injury. The results of an average of the three years' work are as follows:

	Bu. per acre.
Not pruned.....	62
Pruned two inches deep.....	60
Pruned four inches deep.....	45
Pruned six inches deep.....	30

At the past winter's farmers' institutes the question was frequently asked: "Would deep early cultivation injure the plant?" A young plant taken up twenty-one days after planting had the root system washed out. At this time the roots spread from one side of the row to the other near the surface of the soil. The root development of the mature plant similarly washed out shows that there is a perfect network of roots in the surface soil. In fact, these surface roots largely supply the plants with the plant food from the soil. The deep roots anchor the plants and hold them in an upright position. Deep cultivation would doubtless cut off and destroy many of these important roots. I have seen men pull out bunches of corn roots from the cultivator shank at the end of the row. The amount of damage from such injury will vary with the season. In a dry season the injury will be very great. In a wet season it will be less because the remaining roots will be able to supply the necessary moisture for plant growth.

Some of the letters indicate that the writers have secured better results with deep cultivation than shallow cultivation. If this is the case then it is the best system for them to follow under

their conditions. However, in Illinois the majority of farmers will get better results from shallow and frequent cultivation. If the seed bed has been properly handled, disked, plowed, harrowed, and planted, there will be few weeds to eradicate in the field. It will not be necessary under these circumstances to cultivate deep. The shallow cultivation, stirring the surface, will destroy the small weeds and conserve soil moisture, the two principle objects of corn cultivation.

Moles.

A correspondent sent to the KANSAS FARMER the following inquiry:

"Do you know of any way to successfully destroy the moles that are so destructive to alfalfa fields? I have been trying to trap them, but have had no success whatever. Please inform me what is the best way to exterminate them."

This inquiry was sent to Prof. D. E. Lantz, of the Kansas Experiment Station in the hope that an answer might be received in time for last week's paper. The reply did not arrive in time, however, and the editor answered the inquiry. After last week's FARMER had gone to press, the following was received from Professor Lantz. It agrees in all essential points with the answer given last week. Professor Lantz says: "Your correspondent is probably mistaken in the name of the animal. It is, without doubt, the pocket gopher that is doing the mischief. We have some complaint of damage by the mole in lawns and meadows. This animal heaves up the sod by burrowing near the surface in lawns; and in dry weather the loosened grass withers and dies. In the cornfield the runways of the mole furnish convenient shelter for mice. In the alfalfa fields, the mole is nearly always present, but the loosening of the surface soil is a help rather than an injury to the field, unless the alfalfa plants are very young. The mole is almost entirely insectivorous and destroys large numbers of larvae that are destructive to growing crops. Efforts to poison the mole have not been very successful because suitable bait is difficult to find. Aside from the injury to lawns, it does no damage that is not fully compensated by its destruction of insects. For the best means for combatting the pocket gopher, Press Bulletin No. 109, of the Kansas Experiment Station, gives our latest information. We recommend strychnine poison."

Soy-Beans in Crop Rotation.

William H. Rowe, a successful farmer in central Illinois, uses soy-beans as one crop in a rotation that has made his farm very productive and his farming profitable. He has only 100 acres on his farm, but turns off large numbers of hogs.

Mr. Rowe prepares the ground for soy-beans just as he does for corn, and about May 20 plants one-half bushel of Early Yellow beans with a beet drill in

rows twenty inches apart. The crop is usually cultivated about three times with a one-horse cultivator, and little or no hand work is required. The yield is from twenty-five to thirty bushels per acre and is ready to pasture the latter part of August.

Four or five acres of artichokes are raised each year and furnish a splendid food for the hogs through the fall and winter months. The hogs do their own harvesting and are benefited by the exercise required to root out the artichokes.

The fourth year corn is raised following the soy-beans. It is not surprising to find in these fields, which have grown several successive leguminous crops and been pastured summer and winter with hundreds of hogs, corn of the highest type and quality yielding seventy to ninety-five bushels per acre. A pure-bred variety of corn is raised.

Experience With Alfalfa.

EDITOR KANSAS FARMER:—In the fall of 1901 I sowed about seven and a half acres of alfalfa. The ground was plowed in July and harrowed a number of times. I sowed the seed about September 15. It came up and made what I thought was a pretty good stand. But the dry, hard freeze in December killed it. This spring I double disked it and harrowed and sowed to seed on May 1. The seed came and up and made a good stand. I mowed the weeds and alfalfa when the alfalfa was about six or seven inches high. Then I raked and hauled it off the field. In the latter part of July it was cut again, cured, and stacked, being a little more alfalfa than weeds. It was cut again between October 8 and 12, it being about twelve to fourteen inches high and almost free from weeds. I averaged a ton per acre.

G. W. STAATZ.

Woodbine, Dickinson County.

Imports of Sugar.

The imports of sugar into the United States from foreign countries for the nine months ending September 30, were 1,425,000 short tons, as against 1,517,000 short tons the same date the year before. The import value of this sugar per short ton was \$32.36 [or \$1.12 per 100 pounds] for the year ending September 30, 1902, against \$44.16 at the same date the year before.

Of these sugars 769,000 short tons came from Cuba, 124,000 from the East Indies, 121,000 tons from Brazil and 85,000 tons of beet sugar from Germany.—Louisiana Planter.

If the farmer would domesticate the quail we would not have to spray our orchards when they are in bloom in order to raise a crop of fine fruit. Quail would eat and drive away the insects. From observation I have learned that a quail will eat an insect every minute of the day. Take ten hours of the day and you'll find that one quail will get away with 600 insects. Usually there are twenty-five quail in a covey, and

Proper feeding will improve any milch cow, and will often make a model milker of an unprofitable cow. The greater part of a cow's feed goes to keep the physical condition of the animal to a proper standard; food assimilated above these requirements brings returns in milk. The greater the ability of a cow to

appropriate food elements to tissue building and milk formation, the greater the dairyman's profit. Dr. Hess' Stock Food is the great cow tonic and milk producer. A tablespoonful given twice a day in meal, mash or grain, increased to two tablespoonsful at the end of a week, will wonderfully increase the milk production, because it insures perfect digestion and assimilation of every particle of the food given, allowing nothing to pass off as waste. The cow eats more and the flow of milk is always in proportion to the amount eaten and well digested. Dr. Hess is a graduate of famous medical and veterinary colleges and his compound is endorsed and prescribed by them. If these institutions of learning know of nothing better than

Dr. Hess' Stock Food is sold on a written guarantee in 100 pound sacks at \$5.00; smaller packages at a slight advance. Fed in a small dose.

Dr. Hess' Stock Food

It must be good. No unprofessional manufacturer can equal Dr. Hess' Stock Food, the scientific compound for cattle, hogs, horses and sheep. Every pound sold on written guarantee; 100 pounds for \$5.00; smaller packages at a slight advance. Fed in small doses. In every package is a little yellow card entitling the purchaser to personal advice and free prescriptions, for any animal, from the eminent veterinarian, Dr. Hess. Otherwise this personal advice would cost many dollars.

DR. HESS' GREAT STOCK BOOK

C. M. McCLELLAN, Veterinary Surgeon, Jeromeville, O., says: "It is the most comprehensive work for farmers I have ever seen." H. H. LAYMAN, Veterinary Surgeon, Lattasburg, O., says: "In my practice I often follow suggestions given in your Veterinary Works."

We also make Dr. Hess' Poultry Pan-a-cie-a, Dr. Hess' Healing Powder and Instant Louse Killer. Address

Dr. HESS & CLARK, Ashland, Ohio.

they would eat 15,000 insects a day. At this rate, with two or three coveys on each farm, it would not take long to rid the fields of the insects and insure us a good crop of grain, says Isaac W. Brown, of Rochester, Ind.

The total value of the farm products of the United States in 1900 was \$3,764,177,706, of which \$835,858,123 were shipped to foreign lands. In 1880 the product of our farms were valued at \$2,212,440,927, and we exported in that year \$685,961,091 worth of farm products. In the meantime the output has increased by \$1,551,636,779, while our exports of farm products have been enlarged only \$149,897,032.

If it takes twenty bushels of corn to the acre to pay the expenses of raising a crop and we raise but twenty bushels per acre, we are not making any profit. But every bushel we raise above the twenty bushels per acre is that much more to be added to the profit side of the account. And there is where the farmer must do his best thinking and use his best efforts to increase his crop yield, above and beyond the point of expense.

It is easily seen, says "Uncle John," that the twentieth century farmer, the farmer who shall meet the demands of these progressive times, and do his part in the work of increasing the acres by increasing their production (and that is the problem before us), must have eyes and ears as well as feet and hands, nerve and brain, as well as pluck and muscle,—a cultivated mind as well as cultivated hands.

The prospect is that the corn crop will be sent to market much less rapidly than usual. The empty cribs, the shortage of cars, the tendency to hold back the crop, and the growing disposition of farmers to feed instead of selling the grain will likely act as a lever to keep up the price.

An idea written with but a single drop of ink may make you rich. You get many ideas in the KANSAS FARMER.

Mohammedans do not wear silk. As it is the product of a worm, they consider it unclean.

\$100 Reward \$100

The readers of this paper will be pleased to learn that there is at least one dreadful disease that science has been able to cure in all its stages and that is Catarrh. Hall's Catarrh Cure is the only positive cure known to the medical fraternity. Catarrh being a constitutional disease, requires a constitutional treatment. Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system, thereby destroying the foundation of the disease, and giving the patient strength by building up the constitution and assisting nature in doing its work. The proprietors have so much faith in its curative powers, that they offer One Hundred Dollars for any case that it fails to cure. Send for list of testimonials. Address, F. J. CHENEY & CO., Toledo, O. Sold by Druggists, 75 cents. Hall's Family Pills are the best.

The Stock Interest.

THOROUGH-BRED STOCK SALES.

Dates claimed only for sales which are advertised or are to be advertised in this paper.

December 8-9, 1902—J. E. Logan and Benton Gabbert & Sons, Kansas City, Mo., Herefords.

December 16, 1902—Gifford Bros., Manhattan, Kans., Shorthorns.

December 19, 1902—Hanna & Co., Howard, Kans., Percheron horses, at Kansas City.

January 13, 1903—L. B. & A. M. Thompson, Nashua, Mo., Galloways, at Kansas City.

January 12-17, 1903—C. W. Armour and Jas. A. Funkhouser, Herefords, at Kansas City, Mo.

January 22 and 23, 1903—Combination sale pure bred Hereford cattle at South Omaha. W. M. Rogers, McCook, Neb.

January 23, 1903—Breeders' State Combination Berkshire Sale, Topeka.

January 28-29, 1903—C. A. Jamison, Peoria, Ill., Shorthorns, at Chicago.

February 3, 4, and 5, 1903—Combination Sale, Wichita, Kans., Percherons, Shorthorns, and Poland-Chinas.

J. W. & J. C. Robinson, Snyder Bros., and others.

February 6, 1903—Thompson Bros., sale of Poland-China bred sows and gilts, at Marysville, Kans.

February 10, 11 and 12, 1903—J. F. Stodder, George Bothwell and others, Shorthorns; also C. A. Stannard and others, Herefords; Oklahoma City, Oklahoma.

February 17, 1903—Geo. F. Kellerman, Shorthorns Kansas City, Mo.

February 20, 1903—S. S. Spangler, Milan, Mo., Percheron horses.

March 3, 1903—L. M. Monsee & Son, Smithton, Mo., Jacks, Jennets, saddle horses and Poland-China swine.

March 3 and 4, 1903—C. H. Garner and M. A. Judy, Aberdeen-Angus cattle, Chicago.

no spots or horns, which is a big item. They are easy feeders, have good disposition, and as to size, they will weigh with any of the breeds. I have a calf which at 5 months old weighed 535 pounds, and have seen them at a year old weigh 1,235 pounds. They are low-down and blocky. I have been a Kansas farmer for twenty-two years, and have experienced some of the ups and downs of a farmer's life, and find that dairying and stock-raising pays better than raising grain for the market.

CHARLES MORRISON.
Phillipsburg, Phillips County.

Trough for the Hogs.

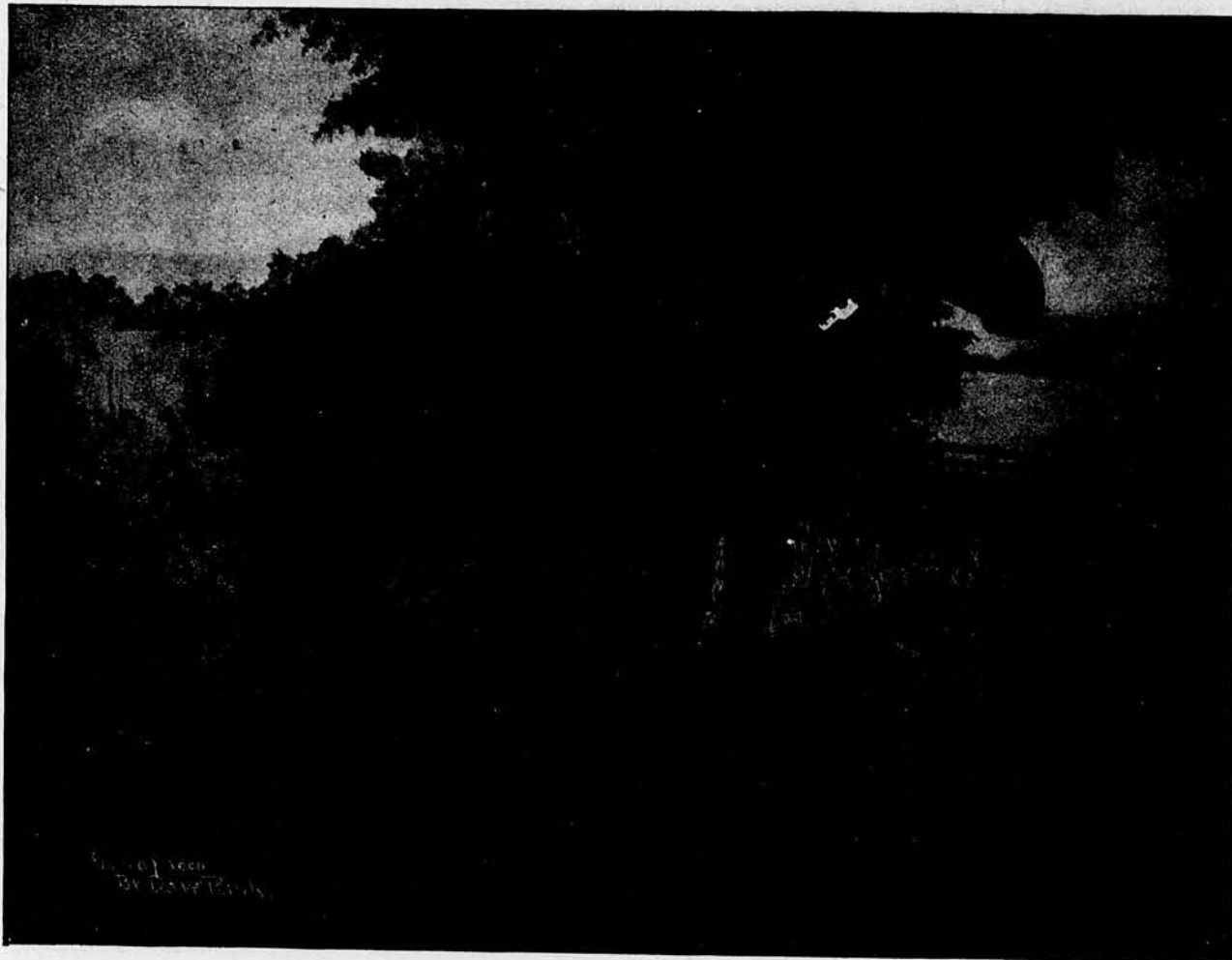
A good "recipe" for the construction of a hog-trough is offered by G. H. Moore, of Kansas City, who writes as follows:

Take a board one inch thick and eighteen or twenty inches wide; bevel the edges to an angle of 50 degrees, and side pieces on bevel edges should be six inches wide, allowing one inch to project below lower edge of board that forms bottom of trough. Place a board twelve inches wide in the center, raising the board two inches from the bottom,

pendent of the London Farm and Home gives us some interesting prices in England in the olden times when horse-breeding first began along industrial lines, and prices are now ten times higher than then.

Very interesting is the light thrown upon the manners and customs of our forefathers, their habits, occupation, and style of living and the prices ruling for agricultural produce, by the diaries kept by sundry clergymen, country gentlemen, yeomen, and tradesmen, particulars of which are contained in that most interesting work which has just come in my way, entitled "Glimpses of Our Ancestors in Sussex." The range of these diaries is from 1655, before which clerical accomplishments were rare, down to 1750. In all articles of home produce the rise of prices has been immense since those days, and it is interesting to note that horseflesh has "gone up" with the rest.

One of these diarists, a country gentleman named Stapley, of Hickstead Place, Sussex, records in May, 1737, that "Chowne bought me a mare, which cost me 10 pounds and 10 shillings, and I gave him 1 shilling for bringing her." Note the liberality of the "tip," and



MARMOTTE (44058).

The 2,400-lb. black Percheron stallion imported by M. L. Ayres, Shenandoah, Ia. One hundred registered Percherons in his stables to-day.

The Dual-purpose Cow.

EDITOR KANSAS FARMER:—In your issue of November 13, Farmer inquires about what breed to use as dairy cattle. As I am a breeder of Red Polled cattle, which he says he prefers, I will try and give him some information about them as dairy cattle. The Red Polled cow, Mayflower 2d, stood second at the Buffalo test of all the breeds. My Red Polled cows give milk within five to six weeks of calving. They give a good quantity of rich milk. If Farmer will send his name I will send him reports of different milk tests and facts and figures of Red Polls, as it would take up too much space in the KANSAS FARMER. I have tried registered Shorthorns and Holsteins, and finally settled on Red Polls as the best dual-purpose cattle for the farmer, as they are good for milk and beef. Will quote him a few lines from V. T. Hill's catalogue: "When you find a cow that gives 7,000 pounds of milk, which makes over 300 pounds of butter in twelve months or less, we consider her a good dairy cow. When we find a cow that produces a calf, that having been made a steer, weighs over 700 pounds when 9 months old, we call that cow a beef-producer. When we find these results combined in the same individual what shall we call her but a dual-purpose cow?"

I have been breeding Red Polls eight years and find them harder than the Shorthorns or Holsteins. By using a Red Polled bull you get a solid red calf,

and every eight inches put in a partition, nailing secure to board in center and side pieces of the trough. This makes a trough the hogs can not get into and every hog must eat in his own department. On the top of board in the center you can build a hopper where shelled corn can be put, leaving the space below large enough for the corn to pass through to the trough below. If a cover is placed on this hopper it will keep all kinds of stock from eating the feed in the hopper; also serve as a protection from storm and dirt. This trough has many advantages over any others I have seen or known, and I will mention a few of these: Being made of inch lumber, it is light and convenient, and a sixteen-foot trough weighs only about forty or fifty pounds, and forty-eight hogs can all feed at the same time out of this kind of a trough. As the hog can not get his feet into this trough, little or no mud or filth is carried into the feed, and the partitions keep the hog in his own department. This is the ideal hog-trough for the farmer, as it is a money-saver and certainly an agreeable surprise to the hog.

Ancient Prices of Horses.

The progress of horse-breeding throughout the world is well illustrated by comparing the low prices 200 to 250 years ago, and it clearly shows that with the advance of civilization and the improvement of horse-breeding the prices continue to advance. A corres-

fancy any modern groom being satisfied with any such sum out of a "deal." Again, in 1739, "Bought a black mare for John Stapley to ride; she cost 5 pounds," with saddle and bridle in. In 1740, "Bought a mare of John Daulton for which I gave him 5 pounds." Sometimes, however, a higher figure was reached, or horses got "dear," for in 1741 he "bought a mare of John Linfield, of Dean House, for which I paid him 15 pounds." The Stapleys were sportsmen, and kept hounds, so that they they doubtless kept good horses, but not much could be got now for the prices mentioned, especially if buyers of yeomanry remounts were in the market. "Paid to William Ashford, for two beagles to make my cry complete, 4 pounds, 15 shillings," suggests that the breeding of dogs was more profitable than the breeding of horses; and "I had a mad dog in my kennels and was obliged to kill all my hounds," indicates that 170 years ago the "stamping out" method of dealing with rabies was in vogue, even if they had no "muzzling order" and no Minister of Agriculture to abuse. Mr. Stapley evidently had some regard for his dumb servants; and did not, as so many "gentlemen" do now, sell them for "what they will fetch" or consign them to the kennels or the Continent. Here is an example, "1735, October 9, James Mathews had my old white horse away, which I gave him to keep as long as he shall live, and when dead



Warranted
to give satisfaction.

GOMBAULT'S CAUSTIC BALSAM

A safe, speedy and
positive cure for

Curb, Splint, Sweeney, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a HUMAN REMEDY for Rheumatism, Sprains, Sore Throat, etc., it is invaluable. Every bottle of Caustic Balsam 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, testimonials, etc. Address THE LAWRENCE-WILLIAMS COMPANY, Cleveland, Ohio.

BALMOLINE The Corn- Husker's Friend

And Nature's Perfect Healing Salve

MAN OR BEAST.

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LUMP JAW.

A positive and thorough cure easily accomplished. Latest scientific treatment, inexpensive and harmless. NO CURE, NO PAY. Our method fully explained on receipt of postal.

Chas. E. Bartlett, Columbus, Kans.

Immune Hogs.

The pigs are born Cholera-proof.

Innoculation before birth the most scientific and best hit ever made in preventing Hog Cholera. Write for free book and agency.

ROBERT RIDGWAY, Box 300, AMBOY, INDIANA

MOORE'S
HOG
REMEDY

The Original
Hog Dip.

Used on Outside and Inside of Hogs

Kills lice and fever germs, removes worms, cures mange, canker and cough; aids digestion, promotes healthy growth, and

Prevents Disease, at Small Cost.

At dealers in Sealed Cans Only. Useful book with illustration of Dip Tank FREE. Address

MOORE C. & M. CO. L 1501 Genesee St.
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ICE

CUTTING is easy with

DORSCH All Steel, Double-Row ICE PLOWs. Marks and cuts two rows at a time; cuts any size cake and any depth, and does it with ease and economy. Does the work of twenty men sawing by hand. Pays for itself in two days. No farmer, dairyman, hotel man or other can afford to be without it. Ask for catalogue and introductory prices.

John Dorsch & Sons, 245 Wells St., Milwaukee, Wis.

WINTER WATER.

When the stock goes into winter quarters you will want to be sure of a reliable and constant supply of water. A bored well is the safest and surest. Our Well Machinery is the best and cheapest. Drills 25 to 1500 ft deep. We make all appliances. Have stood the test of 15 years. We also have Gasoline Engines for all purposes. Send for free catalog.

W. M. Thompson Co. Sioux City, Iowa.
Successors to Sioux City Engine & Iron Works

to bury him in his skin and not to flog him or abuse him in any way."

By a later entry it appears that this old horse did not long enjoy his pension, for he died in the following May and was buried in the saw pit in Laines Wood. His age when he died was supposed to be 35 years. It would have been interesting to know what he cost.

Trying to farm without a farm paper is like trying to sharpen a lead pencil with a pair of scissors. See our "Blocks of Two" proposition.

Cottonseed or Cottonseed-Meal.

There is much difference of opinion and consequent discussion among farmers who grow cotton as to the manner of feeding and relative value of cottonseed-meal. The tendency always is to utilize for feed the products of the farm and this is generally a safe and a desirable practice.

Cottonseed-meal is one of the products resulting from the manufacture of oil from cottonseed. Oil, hulls and linters are the other products. The short cotton that sticks to the seed is first removed, then the hull is separated and the resulting hulled seed is ground, heated, and pressed. After all of the oil obtainable by heavy pressure is secured, the cakes from the presses are ground into the product known as cottonseed-meal. It is not cottonseed-meal in the same sense that ground corn is corn meal or ground Kafir-corn is Kafir meal. The cottonseed-meal produced by the oil mills differs greatly from ground cottonseed and this fact should be kept in mind when discussing the uses which may be made of this feed. The only difference between corn and corn-meal is that of digestibility. The chemical composition of each, if from the same lot of corn, is the same. But cottonseed and cottonseed-meal are entirely different in composition. Cottonseed contains, in each hundred pounds, twelve and one-half pounds of protein and nearly sixty-nine pounds of carbohydrates and fat and has a nutritive ratio of 1:5.2. Cottonseed-meal contains, in each hundred pounds, thirty-seven pounds of protein and forty-four pounds of carbohydrates and fat and has a nutritive ratio of 1:1.2. The term, nutritive ratio, means the proportion existing between the protein and the carbohydrates and fat in a feed or ration. For general purposes, the grain ration which is fed should have a nutritive ratio somewhere between one to six and one to seven.

Thus, neither cottonseed nor cottonseed-meal is suitable to feed as an exclusive grain ration but should be fed mixed with some grain richer in carbohydrates, such as corn, Kafir-corn, or wheat. If cottonseed is fed, at least an equal amount of one of these other feeds should be mixed with it. Both of the feeds will then be utilized to better advantage than either alone. Cottonseed-meal should never be fed alone except possibly to stock cattle that have plenty of roughage and are not receiving other grain. In general, cottonseed-meal should be mixed and fed with about three to five times as much corn, Kafir-corn or wheat.

Whether to feed cottonseed or cottonseed-meal depends on market prices of each and of corn, Kafir-corn, wheat, and rough feed. These prices vary so greatly in different localities that no general statement which will apply in all cases can be made. The tendency appears to be toward feeding cottonseed without inquiring into the possible advantages of selling the seed and buying cottonseed-meal. Pound for pound, when fed in connection with other grains, cottonseed-meal possesses far greater feeding value than cottonseed and can be used to advantage where cottonseed can not.—Oklahoma Experiment Station.

General Purpose Cattle—Brown Swiss.

EDITOR KANSAS FARMER:—I noticed in last week's issue an inquiry from Farmer, Pomona, Franklin County, for the experience of the farmers of Kansas in dairying, also what he should head his herd with, whether Jersey, Holstein, etc. I have been dairy farming in Kansas for several years. I first tried grade Shorthorns, but they did not give milk enough. Shorthorns are all right for beef but they are a failure as dairy cattle. I then tried Jerseys, and for milk and butter they can not be equalled, but I hardly think it will pay a farmer to keep a cow for milk and butter alone and get no beef. I am now trying Brown Swiss cattle which I find are nearly as good as Jerseys for milk and butter and are also excellent beef cattle. A herd of cows in milking condition will average about 1,400 pounds, and make about 500 pounds of butter per head per year. The Brown Swiss cow Brienz made the highest record at the World's Fair at Chicago, of any cow away from home, giving ten gallons of milk per day for three days, which made thirty-eight pounds of butter.



"Tama Jim," 2,540 Pounds, One of Iams' "Wide-as-wagon Kind."

Our illustration is from the "Home of the winners," the largest importing horse establishment of Nebraska; that of Frank Iams, St. Paul, Nebraska. "Tama Jim" 20810 is a 4-year-old home-bred black Percheron, weight 2,540 pounds. Mr. Iams says, "He is the largest well-finished stallion in the United States. He is of the 'wide-as-the-wagon kind,' with two good ends and a middle; has fourteen inch bone. He is a flash actor, a bold mover and a real cyclone in motion. He is royally bred, being one of 'Iams' select 400.' Is an outstanding winner in any show. Has never been defeated. This horse and his companion are the largest pair of finished up-to-date Percherons owned by one man in the United States. The pair weighs 5,100 pounds and are worth going 1,000 miles to see."

Mr. Iams guarantees them to be as good as the picture if not he will pay your fare to see them. He has many other black Percherons just as well made and finished, weighing 1,600 to 2,500 pounds. He has a number of Belgian horses, bays and blacks, and his flash going coachers are a veritable sensation. Mr. Iams has just imported 63 horses and has on hand 117 head of full blood imported and home bred horses which he is selling at from \$1,000 to \$1,400. Mr. Iams agrees to satisfy buyers of horses as to prices and quality or refund the fare paid to see them.

I think for general purpose cattle, the Brown Swiss is the best breed we have.

J. W. Cool.

Columbus, Cherokee County.

Staked Plains Shorthorn Sale.

The annual sale of Bates-bred Shorthorn cattle from the Staked Plains herd of B. B. & H. T. Groom, of Groom, Carson County, Texas, will be held at the stock yards, Wichita, Kans., on Friday, December 12, 1902. Several sales, the produce of this herd, have been held at Kansas City, and buyers have always had very satisfactory results from such purchases and are sure to be on hand for the Wichita sale.

It is a well known fact that grass alone will not make as quick maturity as when a heavy ration is added but in the absence of heavy grain feeding the organs of reproduction are much more vigorous, more hearty and cows more regular breeders. These Staked Plains cattle are money makers for their owners, being great breeders, and we hope to have those attend this sale who want the best blood that has been handled as near nature's way as possible, thus securing strong, vigorous breeding cattle.

It is this superior blood that has made them the winners of the championship prize for 2 year olds in car lots for the last two years. At the Chicago stock show, the reports coming from females sold from our Staked Plains herd at Groom, Carson County, Texas, has confirmed our assertions that grass grown cattle were more satisfactory breeders than cattle fed heavily on grain or other concentrated feeds. The draft of 70 head, running in age from yearling to 6 year old cows, to be sold at stock yards at Wichita, Kans., on December 12, have been grown on open grass ranges and will prove to be exceptionally valuable as breeders. They are rich reds, with a few red and white and roan. They are from old established families and trace back through lines of the best Bates blood to the oldest and most successful American herds. They come under the hammer in thrifty condition but not fat, having been fed but little grain and that only since being haltered up preparing for the sale of December 12. This will afford an opportunity of securing some of the best Bates blood in the country, blood that has given greater character to American cattle than any other strain of Shorthorns.

\$215.56; Galloways, \$207.57. The highest price paid for a Galloway was \$2,000 for imported McDougall. The highest priced Polled Durham and Red Poll was each \$1,005; leaving the Shorthorns still in the lead in point of numbers sold, average price and highest price.

Joe Young's Sale of Poland-Chinas.

The public sale of Poland-China swine by J. R. Young, of Richards, Mo., last Friday was a success, as it deserved to be. Mr. Young more than sustained his record for offering the best. Buyers from Kansas, Missouri, Iowa, and Illinois were present. Following is a partial record of the sales:

1. H. W. Turney, Lorimer, Ia.....	\$405
2. N. E. Mosher & Son, Salisbury, Mo.....	58
3. C. E. Pogue, Finley, Ill.....	49
4. Dietrich & Spaulding, Richmond, Kans.....	41
5. W. J. McKinney, Arcadia, Kans.....	56
6. Jas. Mains, Oskaloosa, Kans.....	68
7. Warren Smith, Boswell, Ind.....	162
8. E. E. Axline, Oak Grove, Mo.....	50
9. A. McCann, Medoc, Mo.....	32
10. Wills Crowley, Richards, Mo.....	25
11. Wills Crowley, Richards, Mo.....	25
12. J. R. Brodie, Williamsport, Ind.....	112
13. Dietrich & Spaulding.....	45
14. J. E. Scott, Freeman, Mo.....	51
15. Prettyman & Carey, Pekin, Ill.....	65
16. A. E. Schooley.....	45
17. Miller Bros, New London, Ia.....	66
18. A. E. Schooley.....	45
19. Harrison Goodwin, Ambia, Ind.....	80
20. Dietrich & Spaulding.....	45
21. H. W. Turney.....	30
23. T. N. Langan & Co., Clifton, Ill.....	30
24. H. W. Turney.....	29
25. A. E. Schooley.....	25
27. Harry Evans, Pleasanton, Kans.....	45
29. Fred Dalton, Walker, Mo.....	27
31. E. A. Paschal, Amsterdam, Mo.....	30
33. H. W. Turney.....	45
34. A. E. Schooley.....	40
35 1/2. W. B. King, Pickneyville, Ill.....	100
37. T. N. Langan & Co.....	36
44. M. L. Fullenwider, Eldorado, Kans.....	34
45. E. E. Axline.....	39
46. Jas. Mains.....	50
47. E. E. Axline.....	72
48. A. E. Schooley.....	41
49. H. W. Turney.....	67
50. T. N. Langan & Co.....	102
51. Dietrich & Spaulding.....	50
52. Ross Bros., Otterville, Mo.....	30
53. J. C. Patterson, Marshall, Mo.....	35

Gossip About Stock.

On Monday, Dec. 22, 1902, the entire herd of thoroughbred Hereford cattle belonging to the estate of Geo. A. Carpenter will be sold at the farm of Mr. J. A. Carpenter near Carbondale, Kans. The herd consists of forty cows, seven bulls, and twenty-three calves, all registered and in fine condition for breeding. Mr. Carpenter was a well known breeder and there will be some very choice animals offered at this sale. The advertisement will appear next week.

The combination sale of Shorthorns by F. M. Marshall, of Blackwater, Mo., S. W. Roberts, of Pleasant Green, Mo., and W. P. Harned, of Vermont, Mo., at Kansas City, last Friday and Saturday was not well attended and consequently the prices realized were below the values of the offerings. The large numbers of calves sold brought the average down. Following is a summary:

11 bulls brought.....\$1,235 av.....\$112.27
74 females brought... 7,250 av..... 97.97
85 head brought..... 8,485 av..... 99.92

Geo. W. Berry, manager of Spring Brook Farm, North Topeka, writes us as follows: "We have sold the Berkshire boar, Berrington Duke, to James Qurollo, of Independence, Mo., who, after attending the American Royal Swine Show and seeing a number of other herds, visited us. After inspecting Berrington Duke, he unhesitatingly pronounced him the best young boar he had seen. Mr. Qurollo is an experienced breeder, and it will be remembered it was he who developed and brought out the noted King Lee 2d. Berrington Duke was got by our herd boar, Black Robinhood, and out of Duchess 21st. It is in shortness and dish of head with the finest of ears he excels, with great length and evenness of body, standing low down on neat, strong legs and feet. In the transfer of Berrington Duke Kansas loses one of the most promising Berkshire pigs ever bred in the State while Missouri is the gainer. However, before leaving Spring Brook Farm, he will be put in service to some of the choice gilts."

Dietrich & Spaulding, with W. S. Hanna, will hold a Poland-China brood sow sale

Sales of Pure-bred Cattle for 1901.

The total number of Shorthorn cattle sold during the year 1901 was 4,045, bringing an average price of \$280.91, or a grand total sum of \$1,136,290.95. The highest price paid for a bull of this breed was \$5,100 for imported Lord Banff. The imported cow, Missie 153d, sold for \$6,000, being the highest price realized for individual animals of any of the breeds of cattle, as well as the best average price. The Herefords came next in point of numbers sold, there being 1,888; they also came next in point of price for an individual of the breed, the cow Dolly 2d selling for \$5,000; but their general average was only \$240.80. There was only 894 Angus cattle sold, at an average of \$277.43, and the highest priced individual of this breed was the cow imported Krivinia at \$1,700. The average price for Red Polls sold was \$230.50; Polled Durhams,

KENDALL'S

Most Reliable Remedy.
100 Eagle Av., Brantford, Ont., Can., Nov. 18, 1900.
Dear Sirs:—I have used your Spavin Cure with great success. I find it is most valuable liniment to have, as I have found it a cure for Cuts, Sprains and Horses Galls, and as a Spavin Cure it is the most reliable liniment that can be bought.
Yours truly,
CALLED TILLEY.

SPAVIN CURE

THE OLD RELIABLE

And Most Successful Remedy Ever Discovered for Spavins, Ringbones, Splints and all Lameness.

This is the unqualified experience of thousands of horsemen and others in this and other countries and there is no reason why you should not share in these benefits. Just read what the above people say about "Kendall's." Write to them for your own satisfaction.

In addition to being the best stable remedy known, it is unequalled as a liniment for household and family use. Sold generally by all druggists. Price \$1; six bottles for \$5. We send valuable book, "A Treatise on the Horse," profusely illustrated, free upon request.

DR. B. J. KENDALL CO.,
Enosburg Falls, Vt.

at Ottawa, Kans., on December 13. Watch for the advertisement in next week's Kansas Farmer.

The W. E. Robinson sale of Shorthorns at South Omaha proved fairly successful in spite of the fact that the owner lost 13 head in shipping. The remaining 52 head brought \$5,790; average, \$111.34. Forty-three females averaged \$115.41, and nine bulls averaged \$92.22.

Immediately following his Percheron sale at Rock Rapids, Iowa, on November 20, Mr. H. G. McMillan held a sale of Shorthorns with the following results:

36 females brought \$3,555.50; average, \$98.75

6 bulls brought \$590; average, \$98.33

42 head brought \$4,145.50; average, \$98.70

On November 19, L. C. Hodgson, Luverne, Minn., closed out his herd of Percherons to good advantage. The offering consisted of eighteen females which sold for \$5,565; average 309, and five stallions which brought \$2,695, average \$538. The general average for the twenty-three head was \$360.

At West Liberty, Iowa, S. H. Thompson's Sons, of Iowa City, and Cookson Bros., of West Branch, sold forty-two head of Scotch Shorthorns for \$12,025, or an average of \$286.31. Of this number thirty-three were females which brought an average price of \$285.45, while the nine bulls averaged \$287.11.

We have received an order for advertising Ridgway's New Scientific Discovery for immunizing hogs against cholera and insuring that pigs will be born cholera proof. This process has stood the test of many experienced swine breeders. Full information will be sent by Mr. Ridgway on request.

Oak Grove Herd of Poland-China swine offers for sale some of its finest animals. Gus. Aaron, the proprietor, has given many years of careful breeding to bring his herd up to its present excellent condition. Write him for descriptions and prices of his stock, or call on him and see his herd. Direct all letters to him at Leavenworth, Kans., Rural Free Delivery No. 5.

The Shorthorn sale of Thos. Anderson & Son, Cambridge, Neb., on November 11, resulted in a general average of \$155.90 on the nineteen head of cattle sold. The Clydesdale horses offered at the same time averaged about \$300 for the eight head sold. The top of the horse sale was brought by the 2-year-old stallion, Prince of Cambridge, who went for \$700.

At a sale held at the Oberfelder ranch at Lodge Pole, Neb., on November 11, Amos Meeker, of Lewellyn, Neb., purchased the celebrated Poland-China boar, Bob Baxter, for \$500. This is the highest price ever paid in Western Nebraska for a male pig. At the same sale, Walter Clark, of Lewellyn, bought the well-known Poland-China boar, General Price, paying \$250.

Purdy Bros., Harris, Mo., held a sale of Shorthorn cattle from their famous herd on November 13 at their home town. Everything considered the sale was a great success. Cows bred to their great herd bull, Lord Lovell, were in great demand. The results of the sale are shown in the following summary:

35 females sold for \$4,335; average, \$123.57

14 bulls sold for \$1,335; average, \$95.35

49 animals sold for \$5,670; average, \$115.71

Shorthorns at Allertown, Iowa, sale, held by J. W. Smith & Son, resulted in the disposal of fifty-seven head for \$28,730, an average of \$504.04. The top of the sale was brought by the 4-year-old Scotch cow, Missie May 2d, who brought \$2,000, and went to Brown, Randolph, Igo, of Indianola, Iowa. The top of the bull sale was \$550, paid for Royal Dudding 177892. About 1,500 people were present and the bidding was spirited.

H. G. McMillan's fourth annual sale of Percheron horses at Rock Rapids, Iowa, on November 20, was a good one. Much of the offering was quite young and consisted of twenty-one stallions and twenty-one mares, which aggregated \$18,880, or an average of \$449.50. The stallions averaged \$630.70 and the mares \$287.40. Henry Avery & Son, Wakefield, Kans., were the purchasers of Illustre 20489 and Banshee 28947 at good, long prices.

R. J. Stone, Stonington, Ill., the greatest winner of any Oxford breeder in American, failed to get elected county treasurer at the last election on the Republican ticket, but he made a mighty fine race record. In a recent letter he says: "I have been in the sheep business twenty-seven years, and I have sold more sheep this fall than ever before up to this time. Am getting ready to ship to the International Live Stock Exposition. Come and see the best lot it has ever been my pleasure to exhibit."

Over on page 1197 will be found an advertisement of W. E. Mason's dispersion sale of Duroc-Jerseys. A change of residence makes this sale necessary, and any man who admires this breed of swine should see to it that he is present with his check book. This will be a chance for young farmers who wish to become breeders of this remarkably prolific breed of hogs. We venture the assertion that no such sale as this will occur again in the immediate future and we predict a big crowd at Haddam on the day of the sale. Write to W. E. Mason, Haddam, Kans., for a catalogue. Better yet, get on the train and go there.

The South Omaha Hereford sale which was held on November 15, was fairly good although no regular breeders were present who were buying. The small breeders and the farmers had it all their own way.

The cattle were contributed by the Stanton Breeding Farm Co., of Madison, Neb.; Miner Bros., Craig, Neb.; W. W. Wheeler, Harlan, Iowa; B. & W. George, Aurora, Ill. Summary:

40 cows brought \$5,000; average, \$125.00

7 bulls brought \$1,120; average, \$160.71

47 head brought \$7,045; average, \$149.79

"Kine" is a familiar word. Makes one think of cattle at once. It ought to be for "Kine" is said to be a sure preventive and cure for the so-called corn-stalk disease, a real and dangerous disease to which all cattle are subject. It is well some times

HAVE YOU SEEN YOUR NEIGHBOR'S NEW SEWING MACHINE?

A number of finest Five-Drawer, Drop Head Cabinet Sewing Machines have recently been shipped to families in every town in the United States on three months' free trial. The prices are \$8.95, \$10.45, \$11.95, and \$12.85, according to make and style of machine.

If you will mention the name of this paper, cut this notice out and mail to us, no matter where you live, what State, city, town, or country, we will immediately write you, giving you the names of a number of people in your neighborhood who are using our machines, so you can see and examine them and convince yourself there are no better machines made at any price. We will also mail you, free, our new special sewing machine catalogue, showing handsome illustrations, descriptions and prices of an immense line of machines at \$5 to \$12.85, special three months' free trial offer and most liberal sewing machine proposition ever heard of.

A sewing machine trust is said to be forming for the purpose of cutting off our supply and if accomplished you will no doubt be compelled to pay \$25 to \$40 for machines we can now furnish you at \$8.95 to \$15.20. Our stock is now complete and for catalogue, all offers and particulars you should cut this notice out and mail to us to-day. Sears, Roebuck & Co., Chicago.

to be conservative but you can carry it too far occasionally. E. E. Bruce & Co., proprietors of "Kine," are one of the most reliable firms in the country and a letter to them will bring their personal statement regarding "Kine" as a cure for cornstalk disease. They say it will cure. In view of the dangerous character of this disease, it would be good policy to write them at once. Address E. E. Bruce & Co., Omaha, Neb.

C. W. Freelow, of Clyde, Kans., held the first public sale of pure-bred Tamworth swine ever held in the State on November 25. It was quite an experiment and required considerable nerve on the part of Mr. Freelow. The crowd was too small for the number of hogs advertised. So after selling seventeen head, most of which were late summer pigs at an average of \$12.30, every one appeared to be supplied, and the sale was stopped. In view of the fact that Kansas people are not accustomed to the ungainly looking Tamworth, this was a very good sale, and Mr. Freelow expressed himself as being well pleased and says he will have a better sale and better hogs next year. Col. Gregg, of Clyde, and Col. Albright, of Waterville, conducted the sale in a very satisfactory manner.

On December 17, at Wellington, Kans., Snyder Bros. will offer at public sale a select draft from their herd of 400 Poland-China swine, consisting of twenty sows and gilts, twenty boars and ten choice pigs, all of which are sired by either Broad-gauge Chief or Simply O. K., their International and State fair winning boars.

The sows will be bred to the above-named boars or to Priceless Black U. S. by Heyle's Black U. S. and out of a sister to Chief Perfection 2d, or to Columbia Chief or Chief Tecumseh 3d, out of Columbia 2d. Snyder Bros. have been having excellent trade during the past few months, but are making this sale in order to reduce their large herd to make room for their fall litters which are now filling up their pen room. They report these newcomers as the very best lot of pigs they ever had farrowed on their ranch. Poland-China breeders will have a splendid chance at this sale to get the very best of stock at reasonable prices. Write Snyder Bros. for catalogue.

The dispersion sale of registered Percheron and high class jacks advertised by Hanna & Co., of Howard, Kans., to be held at the Stock Yards Horse Pavilion at Kansas City, Mo., December 19, is perhaps one of the most desirable offerings of first-class horses ever made in the West and parties needing anything in this line should not overlook the fact. Of this offering "Mr. Hanna says:

"It is a dispersion sale and will include our entire herd without reserve, except possibly one or two old mares, and the young foals not of suitable age to sell to advantage. There will be eight stallions and twenty-four mares catalogued, and also five extra good young jacks. The stallions will be in every way a superior lot, and the mares will be of a size, quality and breeding to enrich any herd in America. There will be but one stallion offered over five years old, and but three mares over five years old. Some of the mares will weigh a ton, and nearly all will be safely in foal. The five jacks are from the largest stock, well grown, and proved breeders. At least three of them would be classed as extraordinary in size, bone and quality."

The cattlemen of the West are not only alive to their own interests as such in the breeding barns and feeding lots but in politics as well. The recent election returns show that two prominent members of this fraternity have been placed in the gubernatorial chairs of their several States. Mr. W. J. Bailey has long been known in Kansas for his active interest in live stock and agriculture generally, and the people of this State have decided that he is the best man within her borders to occupy the governor's office in the State house for the ensuing two years. That the people of Kansas think they are right in their selection is shown not only by the record Mr. Bailey has already made in political life and his pronounced ability as a cattleman, but by the fact that he was elected to the chief office in the gift of the people of the State by the largest majority received by any governor for many years.

Out in Nevada the people realize the importance of the cattle industry and propose to see that it is properly fostered. One step towards this object has been the election of Mr. John Sparks, a noted cattleman, to the office of governor by a handsome majority.

The ninety head of Herefords to be sold at Kansas City next Monday and Tuesday, December 8 and 9, from an offering that should interest the Hereford breeding fraternity of large. It will be of especial interest to the large class of breeders and cattle growers who naturally look to Kansas City at their base of supply, for with the exception of the sale made during the

American Royal, it is the first offering of Herefords to be made at that point since last May. The kind of Herefords included in this offering of Benton Gabbert & Son's Columbus Herefords and Dr. J. E. Logan's Sunset Herefords are none too numerous. Sixty head of cows and heifers from 1 to 7 years old, and about thirty 1- and 2-year-old bulls, representing as these do the best blood of England and America, and not offered to the bidders at every sale. But they are the kind of cattle that every bidder should buy for the purpose of maintaining, and in most instances improving, the quality of his herd. They are the kind of cattle every beginner must buy if he desires to establish a herd of uniform high quality. They are the kind of cattle that proves their present owners to be successful breeders, and they are the kind that will do their part toward earning for their new owners the same kind of success. Of the bulls offered there is a sufficiently large number of individuals of the right stamp for herd bulls. There is the Earl of Sunset Farm and others offered by Dr. Logan, and the Columbus bulls, offered by the Gabberts, that are beyond question the very kind that are needed in the majority of our pure-bred herds. And there will be enough of this kind offered to afford the buyer a wide range for selection. The unusually large number of females included that have calves at foot or will drop calves shortly make this an excellent opportunity for the new breeder, or the small breeder who desires to increase his herd, to get just what he wants. The imported females, and females by imported bulls in Dr. Logan's consignment, are the kind that are too scarce in most public offerings. The thick-fleshed chunky, curly-coated Columbus and Heslod 17th females, offered from the Gabbert farm, are the kind that make grand matrons—the dams of the best kind of Herefords. Following the International so closely, moderate prices are bound to prevail. The entire offering is one of unusually good quality, and instead of prospective purchasers being fearful that prices may be beyond them, it looks on this occasion that the consigners are the ones to worry on that score. They will be sold without reserve, and every animal is guaranteed in every respect. Catalogues have been delayed somewhat, but one will now be sent you immediately upon request by writing either to Dr. J. E. Logan, 1208 Wyandotte St., Kansas City, Mo., or C. R. Thomas, Secy., Stock Yards, Chicago, Ill.

One thousand dollars in cash prizes were paid the successful exhibitors of Berkshires at the American Royal at Kansas City, October 20-25, 1902, as follows:

G. G. Council, Williamsville, Ill., \$381.00
Harris & McMahan, La Mine, Mo., 218.00
Geo. W. Jessup, Rockville, Ind., 187.00
Etzler & Moses, Conover, Ohio, 128.00
James Houk, Ulrich, Mo., 32.00
James T. Pollard, Fulton, Mo., 28.00
J. H. Blodgett, Beatrice, Neb., 17.00
W. D. McTavish, Coggon, Iowa, 8.00
N. H. Gentry, Sedalia, Mo., 5.00

Total, \$1,000.00
The breeders of the prize winners at the American Royal of 1902 are entitled to precedence in the order named, based on the amount of cash prizes awarded stock of their breeding. The percentage of the total cash prizes awarded Berkshires at Kansas City, bred by the respective breeders, is as follows:

Name P.Ct.
N. H. Gentry, Sedalia, Mo., 25.3
Harris & McMahan, La Mine, Mo., 17.6
G. G. Council, Williamsville, Ill., 7.7
A. J. Lovejoy & Son, Roscoe, Ill., 7.0
W. R. Stokes, Belmore, Ind., 4.1
James Riley's Sons, Thorntown, Ind., 3.5
James Houk, Ulrich, Mo., 3.2
Geo. W. Jessup, Rockville, Ind., 2.6
T. H. Baltzell, Decatur, Ind., 2.4
John F. Stover, Crawfordsville, Ind., 2.0
J. T. Pollard, Fulton, Mo., 1.2
Christ Etzler, Conover, Ohio, 0.8
W. D. McTavish, Coggon, Iowa, 0.8
E. V. Walborn, Van Wert, Ohio, 0.8
Milton Hadley, Thorntown, Ind., 0.5

The Gifford Shorthorns.

There are some heifers catalogued for the Gifford Bros. Shorthorn sale at Manhattan on December 16 that are beauties and they are mighty well bred too, as they are sired by Red Knight 120752 which is a sufficient guaranty of their quality. Miss Mary Knight and her dam Mary R by Waterloo Regent 117669 are both splendid Young Royal cows and will be sold. Others of special merit are Marvel out of Mary Earl by Waterloo Earl 93880; Janice out of Jean by Waterloo Regent; Music out of Musette by Waterloo Regent; Ruby of Elmwood out of 7th Moss Rose of Walnut Grove by Scottish Hero 110139; Highland Beauty out of Iowa Beauty 4th by 17th Scottish Lord 113726. While these are but a few of the many good things named in the catalogue it must not be forgotten that they are all the get of that wonderful sire, Red Knight, who reproduces his type so remarkably. The entire offering of Red Knight's get is so remarkably even in its superior quality as to make it stand out as the most uniform lot that will be offered at auction this fall. All the females are bred to Red Gauntlet 3d 149507. Write for a catalogue and mark Rose Duke 155031, if you want a herd header. Address Gifford Bros., Milford, Kans.

M. L. Ayres' Percherons.

The old Shenandoah horseman, Mr. M. L. Ayres, is "sawing wood" at the old stand again, and he reports trade good, and prospects excellent. Mr. Ayres is something of an optimist; he has faith in everything that is good, but more especially in good draft horses. Good horses make better men, and better men want still better horses, and so the wheel goes round, and the world moves. Mr. Ayres has a larger number of big clean, heavy boned drafters in his Shenandoah barns now than may be seen at any other western establishment. There are more than one hundred registered Percherons here. The buyer is sure of finding the horse here that will suit him. With early buyers Mr. Ayres will make attractive terms. He does not want all profits to himself. He asks that you come to see the horses. Good horses ought to be seen to be appreciated. A fair specimen of one of his low-down young black Percherons is represented in the sketch made by Mr. Dave Risk, and presented on another page. See the M. L. Ayres advertisement and write mentioning the Kansas Farmer.



Fleming's 3 are free if they fail.

End of Lump Jaw.

Fleming's Lump Jaw Cure has for six years cured 90% of all cases, mild or severe. Easy to use, not severe, seldom leaves a scar. Loss is certain without the remedy. Cure is sure with it.

No More Spavins.

It is worth your while to know of a certain means of curing any spavin in 45 minutes. You can wonder but you dare not doubt, for we have the evidence and you can test for yourself. Carb, Splint and Ringbone just as easy. Fleming's Spavin Cure is painless and harmless.

Fistula & Poll Evil

Cured in two to four weeks.

Fleming's Fistula and Poll Evil Cure is our latest addition to the list of remedies that never fail. We have yet to find a single incurable case among the thousands where the remedy has been tried. Write today for circulars on any or all the above remedies. State which are wanted.

FLEMING BROS., Chemists,
213 Union Stock Yards, Chicago, Ill.

The Center of the Breeding Industry.

Our contention that the so-called Kansas City territory is the breeding center of the United States has been well demonstrated by the record both in the sale and show rings at the American Royal of 1902. A total of 308 head of pure-bred animals belonging to the Angus, Galloway, Hereford and Shorthorn breeds—the only ones on exhibition—were sold at the American Royal. Of this number Kansas took 105 head, while Kansas and Missouri together took 191 head, or almost two-thirds of the total offerings. Below is a table showing the purchases of the different breeds by States:

	Angus.	Herefords.	Shorthorns.	Galloways.	Total
Missouri.....	23	34	26	3	86
Kansas.....	28	21	32	26	105
Iowa.....	31	8	6	6	51
Illinois.....	10	9	..	8	27
Indiana.....	5	13	1	..	19
Texas.....	3	2	..	1	6
Nebraska.....	..	10	..	..	10
Wisconsin.....	..	..	1	..	1
Minnesota.....	..	..	..	1	1
Colorado.....	..	..	..	2	2
Total.....	98	97	66	47	308

The distribution of these pure-bred animals by breeds is shown in the following tables which only serve to emphasize the fact that our western breeders are alive to the best interests of their location and the breeds they represent:

SHORTHORNS.

	Cows.	Bulls.	Total.	Average price paid
Missouri.....	23	3	26	\$271.34
Kansas.....	23	9	32	197.65
Iowa.....	6	..	6	354.16
Indiana.....	1	..	1	325.00
Wisconsin.....	1	..	1	500.00
Total.....	54	12	66	\$247.42

HEREFORDS.

	Cows.	Bulls.	Total.	Average price paid
Missouri.....	26	8	34	\$271.61
Kansas.....	11	10	21	238.23
Indiana.....	13	..	13	391.15
Nebraska.....	5	5	10	301.50
Illinois.....	8	1	9	472.22
Texas.....	2	..	2	472.50
Iowa.....	5	3	8	289.23
Total.....	70	27	97	\$304.74

ABERDEEN-ANGUS.

	Cows.	Bulls.	Total.	Average price paid
Iowa.....	24	7	31	\$160.00
Missouri.....	17	6	23	151.08
Kansas.....	14	12	26	161.53
Illinois.....	9	1	10	340.00
Indiana.....	5	..	5	155.00
Texas.....	1	2	3	145.00

GALLOWAYS.

	Cows.	Bulls.	Total.	Average purchase price.
Kansas.....	4	22	26	\$108.07
Iowa.....	5	1	6	103.66
Illinois.....	5	3	8	260.00
Missouri.....	2	1	3	183.33
Texas.....	1	..	1	.....
Minnesota.....	1	..	1	.....
Colorado.....	..	2	2	180.00

DISEASES OF MEN ONLY.

The greatest and most successful Institute for Diseases of Men. Consultation free at office or by letter. BOOK printed in English, German and Swedish. Explaining Health and Happiness sent sealed in plain envelope for four cents in stamps. All letters answered in plain envelope. Variococles cured in five days. Call or address

Chicago Medical Institute,
513 Francis St.,
ST. JOSEPH, MO.

When writing advertisers, please mention Kansas Farmer.

Horticulture.

Kansas State Horticultural Society.

Following is the program of thirty-sixth annual meeting of the Kansas States Horticultural Society, to be held at the rooms of the society in the State Capitol at Topeka, December 29, 30, and 31, 1902:

FIRST DAY, MONDAY, DECEMBER 29.

Trustees meet promptly at 11 o'clock, a. m.

Call to order by President Wellhouse at 1.30 o'clock.

Prayer by F. L. Kenoyer, Independence.
1. Annual Report of Trustees, by congressional districts, on Horticultural Conditions and Progress. First district, E. J. Holman, Leavenworth; Second district, E. F. Smith, Lawrence; Third district, F. L. Kenoyer, Independence; Fourth district, Geo. M. Munger, Eureka; Fifth district, William Cutter, Junction City; Sixth district, J. J. Alexander, Norton; Seventh district, Geo. W. Bailey, Wellington.
2. "Orchard Treatment," James Sharp, Morris County; E. E. Yaggy, Reno County.
Appointment of Committees on Credentials of Delegates, Program, Membership, Exhibits, Audit, Obituary, and Final Resolutions.

Evening Session.

3. "Bitter Rot in Apples," John H. Stinson, Mountain Grove, Mo.
4. "Replanting Fruit-trees," H. L. Ferris, Osage City.
5. "Orchard Success in Kansas," Carl Miller, Shawnee County.
6. "Better Legislation for Bird Protection," D. E. Lantz, Riley County.
7. "Report on Entomology," E. A. Pope, Kansas State Agricultural College.
Music During Interludes.

SECOND DAY, TUESDAY, DECEMBER 30.

Call to order by President Wellhouse.

Prayer.
8. Officers' Reports. President, F. Wellhouse; Topeka; Vice-president, J. W. Robison, Eldorado; Treasurer, F. Holsinger, Rosedale; Secretary, William H. Barnes, Topeka.
9. Amendments to Constitution.
10. Amendments to By-laws.
11. Legislation Report, A. L. Brooke, Shawnee County; J. W. Robison, Butler County.

Afternoon Session.

12. Report of Committee on Credentials.
13. Election of Officers. President, Vice-president, Treasurer, Secretary, One Trustee for each Congressional District.
14. "Pears and Pear Culture," T. W. Harrison, Shawnee County.
15. "Handling Fruits," A. F. Yaggy, Reno County; Geo. A. Blair, Sumner County; Geo. C. Richardson, Leavenworth County.
16. "Cherry and Plum," J. J. Alexander, Norton County; Peter Voorhees, Douglas County.
17. "Peaches," C. A. Chandler, Wyandotte County; C. A. Chandler, Shaw's Garden, St. Louis, Mo.
18. "Handling Stone Fruits," Miss E. Geyer, Leavenworth County.
19. "Taste as Pertaining to Fruits," B. F. Smith, Lawrence.
20. "Small Fruits," M. Chandler, Wyandotte County; Clarence Holsinger, Wyandotte County.
21. "Handling Small Fruits," F. W. Dixon, Jackson County.
22. "New Fruits and Nomenclature," William Cutter, Geary County.
24. Report of Committee on Exhibits.

Evening Session.

25. "Home Adornment," Mrs. C. W. Bulard, Leavenworth County; Mrs. Lizzie K. Maffet, Douglas County.
26. "Some Present Day Theories of Plant-breeding," H. F. Roberts, Kansas State Agricultural College.
27. "Plant-breeding," Phillip Lux, Shawnee County.
28. "Romance of Horticulture" (with stereopticon), S. J. Hunter, Kansas State University.
Music During Interludes.

THIRD DAY, WEDNESDAY, DECEMBER 31.

Opened by new President.

29. Prayer.
30. Report of Committee on Obituaries.
31. Report of Auditing Committee.
32. "Best Horticulture Implements," O. T. Whitney, Shawnee County; Edwin Snyder, Jefferson County.
33. "Irrigating for Fruit," H. E. Goodell, Shawnee County.
34. "Commercial Gardening," A. Chandler, Randolph, Mo.
35. "Marketing Fruit," B. F. Smith, Douglas County; E. J. Holman, Leavenworth County.
36. "Experimental Horticulture," A. H. Grisesa, Douglas County; F. L. Kenoyer, Montgomery County; Albert Dickens, Kansas State Agricultural College.
37. "Keeping Fruits," Francis Goble, Wyandotte County.
38. Report of Committee on Final Resolutions.

FRUIT EXHIBIT.

One hundred dollars has been set apart for awards on exhibits of fruit. The exhibition is not competitive, and every exhibit of merit will receive an award. Uniformity will require that five (no more, no less) specimens shall constitute a plate of apples, pears, peaches, or quinces; nine specimens of crabs and plums; grapes, one pound.

Several plates of same variety may be exhibited by same person. Displays by counties, societies, or individuals may include all not duplicates which they exhibit, whether already awarded a premium or not.

All fruit should be correctly named. Preserved and dried fruits, or preparations of fruit, will receive the attention and consideration of the committee.

New varieties will be specially classed

and distinctly and separately reported upon.

New fruits of value, noted varieties, or those of peculiar excellence, from anywhere, will receive awards of "Special Merit," or "Honorable Mention."

We anticipate that this will be the largest and most elegant display ever made at a meeting of this society. It will be made on each side of the entrance to the society's rooms in the newly finished, marble-floored, electric-lighted north corridor, on the ground floor of the State capitol.

Bear in mind, this is a State exhibit, and should be superior in every way.

Elegant lettered premium ribbons, thus: "Highest Award," "Excellence," "Special Merit," "Honorable Mention," will go with the awards.

Fruit carefully packed can be sent by express, in care of the secretary, about December 26, or brought in your baggage.

All railroads will give round-trip tickets for a straight one-way fare.

Manuring Fruit Trees.

The advantages of manuring fruit trees are not always appreciated. Even when enjoying good Kansas soil a young apple tree can be made to greatly increase its rate of development by the liberal use of manure. By judiciously regulating the application of the manure the fruiting of the tree may be hastened. The plan is to manure liberally for about three years after the tree is planted, then cease the applications. As the stimulating effects of the manure become less pronounced the effect is the same as a check upon the growth and the tree begins bearing profusely. Having attained a good size it is able to produce liberal crops of fruit. Trees treated in this way should not be allowed to impoverish the soil to the extent of impairing the quality or reducing the

ALMOST A MIRACLE

THE WONDERFUL RECOVERY OF A MINNESOTA MAN.

His Lower Limbs Had Become Useless and He Dragged Himself Around Like A Snake.

While the story of the wonderful recovery of John Hunter in the little town of Chico, Calif., from paralysis and locomotor ataxia is still fresh in the mind of every one, an account of another equally remarkable and somewhat similar case comes from Minnesota.

Near Northfield, Minn., lives P. A. O'Brien, known to everybody round about the town. In the fall of 1900 he was obliged to give up work because of a disease which one of the physicians who attended him called locomotor ataxia and another paralysis. He suffered for more than three years and, for part of the time, lay in a harness by the doctor's direction. He grew worse and the physicians pronounced him incurable. But at last, like a miracle, came his cure. Let him tell the story:

It had been coming on slowly for eight years," he says. "A cold numbness commenced in my feet and worked upwards. It grew worse, and, in November, 1900, I had to quit work. The disease bent me over, and, when I attempted to straighten up, it felt as if someone was cutting me in the pit of the stomach with a knife. I always felt tired and could not rest at night, my feet felt as if there were needles sticking in them and my legs got so numb that I could stick pins in them and never feel it. They would shake so sometimes that I could not hold them still with both hands.

"Then I got so that I could not walk and I had to pull myself around like a snake. When I got excited my heart would palpitate and I would choke up. My kidneys also became affected and caused me much pain.

"Didn't the doctors help you?" was asked.

"No. One of them had me on my bed in a harness for several months, but that did me no good. They tried various things and, at last, said I could not be cured.

"I began taking Dr. Williams' Pink Pills for Pale People. The first box stopped my pain so I could sleep good. It was a week before I could move my feet the least bit, but from that on I gained pretty fast. I will never stop praising Dr. Williams' Pink Pills, for they have made a new man of me."

At all druggists, or direct from Dr. Williams Medicine Company, Schenectady, N. Y., fifty cents per box; six boxes for two dollars and fifty cents.



The Old Reliable Anti-Friction Four-Burr Mogul Mills

No gearing; no friction. Thousands in use. Four-horse mill grinds 60 to 80 bushels per hour; two-horse mill grinds 30 to 50 bushels per hour. We make a full line of FEED MILLS, best ever sold, including the famous Iowa Grinder No. 2 for \$12.50. Send for free Catalogue.

Manufactured and sold by the IOWA GRINDER and STEAMER WORKS, Waterloo, Iowa.

KENTUCKY BLUE GRASS SEED.

For a Beautiful as well as a Most Profitable Pasture sow BLUE GRASS. The genuine Kentucky seed is what you want, and from September until June is the proper time to sow. For pure seed of our own raising, and full particulars, write MIT. AIRY SEED FARM, Paris, Kentucky.

J. G. PEPPARD MILLET OAK CLOVERS TIMOTHY GRASS SEEDS.
1101 to 1117 West 8th St.
(Near Santa Fe St.)
KANSAS CITY, MO.

SEEDS

STARK TREES best by Test—75 Years Largest Nursery. Fruit Book free. We PAY CASH. WANT MORE SALESMEN. STARK BROS., Louisville, Mo.; Huntsville, Ala.; Etc.

Veneered Tree Protectors

Cheapest and Best Ever Made.

Millions in use everywhere. Send for testimonials and full description—10 each; 1,000 for \$6. Will last for years.

Hart Pioneer Nurseries, Fort Scott, - - Kansas

For information as to Fruit and Trucking Lands, Grazing Lands, Soil, and Climate in Virginia, North and South Carolina, Georgia, Alabama, and Florida, along the

ATLANTIC COAST LINE RAILROAD,

Write to

WILBUR MCCOY,

Agricultural and Immigration Agt., Jacksonville, Fla.

Jose scale. Why not the Ben Davis be preferred by the codlin moth? Where arsenate of soda and Paris green were used and trees not sprayed for the second brood the percentage of wormy apples has in my observation ranged from 40 to 60 per cent for the Ben Davis. We have noted for years that varieties of apples that grow in clusters are badly infested with the larvae of the codlin moth, the egg being deposited where two or more apples touch instead of at the blossom end as with the first brood. We shall use arsenate of lead in preference to any other arsenate because it does not burn the foliage and sticks, though the cost for a single spraying may be greater than with arsenate of soda. We expect to make a fight against the second brood of the codlin moth, the apple-grower's worst enemy."

Aphis.

EDITOR KANSAS FARMER:—I find on my young apple trees a small green louse or fly that seems to get its living from the tree. Will you please let me know through the KANSAS FARMER what it is and if it is an enemy of the orchard?
W. J. REARDON.
Liberty, Montgomery County.

Diligent inspection of the sample enclosed fails to reveal any specimens that can be identified, they either escaped or evaporated. The insect is probably the apple aphis, Aphis mali, which is frequently found upon apple trees and stock in nurseries, but is rarely present in sufficient numbers to inflict any serious or permanent injury. It may be controlled by strong tobacco water or thorough spraying with kerosene emulsion.
ALBERT DICKENS.
Department of Horticulture Kansas Experiment Station.

Birds and Grapes in McPherson County.

EDITOR KANSAS FARMER:—I was much interested in reading an article written by E. S. Tucker, in the issue of November 20. I give my experience with fruit and birds here in McPherson County. I have been here thirty years. I find that grapes are the surest fruit we can raise. They bear every year but I do not expect any unless I stand over them with a shot gun from the time they begin to color until they are all gone and we have to gather them before they are ripe to get any at all, because I can not watch them all the time. I will have to give up grapes unless the brown thrushes, cat birds, and orioles are killed off. We have not many robins or many mocking birds. The orioles are the most numerous and worst.
McPherson, Kans. B. REICHAERT.

Cash makes friends. Friends make life worth living. Subscribe for the KANSAS FARMER and get both.

Twenty-Five Cents a Bottle.

The Home Circle.

KING TOIL.

I am the monarch who rules on the land,
And the monarch who rules on the sea;
My will is iron, my laws demand
That all men shall bow to me.

The empire under the hills is mine,
Black coal, hard iron, my throne;
I reign where the bright red gold doth
shine,
Where the gleam of rare gems is known.

I reign where the hammer throbs and
rings,
Where the sickle flashes its steel;
I laugh in the song the mariner sings,
And I fashion the flying keel.

I reign where the church rears bold its
spire
To the arch of the bending sky;
Where the voice of the bell's fierce clang
cries "Fire!"
And the uniformed men dash by.

I dwell where the printer fills his "stick,"
Where the cartman holds his reins;
Where the gentle nurses tend the sick,
Where the merchant counts his gains.

I reign where the lungs of the furnace
breathe,
Where the lifeboats breast the wave;
Where friends a bridal garland wreath,
Where the sexton digs a grave.

I reign where the woodman fells the tree,
Where the millwheel stately turns;
Where the huntsman ranges bronzed and
free,
Where the forge-fire smokily burns.

I reign in the halls where the judges grave
Interpret the laws of the land;
In every clime I'm the friend of the brave,
And I hold to all my hand. —Selected.

Finding of the White Lama.

A STORY OF INDIA, BY LIEUT.-COL. A. F.
MOCKLER-FERRYMAN, IN THE BALTI-
MORE SUN.

(Continued from last week.)

Never did three conspirators meet
with more pent-up expectancy; and as
Gillmore laid the packet before him on
the table the others stood round him to
assist in the reading. It proved no easy
matter. The writing was in parts bare-
ly legible, the English was faulty and
or rather and again failed altogether, the
writer passing into Hindustani and Pali.
With the latter he seemed most famil-
iar, and here the Wuzir came to the
front, translating the passages readily.
Before midnight the whole manuscript
had been deciphered and converted into
English. Keane carefully writing it
down and finally reading it slowly and
aloud:

THE WHITE LAMA'S COMMUNICATION TO
HIS COUNTRYMEN.

"I, Sariputra, Priest of Buddha, Spir-
itual Head of Tscho Pangli gumpa, know-
ing that I am about to pass hence to my
next rebirth—whether in this world or
in another planet no man can tell—de-
sire to make known the story of this
worldly passage which is just closing.
Why should I have this strange desire?
It is because of a vision that has ap-
peared to me. By reading my some-
times strange history the people of
whom I was born may be drawn toward
the beautiful religion which has brought
knowledge, calm and peace to one who
formerly was ignorant, sinful and with-
out merit. The way of the Noble Eight-
fold Path is long and accompanied with
endless trials and vicissitudes; but
here lies beyond it the acquisition of
the knowledge of the Four Noble Truths
of the Lord Buddha, by which alone the
number of re-births can be reduced and
the attainment of Nirvana hastened.
Listen, O ye men of the outer world! to
the words of Sariputra, once living in
the downward course, but now dying to
enter in a more meritorious existence.
Listen and take heed; live apart and
contemplate, so that the knowledge of the
series of your existence may be given
you.

Let me begin at the beginning. I
write for my fellow-countrymen, and to
attain my object I must be clear
throughout; but they must remember
that I write under difficulties and secret-
ly, for my brethren would never permit
my communication. I have devised a
plan for placing my story in the hands
of the outside world. Whether it will
succeed I can not say; but if it does
succeed, and if these writings be read,
then shall I have made an endeavor to
rouse the world to a sense of its sin-
fulness.

THE MAN WHO WAS THOUGHT DEAD.

"The name by which I was known for
the first 30 years of my life was Harold
Breakpear—how strange it sounds! My
father was an Indian general and com-
manded a brigade in the Sikh war, where
I myself was his aide-de-camp. Subse-
quently I entered the Bengal Cavalry,
and for several years lived solely
to enjoy myself, being devoted to what
was called 'sport.' When a young cap-
tain of thirty I visited this country on a

shooting expedition, and through
thoughtlessness committed a crime
which led to the commission of a second
crime, for both of which I was swiftly
condemned to pay the penalty.

THE GOLDEN GAUTAMA.

"The first crime, as I have said, was
committed thoughtlessly, yet it was
nevertheless theft and sacrilege. I was
traveling into the valley of Changchem-
no river and camped for the night in the
fields beneath the gumpa o. Chimray,
close to several chortens containing the
bones of sainted lamas. In a niche in
one of these I observed a tiny image of
Siddhartha Gautama, studded with pre-
cious stones; and in an evil hour I set
my heart on adding it to my collection
of curiosities. In the stillness of the
night I crept silently to the chorten, and
after some difficulty managed to find my
prize, which I bore back in triumph to
my tent. Closer inspection told me it
was of great value, since it was com-
posed of solid gold, in which were im-
bedded what were undoubtedly the rich-
est gems, though rudely cut. The theft
troubled me little, as I had frequently
taken part in the looting of temples in
Indian warfare, and, packing the image
away at the bottom of a kilt, which I
kept locked, I forgot the whole incident.

CAPTURED AND CONDEMNED.

"Three months passed, and the time
came for my return to the wilds. I
camped again at Chimray, and visited
the chortens in hopes of further booty,
but without success. Then I traveled
through Leh toward Srinugger. At Leh
I repacked my bag again, taking care to
replace the precious image at the bot-
tom of the kilt containing my books
and private papers. Two days later the
kilt was stolen from my tent; but, dis-
gusted as I was, I was afraid to make a
commotion in the village. The recovery
of the stolen property would have dis-
closed my own theft; and under the cir-
cumstances I thought it best to let the
matter drop. On arriving at Basgo I
was visited by a Bhoti shikari, who
talked much of shooting and who as-
sured me that he would show me good
sport if I would accompany him next
day across the river. This I agreed to
do, and shortly after daybreak we were
making the best of our way up a stony
ravine on the far side of the river. Then
we descended into another ravine, at
the bottom of which four lamas sudden-
ly appeared from behind a rock; at the
same time my shikari turned to me with
a grim smile and said: "These men
have come to take you for stealing the
Golden Gautama of Chimray." Seeing
that I had been entrapped, I placed my
back against a rock, and raising my
loaded musket told them that I would
shoot the first man who approached.
Nothing daunted, my shikari seized a
large stone, hurled it and rushed in on
me. In self-defense I shot him dead.
The four lamas saw their opportunity,
and before I could reload overpowered
me and quickly bound me with cords.

"We were then some miles from the
monastery, to which it was evidently
not intended to convey me until night-
fall, for I was carried by two of the men
to a cave about half a mile distant,
whither also the corpse of the shikari
was brought, and laid by my side. Here
I lay, bound hand and foot, all day;
and at dusk the four lamas formed a
solemn procession, two carrying myself
and the others carrying the corpse. I
asked to be allowed to walk; but, evi-
dently fearing to unbind my feet, they re-
fused my request, and it was some
hours before we reached the gate of the
lamasery. Up a never-ending flight of
steps, through labyrinths of long pas-
sages dimly lighted with flickering oil
wicks, now passing along galleries half-

Not what is said of it, but
what it does, has made
the fame of the

Elgin Watch

and made 10,000,000 Elgins neces-
sary to the world's work. Sold by
every jeweler in the land; guar-
anteed by the greatest watch works.

ELGIN NATIONAL WATCH CO.
ELGIN, ILLINOIS.

open to the night air, up further steps
and down again into more passages, my
jailers bore me weary and worn out. At
length we arrived at a solid door in the
side of the rock. The heavy iron bars
and bolts were raised and my aching
body was put down on the floor of the
dungeon. A small portion of food and
water was placed in the corner of the
cell, my cords were unloosed, and to my
horror, the corpse was set down by my
side. The lamas withdrew after light-
ing a lamp, and I heard the bars of the
door fall into their strong sockets. Was
this to be forever, I wondered, or would
the morrow bring release or fresh hor-
rors?

"Whether I slept or fell into a state of
stupor I can not say; but after a lapse
of what must have been many hours I
was aroused by the clanging of the bars
and the door opened to admit two men
with drawn swords. I was informed
that I was summoned to my trial, and
forthwith was conveyed through a suc-
cession of long, dark corridors to a
large hall, where I found assembled the
chagzot and a number of high lamas.

"The trial lasted for several hours,
and I need only say that I was found
guilty of sacrilege and murder and sen-
tenced to be tied to the corpse and to
be burned with it. The stolen image
was produced at the trial, as well as all
my books and the remainder of the con-
tents of my kilt.

MUST NOT RETURN EVIL FOR EVIL.

"I was taken back to my cell, but later
was reconveyed to the hall of trial,
where I was informed that my sentence
had been reconsidered; that the teach-
ing of Buddha, as set forth in the
Dhamma-pada, forbade returning evil
for evil; that I had sinned grievously,
but that it had been decided that I
should live to be taught the knowledge
which alone led to salvation. To re-
mind me of my sin the Golden Gautama
was to remain always in my presence,
and several lamas were appointed as
my teachers. The chagzot read from
the holy books a lengthy exhortation
and admonished me that although the
death sentence had been remitted, I
would have to pass through many trying
ordeals, lasting throughout a period of
many years; that I might abandon for-
ever the thought of escape or communi-
cation with the outer world; but that,
if I proved myself studious and desirous
of atonement, I had before me in the re-
mote future a life of peace and spiritual
comfort.

"I was scourged before the assembly
with sharp-cutting thongs of rawhide and
then handed over to my guru to com-
mence my novitiate, which, though it
lasted a space of time covering fourteen
annual festivals, remains in my mem-
ory not so much by reason of the hard-
ships I underwent as for the eventual
knowledge that I acquired. I passed
through the ordeal of fire and the or-
deal of water. I practiced, for months
at a time, hathayoga, bhaktiyoga, pran-
ayam and the like; I spent nights in the
bottomless pit. I studied deeply of the
Pitakas and became proficient in Pali
and Sanskrit; and all this time I was
daily scourged in the presence of the
stolen image. I received much praise
from my teachers and was eventually
permitted to take my place as a work-
ing lama within the precincts of the
monastery. After a while I obtained
leave to practice dhyana and became re-
nowned in miracle-working, or lokothra.
So great a power did I develop that the
chagzot assembled his lamas and initi-
ated me into the priesthood.

ONLY ONCE TEMPTED.

"All desire to return to the world and
my former life had long since left me,
and I begged to be transferred to some

secluded spot where I might be able to
devote myself entirely to study and con-
templation. I said that all desire to re-
turn to the world had been abandoned;
yet this is not quite the truth, for dur-
ing my novitiate I once took part in the
Dance of Death at Himis, whereat an
Englishman was present and I was sore-
ly tempted to disclose my identity and
seek his aid. But the temptation
passed; and, from fear that I might be
again exposed to its influence, I was
ever anxious to retire into the more in-
accessible parts of the country. My op-
portunity soon came, and after lengthy
negotiations with Lhasa I was moved
across the border into Chinese Tibet,
where I was received into the yellow
priesthood as a minor lama of the Tscho
Pangli gumpa.

"That was nearly twenty-five years
ago, and from that day to this I have
resided within the walls of the island
lamasery. My story went with me to
Tscho Pangli, as did the Golden Gauta-
ma, which I had long since come to re-
gard as my savior. It lived before my
eyes to remind me of the past, and is
still ever present in my mind; by day it
rests in its niche in the wall, by night
it lies clasped in my hand. There is lit-
tle more to say. I acquired grace and
knowledge, and I rose in the priesthood
until I became the head of my holy
brethren. The expiation of my crime
was complete and the pardon of the De-
lai Lama was conveyed to me by a
special deputation of the highest lamas
om Lhasa. I have begged and been
granted one request—that when after
my death my body is consumed in the
fire, my ashes shall be inclosed in an
image resembling that of the Golden
Gautama of Chimray. Om Mani Padmi
Hum. Oh! the jewel in the Lotus.
Amen."

THE GOLDEN GAUTAMA AGAIN.

It was midnight when the Wuzir re-
tired from the Englishmen's room; but
an hour later he returned, looking wor-
ried and excited. Keane was asleep,
but Gillmore still sat smoking; and the
Wuzir on entering noticed that a great
change had come over him; he was paler
than usual and his eyes wore a
strange, hunted expression.

"Why didn't you tell us that you had
taken it?" asked the Wuzir, coming to
the point at once.

"Taken what?" demanded Gillmore,
roughly.

"The Golden Gautama of Chimray."

Gillmore grew livid and, trembling
violently, said in a whisper, "For heav-
en's sake don't speak so loud! How did
you find out?"

"In this way," slowly answered the
Wuzir. "I have spent the last hour with
three men from Tscho Pangli, who ac-
cuse you of stealing the Golden Gauta-
ma from the monastery. They demand-
ed that you should be sent back to Leh
for trial. I have, however, arranged
with them that you shall return the im-
age and pay 5000 rupees to the mon-
astery as compensation."

"All right," said Gillmore, thrusting
his hand into the front of his coat and
withdrawing a small packet; there's the
beastly image; but I haven't got enough
money to pay the fine."

"I will lend you that, and you can
send it to me when you get back to In-
dia."

"Thanks, you good old Wuzir; you
have seen me through a very bad busi-
ness, and I shall be ever grateful. Hon-
estly, I could not help taking it; it
looked so tempting lying on the ground
at my feet when the white lama died;
and, of course, I did not know its his-
tory then. You won't catch me in La-
dak again, for I don't feel inclined to
take over the Tscho Pangli district—
even with the prospect of Nirvana."

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**Expedition of the Insect Collectors.—
Dr. F. H. Snow and Party on a Trip
to Southwestern Kansas.—Camp
Life and Incidents.**

EDITOR KANSAS FARMER:—The return of Dr. Francis H. Snow to the chair of natural history, his favorite field of labor previous to his election as chancellor of the University of Kansas, which office was resigned in the last year on account of his health, marked the beginning of a new period of activity in the department of entomology, there taking up the work which he had dropped twelve years before. His health had been so completely restored after a period of recuperation that in January of the present year he assumed charge of the insect collections as curator, besides continuing to act as director of the natural history museums at large. "I am glad to get back to my old work," he has said a number of times to friends and visitors who in calling usually found him busily occupied among "the bugs." Alone at his work he often enlivens the seclusion with a short song, or hums a tune, since the relief from executive duties brings a bright and cheering effect. His ambition to realize a cherished plan—to increase the collections so that they will exceed any other collection of insects in the United States—leads him to direct his energies with renewed vigor. In fact at the present time, only one university in our country can claim any better collections in this branch of science. Much of his success in past and present efforts can be traced to the stimulation of a curious motive, with which an interesting story is connected. Many years ago, on a trip in New Mexico, he and his party were surrounded by Apache Indians on a raid, but by prompt action for defense, an attack was prevented. In the midst of the danger imperiling his life, he vowed that if he should escape safely he would make the best collection of insects in the United States. And, while the report was telegraphed and published that he and his party were scalped, all reached home in safety, and though his executive work and ill health have delayed him somewhat, he is now pushing operations with an increasing force of assistants.

HOW THE COLLECTIONS ARE BUILT UP.

From the different kinds of insects collected at home and on expeditions, a surplus number, called duplicates, are used for exchange with scientists and collectors in other parts of our country, and even in foreign countries, who return specimens from their own localities, as may be desired. By this system of trading, specimens can be obtained from nearly every part of the world, and each addition thus gained helps to build up a great collection of diversified forms. Dr. Snow began again to make exchanges, which practice had been nearly neglected during the twelve years he passed in the chancellor's office. He soon found that more material was needed to continue exchanges, as well as to work up a better representation at home. Then he planned a collecting expedition for the summer vacation, with a party of students, such as he had conducted many times in previous years.

START OF THE EXPEDITION.

This expedition adds another noteworthy event in the history of scientific field collecting for the University of Kansas. The time was chosen for early summer, particularly June, as no previous collecting had ever been done in western Kansas, where he intended to go, at this time of year.

Five members composed the party, including Dr. Snow and his son, Frank, his regular museum assistant, E. S. Tucker, and two students, Roy L. Moodie and Will H. Bailey. On the day of departure, the university teamster carried the outfit to the depot, accompanied by the three latter members, while the Doctor and his son followed, bringing a bicycle which proved very useful on the trip. The outfit consisted of tents, provisions, camp utensils, blankets and collecting equipment, all packed in wooden chests securely bound with ropes, besides such articles as were carried by hand, principally guns, insect nets, a case of eggs, and a large street lamp with a gigantic funnel attachment for trapping insects at night. A truck load of baggage awaited the train, and each member of the party had his hands full besides in boarding a west-bound passenger.

FIRST INCIDENTS OF CAMP LIFE.

Upon arrival at Coolidge, the very last station westward on the Santa Fe Railway in Kansas, a dray hauled the party and outfit two miles down the Arkansas River where some cottonwood

timber offered a shady spot for camping.

Real out-door life began on the evening of May 30. Tents were pitched and provisions laid out for supper. In unpacking, Dr. Snow found his new red blankets smeared with syrup which had burst from a gallon can during the journey. Here was a "sweet mess," not very inviting to sleep in, so after diligent scraping and wiping with a wet cloth, the objectionable parts were folded inside to await further treatment on the morrow, and the clean side laid out for bed. The cooking was done on a sheet-iron camp-stove, and the meal consisted of fried eggs, coffee, crackers, and cold boiled ham brought ready prepared. But what was the reason the fire in the new camp-stove failed to draw properly, and smoked at every point except where it should—from the pipe? The cause was explained a day or two afterwards when search was made for a ball of twine until one of the party remembered that in packing for the start he had stuffed it into the chimney hole of the stove, and no wonder the draft was choked until the obstruction burned out!

Early next morning, each person appeared in old clothes. One member brought water, another wood, and another took charge of the cooking which was afterwards transferred in regular daily turns to each one, excepting the Doctor, whose program every morning consisted in baking gems. He stirred about, fresh and happy, singing songs while he mixed dough and baked the gems in the little oven of the camp-stove. His fame as a gem-baker can be confirmed by members of this or previous expeditions. In fact, some years ago at a camp in Colorado, one fellow made a record of eating over seven hundred of these delicious biscuits.

The crack of guns resounded and some pigeons and other birds were added to the bill-of-fare. Near by, numbers of prairie dogs whistled in defiance. Some one in the party said their meat was good to eat, and that the prejudice against these animals on account of their name was wrong, since they had no relation to dogs whatever, but belonged to the squirrel family. One was shot and cooked for a trial; only one member objected to the taste of the meat, yet the one experience satisfied the party, for the meat was rather tough, besides all Western people know how difficult it is to shoot the animals away from their holes. Probably very few of the inhabitants ever attempted to eat prairie dog, but the campers can claim this distinction and almost on their first day in the country!

GETTING DOWN TO BUSINESS.

By the time breakfast was finished, the sun blazed high in the sky. The boy remarked how early it rose, and how much earlier daylight appeared and awakened them from sleep, though in a few days they became accustomed to the light and were not always willing to leave their beds at that time of the morning. The business of the day began in earnest directly after the morning meal, when the members, except one to keep camp, scattered out with nets and bottles to scour the country for insects. At noon they reappeared, straggling in from various directions, hot, thirsty, and hungry. After refreshments, each one began to pin his specimens and compare his catch of the morning with the others. Red tiger-beetles (*Cicindela pulchra* and *formosa*) attracted the Doctor's fancy, and on the following days each collector tried to outdo his comrades in an effort to catch the greatest number.

These beetles were detected on account of their bright red color as they rested on the sandy soil. To capture one, the collector approaches cautiously, else it will fly away, and when within reaching distance, he claps his net over the insect and presses it to the ground to prevent the prisoner from crawling out under the edge and escaping, then he gathers the beetle into a fold of the net and forces it into a poison bottle. Only after the bottle with the insect in it has been corked can a collector be sure of a specimen. The majority of other insects were captured by sweeping a net through weeds and foliage, especially with flowers.

On the second or third day, a student brought in the rattles of the first rattlesnake to be killed, but about camp only harmless snakes were found.

After ten days of collecting a splendid show of specimens was made. "Sugar-ing" at night had been tried in timber near the camp without much success. This is a method of attracting moths by a bait composed of beer and molasses smeared on trees after dark, when the spots were examined at intervals by a light from a dark lantern, and the feed-

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ing insects were captured. Also, every night, the large lantern was lighted, and the big funnel hung underneath to trap the insects which fell into it. The light from the lantern served to illuminate the sump finely, though only on one night did it pay as an attraction for insects, but at this time its returns were immense, probably due to a lull and change of wind which afforded the right condition for insects to fly. Moths and beetles appeared in continuous swarms and fluttered in the circle of light, numbers of them falling into the funnel or onto the ground, and the Doctor hastily called out all hands to capture them. Care must be exercised always to prevent injury in catching the delicate creatures, but here the great number of beauties which fluttered in sight nearly drove the Doctor to distraction for fear their perfect condition would be marred by beating their wings against sides of the funnel or on the ground as they endeavored to regain their flight. He groaned aloud as if the sight of so many prizes gave him a pain, being unable to catch every one that he wanted. Really the party presented a comic as well as an animated scene; the effect of the members in prancing around the light, whirling nets frantically in the air, or in searching the ground for choicest specimens of the fallen hosts, amid a din of excited exclamations mingled with the Doctor's groans, would have afforded quite an entertainment for an audience. All efforts were fully repaid at last, for the poison bottles became crammed to the limits with the catches, and the whole party was thoroughly tired before the supply showed signs of failing.

DR. SNOW'S POLICY TOWARDS STUDENTS.

All students who accompany Dr. Snow on a trip must be prepared with at least an elementary knowledge of entomology. Each retains one-third of his collections in the field, as the Doctor believes in stimulating a personal interest to arouse the best efforts, although he pays all expenses of the trip. Besides he supplies plenty to eat in abundant variety, for he himself likes a good bill-of-fare as far as possible. Living together in the freedom of camp is entirely different from the formality of home. Here a person's disposition soon reveals his true nature and development of character, and the Doctor warned each one of the party in advance, during the journey on the train, to guard himself, for the test of sharing in discomforts as well as in pleasures, always in harmony with his companions, aids one to higher development for such an experience.

Then, as Dr. David Jordan once said, it is a great privilege for a student to have an opportunity of becoming intimately acquainted with Dr. Snow.

HEADED FOR MORTON COUNTY.

As the plan had been made before leaving home to go into Morton County, in the extreme southwestern corner of the State, the Doctor resolved to carry out his trip in spite of all difficulties which lay before him. On the map he laid out the journey for sixty miles directly south from Coolidge, but by actual travel over the crooked trails, the distance was extended to nearly seventy-five miles.

On Monday morning, June 9, tents were struck at the first camp, and the entire outfit was moved into Coolidge. Here the specimens and surplus baggage containing the best clothes of the members were stored, and preparations were made for a rough time ahead. A driver was engaged with team and wagon for the trip. Precautions as to sufficient supplies together with a keg for

carrying water were duly appreciated before the return. At the start an extra team was used in fording the Arkansas River, as the bridge had been partially carried away by flood a short time before, and in crossing the sand hills extending four miles beyond. From this point the bicycle proved handy as turns were taken by different members in riding ahead, while those left with the wagon often preferred to walk, to obtain relief from the tedious riding, and at the same time, improve the opportunity for collecting on the way.

A new interest arose in the study of insect life on the open plains, far away from the limits of cultivation. The Doctor intently examined everything that was caught, and directed attention from one thing to another which he wanted. His keen eyes detected a moth resting on a flower by the roadside, which he suddenly pointed out to a student, who fortunately captured it with a sweep of his net and disclosed a specimen of *Lepidoptera gaurae*, valued at \$2.75 to \$3 each by specimen dealers. With all of the sharp watch possible, not more than six of these moths were obtained afterwards.

Another desirable insect, a rather large black beetle known as *Moniloma annulatum*, was found on cactus plants. One student in particular made the best record in finding them, sometimes as many as fifteen or twenty per day. He

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would walk miles at a stretch, kicking and tearing the cacti, while at nearly every capture he would shout, "I've got another Monilema."

The progress of the party was provokingly slow on account of a heavy load and a small team of horses which never could be urged to travel faster than a walk. A halt at noon to eat a lunch of canned goods, directly exposed to the fierce heat of the sun, did not compare favorably with the former comfort of being in a shady camp. No opportunity for obtaining fresh water was found until sixteen miles from Coolidge, and this was about an average distance between watering places during the journey. Pushing on till darkness overtook the travelers, the night was passed on the open prairie, except for a tent which was pitched for the Doctor. Early next morning after breakfast had been dispatched, the party resumed its journey. Such was the progress for three days, being exposed to the parching rays of the sun while the flickering waves of heat visibly hovered along the ground. Frequent resorts to the keg of water which tasted strongly of vinegar, as the keg had formerly contained pickles, served only for brief periods in relieving thirst. Much of the time no sign of civilization appeared; as far as could be seen, merely a level stretch of the fresh green plains faded away into the delusive mirage on the horizon. Scarcely an object broke the monotony of the scene, though a relief was sometimes afforded when an antelope or two suddenly attracted the eye as they fled from view in the distance, or a jack-rabbit presented a mark for the gunners, or the curlews flew within range of a shot.

A welcome sight cheered the travelers whenever a ranch house appeared ahead, for there a windmill whirled its fans in the breeze and a cool stream of fresh water ran from the pump to refresh the men and horses, though as the party approached the place the farther it seemed away, thus taxing their patience by failing to judge correctly of distances, until at last the relief was at hand.

At one stopping place the Doctor was asked what business he was on, and he replied in his characteristic way, "just after bugs." The questioner, a young man, then surveyed the Doctor from head to foot, besides noticing the curious looking net which he carried, and if it had not been for the accompanying members who explained the object of their journey more fully, the fellow might have concluded that an escaped member of some institution, other than the University of Kansas, had wandered away.

Judging from personal appearances, it is no wonder that mistaken impressions result, as in this case not one in the party presented a very complimentary appearance as might be expected for students of science. If friends at home only had a chance to see Dr. Snow after a week or so in the field, they would not blame the woman who once ran from her house to a neighbor's on seeing the Doctor approach, although he merely stopped to ask for a drink of water.

However, the people in the country bestowed many favors on the travelers, kindly directing them on their route, and supplying fresh milk when it could be spared, in some instances refusing to accept payment for it.

The second night found the party across the State line in Colorado before they were aware of the fact. On the third day the trail led back into Kansas, and Dr. Snow resolved to reach the Cimarron River for camp that night. As darkness came on, storm clouds began to gather in the west, and to add to their anxiety, the party found they were following a wrong trail which narrowed into a winding cow path. However, the tired horses were urged along while the last of the party lightened the load of their

weight and walked. At last a furious wind arose and the storm broke into a deluge, causing an immediate halt. While the driver picketed his team, all hands hurriedly dragged a tent over the open prairie to cover the goods from the wet, and then the young folks huddled on the ground underneath the wagon for shelter. Tired and hungry, the prospect of a gloomy night in this unprotected condition lay before them. But presently, between the howling blasts, the strains of a song in the Doctor's voice were heard, as he sat beside the wagon, there screened from the wind by a wind rain, and rehearsed familiar tunes, but just as if he were pleasantly located in the camp. The cheering effect soon dissipated the gloom of the discomforted travelers, who shortly afterward, during a partial lull, arose with renewed courage and pitched a tent in the face of the same wind. "Now," the Doctor said, "we

can have griddle cakes for supper." So the poor cook started to work by the light of a lantern and, with generous assistance, produced a meal, while a second and harder fall of rain interfered considerably with the cooking, to be served in the tent with resulting praise, for appetites could not be spoiled by trifles. Then the weary campers spread out their bedding, trusting to the shelter of the tent, which fortunately held secure through another and stronger wind while nearly all slept undisturbed. After midnight, when the storm ceased, the howl of coyotes was heard. Morning broke calm and dry as if no storm had lately passed, and behold! the promised valley of the Cimarron appeared before their view.

CAMPING IN MORTON COUNTY.

The camp in Morton County was located near the ranch houses, in which a postoffice was kept, called Point of Rocks, on the property of an extensive cattle company owning twenty-five miles of land and 20,000 head of cattle. In front of the camp flowed the Cimarron River, while behind rose a bluff of rocks, a feature of the country which gave the place its name.

While nearing this place, one of the students nearly stepped on a huge rattlesnake which lay in the trail. This student happened to be walking behind the wagon at the time, when Dr. Snow who rode with the driver shouted, "Look out behind! There's a big rattlesnake in the road!" Then the student jumped to one side just in time, for the horses and wagon had passed over the snake without touching it. Probably there is nothing better for catching snakes than an insect net, so this reptile was captured and soon confined in an empty syrup can with a tight fitting cover and thus it was brought home alive to be afterwards preserved among the collections of snakes in the university.

In speaking of snakes, Dr. Snow's fondness for handling them once resulted in a bite from a rattler, consequently a person would think that he never would care to handle another snake of any kind. Not so, however, for on the road a student captured in his net a snake much like a rattler in markings, but without rattles, and brought it to the Doctor, who fearlessly dragged it out into view with his hand, only to find it a harmless Texas rooster, notwithstanding the fact that there is a species of rattlesnake without rattles for which the honor of discovery belongs to him alone. Yet they have never been found in Kansas. One day he appeared in camp with a blue racer dangling from his hand, but it resented all attempts to be petted and finally bit the Doctor's hand severely enough to draw blood, when he released it with the remark that he never saw a snake so refractory. He believes in treating snakes as friends, not as enemies.

There is some similarity in the buzzing of a rattler to the singing of a cicada insect, though the insect continues longer and in a shriller key. About fifteen rattlesnakes were killed altogether, mostly along the trails where they might have passed unnoticed had they not sounded their alarms.

Four days' collecting resulted in a great number of specimens, indeed, many more than the doctor expected, particularly bees and wasps. Both the doctor and his assistant worked continually at pinning the insects as fast as the three boys could catch and bring them into camp. Towards the last day all of the specimen boxes became filled, but fortunately, some empty cigar boxes were obtained from a ranchman and prepared for use so that the work went on without interruption. Very few insects appeared at night about the lantern, and their absence rather disappointed the doctor who longed for more moths; however, the abundance of day flyers consoled him.

The increasing hot weather culminated on Saturday when a thermometer at one of the houses registered 114° in the shade of a porch. During the night a strong wind strained on the tents together with a rigging consisting of a "fly" stretched across the space between the two tents when the light sleepers aroused themselves and fastened extra guys. However, the fly became loosened and flapped loudly until lowered, while underneath the driver lay asleep on the ground, neither disturbed nor awakened till morning, when he crawled out from under the sheet of canvass and discovered a centipede in his blanket. The intruder was caught and it furnished the largest specimen of its kind seen on the entire trip.

What object the party had in coming into such a remote district just to catch so many "horrid bugs" seemed to puzzle the ranch people, who viewed the collec-

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tions curiously, until the doctor kindly explained his mission as an undertaking for the benefit of science and that this region was selected because no scientist had visited it before; consequently, many interesting and valuable forms should be found, possibly entirely new to scientific knowledge.

THE RETURN.

Early on Monday morning, a start was taken for the return to Coolidge, following the same route as in coming. After enduring all the discomforts experienced thus far, the further inconveniences of passing two nights on the road in disagreeable weather were met with the best of good humor, for each day's journey brought the party near the end of the trip and towards home. Rain began falling on the first night just after the doctor's tent had been raised, and the cook prepared supper under cover of an umbrella. A ranchman's barn near at hand offered shelter for the younger members who carried their bedding inside and prepared to take lodgings for the night, appropriately calling the place "Hotel de Bum." Here, they obtained more accommodations than they paid for: the best room was selected on the "ground floor," being electric lighted though somewhat irregularly (by the lightning flashes), besides having shower baths in connection (rain dripping from holes in the roof), while a free entertainment was provided for the guests in the way of a grand ball (bawl by the calves' band), which lasted until a late hour.

But on the following night, as another storm threatened, the young folks would not trust to the barn again, but sought refuge in a house where they were quartered on the floor, while the doctor and his son in their tent braved a storm of dust and sand instead of rain.

With a lighter load, the progress of the party on this return trip was considerably faster than in entering the country, so that on the third day about noon, the river was reached opposite Coolidge. However, in the region of the sand hills, all of the party walked in order to lighten the load on the team. In fact many had been walking for some time previous to keep warm, since the morning broke cold with dull clouds and a misty rain. Overcoats were then appreciated by the fortunate ones who possessed them, rather in contrast to the preceding hot weather. The doctor, his son and a student reached the river some distance ahead of the wagon, and the student being anxious to get to the post office, doubtless expecting to find a letter awaiting him from his best girl at home, immediately waded the river, and accompanied by Frank Snow, hurried into town; only to meet with disappointment which plainly showed in his face when overtaken by the rear members.

DR. SNOW MISTAKEN FOR A TRAMP.

After three weeks of rough camp life, the appearance of each one in the party presented a sad change: sun-burn, tan and dusty old clothes were the common possession of all. The students had shaved in camp but the doctor had not, so he could hardly be recognized as the trim neat professor at home. While waiting at the ford for the wagon to come, the doctor noticed a small house

near the road where he applied for shelter from the rain.

In answer to his knock at the door, a woman appeared. Dr. Snow stated that he would like to get out of the wet. The woman looked him over and said he could rest behind a corner of the house where the wind could not reach him. This was poor satisfaction to the doctor who said he was afraid of catching cold. "Well," the woman replied, "you might go to the chicken house." "No, I would rather walk around and wait for my wagon to come," returned the doctor. The woman then began to question: "Where did you come from, any way?" When told, she continued, "What have you been after?" "Collecting bugs," answered the doctor. "Collecting bugs!" she repeated with interest. "Have you got any with you?" Hereon the doctor untied a cigar box from his waist and opened the box to show some specimens inside. The woman looked closely and spied the printed labels bearing the name of "F. H. Snow." With wide open eyes, she exclaimed, "Is this Professor Snow?" The doctor nodded. "Come right in," she said. "Is there anything more I can do for you?" After the doctor seated himself, his hostess entertained him in reviewing the history of her life in Western Kansas, until he was forced to depart on seeing the wagon arrive.

The two boys in town had notified the driver's father of the approach of the wagon, and he started out to meet it with an extra team to assist in fording the river. Soon all the goods were unloaded at the depot, and the members presented themselves in respectable clothes again, in readiness for the next train home. But the greatest change appeared in the doctor after he had visited a barber shop.

As a result of the trip, fully 10,000 valuable insect specimens have been added to the stock of the University museum in Snow Hall of Natural History.

E. S. TUCKER.

Museum Assistant, Dept. of Entomology, University of Kansas.

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SANTA FE.

THE METHODIZER.

(Continued from page 1179.)

ness turns the unforeseen change of conditions into a means of profit, who makes the unexpected fit into his method and his program, and who keeps an intelligent grasp upon every detail of his occupation is the man who succeeds, who prospers whether his operations be small or large. But there is a valuable hint to every man, be he farmer, manufacturer, or merchant, in the methodizing of business by the professional methodizers.

THE BIG SHOW AT CHICAGO.

The International Live Stock Exposition at Chicago opened last Monday. Secretary Wilson characterized it as "the most magnificent expression of progressive breeding and feeding that there ever has been in the history of the world." The Secretary remarked further:

"The most important feature of this exposition to me is the presence here of the students from the agricultural college."

He then paid a high tribute to the value of the work being done by those institutions and went on to say:

"I propose to ask Congress to be generous with us and authorize me to cooperate with the colleges at the experimental stations throughout the land along the lines of breeding."

"We want to produce what we need in the United States. I think we have the healthiest animals in the world in the United States. Canada, perhaps, has as healthy animals as we have here. When you go to the continent of Europe you find diseases there all the time, for the reason that jurisdiction is so cut up into small countries that no one central power can stamp out the diseases as we can here, or as the British can. We are compelled to shut out everything from continental Europe. We are compelled to shut out everything from Asia. We have to shut out about everything from the Philippines."

Look for a full report of the entire show in next week's KANSAS FARMER.

The National Live Stock Association.

EDITOR KANSAS FARMER:—Complying with the orders of the executive committee, we have the honor to advise you that the sixth annual convention of the National Live Stock Association will convene in the Century Theater, Kansas City, Mo., January 13, 1903, and continue through as many sessions as the business may require.

Delegates will be admitted according to the provisions of the constitution, as follows:

Each State, Territorial, county, or local range association of cattle, sheep, horse, or swine-breeders may appoint one delegate for every 10,000 head of stock or part thereof, represented by the members of such organization.

The Governors of each State and Territory may appoint three delegates-at-large.

Each feeders' and breeders' association may appoint one delegate-at-large and one for every twenty-five members or part thereof.

In counties where there is no regular live stock organization, the county commissioners may appoint one delegate from among the stockmen of said county.

Each State or Territorial live stock sanitary board may appoint three delegates.

Each State board of agriculture or agricultural college may appoint one delegate.

Each live stock commission merchants' exchange may appoint one delegate-at-large and one for each twenty-five members thereof.

Each stock yards company may appoint one delegate.

Each railway and transportation company may appoint one delegate.

Each chamber of commerce may appoint one delegate for every 100 members.

Each dairymen's association may appoint one delegate.

Each State irrigation organization may appoint one delegate.

Any bona fide stockman engaged in breeding, feeding, trading, or handling live stock may become a member of this association by the payment of an initiation fee of \$10 and an annual due of \$10.

Delegates may be appointed from Canada and the Republic of Mexico, but in all cases, except those from State and county, the requirements regarding membership must be complied with.

Among the subjects which will come before the convention are:

The consideration of, and the adoption of some plan to oppose the merging

of a majority of the packing plants of the nation into one gigantic trust, which we have every reason to believe is contemplated. No greater calamity could befall the live stock industry than a combination of this kind to control the meat supply of our country.

To take such decisive action as will induce the present Congress to pass the following measures which we have caused to be introduced:

H. R. 14,488, known as the Grosvenor Anti-Shoddy Bill, which is now before the Committee of Ways and Means of the house. The bill provides for the federal inspection and tagging of woolen goods, so as to prevent the sale of shoddy and waste as pure wool. This is not only a protection to the producer of wool but to the consumer as well.

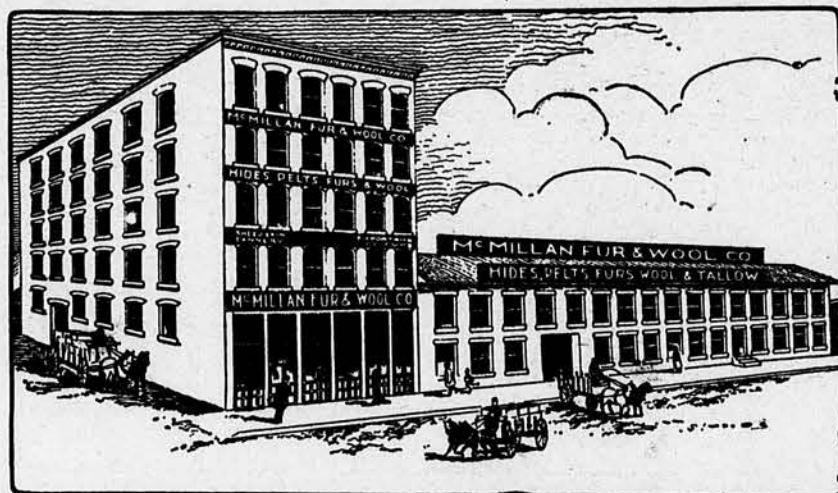
H. R. 14,643, introduced by Congressman Hopkins, and providing for a classified census of live stock and agricultural statistics.

H. R. 12,002, introduced by Congressman Stephens, and amending the shipping laws by extending the limit for unloading live stock from twenty-eight to forty hours. The bill has been favorably recommended by the Committee on Interstate and Foreign Commerce.

H. R. 2,588, introduced by Congressman Penrose, providing for the improvement in breeding of horses for general purpose use. This bill has received the endorsement of both the War Department and Department of Agriculture.

The amended Elkin's Bill to amend the Interstate Commerce Act, so as to give the commission power to enforce its orders and decrees.

To take steps to prevent the removal



Warehouses of McMillan Furniture & Wool Co., Minneapolis, Minn.

The above is an illustration of the five-story and basement brick and two-story and basement frame warehouses of this company, located at 200-212 1st Ave. No., Minneapolis, Minn. with a total floor space of over an acre which is several times as large as any other establishment in this business in the West. This gives them every facility for taking care of the great quantities of furs, hides, pelts, wool, etc., which they handle every year. In addition they have a sheep-skin tannery on Hennepin Island, Minneapolis, with a capacity of 3,000 pelts per day. This concern has been building up its business for twenty-five years and as may be assumed it has grown to very large proportions. High prices, fair treatment and quick cash returns explain their success. Their circular is furnished free upon application.

of the tariff on wool, cattle, meats, and hides.

To discuss what Congress might do to improve existing laws governing the public lands and forest reserves.

The practicability of cooperation in marketing live stock.

The advisability of some change in our financial system so as to give elasticity to the currency, thereby benefiting the stockman and farmer.

To secure the enactment of a law providing for a classified assessment of live stock.

To consider the present policy of State live stock sanitary boards in demanding a re-inspection and imposing fees, on interstate shipments of live stock after said stock has been inspected by a federal official. This case is now before the Supreme Court of the United States, and a decision may be expected about time this convention convenes.

Also all matters pertaining to sanitation, markets, transportation, feeding, breeding, etc., in which any member is interested and which may be brought before the meeting.

Any member of the association interested in any subject of a general nature is respectfully requested to place it in the form of a resolution and send it to the secretary at once, so it may be brought before the first meeting of the executive committee, and thus receive early consideration by the convention.

For mutual protection it has become the policy of all industries to organize. It must be conceded that in a national organization the live stock industry of the nation can accomplish more in its interest than by individual efforts. The history of this organization will demonstrate this fact. This work which is in the stockman's interest cannot be carried on successfully without

The Topeka College

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Large School. Reasonable Rates. Good Positions. Catalogue Free. Address L. H. Strickler, Topeka, Kan.

his assistance. The cost in maintaining a national organization is insignificant, the assessment being one cent for every twenty head of stock. If the reader or his local association are not members of the National Association, they are earnestly requested to make application immediately, in order to be represented at the Kansas City meeting. Blanks for this purpose, and all information may be had by addressing the Secretary at Kansas City, care Coates House.

All associations, governors and county commissioners are requested to send the names and postoffice addresses of their delegates to the secretary as soon as named, in order that the roll may be promptly and properly arranged.

The National Wool-Growers' Association will hold their annual meeting here on Saturday, January 17, the day following the adjournment of our convention, so that it will be possible for delegates to attend both conventions during the same week.

The citizens of Kansas City have subscribed \$20,000 and are arranging to entertain all delegates and visitors in a most generous manner, and an excursion to New Orleans via Memphis, after the meeting, is contemplated. In fact,

300 FERRETS FOR SALE.
Farnsworth Bros.,
Elk Falls, Kansas

WIRE FENCE at Wholesale. A 54-inch stock fence \$9 per 100 ft. Send for price list and FREE catalogue of Wire Fence and full line of Fence Supplies.
W. H. MASON & CO., Box 62, Leesburg, Ohio.

DICK'S PRODUCTS...

Superb warm house shoes. Hand woven; seamless; wool-lined; pliant; durable. I mail ladies' sizes, \$1.25; men's, \$1.40. "Same make" "Feet Warm" best slip ers, 85 cents and \$1.00.
W. H. DICK, Manufacturer, Danville, N. Y.

The Sure Hatch's Latest
An automatic, direct acting regulator that surpasses any other improvement ever made in incubators. Send for new illustrated catalog and free trial offer.
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New way to smoke meat in a few hours with **KRAUSER'S LIQUID EXTRACT OF SMOKE.** Made from hickory wood. Delicious flavor. Cleaner, cheaper. No smoke house needed. Send for circular. E. KRAUSER & BRO., Milton, Pa.

Our 'Xmas Present to You:

A dainty Dolly and Handkerchief, nice enough for anybody, price is a real cost, 48 cents postpaid.

Only one of each sold at this price to same person. Other goods at Holiday prices.

MEXICAN DRAWN WORK EXCHANGE
Box 862, El Paso, Texas.

Big Cut in Drugs
Direct to Consumer at Wholesale Prices. Our Handsome Catalog Free, costing over 25 cents, contains 208 pages, with 3000 illustrations and 20,000 articles listed, on which we guarantee to save you from 10 to 75%. Only book of the kind in the world, sent for the despatch which will be refunded with first special order of \$1. Valuable book of reference, should be in every household. Small booklet sent free for the asking.
Heller Chemical Co., Dept. 47 Chicago.
"The Only Mail Order Drug House in the World."

This machine will sow evenly any seed that is sown broadcast. It is more compact and convenient to operate than any similar machine made. It is strongly built and with ordinary care will last a lifetime. Every Machine Guaranteed. Upon receipt of price \$1.50, we will send this seed sower to your nearest express office, and prepare all charges.
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115 Dock St., St. Louis, Mo.
SPECIAL NOTICE—Every farmer ordering one of these machines while this offer holds good will be given an opportunity to have the entire cost of his machine refunded in cash.

were so nervous about milk why they ignored the question of butter, in which all such bacilli were in myriads. He averred that boiling milk did not exterminate the bacilli of tuberculosis, and that sterilizing impaired its quality. If infection by bovine tuberculosis was frequent from milk, positive proof ought to be obtainable. But it was not. The danger of phthisical persons acting as milkers and handlers of milk is immeasurably greater than it gets credit for.

During a lull in a cabinet meeting at Washington some time ago one of the cabinet members spoke of driving cows to pasture, when the question was asked: "How many of us in our boyhood days drove cows to pasture?" It was developed that every one of the President's official family had performed that service in his youth.

The Nor-West Farmer says that the high price of beef and the scarcity of labor is causing some farmers in Ontario to turn to beef raising more than to dairying. This is most noticeable in districts that have always been inclined towards beef raising.

Measures are now being taken in England to organize a large trading company which will open stores at all likely places in Great Britain for the sale of Canadian produce. The proposed capital is \$2,750,000.

One knock on the nail head will not drive it. Continuous hammering drives nails. A good hammer is necessary. Get the KANSAS FARMER and hammer success out of your farm.

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We send FREE and postpaid a 200 page treatise on Piles, Fistula and Diseases of the Rectum; also 100 page treatise on Diseases of Women. Of the thousands cured by our mild method, none paid a cent till cured—we furnish their names on application.
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Is different from other separators—half the labor to turn—one-tenth the parts to clean. You may have a free trial of it. Catalogue No. 166 free.

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In the Dairy.

Conducted by Ed. H. Webster, Professor of Dairy Husbandry, Kansas Experiment Station, Manhattan, Kans., to whom all correspondence with this department should be addressed.

What to Feed the Dairy Cow.

This question is one of frequent discussion at the farmers' institutes this time of the year. The conditions that surround the individual case are so varied that practically each herd requires different treatment, and it would be folly to say feed this and that unless all the conditions were known.

There are a few general directions that will be well to follow in every instance. To the beginner or any one who has not made a study of this bit of important work connected with the dairy, his first lessons should be from nature. The object of keeping a cow usually is to secure a large flow of milk at as little cost as possible. The period of the year at which this comes naturally is the early summer. We often speak of June conditions being the best. There are a number of reasons for this, all of which should be carefully considered in view of feeding and caring for our herd through the rest of the year. What are some of the June conditions which make the flow of milk so large at that time? The factor of comfort is so closely associated with that of feed that it will be well to discuss these things together. At this time of the year the conditions of comfort are at their maximum. It is neither too cold nor too hot, too wet nor too dry. The feed is just right to be palatable, it is most nutritious. The flies are not yet a source of annoyance. In fact the cow feels good all over, and whether she was fresh in the fall or in the spring she can not help giving milk if she would. Even the beefy type of cow will do well for a time.

Sometimes, and in some things, man has been able to improve on nature, but in the matter of handling dairy cows, nature as it is exemplified in the warm June days has not even been approached when all things are considered.

Early summer stands as a model we might well study. At this season of the year, the last week in November, the condition of comfort and feed are quite different in the spring.

Some farmers are running their cows in stalk fields, and are not any too well pleased with the fact that they are drying off very rapidly when the creameries are paying from 23 cents to 26 cents per pound for butter-fat. But look at the condition of feed in the stalk fields and contrast them with those of last May and June. The stalk field furnishes everything in converse. The stalk field furnishes extremely dry feed, the grass of June one that is succulent, the one is high in carbonaceous material or that which tends to make fat or heat, the other is rich in protein, the substance necessary to make milk. The corn stalk is unpalatable, the June grasses are very palatable. The stock field produces constipation, consequently a diminished ability to produce milk, the early pastures are from the succulence and high protein loosening, and

so on. Every condition that is found in spring is lacking in the stalk field.

The farmer that grows only corn and prairie grasses has a problem to solve, for the stalks by day and the prairie hay by night will dry his cows up just as sure as can be, if they make up the ration. When it comes to this his only safe way to a profitable winter in dairying is to buy the right kind of feeds, and the question is, what will come the nearest to restoring June conditions?

For convenience of the reader the following list of feeds are given: Loosening feeds: alfalfa, sorghum hay, ensilage, roots, bran, soy-bean-meal, linseed-meal, gluten-meal. Constipating feeds: corn fodder, timothy hay, Kafir-corn grain, corn (in light feeds), cottonseed-meal.

Loosening feeds will in a measure make up for the lack of succulence found in the winter feeds which are all practically dry feeds with the exception of roots and ensilage, neither of which one in one thousand Kansas farmers has provided himself with.

The first principle of feeding should be to study June conditions. The feeds are given in the above list. Combine them in such a way as to furnish the necessary variety, loosening qualities, and required food elements.

Get the cows out of the stalk fields, furnish them with the proper conditions, and they will make you glad by a handsome return each month in cash dividends.

E. H. W.

A Letter to Creamerymen.

The following letter has been sent to Kansas creamerymen and may be of interest to the public in general. Any creameryman not receiving this letter may consider this as personally directed to him:

To the Kansas Creamerymen and Butter-makers:

A Monthly Educational Test for Kansas Butter-makers: It has been suggested to me by a number of butter-makers that such a test be made the coming year. It is not likely that the United States Department of Agriculture will be in shape to take up the work as carried on the past summer. If it should, but a very few from Kansas would take advantage of the opportunity as seen from last year's work. It is believed by those who have given the matter much thought, that a home test would be of more benefit and that a great many more would take advantage of it.

The matter has been brought before the Experiment Station Council to secure the cooperation of the Experiment Station in the enterprise. The dairy department is authorized to go ahead with the work and make it the most complete of any work of its kind now being attempted. This at once opens up a great opportunity for the improvement of butter in Kansas.

SUGGESTIONS WANTED.

While you will see below a plan more or less complete for the test the dairy department wants all the suggestions that you may offer. You know your own peculiar difficulties and may want a line of work which would throw some light on the subject from your standpoint. A dozen other creameries may have the same difficulties. Therefore be perfectly free to write to the dairy department and make any suggestions you see fit in regard to the test.

PLAN OF TEST.

The following will give you, in a brief way, something of the line of work we wish to carry out:

NUMBER OF TESTS.

One test will be made each month beginning with January, 1903, and continuing until January, 1904. The March test will be made from the butter that is sent to the State Dairy Association Convention at the Agricultural College. The butter for the next October test is to be taken from the same churning as that which goes to the National Butter-Makers' Association Convention. All other tests to be taken from the butter on hand the day the call for butter is received. Butter to be shipped in twenty-pound tubs preferably.

NATURE OF TESTS.

The butter will be scored on arrival at the college. A sample will be taken for chemical and one for bacteriological analysis. The butter will then be held in the refrigerator for two to three weeks and again scored and sampled for bacterial content.

Some of the butter will be placed in cold storage and held for a longer time and the same tests made.

CHEMICAL TESTS.

This test will show the amount of

water, fat, casein, and salt in the butter on arrival. The second test will be made to determine the changes that have taken place as old, rancid, or other off flavors are developed in the butter.

BACTERIAL TEST.

This test will be made when the butter arrives and after it has been held for two or three weeks to determine the kinds and number of bacteria present and to determine their connection with the deterioration of the butter.

SCORING TEST.

The butter will be scored on arrival and again at the completion of the test. The score will be given on the merits of the butter at the time of scoring. The same standard will be used throughout and the results will be such that comparisons can be made one scoring with another and different lots with another.

EXPENSES OF THE TEST.

Considerable expense will necessarily be connected with this test. The expenses must be met from two sources—the creameries entering the test, and the Experiment Station.

EXPENSE TO CREAMERIES.

Owing to the fact that the college has no funds for doing outside work there is a portion of this expense that must be met by the participants in the test. Express or freight charges and drayage incidental to getting the butter to the college and to the sale of the butter will be deducted from the selling price of the

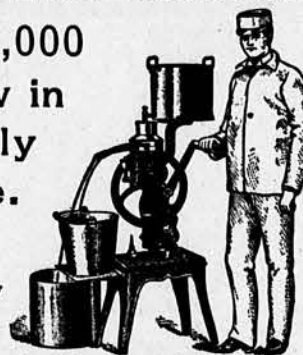
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per Cow
each
year.



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THE DE LAVAL SEPARATOR CO.
RANDOLPH & CANAL STS. CHICAGO. 74 CORTLANDT ST. NEW YORK.

butter before remitting to the participant.

The butter will in some cases suffer loss from keeping. The participant must stand whatever reduction in price may occur from this source.

EXPENSE TO EXPERIMENT STATION.

All the expense incidental to analysis of butter and scoring of same and publishing final report will be paid by the Experiment Station. This will be a considerable amount as a great deal of time

Creamery Butter 29 Cents!

This is the New York top quotation for creamery butter and is the highest November quotation on that market for ten years. The market will continue high through the season and now is the time to get a winter's good profit from the Dairy.

Our Price 26 1-2 Cents!

Every pound of butter-fat we buy is paid for on a basis of 2 1-2 cents below New York's highest quotation for creamery butter. This basis takes the setting of the price entirely out of our hands and quotes the price in advance of the delivery of the product. Compare our price for butter-fat with the prices your merchants are paying for country butter.

Our Price the Highest.

No other purchasers of butter-fat have equalled our prices under the above basis which went into effect January, 1902. Our net price to the farmer at his shipping point is 2 1-2 cents below New York. We furnish everything and pay the cost of transportation. For butter-fat in milk we pay on the same basis, less the cost of separating and handling the milk at the station, which varies from one to three and a half cents per pound fat. Our skimming station prices are as high as any of our competitors and our direct shipper's price is higher than paid by any other creamery.

This is Important.

We are the first to buy butter-fat on this basis, and the system has many imitators. We always lead; others attempt to follow.

If You Want a Hand Separator

Don't experiment with inferior machines. We sell the De Laval on monthly payments. It is the most durable separator on the market. Our guarantee is behind it.

These facts coming from the Old Reliable are worthy of your careful consideration.

THE CONTINENTAL CREAMERY CO.,
TOPEKA, KANSAS.

MORE GOOD NEWS.

November, the Best of All

The list continues to grow. The largest number of checks is being sent out to our patrons of any previous month. Our price for butter-fat is higher than ever for this season of the year, being 28 cents. This is the time to begin or to increase your herd. Write for particulars.

"Economy in operating and a high price for butter-fat" is our motto.

If you are hunting the best market, take your can of cream to the Depot and mark the tag

"BLUE VALLEY CREAMERY CO., St. Joseph, Mo."

NEED A GIRL AT YOUR HOUSE?



I'll save your wife more work than two girls; I never lose my temper; I never want a day off, and I work for nothing. I'm the

Empire

Easy-Running

Cream Separator,

and everyone who knows me says I'm the best of the whole separator tribe. I'm simple, easy to turn and easy to clean. I'm handsome and my beauty and usefulness last indefinitely.

Let me send you a book telling what I do for folks.

Empire Cream Separator Co.,
Bloomfield, N. J.
(Formerly U. S. Butter Extractor Co.)

will be required to make the tests. The expense of publishing monthly reports to the participants will be met by the dairy department.

REPORTS OF THE TESTS.

At the completion of each test there will be mailed to each participant a report of the score and analysis of his butter. At the completion of the series of tests a final complete report will be published by the station.

DATA REQUIRED.

Blanks will be furnished each participant which he shall fill out giving all the available data in regard to the making of the butter. This will be necessary for a complete study of the butter and report on same.

OBJECT OF THIS TEST.

This is twofold—to give immediate information to the butter-maker as to what his faults are and to suggest remedies for same and to study the deterioration of butter from a scientific standpoint to determine if possible why and how such changes take place.

It will be an education of great value to the participant if he will take hold of the matter and push for all he can get.

A SPECIAL OPPORTUNITY.

In connection with this work we want to offer a proposition that should interest every butter-maker of the State who wants to take a step forward. Last year we offered a ten days' course in starters and flavors to old butter-makers. We plan now to so arrange the work that at every monthly test, the school will be open to special students who want to make a study of the butter from the different creameries in connection with the score card and makers' report and to add to this some special work in starters and flavors. This will offer a rare opportunity for this kind of study and every Kansas butter-maker should be intensely interested in it.

IN CONCLUSION.

I wish to hear from every butter-maker or creamery manager interested in the above, at your very earliest convenience. I feel that this is of too much importance to you from the standpoint of improving our Kansas butter for you to miss this opportunity. Offer any criticism on the outline that you may see fit, suggesting any change that you think would be advantageous to your work.

Hoping that you will at once fall in with this work, I am Yours truly,
ED. H. WEBSTER,
Professor of Dairying.
Manhattan, Kans.

The Apiary.

Conducted by A. H. Duff, Larned, Kans., to whom all inquiries concerning this department should be addressed.

Something New in Swarming Bees.

A. H. DUFF, LARNED.

There has always been rather a difficult problem in controlling increase of bees, and also in making artificial swarms or colonies by any method that will give as good returns as natural swarms. A method that has been recently practiced to quite an extent, seems to have come near the desired effect, and swarms made on this plan have as a general thing given as good results as natural swarms. The honey-producer as a rule does not want swarms or increase of colonies, for increase thus is always at the expense of the honey crop. But owing to very close attention it takes to keep down swarming, which the apiarist has not always the time to give, especially when he is running several apiaries at different locations, it turns out that he loses many good swarms of bees in his absence, which means a heavy loss to the honey crop. If he could arrange to have all his colonies to swarm on one and the same day, he would not object so strongly to swarms. The plan hit upon is about the same thing; perhaps it is a little ahead. It is called "shook swarms." When the hives become strong and nearing the swarming point, the apiarist opens them up and takes out the frames and the bees are shaken off into a new hive, and enough only are left in the old hive to take care of the young brood in the combs. The new hive is prepared to receive the bees as a hive would be to receive any swarm. The bees are well smoked before shaking, so that they are well filled with honey as in natural swarming, and the colony thus formed is composed of classes of bees the same as a natural swarm, being field-workers, comb-builders, and nurse bees. They are thus left to the old stand to be-

gin work anew, and they do it with as much vigor, and in the same business-like manner as natural swarms. This satisfies the bees in the line of swarming seemingly, the same as in natural swarming.

Honey Statistics.

A. H. DUFF, LARNED.

Ernest Root, editor of Gleanings and secretary of the National Beekeepers' Union, gives us some figures on the total output of honey in the United States and Cuba. This estimate was made of the year 1899 and seems to be a very close one. He figures the output of comb honey at 50,000,000 pounds and extracted honey at 100,000,000 pounds, or all told 150,000,000 pounds and places the actual value at \$10,000,000. Putting this in car load lots he says would make 7,000 car loads. The United States census report would make 6,667 car loads, only 333 less than his estimate.

The United States honey report of 1899 shows that California produces 170 cars of honey, Texas 220 cars, New York 160 cars, Missouri 140 cars, Iowa 120 cars, Kentucky 180 cars, Illinois 135 cars, Ohio 85 cars, Colorado 81 cars, Arkansas 65 cars, figuring the cars at 22,000 pounds to the car.

Every beekeeper has his eye turned on Cuba at present, which promises to be the greatest honey field ever yet discovered. Mr. Root says, "It will be interesting to know that Cuba is now turning out something like 200 carloads of honey every year, notwithstanding only a very small portion of its bee locations are utilized, especially by modern beekeepers. We learn from official sources that we consider reliable that the annual product of honey in Cuba is as stated above. What Cuba could do easily if its territory were taken up with modern beekeeping, with its long seasons of honey flow, no one can estimate. It is not too much to suppose that it could produce in the neighborhood of 500 carloads. California has put out in one season an amount equal to this. But probably Cuba has better and more extended honey resources than any other province, State, or island on this hemisphere; and I should not be at all surprised if her annual product in ten years hence—well, I dare not estimate."

Winter Management.

A. H. DUFF, LARNED.

It is costly negligence to allow the bees to remain upon their summer stands in the same condition as they were summered. It is but a very easy matter, and also very inexpensive, to give them in some form or another some extra protection. A windbreak on the north and west is of itself a great protection to all the hives, but a better plan is to protect each hive to itself, in addition to a general protection of the windbreaks. The hives should sit close to the ground, but not directly on the ground so as to draw dampness. When thus set down they can be made and arranged more easily in a better and warmer condition, and is not so exposed to storms as when sitting high up on benches.

When we do not have a proper cellar to winter the bees in, we can add to their comfort to a great extent by using boxes large enough to cover each hive. These boxes should be good, tight ones, without cracks, and deep enough to come down over the hive and rest on the ground all round the same. The ground should be banked up a little about them, thus turning water away. We must be very careful to make a convenient entrance out through the outside box so that the bees can readily pass out and in at any time the weather is fine enough for them to fly. Entrances should face the south if possible. The bottom boards of the hive proper, if standard made hives, are about two inches longer than the hive projecting in front, and to use these winter cases every bottom should be thus, so that when the outside box is put over the hive, it is pushed up against the front of bottom board, and the entrance out through the case may be a hole from one to two inches in diameter to come to the outside without inconvenience. These boxes can readily be obtained at the grocery or drygoods stores and need not cost but a trifle. If not all of the same size they will answer as well.

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PILES

without the knife, cutting, ligature, or caustics, and without pain or detention from business. Particulars of our treatment and sample mailed free.

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"M. MCCOY."
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The Poultry Yard.

Winter Care of Hens.

Any old hen in any old place if she has her freedom will produce during spring and early summer months her full complement of eggs. It is the production of fresh-laid eggs during early fall and winter months that is the question of the hour. All hen-men and others are continually striving to have hens better calculated to produce the larger yearly yield and to have winter eggs from them, and greater progress has been made in breeding than has been reached in their management, says The Feather.

The simple little demands for success seem to be the most neglected. One tells us the hens are too fat to lay; others tell us they are not fed enough, while others cry for the balanced ration. All may be true or not and still no winter eggs. At one time we felt assured that fat hens would not lay; again, that too little food was the trouble, or the ration was not right for the producing of eggs. Now we know that all of these count for or against a winter egg-yield to a greater or less extent, at the same time we are convinced that all may be present and if properly guarded against they will not prevent at least a partial egg-yield.

There is one feature that we all seem to lose sight of, and that is the amount of green food consumed by the hen during the spring and summer. The same is true of the milk-yield of a cow. When she has given a medium supply during the winter, the amount is almost or quite doubled when she goes on pasture in the spring. As soon as spring comes the hen begins to lay. Long before the bugs come she will eat the new green food and prosper. It is quite evident that this has been overlooked. It is quite true that cabbage is hung up for them to eat and it to freeze, but will chickens prefer cabbage to grass or clover in summer when they can have both or either? We should say not. They eat cabbage or beets or turnips when they have no other kind of green food to eat.

There is no possible doubt but that the proper quality and amount of this kind of food is quite as necessary as is any of the grain foods. Even meat in winter is not of more importance than is the proper kind of green food. Of all these grass and clover are the best. If we can not have growing rye or some winter grain of this kind the very best substitute is clover-hay, and the best way to feed it is to have it cut into short lengths in a cutting-box and put plenty of it in their houses for them to scratch among and eat all they want; this with some cabbage and other vegetables will do very well.

THE VALUE OF CLOVER.

The use of clover-hay [and alfalfa clover is the best] as part of the ration for hens has become quite general. Almost every one who pays attention to a winter egg-yield feeds more or less clover. Ground clover is used as a part of the mixture for the mash. In some cases too much is given in this way, in other instances not enough. When the amount thus made use of is out of proportion it makes a mash that is not enjoyed by the hens, and for this reason it is best to limit the use of ground clover or clover-meal to that amount that seems most attractive to the hens. Have the mixture in the mash so that the hens will enjoy it and eat it up readily and in addition to this give them cut clover-hay to pick and scratch among so they will eat all the clover leaves they need. The hay should be cut quite small in a cutting-box and thrown among the straw for them to help themselves. Clover is admitted to be most useful as an egg-producing food, at the same time it is only a portion of a desirable ration. It is quite possible to give them too much of it, but not probable; more frequently they have too little of such food, and for this reason we urge a plentiful supply of cut clover-hay as above stated.

Such coarse or heavy foods demand a full supply of both water and grit for their consumption. At all times a full supply of grit, shells, and broken charcoal should be at hand for their use, and water is an absolute necessity.

ANIMAL FOOD.

No other food will take the place of meat of some kind. During the warmer portion of the year the fowls that have their freedom gain at least one-half of their food supply from insects, worms, and green growth of all kinds. Having called attention to the best method of providing the green food, provision must be made for the animal

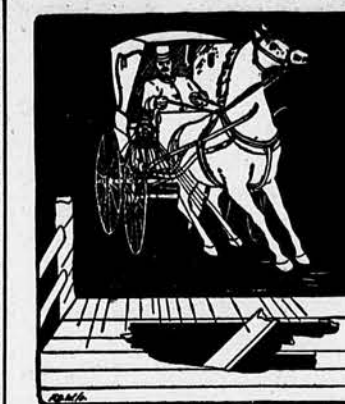
food. Nothing is better than green cut bone, but in many localities this is difficult to get, while in others it is quite expensive. When it can be had at a cent a pound or less, if the labor of cutting is not included, it is the cheapest and the best. Following this is a good quality of meat-scrap. It always pays to have a good quality of meat-scrap when that is used. Some of this preparation as sold has too large a per cent of bone in it and for this reason is neither the most economical nor beneficial.

Meat-meal is good, but always when making use of it test it by scalding. Pour boiling-hot water over it, stir it well, cover it with a cloth for a few moments, then lift the cloth and take a whiff; if it smells bad, like spoiled meat or slaughter-house cleanings, it is not good for the fowls, and in addition to this its use will spoil the flavor of the eggs that are laid by the hens that eat it. If fresh and sweet nothing is better than a good quality of meat-meal. Always be sure of its good quality when it is used. About one-tenth of the entire winter ration of laying hens should be meat of some kind. If they have a little more than this it will increase the egg-yield if joined with the other good grain ration and clover as described.

A little bit of meat now and then is only an aid to existence. If a better egg-yield is desired the hens must have a regular supply of same, within reason. All these foods must be calculated as to cost so as not to go beyond the value of the possible egg-yield. When plenty of clover and meat are given then feed but little oats or barley, for the clover gives all the husk or rough food they are capable of handling so as to work it into vital power, body sustenance, and eggs. Good common sense should be used in feeding, so as not to have too much rough food for grinding. The value of the mash food is its easy and quick passage through the crop and gizzard for assimilation in the body.

THE MASH FOOD.

Mash food is the most expensive of all that are used because more of it can be made use of in the same time than of any other food. It passes more quickly into the intestine and is used in the manufacturing department much faster than are other and harder foods. The most benefit comes from cooked food, because so little of its value is wasted



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Never in the history of medicine has the demand for one particular remedy for female diseases equalled that attained by Lydia E. Pinkham's Vegetable Compound, and never during the lifetime of this wonderful medicine has the demand for it been so great as it is to-day.

From the Atlantic to the Pacific, and throughout the length and breadth of this great continent come the glad tidings of woman's sufferings relieved by it, and thousands upon thousands of letters are pouring in from grateful women saying that it will and positively does cure the worst forms of female complaints.

Mrs. Pinkham invites all women who are puzzled about their health to write her at Lynn, Mass., for advice. Such correspondence is seen by women only, and no charge is made.

A weak heart affects all other organs of the body by depriving them of nourishment, thus the stomach, lungs, kidneys or other parts may be so affected as to lead the sufferer and his physician to mistake the symptoms for the disease. Sharp, piercing, cutting pains in the left side or shoulder; palpitation or fluttering, beating and pounding of the heart; choking or smothering sensations; gasping for breath, a feeling that death is near, these are some of the agonies that heart disease inflicts upon its victims.

Wasting diseases come from weak heart action, retarded circulation, imperfect digestion and impoverishment of the blood. The thin, pale blood can no longer nourish the body, the nerve force is exhausted and the strength falls.

The blood affects the condition of the nerves and brain as well as the muscles and tissue. If it be deficient in quality or lacking in quantity it can not sustain these parts. Rich, red vitalizing blood is absolutely essential to good health. Are you letting yourself run down? Are you losing that snap and vigor that are the mark of endurance? Then stop the excessive waste of the system, add strength and tone to the exhausted nerves and rebuild the worn-out tissues with Dr. Miles' Heart Cure. It is the great heart and blood tonic. Dr. Miles' New Heart Cure is the great body builder. It stimulates the action of the stomach and digestive organs to get all the nourishment out of the food you eat. It makes pure, rich, red blood. It strengthens, regulates, and controls the heart's action, giving it fresh power to send the new blood coursing through your veins on its health-giving mission. It acts on the nervous system which controls all the processes of the body, toning it up to a sound and vigorous action. Dr. Miles' Heart Cure brings quick relief.

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Grange Department.

"For the good of our order, our country, and mankind."

Conducted by E. W. Westgate, Master Kansas State Grange, Manhattan, Kans., to whom all correspondence for this department should be addressed. News from Kansas Granges is especially solicited.

NATIONAL GRANGE.

Master..... Aaron Jones, South Bend, Ind.
Lecturer..... N. J. Bachelder, Concord, N. H.
Secretary..... John Trimble, 514 F St., Washington, D. C.

KANSAS STATE GRANGE.

Master..... E. W. Westgate, Manhattan.
Lecturer..... A. P. Reardon, McLouth.
Secretary..... Geo. Black, Olathe.

The National Grange—Worthy Master Aaron Jones's Annual Address.

Officers and Members of the National Grange:—

We are assembled in the capital of one of the great agricultural States of the Union, as representatives of the basic industry of this country, and the largest and most influential organization of farmers in the world.

Our purpose is to consider measures that will advance the interest of our order, promote a more profitable agriculture, and advance the cause of good government to urge upon State and National government; the enactment and enforcement of just laws that will secure to agriculture, to labor and capital, a fair and just distribution of the earning of labor and capital in the varied industrial pursuits of our matchless country.

CONDITION OF THE ORDER.

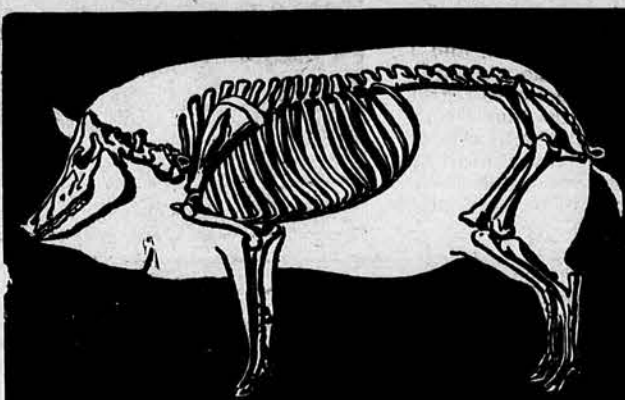
The order has enjoyed a wonderful degree of prosperity during the past year. This is true whatever view you take of it. More new granges have been organized, more granges reorganized, more members initiated in existing granges, better ritual and literary work done, meetings held oftener and better attended, and greater interest taken and more inquiry by those outside our gates. The financial condition is solvent and satisfactory, and more grange halls have been built and tastefully furnished and equipped for the uses and purposes of the order. In securing legislation, State and National, the order has been measurably successful. The work of the order is more generally commended than ever before by all the people of our country.

I, therefore, congratulate the order on the efficient work of the membership throughout the country, with its gratifying and splendid results. The work of the past year, the growth of the order, its increasing popularity, influence, and power demonstrate beyond dispute or question that farmers can, and will, maintain a farmers' organization, to promote agriculture. The grange is one of the permanent institutions of our country, whose influence is, and will continue to be, one of the potent factors to better social, fraternal and educational conditions, and to promote cooperation among the farming population, refining and elevating the standard of American citizenship.

EXTENSION OF THE ORDER.

A constantly increasing demand for information of the objects, purposes, and benefits of the Order of Patrons of Husbandry indicate that the National Grange should provide an ample supply of good grange literature fully explaining the organization, that all farmers may be fully advised of its benefits and advantages, and how they can secure membership, either in existing granges or new organizations.

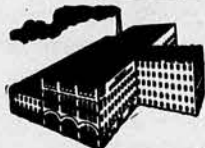
I recommend that the extension and lecture fund be continued, and that the National Grange Quarterly Bulletin, the official organ of the order, be also continued, and the issue increased and a copy sent to each officer of subordinate, pomona, State and National Granges; and that the subscription price to all others be fixed at cost. If a copy of this excellent publication could be in the home of every member of our order, the officers of the National Grange could speak to each member in the United States, keeping all advised of the work being done. The advantages and benefits of this means of communication must be apparent to all. It will advance the interest of the order and greatly benefit the membership. Placing this publication in the home of every patron will in no wise injure any grange paper published by individual or cooperative association. Nor will it take the place of agricultural or local papers, with or without grange departments. The careful reading and thoughtful study of the various matters and measures published in the Quarterly Bulletin will increase the demand for other publications. The wonderful growth, good reputation and increasing influence of the order is due



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to the high character of its membership, to its conservative and consistent course in standing above partisan, sectional or sectarian bias; and always standing solidly and unwaveringly for the right, fairness, equity, and honesty in the exchange of commodities of farm, factory, and in all business, legislative, or other matters. The order recognizes merit, culture, refinement, and Christian character as of far greater value than wealth or official position. Good men and women, observing its work and the fraternal spirit which characterizes its members, have, and are, seeking admission to membership. The future growth and permanency of the order is assured.

FIELD MEETINGS.

The field meetings of the order have been more generally attended this year than ever before, and this method of educating the people as to the work being done and the benefit of the order to the membership and the country is apparent to all. At these meetings needed legislation can be fully discussed and the farmers fully advised as to the advantages to come to agriculture by having such laws enacted by states and the national government as will give all equal advantages, absolutely prevent special privileges, and secure equitable taxation. These meetings can be made still more profitable and less expensive by systematic arrangements as to time and place of meetings, by those having them in charge, giving a little more time and care to securing the attendance of the best men and women in a radius of twenty or more miles of each field meeting, and at as early a date as possible, securing speakers and arranging the details of the program. The social feature should not be omitted or neglected. It will be understood that at any meeting of the Patrons of Husbandry, all matters of a partisan nature must be excluded.

I fraternally suggest that field meetings be held in all portions of our country, as a permanent feature of our order, and that all arrangements be made as to time and place of meetings, not later than March 1 of each year.

To increase the interests and benefits of the order, I fraternally suggest that all subordinate granges should meet once each week and that all members, who possibly can, be prompt in their attendance, and assist in all the work of the grange, and that they should strive to give, as well as receive, information that will increase the profits of agriculture, lessen the labors on the farm or in the home, or add to their attractiveness. This suggestion implies thought, study, and work on the part of every member, all of which is self remunerative, as it broadens and qualifies us for the discharge of the duties of the farm, home and citizenship. Some may urge that farmers have not the time to attend a grange meeting each week, and give the necessary thought to preparatory work. Farmers must not forget that success on the farm is not always attained by

physical labor alone. Success comes from manual labor directed by intelligence and culture. The sooner farmers recognize this fact, the sooner will agriculture take its rightful position as an occupation requiring much scientific knowledge and broad, commercial information.

I fraternally urge every member to read understandingly the constitution, by-laws, rules and regulations of subordinate, pomona, State and National granges. Every official should be required to qualify himself to acceptably discharge all official duties, to observe all the forms, and teach the beautiful, impressive and instructive lessons of the order (without the use of manual), impressing the membership with the spirit of fraternity as well as the beauties of agriculture, as taught by our order. Promptness, system and all the laws of the order, and the rules governing deliberative assemblies should be rigidly enforced, and fraternal courtesies always observed.

The literary work will give profitable employment to members, making them thinkers, writers, and ready speakers, understanding parliamentary law and usages. Especially is this feature of inestimable value to the younger members.

THE FARMER AND BUSINESS.

The farmers of the United States furnish food and clothing to its 80,000,000 inhabitants, and annually send abroad from \$600,000,000 to \$1,000,000,000 worth of agricultural products. The wealth produced each year by the farmers of the United States is greater than that produced by any nation of the world, and the amount of our productions is annually increasing to a degree not realized by our people. Hon. O. P. Austin, chief of the bureau of statistics, treasury department, says, "In the brief period since 1870 the production of corn has grown from 1,000,000,000 bushels to 2,000,000,000 bushels per annum; of wheat from 235,000,000 bushels to 535,000,000; of cotton from about 3,000,000 bales to over 10,000,000 bales; the number of animals from 102,000,000 to 213,000,000, and the value of farm products from \$2,447,000,000 to \$4,739,000,000." In the year 1901 the aggregate value is placed at \$5,360,000,000; in that year, on account of drought, the corn crop was reduced to 1,500,000,000 bushels. In the current year the corn crop is estimated at 2,400,000,000 bushels, or about 90 per cent of all the corn grown in the world.

The brief recital of the annual productions of the farms of the United States, ought to impress us with the vast responsibility resting on our order, as it is the only national organization representing this most important industry. It is a part, and an important part, of the work of our order, to make this industry more important and profitable. This can be done in many ways—I will refer to only two of them. It is our duty to cheapen production by better

and more intelligent culture, conserving fertility, lessening labor, and by increasing the product of our farms, by improving stock, and by more scientific feeding. Time will not admit of fully discussing this important matter. I will only say that, in my opinion, production can be cheapened 10 or 25 per cent, and the aggregate production of the farms in the United States increased from 50 to 100 per cent by the application of the best methods. This is the privilege, it is the duty of the Order of Patrons of Husbandry—and it will perform that duty, of teaching its members along the lines of these better methods. Every farmer and every citizen is interested in the application of these better methods. Along this line of our work, we have the good will and hearty cooperation of every good citizen of our country.

We, as farmers, are interested in finding a more profitable market for the sale of the products of the farm. In the past, the average farmer spent 99 per cent of his thought and energy in production, and only a small per cent of thought and effort in the profitable sale of what his labor and farm produced. This practice has resulted in the farmers producing annually a vast aggregate of wealth, but realizing but a small amount for their labor and use of capital. The profits were absorbed by those engaged in commerce. Some of these exactions have been excessive to a degree that left but a very small per cent of profit to the producer. It devolves on the farmer to correct all these methods, and to secure equity in the exchange of the commodities of the farm, factory, professional and official services of the people of this country. The best interest of all, when broadly considered is advanced by such equitable conditions in prices. The farmer should see that what his labor and his farm produces should go to the benefit of his family. In short, to introduce the best business methods in the distribution and sale of the products of his farm. He must depend upon himself and upon farmers in this work. He can not expect others to aid him, even by suggestions. He must adopt and apply the same business methods used, and so successfully applied, in other lines of successful manufacture and business. To successfully accomplish this, organization, thought, energy, knowledge, and business qualification, must be all wisely applied. In the past farmers have allowed others to organize business methods, and do the thinking for them. So long as this practice is continued, the farmer will fail to realize his just share of what the harvest yields.

Any people or any business that permits or allows those with whom they deal to fix the prices of what they sell, and buy, will become the servants of the one who fixes the prices. The farmers of the United States must change their

present system or financial disaster will come to them.

CHANGES IN WEALTH AND ITS OWNERSHIP.

The logic of events, and the history of our country proves the correctness of this position. In 1850 the wealth of the United States, as shown by statistics, was \$7,135,780,228, of which amount the farmers owned \$3,967,343,580, or 55.59 per cent; in 1900 the wealth of the nation was \$94,000,000,000, of which the farmers owned \$20,000,000,000, or 21.27 per cent. In the production of wealth all these years, the farmers produced more than all other interests combined. Why, then have farmers fallen from 55.59 per cent of the wealth of the nation, which they had 52 years ago, to only 21.27 per cent at this time? Farmers must seek the causes and remove them. They are many. They will be found in excessive charges and discriminations in transportation, in exorbitant storage, large commissions, shortages, unequal taxation, both local and national, dealing in options of boards of trade, combinations and corporations commonly called trusts, adulterations of food products, inequality of prices of farm products and other commodities, official and professional services, and many other causes. Many of these causes are fostered and protected by legislative enactments; but at this time we are only considering the one cause, that of the sale of the products of the farm. Farmers should provide for the sale of their products in such manner as will secure to them what justly belongs to them. To do this, the farmer should never lose control of his property until needed for consumption.

If farmers will store their grain on their own farms until needed for consumption, it will cure the evils incident to board of trade practices of gambling in options and futures and farmers will realize 5 to 10 per cent higher prices than they now realize under the present system.

COOPERATIVE ASSOCIATIONS.

Individual members may form cooperative or stock associations, such as mutual fire and life insurance companies, savings banks, trust and loan associations, building and loan companies, elevator associations, cold storage plants, warehouses, feed stations, stock exchange and sale yards, butter and cheese and condensed milk factories, and such other business arrangements as may be found necessary to facilitate the speedy and economical sale, or purchase, of the products and supplies of the farm. All business associations should be established on sound business principles, and managed by honest men with large experience and qualifications, and all transactions should be conducted on the cash system. Under no circumstances should the credit system be encouraged. The Order of the Patrons of Husbandry, subordinate, pomona, State, or National granges, should not be involved as an organization in any of these business enterprises.

NATIONAL LECTURER.

The work of the national lecturer has been of great value to the order. Wherever he has spoken a higher appreciation of the order obtains. The literature prepared and the Quarterly Bulletin edited by him, have furnished food for thought to all classes of American citizens, and have been of such character as to inspire our members to greater devotion to the order, and impress all others that the order of Patrons of Husbandry is doing a grand work in bettering agricultural conditions and improving the citizenship of our country.

OTHER ASSOCIATIONS.

The departments of agriculture in the several States and at Washington and all the agricultural colleges, without exception, are in full sympathy with and are aiding the order to improve agricultural conditions. The grange press, the agricultural press and practically all the local press of the country are friendly to the principles and purposes of our order, and have and are rendering valuable aid in our work. Other farmers' organizations, clubs, institutes, agricultural and horticultural societies, dairy and live stock associations, and all fraternal organizations that have among their purposes the elevation and improvement of society and the establishment of fraternal ties among the people,

Twentieth Century Medicine.

Cascarets Candy Cathartic are as far ahead of ancient pill poisons and liquid physic as the electric light of the tallow candle. Genuine stamped C. C. C. Never sold in bulk. All druggists, etc.

are all friendly to the grange, and encourage and aid us in our work. These friendly aids are valuable to us, and I trust the time will never come when any one of these will have occasion to regret their action. I also trust that every member of this fraternity will aid, to the extent of his ability, any and all of these associations that have for their purposes the bettering of society and the welfare of the people.

(To be continued.)

Trains for the State Grange.—Suggestions to the Committee of Arrangements.

EDITOR KANSAS FARMER:—As this will be one of the most important sessions of the Kansas State Grange held in our State and a large attendance is expected, would it not be well for the committee of arrangements at Lyndon to announce the time of the incoming and outgoing trains when they leave Topeka, Osage, and Kansas City, so that all persons interested may know how to avoid delays. We trust that delegates will come prepared for three days' earnest work for the good of the order in Kansas, as the signs of the times indicate that many accessions will be made to our order if the proper methods are used this winter. There seems to be an inquiry for cheaper insurance, for more sociability, and for an organization that will bring our people nearer together.

A. P. REARDON.

McLouth, Jefferson County.

Publisher's Paragraphs.

Klondike Incubator Company, of Des Moines, Iowa, start their advertisement for this season in this issue of Farmer. Any one desiring to invest in a reliable and excellently made incubator, will do well to write this firm for catalogue and prices.

Make your pump work easily and your windmill will turn with much less wind. The Acme Pump Governor will do it. The cost is so low and any one can attach it in a few minutes. Write Pump Governor Mfg. Co., 40 Dearborn St., Chicago, for particulars. Agents wanted. Exclusive right to territory.

WANTED—Faithful person to travel for well established house in a few counties, calling on retail merchants and agents. Local territory. Salary \$1.024 a year and expenses, payable \$19.70 a week in cash and expenses advanced. Position permanent. Business successful and rushing. Standard House, 334 Dearborn St., Chicago.

The Smithfield hams have long been famous as the most delicious that have been prepared for human consumption. A good home-cured ham is a delicacy that only the farmer can possess. The only reason why the average farmer does not enjoy this lux-



ury more frequently is because of the trouble necessary in properly curing them. It is necessary to build a smoke-house and to devote skillful attention for many days in order to be successful. E. H. Wright & Co., Station A, Kansas City, Mo., have invented a process whereby the smoke from hickory wood is converted into a liquid and in that form applied directly to the meat. In this manner it is thoroughly smoked and ready for consumption without the use of smoke-house, fire or fuel, and you have a Smithfield ham. This process is equally applicable to the curing of bacon, dried beef, sausages, bologna and fish. This new process has gained wonderfully in popular favor so that the writer during his last visit to the manufactory saw them ship out 300 dozen quart bottles to Atchison, Kans., and the same number to Wichita, Kans., in one day. When it is remembered that a smoke-house will cost from \$20 to \$25 and on the other hand that a person can smoke the meat from two hogs each year for ten years for less than five dollars with this liquid smoke, something of the advantage of using Wright's Condensed Smoke will be understood. A seventy-five cent bottle holds a quart of the condensed smoke and this is a sufficient quantity to thoroughly cure from 250 to 300 pounds of meat. The writer saw a ham hanging in the manufactory office that had been hanging there for 18 months without being touched by insects and which was of fine flavor when cooked. Write to E. H. Wright & Co., 915 Mulvane Street, Kansas City, Mo., for a little book describing this process.

Building a Reputation.

For nearly a quarter of a century past the Cash Buyers' Union of Chicago has been talking to the public through the medium of advertising, exploiting the product of their factories—building a reputation. The publisher of this paper is always interested in the success of the business organizations whose advertising appears in these columns, and care is taken to investigate the integrity of an advertiser and the truthfulness of the promises he is



Wing Fire-Proof Paint
The Only Absolutely Fire and Weather Paints in the World.
Will Stand in Any Climate. Ready Mixed. Guaranteed. Write for Estimates and Testimonials from Heaviest Users.
WING FIRE-PROOF PAINT CO., ST. LOUIS, MO

Cornstalk Disease Can Be Prevented

It is killing many cattle all over the Corn Belt. Hundreds of people who have had the nerve to try our remedy are rejoicing at the results. We are making hundreds of actual tests with our remedy and all are successful. Do not get it into your head that stock can not be protected. We protect your stock or no pay. Give us the opportunity and we will save your stock. Price \$10.00 a pall, which will protect 60 head if fed with salt. Address

National Cornstalk Remedy Co., Range Bldg., Omaha, Nebraska.

"FOLLOW THE FLAG."
5 DAILY TRAINS 5
Kansas City
.....TO St. Louis
FINEST EQUIPMENT. SMOOTH TRACK. NO DUST.
The Wabash passes through Forest Park, sight of the World's Fair Grounds in full view of all the magnificent buildings now being erected. The only line that does it.
Wabash Fast Mail No. 8, leaving Kansas City 6.15 p. m., saves a day's travel to Eastern points.
Wabash Ticket Office, 9th and Delaware Sts., Kansas City.

making before the advertisement is permitted to appear. This is for the double protection of our readers and ourselves.

During all the years past we have carefully watched the results of advertising of the Cash Buyers' Union and we know that they have always given just what they represented to give, and in no case have we ever heard a complaint from a purchaser.

The Cash Buyers' Union has been making a specialty of selling high grade sewing machines direct from their factory at a price that is less than half what it would cost to purchase similar standard machines on the old plan. They sold nearly 300,000 machines in this way and have established a reputation for integrity and square dealing—always keeping every promise they make—that is an asset worth more to them than ten times the narrow margin of profit they have allowed themselves. They are distinguished from similar houses by this strong adherence to the principle of never listing anything in their catalogues which falls below a first grade quality mark.

They make a specialty of fine hand-made harness, high grade pianos and organs—noted for sweetness of tone and lasting qualities; vehicles of every description; bicycles; fine blue steel, full weight ranges and stoves; crockery and glassware of the most famous make; cameras, jewelry, tailoring, cloaks, shirts, waists, women's suits—they can furnish your house from cellar to attic and at an immense saving.

Smoking Meat With a Brush.

In all parts of the country, among progressive, enterprising people, the smoke-house, with its risks, annoyances, and expense, is going rapidly out of use. Its place is taken, and more than filled, by Krauser's Liquid Extract of Smoke.

Messrs. E. Krauser & Bro., of Milton, Pa., have succeeded in liquefying hickory wood smoke, so that all meats formerly smoked by fire—an operation occupying many days—can now be smoked at home, in a few hours. Krauser's Liquid Extract of Smoke is applied with a brush or sponge, and has all the ingredients that preserve meat smoked by the old way. It gives hams, sausages, beef, bacon, fish, and whatever is cured by its use, a finer, sweeter flavor; keeps them from contamination by insects and mould, and is entirely wholesome. It is much cheaper and cleaner than the old smoke-house method, and permits of each piece of meat being treated to suit its own conditions—given a thick or a thin coat, as may be needed. It is so simple to apply that any one can do it and the meat can then be hung in a garret, safe from smoke-house thieves, and no loss by fire.

For further information concerning this inexpensive but valuable liquid, write to the makers, E. Krauser & Bro., Milton, Pa.

Low Sleeping Car Rates to St. Paul and Minneapolis.

The Chicago Great Western Railway has three tourist Sleeping Cars per week to St. Paul and Minneapolis. Rate for double berth only \$1.50. For particulars inquire of any Chicago Great Western agent, or J. P. Elmer, G. P. A., Chicago, Ill.

When writing advertisers, please mention Kansas Farmer.

Fall Berkshire Boars

For Sale, Quick, At A Reasonable Price

We have for sale a few choice yearlings, sired by Baron Duke 30th 50017, he by Baron Lee 4th 83446, and out of Duchess C 85th 33683. The dams of these boars are of the most desirable strains. . . .

Inspection or correspondence desired. Address
ACHENBACH BROS., Washington, Kans.
Breeder of Berkshire Swine, Double Standard Polled Durham Cattle, W. P. Rock Chickens.

OAK GROVE HERD OF PURE-BRED

POLAND-CHINAS

For Sale—A few choice Boars and 50 Glits, some bred for early spring farrow. Write, or come and see....

GUS AARON, R. F. D. 5, Leavenworth, Kas

FOR SALE INDIAN LANDS.

6,000 ACRES OF INHERITED LAND

Located in the Indian Territory, for which titles can pass. Consisting of 80-, 160-, and 320-acre tracts convenient to railroads. Good farming land—some in cultivation. Prices from \$11 to \$20 per acre. Address

WILLIAM HIGGINS,
VINITA, INDIAN TERRITORY

Cancer and Tumor

Cured Without the Use of a Knife.

ECZEMA. SCROFULA, ASTHMA,

and all forms of Skin and Blood Diseases Positively Cured.

The experience of one Topeka lady as told by herself:

TOPEKA, KANS., Nov. 10, 1902.

This is to certify that I had cancer of the nose for three years, and after being given up by all the doctors to die, I was cured by the Home Remedy Co. I can cheerfully recommend the treatment.

MRS. NELLIE ALLEN.

Between Seventh and Eighth, on Locust Street.

For full particulars, testimonials, and advice, enclose a stamp and address

HOME REMEDY CO., Topeka, Kans

AGENTS \$4 to \$7 a day selling Ideal 25c. Inhaler. Cures Catarrh, Colds, Headache, Neuralgia, etc. Sells by letting people try it. Sample 10c. **IDEAL SPECIALTY CO., 120 South 14th Street, OMAHA, NEBR.**

THE MARKETS.

Kansas City Live Stock and Grain Markets.

Kansas City, Mo., December 1, 1902. There was a good run of Western cattle here the past week, considering the lateness of the season, but the proportion of killing steers among the arrivals was light and packers were thus enabled to devote their energies to corn cattle. This resulted in a general advance of 25c to 35c on good beefs during the week. The best price in some time was realized for tops last week, John O'Malley, of Wabaunsee County, Kans., securing .615 for a bunch of 1,518-pound natives. Receipts of cattle aggregated 46,100 for the seven-day period, a gain of 16,000 head from a year ago. Now that the big run of Westerns is shut off with a certainty, the market for corn-fed beefs. Although the supply of the latter may be larger than normal, the packers can not become too bearish when they have no Westerns to fall back upon, for the reason that the marketable supply of native-fed stock can be restricted at the pleasure of the shippers. Best steers are now bringing \$5.65.

The big end of the Western receipts consisted of culling cows and bulls and these sold dull to lower. The close was a good 10c off from last week's closing figures and several droves were held over. Traders look for some improvement during the coming week. Stockers and feeders were a quiet sale, owing to the Thanksgiving holiday interfering with trade somewhat. Hog receipts were light, amounting all told to only 34,000 head, yet in spite of this the packers kept prices well jammed down and prevented a reactionary movement after the previous week's big slump. The market closed strong, however, and traders feel confident of an improvement, if receipts continue moderate this week. Freer runs, however, mean no more than steady prices, for the packers seem to have the market well in control. Best hogs closed for the week selling around \$6.15 to \$6.20, with a good end at \$6.10.

The cheap market showed slightly increased supplies, the week's total aggregating 30,000 head, compared with 24,000 the previous week and 14,000 a year ago. Lambs were woefully scarce and the market on them ruled firm each successive day. Trade quit for the week about 25c higher than the opening. At the beginning of the present week Western-fed lambs sold up to \$5 and fancy natives are now quoted at \$5.25. Auctions were in liberal supply and the run of Kansas-fed Westerns was a feature of the trade. Wethers sold for \$3.50 to \$3.90, the latter consisting largely of yearlings. Straight Western yearlings sold up to \$4.10 and operators claim they will bring \$4.25 this week. Stock and feeding sheep and lambs took another tumble towards the close of the week, prices declining 10c to 15c. Western thin lambs are now quoted at \$3.40 to \$3.50 and feeding wethers at \$2.75 to \$3.

The horse trade ruled sluggish owing to heavy receipts. On Monday, November 24, the year's record for a single day's receipts of horses and mules was broken, over 1,300 head arriving. Too many broken-down farm horses of inferior quality are coming to market, and such stock is selling low. Good horses are holding firm.

The egg market continues on a boom. First-hand fresh Missouri and Kansas stock is quoted at 21c. Turkeys advanced during the week but the edge wore off. The market after the holidays passed. Hens and gobblers are worth 10c; broilers 10c; roosters 20c to 25c; geese 7c; ducks \$1.75 to \$4 per dozen.

A weaker tendency prevailed in the cash grain market last week, but the May delivery held about steady. At Kansas City the close on No. 2 wheat was 65¢ to 67¢; No. 2 corn 40¢ to 41¢; oats, 28¢ to 33¢. H. A. POWELL.

South St. Joseph Live Stock Markets.

So. St. Joseph Live Stock Markets. South St. Joseph, Mo., December 1, 1902. There was an excellent demand for beefs, all last week, which, combined with reduced supplies, enabled sellers to make a 25c to 35c gain of the recent losses. Cows and heifers also met with ready sale and values ruled 15c to 35c higher. Stockers and feeders were in good request and the movement to the country was good with prices up 15c to 20c.

The trend of hog prices was lower the greater part of last week, with the demand good at the lower range of values. The general quality averaged good with medium and heavy weights the rule. Prices to-day ranged from \$6.05 to \$6.20 with the bulk selling at \$6.10 to \$6.15.

The sheep market was fairly well supplied with offerings predominated by Western range sheep and lambs mixed, while fed-stock was in lighter quota than for the past few weeks. The general quality was of much better average than of late. The demand ruled vigorous and prices generally advanced 25c. Feeding sheep were in reduced supply and the market showed no material change.

Lawrence Seed Markets.

Lawrence, Kans., December 1, 1902. We give you to-day's buying prices in our market. Outside prices are for best grades:

	Per 100 lbs.
Alfalfa.....	\$7.50 to \$9.00
Red clover.....	8.00 to 9.00
Timothy.....	2.50 to 3.00
English blue-grass.....	2.50 to 3.50
Millet.....	.70 to .80
Cane.....	.60 to .70
Kafir-corn.....	.50 to .60

F. BARTEDES & CO.

Hotel Oxford

And Restaurant

Frank Long, Proprietor.

European and American Plans.
804-6 Kansas Avenue, Topeka, Kansas.

The hotel has moved into new quarters and everything is modern and first-class in all its appointments.
Rates: American Plan, \$1.25 to \$1.50 Per Day. European, 75c to \$1 Per Day.

The Finest Restaurant in Kansas.
Visitors to Topeka are invited to give us a trial.

Special Want Column.

"Wanted," "For Sale," "For Exchange," and small or special advertisement 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.

CATTLE.

FOR SALE—Fine thoroughbred Jersey bull calf, cheap. F. M. McKinney, Rush Center, Kans.

FOR SALE—Twenty-three A. J. C. Jerseys—15 cows and heifers. 5 heifer calves. A son of Golden Blye imported, heads herd. They are high-class dairy cattle. Will trade for Rambouillet ewes bred. F. A. Lonner, Webster, Iowa.

HEREFORD MALES—Three 2-year-olds, two yearlings, seven calves, \$75 to \$125, sired by Socrates 75613; two unregistered calves, \$35 and \$40; ten male calves, high-grade, \$25 to \$35. A few Poland-China males, registered, 150 grade cows in calf by registered Hereford, \$25 to \$35. R. J. Simonson, Manager, Cunningham, Kan.

FOR SALE—One solid red, registered Shorthorn bull calf, 8 months old; also a few choice Poland-China pigs, eligible for register. P. H. McKittick, McCracken, Kans.

FOR SALE—Twenty-five registered Shorthorn bulls, 1 to 2 years old, well bred, good individuals, good colors, prices right. Call on or address B. J. Hobbs & Co., Whitehead, Okla.

FOR SALE—A few choice Shorthorn heifers and young bulls. M. C. Hemenway, Hope, Kans.

FOR SALE—Ten young Hereford bulls from the Evergreen Farm herd, headed by Lee 121232. Address Pearl I. Gill, Great Bend, Kans.

FOR SALE—Registered Red Polled bull, dark red, weight 1,650 pounds, \$75. F. P. Evans, Mont Ida, Anderson Co., Kans.

FOR SALE—My herd bull, Baron Knight 134946, got by Gallant Knight 124468, four years old, dark red, weight 2,200 pounds, also four Scotch-topped bulls from eight to twelve months old; all red. I also have a few cows and heifers for sale, and a fine lot of Light Brahma cockerels. J. P. Enkle, Alden, Rice Co., Kans.

FOR SALE—Guernsey bulls from best registered stock. J. W. Perkins, 423 Altman Building, Kansas City, Mo.

FIVE HEREFORD BULLS FOR SALE—Never used in a herd, they are in fine fix, at a bargain for cowmen. O. L. Thistler, Chapman, Kans.

FOR SALE—Six good Shorthorn bulls, four of them straight Orick-bred; prices reasonable; now is your chance to get a good individual. H. W. McAfee, Topeka, Kans.

SWINE.

FOR SALE—One 2-year old sow, sired by Nine Hundred Fine. She is recorded by Vick as No. 66887 B, and four of her girls sired by Chief Fortune, one sow sired by Golden Model 28448, and dam Black Rose 66888. Also one yearling sow, sired by Perfection Chip 29515. I bought this stock for a new herd, but I have now sold my in and want to sell all my hogs, which are of the prolific type. J. S. Ireland, La Cygne, Kans.

YEARLING Poland-China herd boar for sale. Grand Chief by Grand Chief 2d 55525. He will make a remarkable sire for some good breeder. Address L. W. Hamilton, Kearney, Neb.

FOR SALE—A few fine Duroc-Jersey boars, old enough for service; they are "top-notchers." If you want a herd-header, write me for description and prices. Also a few B. P. Rock chickens. J. C. Leach, Carbondale, Kans.

FOR SALE—Twenty head of Duroc-Jersey males, \$10 to \$20 each. Young gilts bred, \$15 to \$20. All eligible to record. M. H. Alberty, Cherokee, Kans.

FOR SALE—Berkshire boars, by son of Imported Commander. O. P. Updegraff, Topeka, Kans.

FOR SALE—A fine lot of pedigreed Duroc-Jersey boars, old enough for service; also my two herd boars. Onward 7249 and Jumbo Breaker 2d 14997. A few extra fine gilts. H. A. J. Coppins, Eldorado, Kans.

SWINE—Duroc-Jersey breeding stock, pure-bred and registered, for sale at \$8 to \$20, each, owing to age. Burton & Burton, East Seward Ave., Topeka, Kans.

PUBLIC SALE at Topeka, Dec. 11, 1902. V. E. Howey of Topeka, will sell 50 head of pure-bred Poland-China and Duroc-Jersey swine. A number of Jersey cattle and Shire-bred mares and horses.

A BARGAIN—Three fall Poland-China boars, 40 spring pigs; popular breeding, extra feet, legs, hams, backs, heads, and ears, slick, straight, black coats. G. W. Harman, Ridge, Kans.

HORSES AND MULES.

FOR SALE—Thirty head of 2-year-old mules—must all go together. W. V. Jackson, Coldwater, Kans.

FOR SALE—Two Jacks, coming 3 years old, and one Jennet with Jack colt at her side. This stock is all black. Also one Mammoth Jack, 7 years old. For particulars, address F. L. Rice or O. E. Madinger, Wathena, Kans.

PROSPECT FARM—OLYDES DALE STALLIONS, SHORTHORN CATTLE and POLAND-CHINA HOGS. Write for prices of finest animals in Kansas. H. W. McAfee, Topeka Kansas.

SHEEP.

FOR SALE—Nine (9) choice Shropshire rams, all registered, 6 to 8 months old. Anderson & Findlay, R. R. 2, Iola, Allen Co., Kans.

FOR SALE—Registered Shropshire rams and young ewes of choice quality and the best of breeding. E. S. Kirkpatrick & Son, Wellsville, Kans.

POULTRY.

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FOR SALE—480 acres of wheat and cattle farm land, 160 acres of it in wheat, 10 acres in alfalfa. No buildings. Sure to water, good neighborhood. Price \$2,400. Write me at Jetmore, Kans., for particulars. A. T. Eakin.

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GREENHOUSE PLANTS—A full assortment of all kinds, strong and well-rooted plants, samples assorted dozen by mail (satisfaction and safe arrival assured), for 29 cents. Coleus, carnations, roses, fuchsias, feverfew, heliotropes, verbenas, salvia, geraniums, very best sorts and colors, single, double, silver bronzed and scented; everything in plant line; lists free. Tyra Montgomery, box 186, Larned, Kans.

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PATENTS.

J. A. ROSEN, Patent Attorney,
415 Kansas Avenue, Topeka, Kansas.

The Stray List

Week Ending November 20.

Cherokee County—S. W. Swinney, Clerk.

HOG—Taken up by Melvin Pickens, in Cherokee tp., November 8, 1902, one black male hog, weight 300 or 400 pounds, no ears; valued at \$20.

Cowley County—Geo. W. Sloan, Clerk.

MARE—Taken up by W. T. Edwards, in Windsor tp., (P. O. Cambridge), one grey mare.

Greenwood County.

COLT—Taken up by G. W. Gray, in South Salem tp., one black colt, 3 years old, white speck on forehead.

Elk County—G. J. Sharp, Clerk.

STEER—Taken up by T. Chadwick, in Painterhood tp., (P. O. Busby), Oct. 15, 1902, one red and white spotted yearling steer, crop off right ear; valued \$18.

Week Ending November 27.

Bourbon County—Lydia Barton, Clerk.

STEER—Taken up by Wm. H. Levi, 2 miles east of Walkertown, one roan steer, 2 years old, crop off right ear and slit in left ear.

Woodson County—J. P. Kelley, Clerk.

HEIFER—Taken up by John Newell, in Everett, Nov. 8, 1902, one strawberry roan heifer, about 3 years old; value \$40.

Jackson County—J. W. Atwater, Clerk.

STEER—Taken up by Frederick Schultz, in Franklin tp., (P. O. Hutton), Nov. 5, 1902, one roan steer, past 2 years old, about 800 pounds, end of right ear off, left ear split, slit in brisket, and without horns; valued at \$30.

Week Ending December 4.

Marion County—Ira S. Sterling, Clerk.

COW—Taken up by J. W. Moore at his ranch in Moore tp., (P. O. Marion), November 18, 1902, one red cow.

Graham County—R. B. Garnett, Clerk.

MARE—Taken up by C. Saunders, (P. O. Happy), August 9, 1902, one light bay mare, weight 900 pounds, white spot on forehead; valued at \$25.

Elk County—G. J. Sharp, Clerk.

STEERS—Taken up by T. M. Carter, in Howard tp., (P. O. Howard), November 15, 1902, one 2-year-old brindle steer, under crop off right ear; valued at \$20. Also one 2-year-old red steer, letter L or T on left hip, spots and crop off right ear; valued at \$20.

Wabaunsee County—B. Buckli, Clerk.

COW—Taken up by Geo. Ketterman, in Alma tp., (P. O. Alma), November 15, 1902, one dark red cow, swallow fork in right ear and slit in left, dehorned; valued at \$35.

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stating just what you want.

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100 head for this year's trade; all eligible to record.

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DUROC-JERSEYS FOR SALE—Choice July, Aug., and September pigs for sale, both sexes; also 4 1901 bred sows. Prices reasonable. Newton Bros., Whiting, Kas.

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Stock of both sexes for sale.

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Sixteen choice, vigorous males of spring farrow, and 25 head of extra good gilts, either bred or open; best of breeding. Come and see them, or write your wants. Prices reasonable. **J. F. CHANDLER**, Frankfort, Kas

MAY'S Duroc-Jerseys.

Higgin's Hero 11889 at head of herd. Choice spring pigs of both sexes for sale.

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A choice lot of boars ready for service, and gilts ready to breed. Also August pigs now ready to wean. All from large, prolific old sows.

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Standard Herd of Registered Duroc-Jerseys, Red Polled Cattle and Angora Goats.

Swine herd headed by BIG JOE 7363 and OHIO CHIEF Cattle herd headed by KANSAS 8305. Young stock for sale in season. **PETER BLOCHER**,
RICHLAND, SHAWNEE COUNTY, KANSAS.

Golden Rod Herd of Prize-winning Duroc-Jerseys

Van's Perfection 11571, sweepstakes boar at all State Fairs of '02, at head. Both fall and spring pigs of both sexes and of his get for sale.

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FOR SALE: 20 boars ready for service; sows bred or open. 100 spring pigs.
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Has some extra fine gilts bred; also some fall boars. Will sell Sen. I know, he by Perfect I know.

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Jno D. Marshall, Walton, Harvey Co., Kas

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I keep constantly on hand all sizes and ages of high-class Poland China pigs. Quality high, prices low. Write for description and price to

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TWO GREAT HERD BOARS FOR SALE.

One son of Chief Perfection 24, one son of Perfect Perfection; both good. Will sell cheap to deliver December 1st or after. Have just weaned 5 splendid litters of September pigs, grandly bred and all O. K. Will sell 3 for \$25; not akin if wanted. Ten aged sows all tried and found good enough. Sixteen spring gilts, 4 spring boars, 1 yearling boar, all at bargain prices.

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Big-boned only. PLEASANTON, KANS.

WAMEGO HERD**POLAND-CHINAS**

With Black Tecumseh 25118 at head, he by Big Tecumseh 24429, a grand individual, and sire of large, strong, growthy fellows, nearly perfect in color, coat, and markings. Large M. B. turkeys and B. P. chickens for sale. Correspond with me at Wamego, Kansas, Pottawatomie County. **C. J. HUGGINS**.

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FOR SALE Poland-China Hogs, Holsteins-Friesian Cattle; either sex. Best strains represented. **H. N. Holderman**, Rural Route 2, Girard, Kans.

A. B. DILLE & SON, Edgerton, Kans.
HAVE A FINE LOT OF YOUNG

Poland-Chinas
of the best blood, both sows and boars, at reasonable prices. Sows bred if desired.

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FOR SALE: Six 8 and 10 months old boars, every one a show boar and as good as I ever bought to use in my herd. Also 150 spring pigs that are immense.

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SHADY LANE STOOK FARM

HARRY E. LUNT, Proprietor,
Burden, Cowley Co., Kans.

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Elmdale Herd of High-Class Poland-Chinas

W. L. REID, Prop. R. F. D. 1, North Topeka, Kans.

Shawnee Chief 28502 at head of herd. Have for sale choice boars and gilts at living prices. Will have sows bred to Shawnee Chief or a son of Chief Perfection 24.

THOROUGHbred**Poland-China Hogs.**

Special price for next 20 days on 10 bred gilts, to farrow in April and May; they weigh from 200 to 275 pounds, and most of them are bred to Black Perfection 27132, the best breeder I ever owned. Also 20 fall pigs, and 4 boars large enough for service. 100 head in herd. Write for anything you want in Poland-China hogs.

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PECAN HERD OF POLAND-CHINAS

Having sold our farm here, we will make close prices on our

Poland-China BOARS AND GILTS

Have a very fine lot to select from. Sired by Model Tecumseh, J. L. Best, and U. S. Wilkes.

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IG BONE
ROAD BACKED
BERKSHIRES . .

A few fancy young boars ready for service. Orders booked for spring pigs.

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Poland-China Hogs.

400 head in herd. Fashionably bred sows and gilts bred to Broad Gauge Chief 25733, first prize winner International Show 1900, and Simply O. K. 24290, first prize winner Missouri State Fair 1901. 200 winter and spring pigs in special offer. Bargains in Registered Stallions and Mammoth Jacks. Also SHORTHORN AND POLLED DURHAM CATTLE.

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BREEDER OF
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Farm is two miles northwest
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Perfection 11705, sweepstakes boar, 1901, and Pan America 11943, first prize, New York State Fair, first, Michigan State Fair, and first in class at Pan-American Exposition, at head of the herd. The champion herd, Nebraska State Fair, 1902.

Choice spring pigs of both sexes for sale.

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Possessing rare quality, substance and finish, of April farrow. Also, October pigs for sale.

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Herd headed by Premier 4th 55577 assisted by Butger Judge 2d 61106.

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Imp. Elma Lady 4th 44668, the highest priced Berkshire ever sold in Kansas City, is in our herd and there are others like her. Inspection invited six days in the week.

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Herd now numbers 118 head. Young bulls for sale.

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Herd Bull, Imported British Lion 133699.
Young stock for sale.

Registered Herefords.

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Special Offerings: Young cows and heifers, and few bulls for sale.

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Scotch-topped Young Mary females with 9th Knight of Elmdale 161507 at head. Call on, or write,

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FASHIONABLE
POLAND-CHINA SWINE.

REGISTERED BULLS FOR SALE.

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Scotch and Scotch-topped
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Two Scotch bulls in service. Representative stock for sale. Address

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Having sold the most of my herd, I have left for sale 5 fine yearling bulls. Write me for particulars. I will sell them cheap. **E. S. Cowee**, R. R. 2, Burlingame, Kas

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Also German Coach, Saddle, and trotting-bred horses. World's Fair prize Oldenburg Coach stallion Habbu, and the saddle stallion Rosewood, a 16-hand 1100-pound son of Montrose in service. Visitors always welcome.

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SHORTHORNS headed by Victor of Wildwood, by Golden Victor, he by Baron Victor. Late herd bull Gloster 137852. Polands headed by Glenwood Chief Again. For Sale—Choice young bulls; also some 68. Prices right. Choice fall boars and gilts cheap. Visitors invited. Correspondence solicited. Address

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Inspection or Correspondence Invited.

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Rural Route No. 5, Ottawa, Kansas.

Giltsup's Knight 171591 at head of herd. Young bulls ready for service for sale.

A Herd of Red Polled Cattle For Sale.

Headed by Falstaff 3d, the champion of the breed. The show herd has been the leading winner at all the Western State Fairs this year. Address the owner and breeder,

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Consisting of nine 1 and 2 year old bulls, fifty cows from 2 to 10 years old, and twenty-five calves by the side. The get of Royal Bates 123675. Biggest Shorthorn Bull in Kansas. Cows bred to Captain of Mayflower, Red Rover, or Royal Bates. Everything in good shape. Call or address, **Louis Hothan**, Carbondale, Kans.

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"ANXIETY WILTONS."

Printer 66684, a son of Beau Brummel 51817; March On 14th 106678, a son of March On 76035; Good Sign 140387, a son of Printer 66684, are the bulls in service. Some excellent young things—both sexes—for sale. Keep your eye on South Omaha, January 22 and 23

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Good males of both Double Standard and High Grades. Inspection invited.

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Advance Guard and Lavender King yearling bulls for sale. **D. K. KELLERMAN & SON**,
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POLLED DURHAMS.
Three choice D. S. bulls, strong in Polled blood, 8 Cheviot rams, and 30 Shropshire ewes, also registered Angora bucks.
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Farm is 2 miles south of Rock Island depot.
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RED POLLED CATTLE.

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FOR SALE—A few calves, also Prize-winning Light Brahma Chickens. Call, write or telephone.

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BULLS IN SERVICE: Healed 2d 40679, March On 6th 96537, Healed 85th 116352, Onward 2d 118599

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The Oldest and Largest in the United States.
Splendid recently imported bulls at head of herd. Registered animals on hand for sale at reasonable prices at all times. Inspect herd at Allendale, near Iola and La Harpe; address Thos. J. Anderson, Manager, Iola, Allen Co., Kans., R. R. 2, or—
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Breeders of Scotch and Scotch-topped
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The prize-winning bull, Scott Junior 124222 at head of herd. Choice young bulls and heifers for sale
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Herd headed by Hale Lad 30645. Herd numbers 250 head, the largest herd bred by owner in America. Stock for sale. Address
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GALLOWAYS
...FOR 1902...
Up-to-date Galloway Cattle, All Ages, For Sale.

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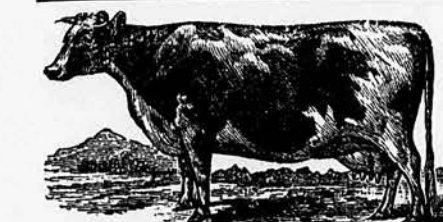
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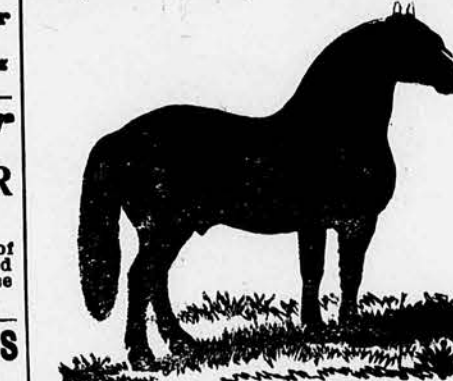
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63--STALLIONS--63

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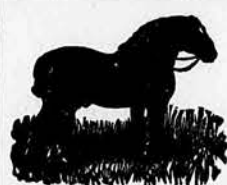
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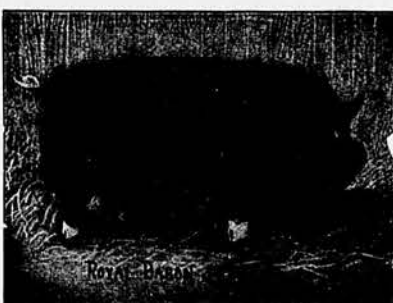
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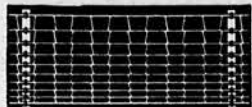
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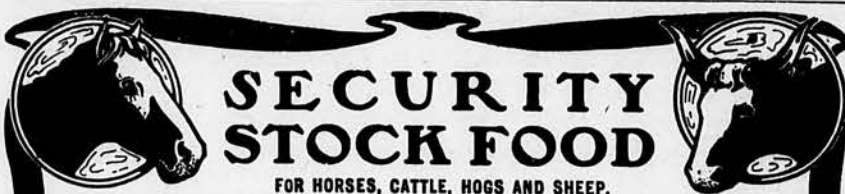
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70-Choice Registered Heifers-70

The grand opportunity for cattlemen will be found in the Groom Shorthorn sale of seventy head of heifers and young cows, all range bred and registered.

Will sell at Wichita, Kansas, on Friday, December 12, 1902.

Regardless of weather, in the warm and comfortable Sale Barns, at the WICHITA UNION STOCK YARDS. All heifers are bred to our best bulls—none better anywhere! All cows offered are young and just from calf.

These cattle are range bred, grass fat, and have not been pampered, therefore show exactly what they are. They will bring you more sure money because they are fully acclimated and accustomed to field work.

THESE WILL SELL

When they go to the hammer they are in your hands and will sell for the highest bid offered regardless of the amount.

This is your chance to get the best blood in America, in Shorthorn heifers and young cows. Every individual bred in the purple and just what you want.

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and attend this sale, the first of its kind ever held in Wichita. Avoid high freight by purchasing nearer your homes. Buy the best and you will never regret it.

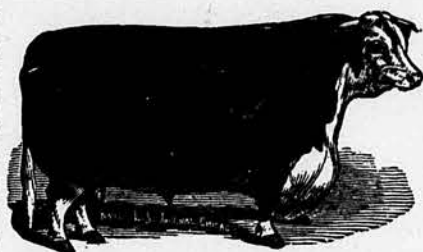
At Wichita, Kansas, December 12, 1902.

FOR FURTHER INFORMATION, ADDRESS B. B. & H. T. GROOM, GROOM, TEXAS.

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Dispersion of Maple Glen Herefords, property of
T. H. Pugh, of Carthage, Mo., at the Kansas City
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13 BULLS—good ones, 6 imported, including a half brother to Unionist, first at Hereford and Evesham, half brother to Bruce (sold to O. Harris for \$1,300). These two were bred by Morris. Also half brother to Evolution, winner at Hereford and Evesham, that succeeds Mr. Nave's \$8,000 Protector, at Lower Eaton, half brother to Lady Polly, winner at Hereford and Evesham.



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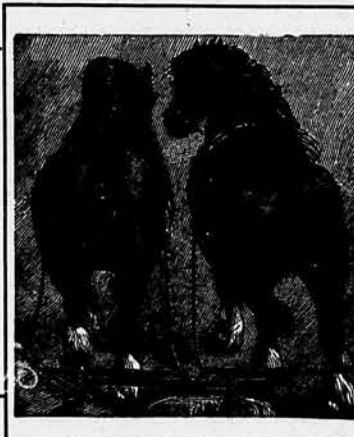
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All deeply bred to Brilliant
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