

# KANSAS FARMER

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## BREEDERS' DIRECTORY.

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EGGS! 50 cents and \$1 per setting, from seventeen varieties of prize-winning Chickens. Largest company in the West. Send stamp for illustrated catalogue and price list. Harry E. Gavitt & Co., Topeka, Kas.

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Has won more prizes in 1892 and 1893 than any other herd out, including championship at six State fairs and World's Columbian Exposition on Iowa Davysen 10th 3149. His calves for sale. Write. WM. MILLER'S SONS, Wayne, Neb.

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Of Large English families. Longfellow's Model, Major Lee and other prize-winning sires. First and second aged herds, first and second young herds, sweepstakes boar and sweepstakes sow at Kansas State fair. Pigs, all ages, in pairs and trios. G. W. BERRY, Berryton, Shawnee Co., Kas.

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Large Berkshires, S. C. Brown Leghorns and Bronze Turkeys. On H. & St. Joe, 28 miles northeast of Kansas City.

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BERKSHIRES. Two hundred head. All ages. Fifty boars and forty-five sows ready for buyers.

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Exclusively. Young stock at all times. Satisfaction guaranteed.

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Won six prizes, including first blue ribbon west of Mississippi at World's Fair. Stock all ages for sale.

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Short-horn cattle and Poland-China hogs, bred by C. C. KEYS, VERDON, NEB. Prince Byron 10513 heads the herd. Stock for sale at all times. Visitors welcome. A fine lot of young male pigs for sale. Farm two miles north of Verdon, Nebraska.

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Won seven prizes at World's Fair—more than any single breeder west of Ohio.

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Graceful's Index 9289 S. 27089 O., sire Seldom Seen 2d 23045 O., dam Graceful L. 28768 O. He was the sire of the Kansas World's Fair winners that won first, third and fourth prizes.

## RIVERSIDE HERD

## Poland-China Swine.

For sale sows bred to farrow in March, April and May. Also young stock at reasonable prices. At all times. Satisfaction guaranteed. Correspondence as well as inspection invited. J. V. RANDOLPH, [Established 1888.] Emporia, Kas.

## WALNUT GROVE STOCK FARM.

## POLAND-CHINA SWINE.

For sale, aged and young stock at reasonable prices. The stock is select bred, of best strains and good individuals. Call or write for catalogue. Let me know what you want, and the matter shall have prompt and satisfactory attention.

W. B. MCCOY, Valley Falls, Kas.

## Wholesale Prices!

Thos. D. Hubbard, twenty years a wholesale merchant in New York city and Columbus, Ohio, having come to Kansas for his health, will supply at wholesale prices, Barbed Fence Wire, Wire Nails, Galvanized Chicken Fence Netting, Glazed Windows of all sizes for poultry houses, barns and other buildings, and all other requisites for breeders and farmers, free on board cars at St. Louis or at your own depot. For fuller information, address with stamp, THOS. D. HUBBARD, Kimball, Kansas.



## Agricultural Matters.

### THE LAND AND THE METHOD.

EDITOR KANSAS FARMER:—While the American agriculturists have reached a high standard of systematic farming, so far as the natural productions of the soil is concerned, there still remains in the minds of many of our best posted men, the important question of stock-raising and farming combined and the location and methods to obtain the best results. In order to intelligently consider this question, we must first admit that the methods necessary to successful farming in one locality would be detrimental to the productions of another.

We should consider the cost of the natural productions and also the cost of the artificial assistance to the soil, as well as the value of the increased yield caused by artificial aid in the various localities. For instance, the New England farmers, whose soil once contained the ingredients necessary to the productions of ordinary farming, has long since become so exhausted as to make fertilizing to the amount of several dollars per acre necessary to successful husbandry. Indiana, Illinois, Wisconsin, Iowa and Missouri, all have fertile lands that were, but a few years ago, so wet that it was then absolutely worthless. These lands were purchased at a very low figure, after which the enterprising yeomanry established a system of drainage that makes it possible for the abundant productions that now reward that energetic people.

Nebraska and Kansas, and especially the western half of these two States, among other things necessary to obtain the best results, is the important matter of irrigation, which has passed the experimental stage so far as the increased yield of farm products is concerned, and is now resting on the question of which is the best and cheapest system. Many writers honestly yet erroneously condemn a country because of some of the methods applied for the artificial aid to the soil for the increase of its productions, and lose sight of the fact that the results from such labor and expense is duly and favorably recognized by all systematic farmers of their respective localities. As an example, take the flat prairie lands of central Illinois in the early stage of cultivation, when from fifteen to twenty bushels of corn per acre was their natural yield, and since the improvement by drainage the same land readily produces from forty to sixty bushels of corn per acre, besides, the land is now worth five times what it was before the improvement was made.

Here in Kansas we have rainfall enough every year to produce abundantly, provided we could retain what water falls, but with the greater portion of our land in its wild state the rain readily runs off of the sod and passes away in the streams, so that in the extreme dry years our crops will be cut short until such time as a larger per cent. of the land will be cultivated and retain the water where it falls. Experience has taught us here, that the lands that are worth from \$5 to \$10 per acre will produce on an average from fifteen to twenty-five bushels of wheat per acre without irrigation and when aided by irrigation it readily yields from forty to fifty bushels per acre, which leaves the farmer a large profit above the expense. It is true that the Eastern producers have an advantage over the West at the present time on account of the markets, but the improvements at Galveston harbor will soon make that a rival to the New York market, and then, considering the cost of production in the East, compared with the West, will aid us in the selection of a favorable locality.

While the methodical farmer will lead in any country and prosper, the immigrants coming to a new country (and this applies to many new settlers that are now locating in southwestern Kansas) are liable to be influenced by some Eastern writer, whose knowledge is entirely foreign to the necessities of the West, or others may err by applying the methods of their former homes. Our mild climate has misled some of our older settlers to the belief that they

can keep stock through the winter without providing feed or shelter, but this is too hazardous. This winter, however, stock has done remarkably well on the native grass, without feed, and passed through the recent storms up to the present time, March 1, with safety, but to depend on such a fortunate condition as that would ultimately result in loss.

There is a prevailing opinion among many of the Eastern people, who have never visited southwestern Kansas, that it is a sandy desert of arid land not susceptible of cultivation, when, in fact, it is a nice, smooth, fertile prairie with a deep, rich, black soil, with productive qualities that cannot be surpassed in any country. Let us then, before abruptly arriving at an opinion that this country is too wet, or that is too dry, or that another is too warm, or another too cold, lay aside our prejudices and investigate for ourselves, figure in a clear and conservative manner, which will eventually lead us into an avenue through which we will ultimately pass to a destiny of future prosperity. We should study well the conditions in our respective localities and adapt ourselves to the country in which we live and its resources, the result of which will be abundantly adequate to our expectations and to which the American agriculturists can point with pride.

NOAH HARDY.

Jetmore, Hodgeman Co., Kas.

### Broomcorn Culture--No. 4.

EDITOR KANSAS FARMER:—Set machine, so the dust will blow away from the shed, but near and convenient enough that no time will be lost in getting the brush from machine to shelves.

When the blossom appears, or the head is well out of the boot or sheath, put breakers to work. Start in at the end and between two rows (now these are the two rows made with the two-horse planter, and the width will always be the same, a great advantage in tabling broomcorn), walking backwards, breaking (what can be grasped in the two hands) alternately from each row, laying tops of each row so that the heads will lay on and hang just outside of the table. Every stalk should be broken square, taking particular pains to lay heads of right hand row so they will hang just over the edge of left side of table, left hand row vice versa. Every head should be in sight. This is important, and should not be overlooked. The heads should not extend past the side of table farther than the point where the stalk is to be cut, and should never be left inside or on top of the table. Cutters that have to search for brush cannot be expected to make much speed. Broomcorn is tabled for the convenience of cutting and to accommodate the cut brush, and particular pains should be taken to see that it does not fall short of the purpose intended. Three good tablers in good corn, one or two rounds ahead, can table for a full set of cutters.

The cutting should follow right up. Provide cutters with short shoe-knives and a small whetstone for each cutter. When it can be done (and do so by all means, if possible), hire an expert cutter to superintend the cutting, even if he has to be paid the wages of two men. Broomcorn cutting is a profession, and there are but few men who can go into a field and cut with any speed until they have learned how, and worked at it several days. The trouble is to cut the brush off and at the same time leave the boot and upper blade on the stalk. It takes just as long to pull the boot off if left on the brush as it would to cut another brush, and the time lost with a green hand would amount to from one-third to one-half day in a day's work. Cutters will pile the brush on alternate tables, laying butts all one way, and the brush crosswise of the table. The brush should be cut five or six inches long; that is, five or six inches of the stalk should be left on the brush. This is something that will require a great deal of attention from the foreman in charge of the cutting, especially with green or inexperienced men. They will (in their efforts to cut fast or keep up with the crowd) get their brush all lengths, and about equally divided between the table and ground, heads and tails, all mixed. It costs more money

to take care of brush badly piled than to cut it. Broomcorn is never cut right until it is piled straight, even at the butts, in small bunches and crosswise of the table. The main thing is to get the brush straight when cut, and keep it straight until the wires are tied on the bale. The management of this is a very important feature in the broomcorn business. If talking, singing and telling stories, in fact, any noise that is made for the purpose of attracting attention is allowed, the result will be a loss to the business in the way of cut too short or too long brush, piled badly on the table or piled lengthwise of the table to fall through (when shaken), top blade and sheath left on for some one else to take off, in fact, general indifference as to how the work is done will soon be the rule. We made the arrangement with and expected our men to devote their entire attention and time to our business ten hours, every work day, and I firmly believe on this, more than anything else, depended our success in handling broomcorn brush. My advice to a man who cannot manage hands economically as to time, and enforce a few simple rules, better not go into broomcorn.

A. H. COX.

Quincy, Kas.

### Notes From the Agricultural College Farm.

Grass seeding is in progress this week. Twenty-four acres are to be seeded to mixed grasses and seven acres to alfalfa. It is all to be drilled in by a shoe drill with press wheels. This is our regular grain drill. The mixed grass seed consists of the following per acre: Thirteen and one-half pounds orchard grass, ten pounds English blue grass and five pounds of red clover. The grass seed and clover seed is mixed in the proper proportion, and "cross drilled," putting half the amount in at each drilling. The seed is covered by one-fourth to one-half an inch of dirt, and is down in a furrow, that the drill leaves, about one and a half inches deep. Some of the ground was in corn and some in millet last summer. All was "fall-plowed," and received no further treatment until this spring, when it was gone over with a large plank "float," and this left the ground in fair condition, but a little loose and rough in places.

Oat seeding was finished Friday. This is about two weeks earlier than the regular seeding is generally done. The first seeding, March 1, is appearing above ground. Several new varieties have been received for trial, which will be planted with thirty tested varieties which have been the highest yielders in former experiments. The rest of the experiments are a repetition of last year's, with a few modifications.

A new lister grain drill has been received for trial. It is for drilling wheat or oats. The little lister plows are a foot apart, and can be made to leave a furrow six inches deep, and cover the seed about one inch deep. This can be used to seed on corn or grain stubble or plowed ground. The seed is put down where the ground is moist, and if there is any rainfall the furrows will get the most of it.

Several sales of live stock have been made the last week. Mr. A. C. Thompson, of Ellis, purchased a young Short-horn bull, two cows and one calf. J. W. Stuckland, Esq., of Junction City, takes a young Short-horn bull and a heifer.

The college never had a better lot of Short-horns for sale. The bulls are by imported Craven Knight. This will probably be the last chance to get his calves, as he is now over six years old and is past his usefulness.

The college herd has received its annual bath of kerosene emulsion. The following mixture is used: Two quarts of water, one-fourth pound hard soap, one pint kerosene. One pint of this is mixed with three pints of water, and applied with a rag. It will take off a little hair sometimes, but does no harm in the spring. After the cattle are turned out to pasture, everything in the basement is gone over with a coat of whitewash. With this treatment the herd is kept free from lice. Where cattle are tied up in stalls, as the college herd is, they will get very lousy if some such treatment as this is not used.—F. C. Burtis, in *Industrialist*.

## Fat

is wanting in most foods, or, if present, is not assimilated. The result is loss of flesh and strength.

## Scott's Emulsion

the Cream of Cod-liver Oil, is a palatable, easy fat food that any stomach can retain and any system assimilate without effort. It gives flesh and strength. Physicians, the world over, endorse it.

Don't be deceived by Substitutes!

Prepared by Scott & Bowne, N. Y. All Druggists.

### Forked Stick for Locating Wells.

EDITOR KANSAS FARMER:—I notice in KANSAS FARMER, February 28, "P. D." Alta Vista, writes to inquire for the most certain way to find water and establishing wells. I suppose he means where and how to find water veins. Some men can find water by the use of a forked stick, that, held in a certain position, can trace veins anywhere that they exist in the soil. I learned, some years ago, from an experienced hand that there is no science in it. A doctor told me that in the hands of a man who could stand a heavy shock of electricity, the forked stick would work successfully. I have read no books on the subject, but I know from what experience I have had, that I can locate a well wherever there are veins. But sheet water has no effect upon the stick. I would like to hear others give their experience through the FARMER. This was an exceedingly dry season. I located over a dozen wells which have given satisfaction. JOHN W. WILSON.

Talmo, Kas., March 8, 1894.

### Weather Report for February, 1894.

Prepared by Prof. F. H. Snow, of the University of Kansas, from observations taken at Lawrence:

The past month was considerably colder than the average. Five other Februaries on our record, including February of last year, have been colder. The sixteen-inch snowfall of the 11th and 12th was the largest single fall on the record. One and one-half inches of water resulted from the melting of the snow, which, together with the heavy rainfall of the 9th, gives the month an excessive precipitation. Cloudiness, humidity and barometer, normal. Wind velocity, high.

Mean temperature was 27.52°, which is 4.26° below the February average. The highest temperature was 53.5°, on the 27th; the lowest was 2°, on the 15th, giving a range of 56.5°. Mean temperature at 7 a. m., 21.8°; at 2 p. m., 34.1°; at 9 p. m., 27.52°.

Rainfall (including snow) was 2.75 inches, which is 1.28 inches above the February average. Rain or snow in measurable quantities fell on three days. The entire depth of snow was 16.5 inches. There were three days on which rain or snow fell in quantity too small for measurement. There were no thunder showers.

Mean cloudiness was 46.20 per cent. of the sky, the month being 0.88 per cent. clearer than usual. Number of clear days (less than one-third cloudy) thirteen; half clear (one to two-thirds cloudy), seven; cloudy (more than two-thirds), eight. There were two entirely clear days and three entirely cloudy. Mean cloudiness at 7 a. m., 54.30 per cent.; at 2 p. m., 47.30 per cent.; at 9 p. m. 37 per cent.

Wind was north twenty-six times; east, six times; south, five times; northeast, five times; west, four times; southeast, two times; southwest, twenty-four times; northwest, twelve times. The total run of the wind was 12,087 miles, which is 972 miles above the February average. This gives a mean daily velocity of 431 miles, and a mean hourly velocity of eighteen miles. The highest velocity was sixty miles an hour, between 8 and 4 p. m. on the 17th.

Barometer.—Mean for the month, 29.249 inches; at 7 a. m., 29.243 inches; at 2 p. m., 29.232 inches; at 9 p. m., 29.272 inches; maximum, 29.817 inches, on the 23d; minimum, 28.412 inches, on the 9th; monthly range, 1.405 inches.

Relative Humidity.—Mean for the month, 72.4 per cent.; at 7 a. m., 83.8; at 2 p. m., 57; at 9 p. m., 70.5; greatest, 100, on several occasions; least, 27, on the 5th. There were two fogs.



## The Stock Interest.

### THOROUGHbred STOCK SALES.

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

APRIL 18—Sotham & Co., Herefords, Chillicothe, Mo.  
OCTOBER 4—C. C. Keyt, Short-horn cattle and Poland-Chinas, Verdon, Neb.

### INJUDICIOUS MARKETING OF SHEEP.

One kind of congestion is threatening the sheep industry more than any congestion of blood in the various internal organs of the sheep. A congested condition of the stomach, lungs or brain of a sheep is confined to one sheep alone. The congestion to which I refer is a congested condition of the various sheep markets of the United States and especially the Chicago market. One would infer by reading the reports from that market in the various journals, that the owners of flocks had all been seized with a united desire to sweep out of existence at one grand move, one of the most important industries as well as one of the most profitable, on an average, of any of the farm-food animals produced by the skill and industry of the husbandman.

It seems but a very short time ago to many of us when the same craze ran like a vast prairie fire over the territory where such fires raged about two decades ago, and so crippled the industry in certain States that the rural population of the same have never fully recovered their standing as first-class farmers. When I get down to hard thinking on the sheep industry I wonder why sheepmen get so badly scared when the protection question is mentioned by our politicians. I can see no way of solving the problem. In the days when the sheep were kept only for wool there was some reason for a partial action in this line, but in the light of our present condition of the sheep industry I can see no reason for grumbling at the low price of wool but to change front in a better selection of breeding stock, remembering that the flesh of the flock is as much sought after as the fleece.

I can see no other reason for this congestion or offer no other solution as a preventive of recurrence than to state that sheep-growers have been placing too much stress on the wool product alone and protection. The fallacy of the former condition is made manifest when we learn that the increase of the flocks of the United States at the present time is all consumed for food. If the same care should be devoted to the production of a sheep as a food animal that has been done in the past to make the American Merino a wool animal there will be still greater demand for the flesh of the sheep, and the natural trade in this line will prevent any congestion in the markets more than that which is found in the market of any other food animals. They will be better prepared for the market and will be presented for sale in such condition and at such times as will best serve the market instead of ruinous attempts to unload when everybody else is unloading. The sheepman should protect himself as far as he is able by the production of a combination animal with mutton first and foremost in the combination. Protect the flock against the ravages of dogs and wolves, selecting the best for breeders, feed and shelter well and all will be well.

Recently the receipts of sheep in the Chicago market have been the largest ever received in that great market. It was caused by the insatiate desire to unload the sheep for fear something would happen to bankrupt the owner—the same as a run on a bank. Whenever steps were taken to unload the owner took one step toward bankruptcy. In one day 35,000 sheep were on the market, with a demand for only 15,000, leaving 20,000 over till the next day, and the run that day was almost in keeping with the day previous. The prices which prevailed in such a congested market could be nothing else than ruinous to parties holding sheep in the market. There is one good that can come from this congested condition of the markets. The scrub, the poorly fattened and the old sheep will all be sent to the market and they will not be on hand when the general clearing up

takes place. This congestion will not only do good in this line, but it will have a tendency to make a better market for those who are not going out of the sheep business.

I would suggest to the sheepmen that they keep no sheep but those that are worth their face value—that is, always worth their actual value, no matter what the price of wool. Why not breed and feed the sheep in the same manner as hogs are kept on the farm? When this plan is adopted by all sheepmen there will be a congested condition of the pocketbook instead of a congested condition of the sheep market. — *Correspondence in Breeder's Gazette.*

### Hogs and Alfalfa.

By R. E. VanHuss, read before the sixth annual meeting of the Finney County Farmers' Institute, February 2 and 3, 1894.

I believe the hog industry is one of the most profitable for farmers in this country, when properly managed.

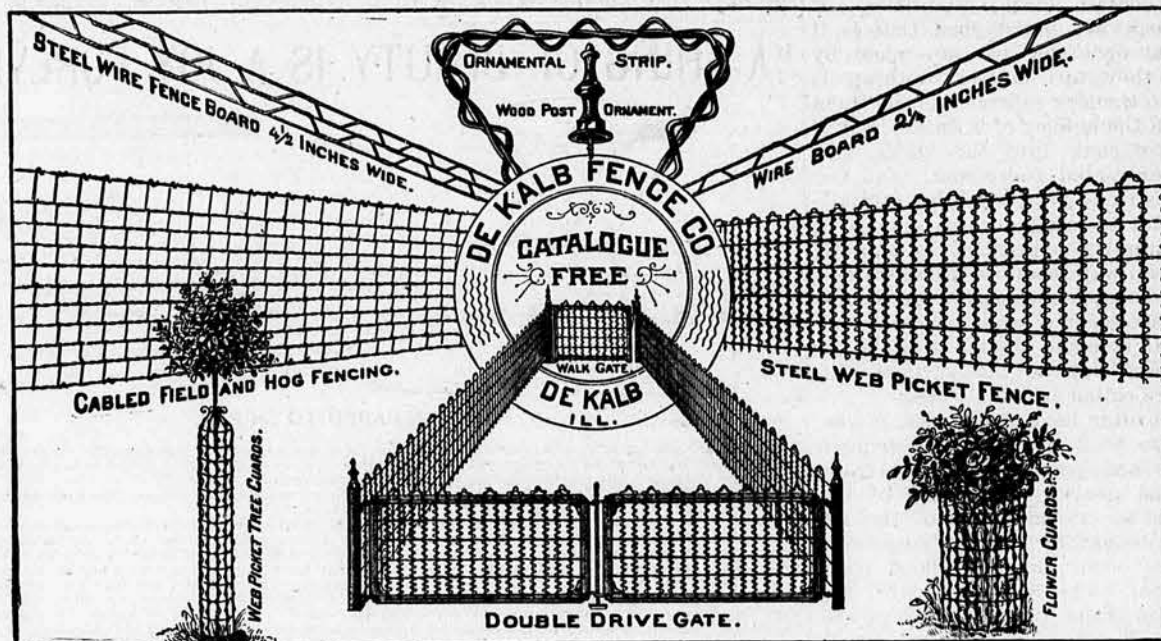
I will give you my experience in the business in this county. I came here seven years ago, bringing with me, among other things, three small pigs. I sold two of these and kept the other. The first pig I ever sold of my own raising here, I traded for one bushel of alfalfa seed, which at that time was valued at \$7 per bushel, hogs being about the same price per hundred pounds. I sowed the alfalfa seed in the spring of 1888, and in the spring of 1889 I fenced one acre hog-tight, and turned in ten head of hogs. They did very

do not think this the most profitable way for Finney county farmers. I think the most money for us will be to sell stock hogs at six months old. These we can raise on alfalfa without any grain whatever, and can therefore produce them ready for the cattle-feeders in the corn districts east of us cheaper than they can be produced even in the corn districts. One or two farmers may not be able to do this, but if all of our alfalfa farmers, or a large number of them, will give up part of their acreage to raising stock hogs, cattle-feeders will soon come right to our doors and buy our hogs.

We can also take our brood sows through the winters cheaper than eastern farmers can, for the reason that we can almost winter them on alfalfa hay and sorghum. You may be inclined to doubt this statement, but if you will take the trouble to go the Scott & March ranch, fourteen miles northeast of this city, you will find about sixty hogs in as good condition as any farmer would desire stock hogs to be, and they are being wintered on alfalfa hay and cane.

Now, as to the best breed for this country, I prefer the Poland-Berkshire, for the reason that they mature younger than the Poland-China. I have given both breeds a trial, and therefore speak from experience.

A word about the fence. My pasture is fenced with eight barbed wires, and makes a good hog fence. The objection to it, however, is that it is very



A BREAKDOWN is a well-nigh impossible occurrence with a DeKalb Fence. At least that is what the manufacturers claim, and they are heartily seconded in the assertion by the hosts of people all over the country whose property is bounded on the north by a DeKalb fence, on the east by a DeKalb fence, on the south by a DeKalb fence and on the west by a DeKalb fence—a splendid boundary, is it not? This firm makes fencing for lawn, for field and hog lot, for driveway and flower garden—all kinds of fencing, which are minutely described on the circular which will be mailed free on application to DE KALB FENCE CO., DE KALB, ILL.

well on this one acre. The next spring I pastured between thirty and forty hogs on this one acre. The result, as you readily can see, was that the hogs did not have very good grazing that season. The next spring (1891) I also increased my pasture to five acres, and turned in sixty hogs, big and little. I also pastured my work horses and milch cows on the same piece of alfalfa, and the result was as before—rather close picking. The spring of 1892 I increased alfalfa pasture to twenty acres. I have been out of luck since that time, in not having hogs enough to eat it off. During the past season, a very dry one, as you are aware, I pastured sixty hogs, fifteen horses, and three milch cows. The horses and cows were on the pasture probably two-thirds of the season. I also mowed the pasture twice during the season for hay. I am of the opinion that hogs will do better on alfalfa when it is nearly ready for making hay. The very young plants seem too washy. Hogs, however, seem to eat it with more avidity when young and tender.

My experience with hogs and alfalfa, as you will have observed, covers a period of five years, during which time the price of hogs has varied very much; but I am safe in saying that my cash receipts will average \$300 per year for the time stated. Some years it would not reach that amount, but in other years it was considerable more.

I shipped a pig last summer, raised on alfalfa and fed corn eight weeks, that tipped the scales at 600 pounds.

I have fattened out several bunches of hogs, and made good profit. But I

dangerous for horses. A better and cheaper fence I think would be a two-foot picket fence, with two or three barbed wires on top, which will make a fence that will turn pigs and horses as well, provided you want to turn horses in it.

Much has been said during the last two years about the profit of the alfalfa seed crop. I have been in both the alfalfa seed and the hog business, and if I had to give up either, I say let the seed business go and give me the hogs for profit.

There is scarcely a farmer so poor that he may not start in the hog business and soon climb to the top of the ladder. If the farmers in the alfalfa districts would all raise hogs, and lots of them, we could all soon be wearing diamonds. Let us take up the swine business, and stick to it through thick and thin, and we will come out on top of the heap.

### Nevada's Senator.

Senator Stewart, of Nevada, is a breeder of fine horses. Being a practical breeder, his stable has the Perfect Impregnator, sold by Specialty Manufacturing Co., Carrollton, Mo.

### What You Don't Know About California.

Is told in a beautifully illustrated and entertaining book entitled "To California and Back." Ask G. T. Nicholson, G. P. A., Santa Fe route, Topeka, Kas., for a copy. It is free.

The San Francisco Midwinter Exposition will attract tourists to the Pacific coast this winter. Write to above address for pamphlet describing World's Fair, Jr. The unexcelled climate, cheap lands and sunshiny skies of all California are attractive every day in the year. Low rates via the Santa Fe route.

### Publications of the United States Department of Agriculture for February.

The publications of the United States Department of Agriculture for February are as follows. Those of our readers wishing any of these valuable publications should forward their requests to Hon. J. Sterling Morton, Washington, D. C.:

Report of the Statistician, January-February, 1894. Pp. 68. (Report No. 112, Division of Statistics).—Contents: Report on number and value of farm animals; notes from reports of State statistical agents; articles on agriculture in China, the sugar crop of the world, Germany as an importer of American agricultural products, and the canning industry; notes on the crops of Sweden, the crops of Germany, and the wheat, rice and cotton crops of India for 1893; domestic and transatlantic freight rates.

Synopsis of Report No. 112, Division of Statistics. Pp. 4.—The results, in condensed form, of the annual returns of correspondents relating to the number and value of farm animals in the several States and Territories.

Experiment Station Record, Vol. V, No. 5. Pp. 458-546, figs. 8-11.—Contents: Article on the apparatus and methods of analysis employed at the agricultural experiment station at Halle, Germany; abstracts of the publications of the agricultural experiment stations and of the United States Department of Agriculture; abstracts of reports of foreign investigations; titles of articles in recent foreign publications, etc.

Insect Life, Vol. VI, No. 8. Pp. 207-282, figs. 6-11.—Principal contents: Insects Occurring in the Foreign Exhibits of the World's Columbian Exposition; Hymenopterous Parasites of the California Red

Scale; Insect Collections of the Columbian Exposition; The Apiarian Exhibit at the Columbian Exposition; The San Jose Scale in Virginia; Pyralidina of the Death Valley Expedition; Entomological Memoranda for 1893; A New Spider Parasite; Notes on Scolytidae and their Food Plants; Extracts from Correspondents.

Monthly Weather Review, December, 1893. Pp. 343-376, charts 7.—A summary of weather conditions observed throughout the United States during the month of December, compiled from the reports of numerous observers. Intended chiefly for meteorologists.

Charts of the Weather Bureau.—Semi-daily Weather Map, showing weather conditions and giving forecasts of probable changes. Snow Chart, issued weekly during the season, showing conditions as regards snow and ice. Lake Storm Bulletin, furnishing meteorological data relating to storms occurring in the regions of the Great Lakes. Weather-Crop Bulletin, reporting temperature and rainfall with special reference to effects on crops.

International Meteorological Symbols. Pp. 5. (Circular of the Weather Bureau.)—Describes the symbols recommended by the Vienna Meteorological Congress, 1873, to indicate various meteorological phenomena.

TRULY ASTONISHING.—Miss Annette N. Moen, Fountain, Minn., says: "Ayer's Cherry Pectoral has had a wonderful effect in curing my brother's children of a severe and dangerous cold. It was truly astonishing how speedily they found relief after taking this preparation."

We have money to loan on farms in eastern Kansas at lowest current rates with every accommodation to borrowers.

T. E. BOWMAN & Co.,  
116 West Sixth street, Topeka, Kas.

Get up a club for KANSAS FARMER.



## Irrigation.

### THE WATER AND THE METHOD.

By Maj. J. W. Powell, Director U. S. Geological Survey, read before Kansas Irrigation Association, at Wichita.

The rainfall of the United States is greatly varied, ranging from an annual precipitation of three inches in the lower valley of the Colorado to a fall of more than one hundred inches in some portions of the State of Washington.

Nature disposes of the water as it falls upon the land by two grand methods—a part is re-evaporated to the heavens from the surface of the earth, and to some extent through the agency of vegetation. Another part gathers into streams; brooks unite to form creeks; creeks unite to form rivers, and the rivers flow into the sea.

In considering the disposition which nature makes of the rainfall, it is found that one great portion is carried away by evaporation and another great portion by run-off, through the agencies of streams. A part of the water falling upon the land is absorbed by the soil and not immediately evaporated or not immediately delivered to the streams. Some of it is slowly evaporated by capillary attraction, and some of it runs off in streams to be delivered to the seas. It is thus that the absorbed ultimately becomes in part evaporation water, in part run-off water. The rocks composing the crust of earth all contain more or less water; some sandstones contain large quantities. If these rocks are undisturbed, that is, if artificial openings are not made by which they are tapped, nothing is added to them or subtracted from them through the agency of rainfall, but if wells are sunk into the rocks, and water extracted therefrom, then the supply is made good from the rainfall. It is usual to speak of two classes of water supply held in the rocks, namely, pump well waters and artesian waters. Under certain geological conditions, which are pretty well known, some rocks can be made to yield supplies of water that flow to the surface, and these are called artesian wells.

Rivers often have broad flood plains, and these flood plains are obstructed by sands and gravels, and into these sands and gravels the floods of the river and the storm water of the adjacent hills gather, so that large supplies are often found in flood plain formations. This is the case with the flood plain of the Arkansas. These are usually called flood plain waters, sometimes underflowing waters.

In considering the water supply of any region, we have to consider, first, the rainfall; second, the evaporation; third, the run-off.

The prime factor in the problem, the rainfall, and having discovered the mean annual rainfall, and how it is distributed through the year, and the variations from year to year, the first great factor is determined. For the United States, the rainfall by large areas has been determined with a fair degree of approximation, but it has not been discovered locally by small tracts, but only in large units and by general averages. Still, the rainfall is so well known that it is possible to make reasonably accurate statements in relation to the subject.

During the last decade or two, the United States Geological Survey has been carrying on a series of measurements and observations in various parts of the country for the purpose of determining the evaporation and the run-off, and some very interesting facts have been discovered, having a profound effect on all problems of water supply for irrigation, and I beg to call attention to some of the more important facts that relate to this subject.

A great many streams have been gauged, some of them for long periods, of time, that is, for several years, and it has been discovered that where the average annual rainfall is forty inches, about one-half of the water is evaporated by the soil and vegetation, and the other half runs off in springs, brooks, creeks and rivers. That is, when the rainfall is about forty inches, evaporation and run-off equally divide the work of disposing of the water by sending one-half to the heavens and the

other half to the sea. If the rainfall is more than forty inches annually, more than one-half is run-off; if the rainfall is less than forty inches, more than one-half is evaporation. If the rainfall is twenty inches, nine-tenths of the precipitation is evaporation; one-tenth run-off; that is, of twenty inches of rainfall, eighteen inches will be evaporated; two inches will run off in springs, brooks, creeks and rivers.

Of course, these are only general averages. There are conditions which greatly modify the problem. The first of these is latitude. Other things being equal, in northern latitudes evaporation is less, run-off is more. In like manner, altitude varies the result; high altitude evaporation is less, run-off the more, and vice versa. The problem is again varied by the nature of the soil and underlying rocks and by the character of the topography. Some conditions are favorable to evaporation; other conditions increase run-off. Understanding these varying conditions, it still remains that the general statement can be made, that in average conditions twenty inches of rainfall will pass away as eighteen inches of precipitation and two inches of run-off. Now this run-off appears as springs, brooks, creeks and rivers, or it appears as pump well water, artesian well water and flood plain water. Now, all the water which can be used in irrigation must come from this source, the run-off water. If the rainfall is the right quantity at the right time, rainfall agriculture is successful, but when

As water is usually supplied in irrigation, twenty inches is necessary, but when the water is distributed in pipes, and the land put in the most favorable condition, a much smaller quantity is necessary. But to distribute the water in this manner is expensive and such refined methods cannot always be economically used. Under the most favorable distribution it is possible that ten acre inches would be sufficient for an acre of land, but with rough methods, which pertain to economical distribution, twenty acre inches are necessary.

Now it is manifest that if only two acre inches of run-off water can be caught, and twenty acre inches are necessary, that a catchment area of an acre will supply a sufficient quantity to irrigate one-tenth of an acre; that is, a catchment area of ten acres will only furnish water for the irrigation of one acre. On an average, in a large tract of country like that of the western portion of Kansas, all the conditions of catchment are not favorable. These conditions for the complete catchment and utilization of the entire run-off are multifarious, and as time does not permit me to discuss this matter fully, I should, therefore, content myself with making the general statement that no more than 5 per cent. of the sub-humid region of Kansas can be irrigated. It is, therefore, vain to hope that the entire sub-humid can be redeemed by irrigation. In the eastern part of the sub-humid region of Kansas more than 5 per cent. can be irrigated; in the

basins, the geological structure must be examined. So far, a very small part of the sub-humid region of Kansas has been found to afford artesian waters. There may or may not be more. The facts can be discovered only by a more careful geological survey than has yet been executed. Such a survey must be based upon a good topographical map. We cannot obtain a knowledge of the geological structure which is sound and conclusive, without relating that structure to topographic features with the aid of properly constructed maps.

The smallest supply from all the sources enumerated will come from the artesian basins. This supply will be very small, indeed, unless new basins are discovered, and under the very best circumstances the deeper-seated rocks will afford only a small supply. There are worth something to the people, and their extent and value should be made known, but no extended relief for agriculture can be hoped for in this direction.

The second supply is to be obtained by pump wells from geological formations, usually near the surface. In order to discover the quantity and value of these, a geological survey is necessary, and this must be based upon accurate topographical maps which give the elevations and depressions of the surface, and show how these topographical features are related to the underlying rocks which hold water. The experience of mankind in various portions of the earth where irrigation has been practiced for centuries, proves that these well waters are of great extent and value, though a single well is rarely competent to serve more than an acre, or at best, a few acres of land, but literally millions of acres are irrigated from pump wells in Asia, Africa, Europe, South America and Mexico, and it is reasonable to suppose that this is one of the most bounteous sources of water supply for the sub-humid region of Kansas.

The rocks beneath the surface of the earth contain a great store of water, but only a part can be extracted by pump wells and artesian wells. The more solid rocks will not yield any of that which they contain; only the more pervious rocks yield up part of their store. The water which the rocks yield would soon be exhausted if they were not resupplied, and this supply comes from the rainfall. Considered in the light of all the water contained in the rocks, the well supply is narrowly limited, and yet the quantity is great for irrigation.

The third source of water is found in the flood plains, usually called in Kansas the underflow. Already this subject has been investigated to some extent in the State, and something is known about them, but the subject is yet far from being exhausted. The supply is in comparatively large quantities and has great value. For securing these waters three methods are used in various portions of the irrigated world. In dry regions the flood plains all descend down stream at a rapid rate, so that it is possible to tap these flood plain waters, and allow them to flow down hill by gravitation in the direction of declivity. This is known as the gravity method. Where the flood plain valleys are narrow, there are many points along the course of a stream where the harder rocks below come to the surface. In such places low sub-surface dams can be constructed which will force the water up where it can be taken away in ditches to lower lands. This is known as the force method.

A third method is used to secure these waters, namely, by pumping. The height to which such waters are to be pumped is very limited, and the expense of pumping is small, and flood plain waters are thus secured. To a large extent pumping is resorted to, in practice, throughout the world, more than forcing or tapping.

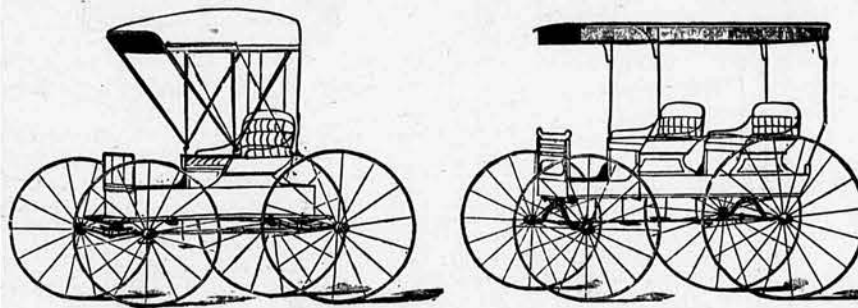
(To be continued next week.)

### The Best Thing Yet.

"The best thing yet." That is the way a young man put it who made arrangements to work for B. F. Johnson & Co., of Richmond, Va. You can get further information by dropping them a card.—Adv.

See Chicago Sewing Machine Co.'s advertisement in next week's issue.

## "A THING OF BEAUTY IS A JOY FOREVER."



I AM PREPARED TO SHIP

Spring Wagons, Buggies and Carriages direct to you from the largest and best equipped buggy factory on earth. I will deliver at all the principal railroad towns in Kansas, Nebraska, Missouri and Oklahoma the handsome Carriages, Buggies and Spring Wagons from this factory. EVERY VEHICLE WARRANTED, and the latest improvements introduced into their construction. All vehicles made of selected materials and by expert mechanics. THE LOWEST PRICES EVER OFFERED TO THE PUBLIC, saving the purchaser from 15 to 25 per cent. The delights of owning and using splendid, easy moving vehicles need not longer be enjoyed only by the rich or financially independent classes. The prices at which these splendid vehicles are sold put them within the reach of all the people. The farmer may for a small price have a handsome carriage to carry himself and family comfortably to town and to church. The farmer's son may for a smaller price have a handsome buggy to carry his lady love to church, to picnics or on the evening drive. The business man, the farmer, the stockman, may all have the WONDERFUL HANDY WAGON for a song. This handsome "Handy Wagon" has no equal for lightness of movement, convenience of getting in and out, easy riding and low price. "A thing of beauty is a joy forever" when it takes so little money to get it. For pictures distinctly exhibiting the style and structure of these wonderful vehicles, their prices and their descriptions, enclose a 2-cent stamp and address the manufacturer's agent,

THOS. D. HUBBARD, - KIMBALL, KANSAS.

the rainfall water is insufficient, irrigation must be practiced; and when irrigation is practiced the run-off water in some form or other must be used. It is thus that the extent to which irrigation can be practiced depends on the run-off.

In order to determine what proportion of the sub-humid of Kansas can be redeemed by irrigation, we must first determine how much water is necessary for irrigation, and second, how much of the run-off water can be secured.

Let us consider the question of how much water is necessary to irrigate an acre of land in order to secure a good crop. This amount is variable; some crops need more, other crops less. Again, some soils need more water, other soils less, but a general average can be shown, and we must now deal with averages, because we wish to apply our facts to a large district of country.

In order that we may clearly understand the subject, it is necessary to deal with some unit of measurement, and it is found in practice that the acre inch and acre foot are convenient standards for this purpose. An acre inch of water is an acre of water one inch deep; an acre foot of water is an acre of water one foot deep. Now experience has shown that on an average, to raise one crop, or irrigate one acre of land for one year, it is necessary to put about twenty acre inches of water upon it; that is, twenty acre inches of water will irrigate an acre of land for one growing season for an average crop.

western portion of Kansas, near the Colorado line, less than 5 per cent. can be irrigated. These lands can be irrigated in small tracts, an acre here, five acres there, ten acres in another place, and under the most favorable conditions, hundreds of acres in a body, scattered among lands that cannot be irrigated, and to be used by other methods under rainfall agriculture. Now in this sub-humid region which we are considering, there are extensive tracts that can be cultivated under rainfall conditions, and from which good crops can be secured in some years, while in other years the crops will wholly fail. It is thus that the agriculture of the region under consideration is to depend in part upon irrigation in small tracts, and upon direct rainfall in large tracts.

We next come to the practical question, "How can this run-off water be most economically secured?" These run-off waters are found under varying conditions, as I have already explained, but may again briefly enumerate, as follows: First, we have artesian waters, more or less deeply seated in the rocks; second, we have pump well waters at various depths, but usually near the surface; third, we have flood plain waters in the valleys of the streams (in Kansas these are usually called underflow waters); fourth, we have stream waters from springs, brooks, creeks and rivers.

Artesian waters are reached by boring. They are found in geological basins, which may or may not be topographic basins. To discover artesian



## The Family Doctor.

Conducted by HENRY W. ROBY, M. D., consulting and operating surgeon, Topeka, Kas., to whom all correspondence relating to this department should be addressed. Correspondents wishing answers and prescriptions by mail will please enclose one dollar when they write.

### Surgical Emergencies.

(NUMBER 12.)

To know just what is best to do for a person immediately on their being shot or stabbed, is a degree of wisdom that makes its possessor a valuable citizen and neighbor, especially in country places, remote from a surgeon. Not only among farmers and laborers is this true, but in remoter parts of the country—in forest and plain, amongst hunters and trappers, tourists and explorers, miners and prospectors. In all the frontier regions of the country these dangers are much increased, and such accidents occur so remotely from populous centers that many lives depend upon the bystander or chance acquaintance. In the presence of such an injury the level-headed and mind-present bystander will first look to the arresting of hemorrhage, and as the methods and means for arresting the flow of blood from a severed artery have already been discussed in chapter No. 1, it is not necessary to repeat it.

The body of a man or *genus homo* is often present, while his mind may be off fishing or sleeping or skulking, but body and mind both being present the bystander will first endeavor to stop the bleeding, and then see to obtaining as good reaction as possible from the shock occasioned by the injury and the loss of blood. This is to be done by seeing that the patient has as easy and comfortable a place to lie down in as possible and has a sufficient amount of warmth from blankets, coats or any kind of wraps conducive to warmth, and that followed up by warm applications, such as jugs or bottles of hot water, or hot bricks or flat-irons, or anything that will convey external warmth to the body, wrapped up and applied alongside the patient's body; this to be supplemented with hot drinks, if they can be taken, such as hot coffee or tea, hot sling, such as a little brandy or whisky in hot water. The hot drinks serve a double purpose. They convey heat to the body that is likely to cool very rapidly on account of the shock and consequent retarding of natural heat production in the body, and they also supply nourishment to the body, replenishing the arteries and veins with liquid for circulation. Circulation is always better when the blood vessels are full and always deficient when these tubes are but partially filled. Seven-tenths of the blood of the whole body is composed of pure water, so that water forms our readiest means of refilling vessels suddenly depleted by hemorrhage, and if it is hot as can be taken, it is so much the better, by reason of bringing up to par the lowered temperature of the body. The heart must have a certain bulk of fluid to contract on in order to send the blood to the extremities and surface of the body, as well as the brain, and that is the physiological reason for haste in restoring the circulating medium of the body. If the hands and feet are cold they may be wrapped in hot cloths, frequently changed to keep up the warmth.

The patient should also be kept very quiet, as all motion increases the tendency to hemorrhage, and it often starts up a fresh flow of blood where the hemorrhage has been once checked. The patient should always lie down, as in that position the pulse is less rapid and strong than in the erect posture and less liable to force out any clot that may form in the end of a bleeding vessel by nature's process of checking hemorrhage. Then, if the wound opens into the chest or abdomen the patient should, if tolerable, lie with the wound downward to facilitate the draining of loose blood from the cavity before it clots so that it cannot escape from the cavity.

Several years ago, a man in a quarrel on Kansas avenue, in this city, was stabbed in such a way that the point of the knife penetrated his heart sac and pricked the heart pretty seriously. Having cut off one of the intercostal arteries, as the knife passed between the ribs, the flow of blood was very profuse for a time. He was taken to the office of an old doctor near by, who boasted that he was the embodiment of all medical and surgical wisdom, while actually possessing about as much of it as the country chump who always knows so much more than any doctor. He looked the man over and gravely said he must die and that very, very soon, and if he wanted to see his wife and children again in this world he ought to be taken home at once. So a quilt was thrown over him, he was put into an express wagon and carted home, a mile away, jolting as much blood as possible out of his severed artery and down into his chest cavity and heart sac. The ante-funeral procession was met on the way out by a neighbor who had his mind with him, and he promptly ran for me and sent me out to the house. Arriving there I soon caught the bleeding artery in a pair of artery forceps and turned the man over on

his face and let all the blood possible run out of the chest. Fortunately this process had been very much facilitated by the assassin, for he had cut into the lung, so that a part of his breath escaped through the wound, and at every breath the man expelled he blew a little spray of blood from the wound until the chest was almost free from it. Then I stitched up the cut and put on a compress and bandage, which made him throw all his breath back through the proper channel. He was wrapped up and given hot drinks and kept quiet, and in a week was up and about the house, little the worse for the accident.

The value of lying down and keeping quiet after gunshot is well illustrated by the case of an old gentleman of this city, who, four or five years ago, accidentally shot himself in the thigh with a pistol he was going to clean. Soon after the accident the bleeding checked up and he got up and walked about the room, starting up a fresh hemorrhage. The friends put him to bed and again the flow checked and again he got up and walked about, only to bring on more hemorrhage. Friends again put him to bed and remonstrated with him, but to no avail, for he would get up and walk every time the flow ceased. Arriving at the house and being told what he had done, I ordered him at once to bed. But he said, "I won't go to bed. I feel better walking. I am afraid if I lie down I'll never get up again. I might get dizzy, or something, and if I keep going I can keep that off." He was already very shaky and feeble from the loss of blood, and while we were getting him into bed he went off into a dead faint from depletion. I tied the artery as quickly as possible and shut off all flow, but he never rallied, and died in a short time. If he had kept his bed from the start, nature would most likely have saved him without a surgeon. But after his blood had all leaked out a surgeon could not save him.

About a year and a half ago a young man on a farm, five miles out of Topeka, took his father's revolver one Sunday morning and started out to shoot some ducks in a small pond half a mile or so from the house, and in a little while he could very nearly duplicate Ben Franklin's celebrated apothegm, uttered while experimenting with electricity. While trying to kill a turkey with a charge from a Leyden jar, the turkey dodged the electrode and Poor Richard took the charge himself, and when telling of the affair he said that while trying to kill a turkey he had come very near killing a goose. So this young man came very near killing a goose while gunning for ducks with a revolver. But some one, who ran to the rescue, took his mind with him and carried the boy into the house and kept him quiet and warm and replenished his circulation with warm drinks, so that when I arrived, some time afterwards, though his abdomen was full of blood, his bowels out in four places by the bullet, which had glanced on the pelvic bone and gone down to the middle of the thigh, he was in as good condition for the necessary operation as could be hoped for. The abdomen was opened and washed out, the rents in the bowels stitched up, the bullet cut out of the thigh and all wounds closed and dressed, and the young man made a good recovery, though the abdominal wall was blown so full of powder that a large patch of it sloughed out and the belly had to be sewed up a second time to get the proper closure. Had he not been kept warm and given hot drinks it is more than likely he would not have survived the terrible injury.

### Answers to Correspondents.

(NUMBER 13.)

DR. ROBY:—I am much interested in the "Family Doctor" in KANSAS FARMER. I am 50 years old, have always been troubled with chronic sore throat. By some means I contracted the habit of sleeping with my mouth open. I sometimes think it would be best for me if I would breathe through the nose while sleeping. Do you think so, and if so, how am I to correct the habit? Try as I will, I am always breathing through my mouth when I awake. An answer through the KANSAS FARMER will much oblige.

Antelope, Kas.

Mouth-breathers are short lived, as a rule, and that rule has few if any exceptions. With some it is a habit induced in childhood by catarrh. Children are permitted to run out bare-headed and bare-footed and half-clad, or even unclad in cool or stormy weather. They take cold in the head, the nostrils become stopped up from the catarrhal inflammation, thus shutting off the breath through the natural channels, and nature, having provided an alternative channel, the mouth, the child naturally and necessarily, takes up breathing through that channel, for it must breathe. If the catarrh is not cured, the temporary habit becomes permanent and the general health is impaired thereby. The air passages are so constructed as to act like a screen or sieve, in a certain sense, and while there is no net-work of threads thrown across the nostrils, yet the convolutions of bone and membranes in the air passages are so shaped and arranged that all the air taken into the nostrils strikes against some warm

wet surface that takes out the chill of cold air and the dust and dirt of impure air. The mucous that exudes from the lining membrane is so sticky that every particle of dust or smoke that passes in with the breath is caught in its tenacious grasp and held back from passing into the lungs, and when a sufficient quantity is thus screened out of the breath it is blown from the nose or hawked and spit out of the throat. But the mouth-breather is deprived of a considerable part of this purifying process and takes far more dust and smoke into his lungs and leaves it adhering to the delicate walls of the air cells, where it makes mischief, resulting often in weak lungs, pulmonary catarrh or consumption. He is also more subject to pneumonia and bronchial affections than the man who breathes naturally.

As to a cure, it is easier to say than do. When once the habit is thoroughly established it is generally hard to break up. The first step to be taken is to get the old catarrh cured up, and that may have gone on until all the membranes in the nasal passages are so thickened that there is not sufficient caliber left to carry the proper amount of air to the lungs. In cases where there is sufficient breath-way the habit may be corrected by tying the mouth firmly shut at night, by a night-cap that can be fastened under the chin so it will not slip, and thus force nose-breathing, which after a time will become a habit again.

In some cases there are tumors and false growths in the nose or throat, which must be cleared out by surgery before normal breathing can be restored.

No medicine is of any avail except to cure catarrh or other disease in the case.

HENRY W. ROBY, M. D.:—About twenty years ago I sprained my knee and it swelled and pained me for a time, and about six years ago had another attack which troubled me over a year, which I supposed came from the first attack. There has always been an enlargement of the joint and some stiffness since the first trouble. Six weeks ago I had another attack and have been unable to get around much since. It is badly swollen and puffed and sore, but not painful when kept in an easy position. Will you please answer through the KANSAS FARMER, telling me whether I can be cured and what the disease is and your treatment of it. Have been very much interested in your department of the FARMER.

Your case is chronic inflammation of the joint, involving, most likely, all the tissues, bones, ligaments and muscles, and you ought, by all means, to consult at once a first-class surgeon and let him examine the limb and ascertain whether there is pus in or about the joint. The kind of treatment necessary to cure the limb will depend entirely on what may be ascertained to be the real condition of the joint. If suppuration has taken place, a surgical operation is absolutely necessary to a cure. The case is entirely too serious for a mere newspaper prescription.

### Note to Correspondents.

By accident, a few recent letters of inquiry have been lost, and thus have not been answered. Correspondents who have not been answered will please write again.

### Leasing Oklahoma School Lands.

All persons wanting to lease school land in Oklahoma will be rewarded by sending for a free sample copy of the HOME, FIELD AND FORUM, Guthrie, Okla., the leading agricultural paper of Oklahoma Territory.

### Seed Corn.

(From a photograph.)

To the readers of the KANSAS FARMER: Owing to the hard times and the many inquiries for corn from all over the State, I have concluded to share the hard times with my customers. I will ship all orders of two bushels corn, sacks free, at \$1 per bushel; ten bushels and over, 90 cents per bushel, sacks free. Now, if you want to save money, club together and you will save freight. Don't wait until it's too late. I guarantee corn first-class, and will show seed corn with any man in the United States for \$25 for best five bushels corn. Compare my prices with others and mark the difference. For first order of six bushels received after March 23 I will give one bushel free; second order, one-half bushel. Brown county not allowed to compete. Corn now ready. Come on with your orders. J. D. ZILLER, Hiawatha, Kas.

### Climate and Crops Just Right.

Oklahoma has thousands of acres of the finest farming land in the world, waiting for you or anybody else with a little cash and lots of gumption. Climate crops are just right. Farms will cost more next year than this. To find out if this is the country you want, ask G. T. Nicholson, G. P. A., Santa Fe route, Topeka, Kas., for free copy of Oklahoma folder.

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VACUUM OIL CO., Rochester, N. Y.

### Gossip About Stock.

J. H. Pegram, Virgil, Greenwood county, has announced that he is of that grand army of improved stock breeders, his specialty being Poland-China swine and poultry.

A new poultry advertiser of pit game chickens is B. V. Ray, Kiowa, Kas., who is finely recommended by the business men of his county. His stock, the "Ray chickens," are bred up from crosses of Nigger Foot Claibourns, Blue Shufflers, etc., and are dead game fighters. Notice his card and write for prices.

A. E. Staley, Ottawa, Kas., in renewing his breeder's card, states that he has a number of Chester White pigs for sale, and that now he will sell his old stock boar, Moorish Pride, a great sire of large and uniform litters of good color. One sow bred to him farrowed eighteen living pigs on January 28. Mr. S. also supplies Light Brahma eggs, fifteen for 75 cents.

Every stockman and farmer that contemplates re-inforcing the blood of his herd or grading up his future beef stock should write Sotham & Co., Chillicothe, Mo., for a copy of one of the most complete catalogues ever issued. It contains much valuable information for the breeder, as well as a list of the animals that will go into their sale, to be held on Wednesday, April 18, 1894.

Mr. E. L. Knapp, Maple Hill, Kas., succeeds his father, L. A. Knapp, recently deceased, in the ownership and management of that sterling herd of Short-horn cattle and Poland-China swine. Mr. Knapp, Jr., has always had active charge of the herd. He reports good sales and inquiry. A. Pringle, Harveyville, purchased four yearling heifers, and John K. Nesbitt, of Osage county, bought five head of good Short-horns, a bull, cow and three calves.

Twenty-four head of jacks and jennets, the property of J. C. Vancleave, late deceased, will go to the highest bidder next Saturday, March 24, at Independence, Mo. Among the offerings are six matured jacks, suitable for full season's work, that have been tested on the Vancleave jack farm and actually known as good performers and sure foal-getters. There is no better lot of males and females on American soil as to conformation points in way up jackology and profitable mule raising. Among the six topky fellows is the seven-year-old Clinton, one of the greatest producers ever owned in jack history. In 1892 the Vancleave bred him to ten of their top jennets, resulting in ten colts, eight of which were jacks. He stands fifteen and three-fourths hands high, very heavy body and bone, high style, extra head and ear and nicely turned all over. No better lot of males and females was ever offered from the block.

The Daily-Goodloe's public sale of jacks and jennets, held at Savannah, Mo., last Thursday, was well attended by buyers from Iowa, Nebraska, Kansas and Missouri. A consignment of twelve head from Kentucky was added by Bowen & Fox, Danville, four head; Josh Jones, Staniford, six head, and J. M. Harlan, Danville, two head. It was, true to announcement, the largest collection of the jack kind ever offered at one time from the block in Missouri. The matured offerings, especially jacks, sold readily at prices ranging from \$500 to \$1,300. The Messrs. Dailys' seven-year-old Grover Cleveland topped the sale at \$1,300. The medium to extra good jennets ranged from \$40 to \$190. The younger jacks did not quite reach anticipated prices, considering their breeding, yet enough better prices were had for those old enough for a full season's service to confirm the belief that jack breeding and mule raising was like the American hog, most always profitable, no matter how the times were.

### "Among the Ozarks,"

the Land of Big Red Apples, is an attractive and interesting book, handsomely illustrated with views of south Missouri scenery, including the famous Olden fruit farm of 3,000 acres in Howell county. It pertains to fruit-raising in that great fruit belt of America, the southern slope of the Ozarks, and will prove of great value, not only to fruit-growers, but to every farmer and home-seeker looking for a farm and a home. Mailed free. Address,

J. E. LOCKWOOD,  
Kansas City, Mo.



## The Home Circle.

### To Correspondents.

The matter for the HOME CIRCLE is selected Wednesday of the week before the paper is printed. Manuscript received after that almost invariably goes over to the next week, unless it is very short and very good. Correspondents will govern themselves accordingly.

### A Reverie.

(Suggested by Welsh scenery.)

BY MRS. SARAH HARGREAVES.

On the bonny banks of the Conway,  
In the land of fair North Wales,  
And out in its hilly woodlands,  
And fragrant, verdant vales.

Away from the mighty city,  
And its crowded, busy mart,  
We had sought the grateful shelter  
Of Eden's counterpart.

A cozy cottage parlor,  
In the hamlet of Trefriau,  
Made us a pleasant resting place,  
Our daily wanderings through.

The bees and birds grown silent,  
The golden glow of day  
Succeeded by the full-orbed moon,  
Shedding her silvery ray.

Lent to our spirits a softness;  
A tender and trustful lay,  
Inspired our dreamy reverie,  
Nor hindered we its way.

In the days that were behind us  
We had traversed woodland heights,  
Had gathered ferns and lichens  
To increase the home delights.

In searches for new beauty  
We had fondled the hills  
Lakes enshrouded in sweetest stillness,  
Save the song-bird's pretty trills.

Reflected in those highland waters  
Were the hill-tops, trees and sky,  
Such spots! Heaven surely designed them  
For the angels passing by.

God's messengers from man to man  
On deeds of mercy bent,  
Mid scenes like these could pause awhile,  
Nor fear the serpent's taint.

With thirst made keen by quaffs so pure  
From nature's brimming cup,  
We turned again, and yet again,  
Reluctant to give up.

On a balmy summer's morning  
"Old Mother," in her best,  
With gentle breezes stirring,  
We sought, with quicken'd zest,

To feast again our vision  
On picture unalloyed,  
And we found it in the region  
Of beauteous Trefriau.

As we stood within her shadow,  
Our hearts grew still awhile,  
And we thought of the many mansions  
Which sin shall ne'er defile.

And still we gazed enraptured  
As on heavenly auditorium,  
And our ears were filled with the music  
Of Bethlehem's memoriam.

And so, as we sat in the moonlight,  
Looking on earth and sky,  
The wondrous sights of the daylight,  
Reviewing with thoughtful eye.

We mused on the Eden vanished,  
And the Eden yet to be,  
When righteousness shall clothe the land  
As waters do the sea.

When the curse of toil shall be ended,  
The blackened and bleak no more,  
The rose and the lily shall flourish,  
The thistle and thorn be o'er.

Anguish and sorrow buried,  
Peace shall triumphant reign;  
The marvelous chorus of mountains  
Shall sing Jehovah's name.

Cedar and oak shall grow joyous,  
And clap their gladdened hands,  
Because the bondsman's fetters  
Have been snapped by heaven's commands.

Hail, man! thou'rt free as the angels,  
The night of sin is past;  
The shout of eternal conquest  
Shall last while God shall last.

\* Pronounce: Tref-riau. + Betty-sy-coyd.  
1712 Harrison street, Topeka.

[A portion of the above poem was published in "Home Circle" in June of last year, but as some of the stanzas were omitted then, we give it entire this time, upon request of several friends of the author.]

### About Queen Victoria.

Queen Victoria has very pretty feet, despite her bulky, unwieldy frame. They are smaller and daintier than the feet of any of her children (according to a correspondent of the New York World). She always wears an old-fashioned congress gaiter, and her last is in the keeping of the provincial bootmakers at Windsor and Balmoral, as well as the court in London. Likewise have the provincial drapers the blocks upon which are fashioned her majesty's caps. The caps are always made of fine white crepe lisse. The Queen orders these caps by the dozen. Six dozen caps generally suffice for a single sojourn at Windsor castle. Six dozen night-dresses are crumpled during a Windsor visit. Never is the same night-dress worn a second time, even after laundering. Who gets them? Ah, that's the head-dresser's secret. It is suspected that she plies a fine trade in royal rubbish. Her majesty's mantles are always made after the same model. They number six for winter and six for summer wear. Black materials of various degrees of weight and warmth

make the winter wraps, while those reserved for summer are made of rich white silk, daintily lined and trimmed with four or six bands of narrow black braid or cord, and finished with deep black silk fringe. The white mantles are worn when Victoria takes her daily drive in the vicinity of Windsor, where her presence excites less attention from the townsfolk than do Mrs. Cleveland's outings in Washington. On the occasion of the opening of the institution founded in London in commemoration of her majesty's jubilee, the Duke of Connaught delivered in person to the provincial draper the order for her majesty's bonnet and mantles. Not until the night before the auspicious event, however, did the Duke confess to the Queen that he had ordered the mantle trimmed with ostrich feather trimming. The Queen was much disturbed. She retired before the mantle put in an appearance at the castle, but she could not sleep. "If there are feathers on my cloak," she finally announced to the maid, with truly feminine petulance, "I will not wear it to-morrow. The people will say: 'There's the Queen! She is fatter than ever!'" Needless to add, the feathers were discarded. There is much excitement in the royal household in preparing for a state function. Everybody tries on her dresses and hats, and comes in for her majesty's inspection days before the event takes place. The effect each is likely to produce on the public beholder is weighed and considered as carefully as the personal like or dislike of the wearer. Next to her majesty's sleeping-chamber is the dressing-room, in which, on long, low shelves, her mantles caps and shoes are laid. They make a curious picture—a study in black and white. Two maids undress the Queen and put her to bed. Before she gets into bed they heat and spread between the Irish linen sheets a white blanket, part wool, part cotton, and bound with silk ribbon, with the royal arms embroidered in the corner. With brandy and water for a nightcap, Queen Victoria reclines upon the blanket until the body is thoroughly heated. The maids then withdraw the blanket and the finest product of Ireland's loom embraces the Queen of England and the Empress of India.

### Some Books.

The Cincinnati Enquirer, in its "Social Club" department, March 1, contains some very interesting letters from correspondents who give their ideas on the subject of reading on the farm. One who signs himself "X. Y. Z., Darke county, Ohio," has this to say:

"This is a prosperous farming country. Nowhere does the farmer get better results from his labors than in Darke county. Corn, wheat and all the other staples of a good farming country are produced in large quantities.

"Intelligent work always pays; and in no county of the State will less want and squalid poverty be found.

"Here and there we find a family too tired to live well, but his neighbor accepts the inevitable and helps him through. When spring comes, with its birds and blossoms, the constitutionally tired ones never catch the key-note in time to work. They wait and loiter till the days are hot and the flies stick to them closer than their friends. And thus the time of such goes, and neither earth nor brain brings them harvest.

"I often wonder what the verdict will be when time has rolled up the scroll and the account must be given in.

"This beautiful earth, with all its sparkle and gladness, rich sunshine and golden harvests, ought to so enliven every living man and woman to make the most of the powers that have been given them.

"Three hundred and sixty-five days are given each year to all, and why not all be busy and happy? for he who is the busiest is the happiest. The tiniest insect flits from morn till night, hoarding up its winter store; no idlers allowed in the home of the bee or ant, and yet they have nothing to do but provide for the necessities of the body. The bee that flitted about the Ark worked with the same precision as the one that looked in on the World's Fair. Man's physical wants are his least; his aesthetic nature, mental and moral, are ever goading him on to a higher and broader life. The harder he works the larger the expanse, until he sees new fields opening, looks down the winding avenues until he sits at table with Archimedes and feasts on untold mathematical problems; or takes a turn with Pliny, the elder, and sups on nature or walks out with Newton some dark night and studies the stars and nature's laws; or, with Bacon, turns upside down all the old theories, and in their stead gives us new ones; or, coming down to a later time, gather at our breakfast table our own homefolks, Irving, Motley, Mrs. Beecher Stowe, Longfellow, Whittier, Bryant and a host of others, and such good company will keep us young and we will have no time for idleness."

There is no better proof of the excellence of Dr. Bull's Cough Syrup than that it is recommended by leading physicians.

### Various Kinds of Stoves.

If "Sarah Elizabeth" is a veritable woman living at Snokomo, Kas., it would be a comparatively short drive for "Englishwoman" to go to see her and confer face to face about stoves and other domestic matters. Something in the style of "Sarah Elizabeth" made me wonder if some man—some editor—some bachelor—had not hidden behind a feminine name in order to express his sentiments more freely.

However, our sister at Paxico, I have used a one-burner oil stove and a gasoline stove. The gasoline is far more satisfactory, to my notion, and if only careful persons are allowed to use them, they will recognize the proper authority and not blow up.

I bought the oil stove when I had set aside the gasoline, to heat irons on ironing day. It did not respond, showing how much more intense the heat of gasoline. However, when only a cup of tea is needed, or some hot compresses in the night, I shall still use my little stove. As for summer cooking, I am going to put my wood stove in a small summer kitchen, detached from the house, this year, as I did last.

I, too, was glad to hear from our old friend, Mrs. Hunter. I had been wondering why she wrote no more; but I forgot to mention it until "Englishwoman" set me the example, and the lady from Larned, who so kindly expressed her approbation of my sentiments, I have looked for her name, but have never seen it again. I wonder if she knows my cousin, Mrs. H. P. Wolcott, of that place.

PHOEBE PARMELEE.

### Odd Box Office Receipts.

There is no more interesting subject of study than currency. People do not realize how difficult it would be to get along without it. Some years ago Mlle. Zelle, of the Theater Lyrique, at Paris, on a professional tour around the world, gave a concert at the Society islands, in the south Pacific. It was arranged that in payment for an air from "Norma" and three or four other selections she was to get one-third of the receipts. Her share consisted of three pigs, twenty-three turkeys, forty-four chickens, 5,000 coconuts and considerable quantities of bananas, lemons and oranges. The live stock and produce would have represented a value of about 4,000 francs in the markets of her native city, but it was hardly practicable to dispose of the former off-hand and the latter had to be fed to the pigs and poultry. A joint stock company, known as the African Barter Co., Limited, now existing in London, carries on a great business on the west coast of Africa entirely by bartering European manufactures for palm oil, gold dust, ivory, coffee, gum and other raw products. Eggs have been in circulation in lieu of money in the Alpine villages of Switzerland. Nails have been similarly used in Scotland, dried codfish in Newfoundland, whale's teeth in the Fiji islands, mats of rice straw in Angola, salt in Abyssinia, beeswax in Sumatra, red feathers in the isles of the Pacific, tea in Tartary and iron hoes in Madagascar. A century ago tobacco was made legal tender in Virginia. When women were imported into that colony for wives for the settlers 100 pounds of tobacco per head was charged for them, the price being subsequently raised to 150 pounds.—Washington Star.

### The Last Stroke in Taking a Whale.

But if a man have the good fortune to be present at a "fall," and, above all, if he be, as I have been, in the harpooning and in the lancing boat, he has a taste of sport which it would be ill to match. To play a salmon is a royal game, but when your fish weighs more than a suburban villa, and is worth a clear £2,000; when, too, your line is a thumb's thickness of manilla rope with fifty strands, every strand tested for thirty-six pounds, it dwarfs all other experiences. And the lancing, too, when the creature is spent, and your boat pulls in to give it the coup de grace with cold steel, that is also exciting! A hundred tons of despair are churning up the waters into a red foam; two great black fins are rising and falling like the sails of a windmill, casting the boat into a shadow as they droop over it; but still the harpooner clings to the head, where no harm can come, and, with the wooden butt of the twelve-foot lance against his stomach, he presses it home until the long struggle is finished, and the black back rolls over to expose the livid, whitish surface beneath. Yet amid all the excitement—and no one who has not held an oar in such a scene can tell how exciting it is—one's sympathies lie with the poor hunted creature. The whale has a small eye, little larger than that of a bullock; but I cannot easily forget the mute expostulation which I read in one, as it dimmed over in death within hand's touch of me. What could it guess, poor creature, of laws of supply and demand, or how could it imagine that when nature placed an elastic filter inside its mouth, and when man discovered that the plates of which it was composed were the most pliable and yet durable things in creation, its death warrant was signed?—McClure's Magazine.

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DRS. THORNTON & MINOR,  
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## The Young Folks.

### A Farmer's Ideas.

I'm a plain, old-fashioned man, an' my wife is jest the same; She was Sary Ann Delaney, an' John Belcher is my name; We live to Treddick's Corner, our house is on the right, Jest as you pass by Wheeler's mill, where the meetin'-house's in sight.

I farm it for a livin', as my father did before— Though my great-granther, I've heern said, he kept a grocery store— An' Sary Ann an' I have raised two girls an' seven boys, An' I expect we've had our share of sorrows, cares and joys.

I ain't an eddicated man, I went to deestrick school; An' though I ain't so larned as some, I ain't a pesky fool. I used to be a Dimmyerat, but now I don't jest know How I do stand in pollyticks, they've got 'em mixed up so.

I read the papers reglar, though my glasses ain't quite right— I calkerlate that sence they's bought I've changed some in my sight— An' I've read about the 'lectric roads that run cars every where With lightnin' harnessed to a wire that's strung up in the air.

The telephone that talks to folks a hundred miles away— An' they can hear you plain as day, an' know jest what you say— An' Sary Ann says she believes that's a news-paper lie, An' she don't take no stock in it, an' some that way am I.

The funnygraft, so they tell me, will take the words you say An' roll 'em up, kinder preserved, canned up, an' put away For futur' use, an' when you feel as if you'd like to bring Them old-time conversations back, you jest unroll the thing.

They light the stores with lightnin' now, an' dwellin' houses, too; You turn a little button, an' that's all you have to do; An' I expect the thunderbolts'll be hitched up right soon To take us off on pleasure trips, skylarkin' to the moon.

The weather's made to order now in Washington, I'm told. They grind it out by steam, and turn it loose on to the world; An' if this year's a sample of the kind of work they do, I'd rather have my weather made by the good old-fashioned crew.

Well, things move on; I s'pose they will, an' what's to be will be, But taller dips and kerysene is good enough fer me; An' I don't want no tellyphones a-ringin' round my head, Or funnygrafts to can my talk till after I am dead.

An' Treddick's Corners aint no place for 'lectric cars to come; They'd skeer the horses half to death with their eternal hum; An' when I go to meetin' on the holy Sabbath day, I'll hitch old stripe-faced Billy up to the good old-fashioned shay.

—Clara Augusta, in Philadelphia paper.

### PHEASANT-BREEDING IN THE UNITED STATES.

The fields are all fenced in with wire netting with two-inch meshes, and from the surface, in which it is securely imbedded, it rises to a height of ten feet. In the summer time one can hear the musical "peeping" of the little fledglings, and the answering "clucking" of the mother hen, with an occasional cry from the cocks in the breeding pens as something startles them. The noise they make sounds like the first tentative efforts of a young rooster, except that whereas the latter flaps his wings and crows afterwards, the former "drums," and then sounds his note. In drumming they move their wings so rapidly that they seem like gauze.

The laying season begins about the middle of April, and before that time all the birds that are wanted for this purpose are caught from the open field, where they have run all winter, and put in huge pens. These are eighteen feet square, or thereabouts, and are arranged in one large rectangle, with alleys between each alternate double row, so that access can be had to them through doors or gates left in the wire meshing for that purpose. The corners are darkened with water-proof hoods smeared with a disinfecting mixture, as indeed is everything about the place. These retreats are for the birds to lay under. The pens being in an apple orchard, the leaves afford shade, and worms and larvae also, for the insatiable crops beneath. Clumps of grass are left to grow about in spots, the rest of the ground being loosened to encourage "bathing" and scratching. Five hens are put in with one cock, and unless they do not get along well together the family is not disintegrated until the end of the season—and not then, for all are kept in one field. Birds one year old are preferred for laying, the older ones being sold off to preserves, where they will be less confined. Two or three years in such small quarters make a difference in their powers of propagation, but they recuperate rapidly in the woods. Great care is exercised in choosing

healthy birds, but if a weak one should be discovered—and they are rare—his neck is wrung on the spot, for Mr. De Guise has no hospital for contagious diseases. Sickness, to reiterate, is not frequent enough to require one. The manner of catching the birds to put in the pens is simple. They are driven into a large box, commodious enough to allow two attendants to get inside comfortably, with the top and sides covered with bagging to prevent injury to the captives in their efforts to escape. Wide "wings" of wire netting extend out into the field from the entrance to the box, and when a man is sent to walk slowly towards the birds all within the radius of the wings run wildly to their fate. They do not try to fly unless startled, but their legs carry them along very fast. Once inside they are handed out one at a time to have a wing clipped. Even in this condition they make strenuous attempts to fly when alarmed in the pens, turning ludicrous somersaults in the air, only to come down unceremoniously and try again.

The average hen will lay about forty eggs in the interval from the beginning of the season to the middle of July, when it is practically over. During this period the birds are fed twice a day—in the forenoon on a mixture of cracked dog biscuit, meal, and pulverized oyster shells, softened with milk, and in the afternoon the diet is changed to grain. With the appearance of the first eggs attendants begin to go around in the late afternoon, near sunset, with flat-bottomed baskets in which to collect them. This is done every day, as regular as clock-work, for the hatching is not done by the pheasants, but by common barn yard hens.

Several weeks before the first eggs are laid the farmers in the neighborhood are notified that sitting hens will be needed at the pheasantry, and soon after All-Fools day they begin to bring in all their surplus stock. These are purchased at market prices, and confined in ventilated boxes arranged in tiers inside the barn, the hens being satisfied to sit on porcelain eggs until needed for actual utility. When the pheasants have supplied enough eggs, the work of putting the latter down is begun. Back of the barn, on a gentle slope, are long rows of oblong coops, each one consisting of a closed box with a removable lid for the nest, and a diminutive yard a few square feet in area for the hen to exercise in. This is enclosed by wire netting, and provided with a separate drinking-pan of earthenware. From fifteen to eighteen eggs are set in each nest, the number depending upon the size of the hen, which may be a bantam or a Plymouth Rock. When she is very large she may take twenty, for they are smaller than her own, light green in color, and so rich that only their expensive-ness precludes their coming into general use for salads and mayonnaises. Each one is tested to see that it is not cracked, and the date of the setting is marked on the top of the nest-box. The period of incubation is twenty-four days, and should, in the daily inspection, any hen show any disposition to shirk her duties, she is promptly disqualified, and another is substituted. But generally they are assiduous, and remain at their posts till the end.

When the young birds begin to appear, before the 1st of June, the constantly increasing duties of the attendants reach their maximum. Every evening the coops are examined to collect the little peepers, from whence they are transferred in baskets to one of the enclosed fields, in which light wooden coops are set down in regular rows in the grass. Around each of them is a little space fenced in with boards, and while the foster-mother is secured inside, the chicks can run out between the slats into this yard. By the time they have become strong enough to leap the low walls of their prison, they have also learned to know the "cluck" of their protector, and where to come at nightfall. Six times a day they are fed on a sort of custard, made of cracked pheasant eggs and milk from which the whey has been expressed. When two months old they are trapped and removed to another field, having no further need for the shelter of their mother's wings. The number of feedings is gradually reduced in the meantime to three a day, and the food becomes more substantial by the addition of grain. They grow wilder every day, and it is difficult to get more than a momentary glimpse of them as they dart through the grass, rustling the blades like a summer breeze. By October the early birds have attained to full growth, passing the winter undisturbed and with need for little care. The only discomfort they undergo is in the traps when their wings are clipped.—Harper's Weekly.

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### The Senator Apologized.

Almost anybody can find it in his heart to forgive the sudden passion which emphasizes error when it is followed by graceful acknowledgment and reparation. I was thinking of this as a friend told me a story about Senator Butler, of South Carolina. The Senator was at the Fifth Avenue hotel. He came down from breakfast one morning and went into the barber shop for a shave. When he had been duly polished up he reached for his hat, dropped his usual liberal tip to "Boots" and went away. But he returned immediately, hat in hand.

"Look here boy," said he, "this is not my hat."

The young colored man came forward and looked at it. "It's the same hat you brought down, sir," he said.

"Impossible!" exclaimed the Senator, growing redder than usual. "I have got somebody else's hat and somebody else has taken mine."

"I'm positive, sir, that is the same hat you brought in, anyhow," persisted the colored boy.

"I say it is not!" thundered the stalwart Southerner—and raising his cane threateningly he took a step forward—"and if you say that again I'll brain you."

The barber who had shaved the Senator now came forward and in a pacific tone interferred. "Run up stairs," said he to the boy, "and have the man at the door examine the rack—there is a mistake somewhere. Please sit down, Senator, he'll be back in a minute." And sure enough, back he did come, and bringing the Senator's hat with him, too. The latter had picked another man's hat from the rack himself and hadn't noticed the mistake.

"It is my mistake," said he, with a graceful inclination of the body, and turning to the lad he had but a moment before threatened, "and I humbly beg your pardon."

But the colored lad was more embarrassed under the polite apology of the noble South Carolinian than he had been under the threat of unjust punishment.—Boston Post.

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All advertising intended for the current week should reach this office not later than Monday.  
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**KANSAS FARMER CO., Topeka, Kas.**

The Kansas City *Packer* congratulates the residents of Oklahoma on the appointment of J. S. Soule, of Guthrie, as Statistical Agent for the Agricultural Department of the Territory, and says: "Mr. Soule has been connected with that sterling paper, the *KANSAS FARMER*, for many years and will fill the position to which he has been appointed with entire satisfaction to all."

The uncertainty of the value of earthly things is strikingly illustrated by the fact that in 1880 Atchison, Topeka & Santa Fe stock was, in New England, considered better than government bonds, and actually sold as high as 152½ cents on the dollar. In January 1894, not over fourteen years from the former date, it was down to 9½ cents and the property went into the hands of receivers.

A subscriber inquires as to the "best method of making family cheese from several cows. How much rennet should be used, and best way of moulding cheese without resorting to expensive machinery." He would also like to hear from some one who has had experience with adobe houses, as to their durability, method of building, and whether ordinary soil is suitable for making the bricks.

We are not exactly giving away a year's subscription for a live Kansas daily paper to subscribers for the *KANSAS FARMER*, but the matter is verging around that way. The *KANSAS FARMER* and the *Leavenworth Daily Times*, both one year, for \$3. Send the money to *KANSAS FARMER CO.*, Topeka, and you will get for the next year, every week, the best farm paper in the west and six times every week the live and aggressive *Times*, containing full associate press reports of the news of the world and the crispest editorials that can be written.

In their struggle for the continuance of protection to the sugar industry, the Louisiana planters, on whom most of this work has fallen, have encountered a serious complication in the reciprocity treaties entered into by this country with foreign sugar-producing countries under the McKinley law. These admit sugar duty free to our ports in consideration of certain concessions as to the admission of our products to their countries. Thus, in attempting to change from the protection of a bounty to the protection of a tariff, the Wilson bill as amended by the Senate committee is likely to stir up fierce antagonism from other interests. As the Wilson bill left the House it made sugar duty free and under this arrangement no treaty would be in the way.

## LAWLESSNESS AND WANT.

The accounts of bomb-throwing, of train-wrecking, of highway robbery, of organization to accomplish by force of numbers and by violence what has not been done by regularly constituted means under the law, to which the newspapers of the day have for months treated their readers, have recently called forth much public discussion as to the cause of lawlessness. The apprehension which has been freely expressed that the strained condition of the industrial world is likely to lead to more serious situations by the breaking down of the respect of the needy for the laws which protect the possessions of the opulent, no less than the realization of the terrors of want, both by the large numbers who suffer its pangs and by those whose humanities have not been frozen over by the coldness of selfishness, have created a state of alarm which adds interest to every item of information on the subject.

The student of history has seen organized society, with whatever of advancement it may have made, go out of existence more than once and in more than one nation amid carnage wrought in the destruction of existing authority. Proudly has this age believed it was building better than its predecessors. Patriotically the people of each civilized nation have supported the authority of law which protected them. But there is a growing feeling—and it is rank in the breast above a half-filled or an empty stomach—that some injustice has been done. The man who finds himself unable to obtain the means of livelihood; who finds closed all opportunities to apply his willing toil to the production of necessities of life for himself and his; who can see in the prospect for the future no hope for betterment of his sad condition—that man is in position to lose patriotism, respect for law, care for the perpetuity of society and anxiety for the prolongation of his own life. He is in position to become a revolutionist, an anarchist, a bomb-thrower.

It is incumbent on the representatives of organized society to find means to protect and perpetuate all that is good in it. The usual remedy proposed by the unthoughtful is repression.

Speaking of the situation, one of the organs of the Pope at Rome, says: "France, in 1793, suffered the overthrow of its rightful government, and the terrors of the guillotine, and just a hundred years after, this same France is subject to a worse terror, that of dynamite." Again, it says: "One hundred years ago destruction and incendiarism reigned because of the love of democracy. Now slaughter and ruin is perpetuated because of the love of anarchism." Again: "Stringent laws have been passed within the last few weeks to regulate the traffic in explosives, and all suspects are closely watched." Again: "The harm done by these teachings is not in the 'propaganda of action,' but rather in the 'propaganda of ideas,' and these anarchist doctrines have originated quite naturally in the same liberalism which now essays to combat them with penal code and the policeman's club." Again: "It is a ridiculous and yet pitiful sight, this liberalism, blanched with fear, straining every nerve in the defense of society. What are your lives worth now, gentlemen?"

These quotations are given as illustrating the condition of civilization in one European country as seen from another. America is not the only country in which society has on its hands a complicated and difficult social problem. But repression, which resulted in the overthrow of ancient societies, cannot alone be made effective in the present age and in this country. Repression of lawlessness is necessary for the safety of the law-abiding, but repression of lawlessness does not and cannot remove the want which results from enforced idleness and leads to the necessity for repression.

Anarchism has become international and the rapidity with which it has been propagated in this country, considered less with reference to what it professes to teach than with what its professed adherents do, gives seriousness to the situation which makes men desperate and yet leaves it easy for them to pro-

cure or make the most powerful explosives.

## A CALL TO DUTY.

A remarkable and powerful paper from the pen of Judge David Martin, of Atchison, Kas., appeared recently in the *Atchison Champion*. Coming, as it does, from one of the profoundest lawyers in the West, a man of vast information and of reasoning powers second to none, a man of rigid honesty of purpose and actuated by motives of benevolence, humanity and patriotism of the highest order, a Republican in politics and by occupation counsel for one of the greatest corporations on the continent, this paper is worthy to be read and pondered by every person who is willing to place himself face to face with the momentous problem which demands solution in tones which must soon be heeded.

The paper takes a bird's-eye view of the history of money in the United States, passing rapidly over unimportant details and noting only salient facts which have contributed to the present derangement of finances and industries. This review brings up naturally and inevitably to the fact furnished to Judge Martin from the Census office, that the indebtedness, public and private, of the people of the United States was in 1890, in round numbers, \$18,000,000,000. From other sources he learns of various items of increase since 1890, and concludes that in 1894 this indebtedness has grown to \$21,000,000,000, a sum which at 6 per cent. accumulates interest at the rate of over \$1,250,000,000 per year, an amount which is far from being paid but is largely added to the principal each year.

Alluding again to the history given in the beginning of the showing, the paper intimates too plainly to be misunderstood that the indebtedness has in it an element of injustice on account of certain acts of financial legislation whereby the money of the contract was made to represent increasing amounts of labor or its products. The series of acts which in this respect receive the severest condemnation are those by which silver was demonetized.

Revolutions of the recent times are passed rapidly in review and injustice is found to be their exciting cause. This element added to the well-nigh unbearable enforced idleness and want of the present situation leads to a warning which, while not couched in terms of the alarmist, is plain enough to awaken the apprehensions of the thoughtful. He admonishes his party of its opportunity and urges it to be true to its duty to the people. "A single gold standard, under the present condition of this country, means the starvation of the millions so that the millionaires may have more of their abundance," is a sentence which gives the key-note of the conclusion of the paper.

## TEXAS CATTLE RAISERS' ASSOCIATION.

The eighth annual session of the Texas Cattle Raisers' Association was held at Ft. Worth, commencing March 13. The membership is 600, holding 1,500,000 cattle. The proceedings showed that the association is a valuable one to its members and is looking after their interests in a business way. A movement was proposed looking toward securing the same rates to Omaha as to Kansas City, with a view to making that market available to the Texas ranchmen.

The Secretary of the Texas Live Stock Sanitary Commission made a long address on splenic or Texas fever, his conclusion from federal government experiments being that the fever district and the region where ticks could live were identical. He had dipped his cattle for the three years he had lived in the quarantined region, and thus obtained immunity from fever.

The best of good feeling seems to have prevailed throughout. Kansas City was represented by a very large delegation in the interest of that market.

The next meeting will be held at Ft. Worth, on the second Tuesday in March, 1895.

Get up a Club for KANSAS FARMER.

## WHEAT CROP OF THE WORLD.

The following table shows the government estimates of the world's production of wheat by countries for the year 1893 as compared with that of 1892. The latest official returns for the different countries were used wherever available. It is stated that in certain cases these official statements are preliminary and may be changed by the corrected estimates. There is little doubt, for instance, that the estimates for Germany and Russia will be reduced by the final returns. Many countries make no official estimate of wheat production, and in such cases the most trustworthy commercial estimates were taken. Where quantities were given by weight they were reduced to bushels under the assumption that sixty pounds of wheat make a Winchester bushel. The crops of the countries in the southern hemisphere are those gathered in November and December, 1892, and in January and February, 1893.

In North America the total production of wheat in 1893 was 447,479,000 bushels, a decrease of nearly 127,000,000 as compared with the preceding year, and of 237,000,000 as compared with 1891. The large extension of the wheat area in Argentina brought up the production of South America from 51,000,000 in 1892 to 82,000,000 in 1893, an increase of 61 per cent. Europe produced 2,000,000 bushels more in 1893 than in the preceding year. Asia's share of the world's wheat production was 346,000,000 bushels, as against 290,000,000 in 1892 and 345,000,000 in 1891. Africa's crop was 35,500,000, an increase of 1,000,000 bushels over 1892. Australasia's outturn stood at 41,000,000 bushels as compared with 36,000,000 in 1892 and 33,000,000 in 1891. The total world's crop of wheat for 1893 is estimated at 2,360,471,000 bushels, which is less by 32,000,000 than the crop of 1892 and about equal to the crop of 1891.

Countries.	1892. Bushels.	1893. Bushels.
United States.....	515,949,000	396,132,000
Canada:		
Ontario.....	28,783,000	21,731,000
Manitoba.....	14,454,000	15,616,000
Rest of Canada.....	4,945,000	4,000,000
Total Canada.....	48,182,000	41,347,000
Mexico.....	10,000,000	10,000,000
Total North America.....	574,131,000	447,479,000
Argentina.....	30,000,000	56,750,000
Chile.....	18,000,000	19,200,000
Uruguay.....	3,262,000	5,694,000
Total South America.....	51,262,000	81,644,000
Austria.....	50,170,000	42,600,000
Hungary.....	142,013,000	132,276,000
Croatia and Slavonia.....	7,884,000	7,815,000
Bosnia and Herzegovina.....	2,000,000	2,000,000
Belgium.....	20,743,000	17,500,000
Bulgaria.....	40,441,000	26,911,000
Denmark.....	5,000,000	5,000,000
France.....	310,814,000	277,857,000
Germany.....	118,215,000	119,748,000
Great Britain.....	60,407,000	50,800,000
Ireland.....	2,211,000	1,666,000
Greece.....	4,000,000	6,500,000
Italy.....	115,676,000	119,695,000
Netherlands.....	6,200,000	5,500,000
Portugal.....	6,100,000	5,000,000
Roumania.....	60,253,000	59,588,000
Russia.....	241,579,000	321,497,000
Poland.....	24,440,000	21,554,000
The Caucasus.....	71,266,000	60,000,000
Servia.....	5,500,000	6,000,000
Spain.....	78,396,000	88,000,000
Sweden.....	400,000	400,000
Norway.....	3,301,000	2,590,000
Switzerland.....	24,756,000	21,000,000
Turkey in Europe.....	2,000,000	2,000,000
Cyprus.....	2,000,000	2,000,000
Total Europe.....	1,406,933,000	1,407,942,000
India.....	206,640,000	288,896,000
Asiatic Turkey.....	49,000,000	45,000,000
Persia.....	18,567,000	19,000,000
Japan.....	15,737,000	15,000,000
Total Asia.....	289,944,000	345,896,000
Algeria.....	19,899,000	19,000,000
Cape Colony.....	2,819,000	4,014,000
Egypt.....	3,252,000	10,000,000
Tunis.....	4,000,000	2,500,000
Total Africa.....	34,464,000	35,514,000
New South Wales.....	3,964,000	6,817,000
Victoria.....	18,679,000	14,315,000
South Australia.....	6,436,000	9,240,000
Western Australia.....	298,000	429,000
Tasmania.....	688,000	1,019,000
New Zealand.....	10,758,000	8,378,000
Queensland.....	392,000	468,000
Total Australasia.....	35,963,000	41,161,000
Recapitulation:		
North America.....	574,131,000	447,479,000
South America.....	51,262,000	81,644,000
Europe.....	1,406,933,000	1,407,942,000
Asia.....	289,944,000	345,896,000
Africa.....	34,464,000	35,514,000
Australasia.....	35,963,000	41,161,000
Grand total.....	2,392,727,000	2,359,686,000



### WHY WHEAT IS LOW.

One of the wonders of the present, as well as the last year, is the low price of wheat. The prophets of the grain market have all been surprised. Even the apostles of low prices, the "bears," have seen their most daring predictions greatly surpassed. When the greatest bear of the grain market suggested that wheat in Chicago would "settle" to about 65 cents, he perhaps little thought that it would go below 55. Statistics have been carefully considered and the authorities agreed long ago that the situation should experience a rally. Foreign trade papers of the most conservative class advised their readers that the price was below the cost of production, and that wheat must therefore be a profitable purchase; and yet these same papers have had to record great declines below what they had considered "bed-rock."

The first really comprehensive view of the situation is presented by the report of the Senate committee appointed to inquire into the cause of the agricultural depression, at the suggestion of and headed by Senator Peffer. Indeed the other members of the committee appear to have left almost the entire investigation to the chairman of the committee. The preliminary abstract of the report has excited much admiration from both producers and dealers, on account of the thoroughness and honesty with which the work was evidently done, and the valuable information presented.

The advance sheets of this report include the following points of information:

"The farming area has been greatly enlarged since the war. The wheat acreage increased during the twenty-two years following 1870 from 18,992,000 acres to 38,554,000 acres, corn from 38,646,000 to 70,626,000 acres, and oats from 8,792,000 to 27,000,000 acres. With the stimulus to grain-growing came corresponding development of the milling industry. Merchant milling has become so common that farmers now quite generally sell their wheat and buy their flour as they need it. The market for wheat in the United States is fixed by dealers on the Chicago Board of Trade, and for all the surplus wheat and corn exported the price is fixed in Liverpool.

"The extension of the agricultural area took place chiefly in the new States of the West; it produced a marked effect on farming operations in all parts of the country, and it had corresponding influence on the general conditions of agriculture. It may be said, as to much of the grain-growing land of the country, that it has improved in recent years. This is true particularly in New England and the old Middle States. Well-managed farms there now yield more wheat by the acre than they did fifty years ago.

"Regarding a general cause of depression, the cereals being annual productions, their market values are affected more or less by large or small yields from year to year. This is true not only as to local prices, but to market values of the surplus generally. Effects produced from this cause are much less now than in years before the facilities for distribution had reached their present state of development. When thirty to forty days were required for the passage of a ship bearing a cargo of 10,000 bushels of wheat across the Atlantic ocean, before telegraph wires and cables were used to convey information concerning crops, before the Suez canal was open for traffic, and before steamships were built that can carry 100,000 bushels of grain from New York to Liverpool in ten days, a very heavy crop or a very light crop of any particular kind of grain in the United States materially affected market prices here for the surplus. Now, however, with present conveniences for handling, storing and shipping grain, with low rates of transportation over long distances, it is the world's production and not that of any one country that affects market values of grains which go into the channels of commerce.

"Competition among farmers affects prices just as competition in other departments of industry affects values in those departments. There is a kind of

competition-among grain farmers that does not affect prices locally or generally—what has been known as "bonanza" farming, as it is carried on by men who operate on large tracts of land acquired when land values were low. This method of farming has brought the cost of producing wheat down to about 35 cents a bushel on an average in North and South Dakota. When it is considered that the market price of our surplus wheat is fixed in Liverpool, and the export price to a large extent controls the price for which it is sold in the home markets, it is readily seen that large quantities of 35 cent wheat thrown on the market must have a depressing effect on the general average of profits in wheat farming. In California, under the improved methods of plowing, seeding and harvesting, the cost of producing a bushel of wheat has been reduced to about 22 cents on an average crop.

"Our strongest rival is India, whose farmers during the seven years, 1886 to 1892, furnished nearly one-half as much as we did of the wheat requirements of our best customer. It is interesting to note that India's exports of wheat in considerable quantities began only about twenty years ago. Of the world's requirements in 1883 that country furnished only 559,000 bushels. In 1887 her wheat exports amounted to 41,558,000 bushels. It has fallen off some since; the annual average from 1888 to 1891 was about 28,000,000 bushels. Our annual average exports of wheat, exclusive of flour, have been about 80,000,000 bushels during the last seven years.

"If the Liverpool price governs prices at other places it is easy to see that India wheat competition in that market, to the extent shown in the foregoing figures, does injuriously affect the price of American wheat. The opening of the Suez canal has cheapened transportation from Bombay and Calcutta to Liverpool 50 per cent. Wages of India farm hands are from 6 to 10 cents of our money per day. Wheat costs only about 13 cents a bushel on the farm. Twelve cents more puts it aboard ship, and 25 cents additional places it on the wharves at Liverpool and London. Thus 50-cent wheat from India competes with wheat grown on American farms at an average cost of 60 cents a bushel."

### KAFFIR CORN ON SOD.

A subscriber writes: I would like some information in regard to planting Kaffir corn on sod. I want to plant thirty or forty acres. The sod has been eaten out by sheep in parts. Please give me some advice as to planting, and will it be a paying crop with a favorable season? This is, or will be, my first experience with Kaffir corn.

Give the ground a good but shallow plowing; cut the sod, which is probably quite tender, with a disc harrow, following with a common harrow until it is fine; then plant your Kaffir corn, being sure to have it well covered. A good rolling will help. If the season is favorable you should get a good crop with little further cultivation.

Under the orders of Judge Caldwell, the Santa Fe railroad is now paying its taxes in full in all counties in which compromises have not been made. The 5 per cent. penalty for non-payment when the taxes were due amounts in some counties to a considerable sum. It is stated, however, that the aggregate tax of the road will not be greater than if it had been paid when due, the amount saved by the company on the compromises effected prior to the issuance of the order of the court being fully equal to the amount added by the penalty in the other counties.

The returns of the commercial agency of R. G. Dun & Co. show that the average price of commodities is now 11.3 per cent. lower than a year ago. The decrease in the total business transactions as shown by bank clearings is 30.7 per cent. A little over one-third of this is accounted for in the reduction in prices. The only cities in the United States showing an increase are in Kansas, namely, Topeka 19.2 per cent. and Emporia 15 per cent. The decrease in New York is 36.2 per cent., in Buffalo 39, in Milwaukee 50.1, in Denver 47.2, in Indianapolis 66, in Sioux City 44.7.

Every State surrounding Kansas shows heavy reduction. If there are any indications of revival they have not been manifested in the bank returns except in Kansas. It is reported that some revival in the iron business has taken place on account of reduction in prices.

### Julius Petersen's Closing-Out Sale.

Special correspondence KANSAS FARMER.

On Thursday, March 15, 1894, Mr. Julius Petersen, of Lancaster, Atchison county, Kas., made a closing out sale of his entire herd of pure-bred and high-grade Short-horn cattle, hogs, horses and farming implements. About 500 people were in attendance, including a number of fine stock breeders from different parts of the State. The weather, which seemed threatening the day before, could not have been more perfect, and the cattle and hogs in the commodious stables and pens were in fine, thrifty condition. Although the FARMER does not know what Mr. Petersen's plans for the future may be, it regrets his retirement from the active ranks of the improved stock breeders of Kansas and hopes that he will soon again embark in this industry, for which he is so eminently fitted. While the prices realized for the thoroughbred stock were not as remunerative as might be desired, we are pleased to note that it was all taken by the farmers of that and the neighboring communities, thus showing their appreciation of the value and necessity of breeding fine stock.

At 10:30 o'clock Col. F. M. Woods, of Lincoln, Neb., announced the terms of the sale and the sale commenced. A fine lot of the latest and most improved farm implements were soon disposed of, many purchasers securing splendid bargains. A lot of seed oats, about 800 bushels, sold at 30 cents per bushel, and about 350 bushels of potatoes went at 45 cents per bushel. One hundred and fifty Black Langshan and Plymouth Rock chickens sold at prices ranging from \$2.50 to \$3.25 per dozen. Fifteen high-grade brood sows with pigs at side sold at \$35 to \$31 per head. A lot of splendid two-year-old and yearling heifers brought \$30 and \$20 per head, respectively, and a fine grade one-year-old bull sold at \$41. One hundred and twenty head of extra fine high-grade steers, 2 and 3 years old, sold in six lots of twenty each at \$49, \$44.25, \$38.55, \$30.60, \$27.50 and \$30 per head, respectively, and occasioned some spirited bidding.

The pure-bred stock sold as follows:

16th Duke of Twin Springs, red, calved August 1, 1893, Sol. Denton, Denton, Kas.	901 00
15th Duke of Twin Springs, red, calved August 4, 1893, Grant Diahong, Troy, Kas.	36 00
Duke of Twin Springs, dark red, calved February 28, 1893, Richard Garrety, Monrovia, Kas.	50 00
Chumley Duke, red, w. m., calved June 10, 1893, A. M. Best, Monrovia, Kas.	59 00
Lord of Myshall Hill, red, calved May 9, 1893, Thos. Adcock, Lancaster, Kas.	39 00
Viscount of Lancaster, red, calved August 24, 1893, F. Hoyt, Robinson, Kas.	61 00
Edwin, red, calved December 23, 1892, Chas. Roes, Iatan, Mo.	37 00
Craig, roan, calved November 5, 1892, Rudolph Lee, Lancaster, Kas.	50 00
Red Boy, red, calved December 4, 1892, D. F. Whitaker, Pardee, Kas.	56 00
Baron, red, calved June 4, 1892, Wm. Bechtel, Valley Falls, Kas.	55 00
17th Duke of Twin Springs, red and white, calved October 5, 1893, John Brentano, Purcell, Kas.	15 00
Jasaminums B. Barrington, red, calved February 6, 1893, Peter Bernay, Horton, Kas.	52 50
Agnes Barrington, red, calved May 22, 1893, to same.	52 50
May, roan, calved March 25, 1893, to same	42 50
Corinna B. Barrington, red, calved July 16, 1891, Jas. Gregg, Huron, Kas.	50 00
Ianthe, red, calved August 1, 1893, cow calf at side, to same.	50 00
Eliza, red, calved October 20, 1890, to same	44 00
Evangeline, red, calved October 22, 1891, to same.	44 00
Maud 15th, red, calved July 24, 1893, to same.	60 00
7th Belle of Twin Springs, red, calved August 1, 1893, F. Hoyt, Robinson, Kas.	30 00
8th Belle of Twin Springs, red, calved June 28, 1893, to same.	26 00
9th Belle of Twin Springs, red, calved June 1, 1893, to same.	26 00
Diana, red, some white, calved June 28, 1893, Fred Mathias, Huron, Kas.	63 00
Sophia, roan, calved August 3, 1891, to same.	35 00
Vega, red, calved October 10, 1893, to same.	35 00
May 58th, red, calved June 7, 1891, Wm. Graynor, Lancaster, Kas.	50 00
May 63th, red, calved May 13, 1891, W. B. Dean, Atchison, Kas.	51 00
Serena, red, calved November 25, 1887, to same.	50 00
Blanch, red, calved October 11, 1891, T. L. Clark, Shannon, Kas.	50 00
Josephine 2d, red, calved July 2, 1891, to same.	50 00
Aria, red, calved November 20, 1893, cow calf at side, Wm. Denton, Purcell, Kas.	52 00
Avena, red, calved October 13, 1893, bull calf at side, to same.	53 00
Emma 29th, red, calved December 27, 1891, to same.	25 03
Zulika, red, w. m., calved December 14, 1886, J. M. Honey, Farmington, Kas.	51 00
Nana, red, calved April 15, 1891, R. Chaney, Purcell, Kas.	40 00
RECAPITULATION.	
Eleven bulls	549 00
Average	49 10
Twenty-four cows and heifers	1,082 50
Average	45 10
Total, thirty-five head	1,631 50
Average	46 62

Every man, woman and child who has once tried that specific, Dr. Bull's Cough Syrup, cannot say enough in its praise.

### SECRET OF HEALTH.

An Old Physician Interviewed on the Subject of March Diseases.

He said the first thing is to keep the feet warm and dry, somehow, no matter how, but be sure to keep the feet both warm and dry. Next keep the chest warm seven days every week, thirty-one days every March; exercise freely in the open air; sleep in a well-ventilated room and take Pe-ru-na before each meal. These rules followed will secure to each individual an absolute guarantee against disease in spite of slush and mud, rain and sleet, wind and damp and sudden changes in the temperature.

If, however, you are already the victim of a cough, la grippe, catarrh, bronchitis or consumption, the remedy that relieves readily, cures quickly and permanently restores to health is Pe-ru-na. Pe-ru-na, when once used in the family, becomes a household fixture. As a spring tonic and blood purifier, both to prevent and cure disease, Pe-ru-na has no equal. It cleanses, strengthens, soothes, purifies, invigorates, regulates and restores.

Send for a free copy of Family Physician No. 2, a catarrh book; also Family Physician No. 3, a book on spring diseases. Address the Pe-ru-na Drug Manufacturing Co., of Columbus, O.

### Publishers' Paragraphs.

Dr. Parkhurst, the story of his life and his remarkable war against the official protection of vice and crime in New York city, will be the subject of an authoritative article in *McClure's Magazine* for April. The article will be illustrated with several portraits of Dr. Parkhurst.

By special arrangements recently made with the publishers, we are now able to offer a new 1894 edition of "People's Atlas of the World" in connection with subscription to KANSAS FARMER at a price within the reach of every farmer in the West. For \$1.25 we will send KANSAS FARMER to any address for one year, and also a copy of "People's Atlas of the World." This is practically the same atlas as the one we advertise under the name of Peerless Atlas except it has plain maps instead of colored, and the information contained in it is amended to date. We can give you subscription to KANSAS FARMER and *Ladies' Home Companion*, each one year, and also send the Atlas for \$1.45. Please make your renewals promptly. Send dollar bill and 45 cents in 2-cent stamps.

### The Cattle Supply.

In this market there is a demand for all kinds of cattle, from the emaciated canner to the prime, sleek-coated, pure-bred bullock. But this demand is a variable quantity and does not always harmonize with the quality and quantity of receipts, and so the market is often glutted when the total receipts are not excessive, because there is a superabundance of some one class. Theoretically, if just so many cattle of each kind could be received each day they could be disposed of readily enough, but such a condition of things doesn't often happen in practice. Just now the cattle market is suffering from an oversupply of medium and half fat steers, which, since the first of the year, has caused much dullness and dissatisfaction in the trade. The demand is strong for prime fat steers, and very few are coming, so that while the total supply is much short of a year ago, prices have been going down hill very rapidly. There is not much chance for the market to pick up when the quality of the receipts is so poor.—*Chicago Drovers' Bulletin*.

### Shenandoah Valley, Virginia.

Have you visited it? If not, we are very sure you know its reputation through friends who have gazed on its mountains, inspected its fine stock and fruit farms, figured on its mineral and timber wealth, and were well pleased with its equable climate, its thriving towns, and the opportunities for securing the best of homes at surprising prices.

Now! Now! Now! is the time to take advantage of low railroad rates and see this grand valley.

MARCH 8 AND APRIL 9 the Baltimore & Ohio railroad company will sell tickets at *One Fare for the Round Trip* from Chicago to points in the Shenandoah valley.

For information about these excursions, address L. S. Allen, A. G. P. A. Baltimore & Ohio railroad, Chicago, Ill.

For information about lands, business openings, etc., address M. V. Richards, Land and Immigration Agent, Baltimore & Ohio railroad, Baltimore, Md.

The persistent decline in the prices of live stock started later than in wheat, but is manifesting staying qualities which are not liked better than those manifested by the depression in the grain markets.



## Horticulture.

### HORTICULTURE ON THE PLAINS.

By Walter Longstreth, read before Kearney County Farmers' Institute.

Western Kansas is comparatively new in horticultural work, yet enough has been done to clearly demonstrate that it not only equals, but surpasses, eastern Kansas in health and vigor of plant and quality and quantity of ripened fruit.

A humid atmosphere is generally thought to be indispensable to successful growth of fruit and forest trees, but moisture in the air is not such an absolute necessity as moisture in the soil. Although the atmosphere was exceptionally dry last year, we have, with irrigation, been able to secure the usual heavy growth of well-ripened wood. The past season was an "off year" on account of a late spring frost, which destroyed all kinds of fruit. The present prospects, however, are good for a full crop next year, with the exception of peaches, which suffered considerable damage from this last cold snap.

As our orchards are far enough advanced in the experimental stage to make experience. I will give some notes and observations on a few varieties and methods of growing them which have been successful. As to location, there appears to be little choice; any land that can be watered, with the possible exception of the lowest bottom lands, being adapted to fruit.

While planting may be done in the fall, spring is undoubtedly better. When one understands how to heel-in trees properly, they may be procured in the fall, but the heeling-in must be carefully done, care being taken to have the earth well packed around the roots. Ordinarily, it is safer to wait till spring and plant as soon as the trees are received. And here a word as to buying. Don't buy of every agent and peddler that comes along with his book of "fashion-plates," showing all manner of monstrosities—blight-proof pears, curculio-proof plums, blackberries that grow to be trees without thorns, iron-clad apples, and many other things too tedious to mention. Instead, buy direct from the nearest reliable nursery, selecting young, thrifty trees, not over two years old, and of such varieties as have proven successful here. On receipt of the trees cut off all mutilated roots and shorten in the tops from a third to a half to correspond to the loss of roots. The ground should be deeply plowed and thoroughly pulverized. Holes should be large enough to allow room for the roots without cramping. It has been well said that "the holes should be as large as the orchard." The trees should be set two or three inches deeper than they stood in the nursery, leaning them slightly to the southwest or one o'clock sun, and have the earth well tramped around the roots.

We have tried various distances apart for trees. Some of our first apples were set twenty-four feet east and west by thirty feet north and south, with peach trees planted between, with the expectation that by the time the apples needed the ground the peaches would be past their prime and could be removed. Such a mode may do where peaches are short-lived, but not here, as there is every indication of their living as long as the apples. Besides, the peach is too gross a feeder, requiring more water than the apple. One lot of Ben Davis apples were set twenty-four by thirty feet with Missouri Pippins between. This appears to be all right, as it makes them fifteen feet in the row. The Missouri Pippin being an early bearer, will probably yield several crops before thinning will be necessary.

Our pears were set twenty feet each way for standards, alternating with dwarfs, north and south. The dwarf varieties have not been very successful. Our standard sorts are all that could be desired, the Bartlett and Clapp's Favorite showing a growth of ten to twelve feet in height, while such varieties as Seckel, Anjou, Lawrence, etc., are from eight to ten feet

high, and all stocky in proportion. Many of them, especially Bartlett, are quite heavily set with fruit buds. This is seven years growth from the nursery, the trees being one year old when set and cut back to a single straight stem eighteen to twenty inches high. A heavier growth than this could easily have been obtained but we have preferred a thrifty growth in the early part of the season, which could be well ripened in the fall, as tending to lessen the liability to "blight," which is the main cause of failure with pears. This disease, however, is not known nearer than 200 miles of us. The dark glossy foliage and healthy appearance of the bark, together with the almost perfect stand of this orchard, which contains 300 standards, surprise and delight all Eastern horticulturists who see it.

Our first planting of peaches is seven years old and has borne one full crop. This was the fifth season after transplanting, the last two being entire failures. The quality of the fruit, when one does get a crop, can not be excelled. Peaches shipped to Denver in 1891 brought the highest market price, outselling California's best product and netting \$1.50 per bushel. For market purposes, it is best to plant young trees, about twenty feet apart each way, and use only such kinds as ripen before September 20 and are well colored, there being small demand for light-colored fruit. Plant sparingly of cling-stones, especially late ones.

Of plums, we have several varieties, the Wild Goose being best for all purposes, as it is early, of good size, bright color, and bears shipping well. The Miner and Weaver are good for late use. The only objection to the Marianne is that it holds too tightly to the stem. Unless it is very carefully picked the stem is liable to be loosened at the fruit, which damages it for shipping. Plums may be set about twelve by sixteen feet.

We have tried the Russian apricot, both seedling and named varieties, and, to quote Bill Nye, "As a success it is a failure, but as a failure it is an unqualified success."

The Early Richmond cherry is the standard early sort. Several hundred English Morello cherries, which were set along the wind-breaks for the birds, have borne such good fruit that, to use Plato's description, the "bipeds without feathers" have gathered most of the crop.

Trees should receive great care the first summer after planting. The ground should be kept free from weeds and well cultivated, using short double and single-trees, or better still, a Sherwood steel harness. Corn may be planted between the rows, as it protects from wind and shades the trees. The heads should be formed low, about eighteen inches from the ground to the first branches. Wind does not have so much effect on trees with low heads as with high ones; besides, the low branches shade the body, preventing "sun-scald," which is the cause of much loss in orchards.

The amount of pruning necessary depends much on the variety. The Ben Davis apple is one of the easiest to train, while the Winesap makes such a rampant growth that it is almost impossible to do anything with it. Enough should be done to keep the tree in the desired shape and prevent crowding of the limbs.

As a protection against rabbits and sun-scald, we wrap the trees with bunch-grass, which, by re-tying, may be made to last several years. This is more easily handled and not so unsightly as old sacks and rags, with which trees are usually protected.

The orchard should be protected from wind on the north and south sides by several rows of trees. Both black and honey locust, ash, box elder, walnut, and, where the break is sufficiently wide to allow of its being planted inside, the catalpa, are all good for such use. We have discarded the cottonwood as unsatisfactory, it being too subject to insect depredations, the "last, but not the least," of which has been the killing to the ground of some of our best ones by the flat-headed borer.

For an evergreen nothing surpasses

the red cedar. We have some which have made an average annual growth of sixteen inches. Others which have had no water have made a yearly growth of one foot. It must be carefully handled when planting, as the roots will stand about as much exposure to the air as a fish.

The Concord is the only variety of grape we have. It makes a vigorous growth and is free from disease.

With small fruits we have done little beyond supplying home demand, owing to the difficulty of procuring the necessary help to pick the berries. All our berries have been planted between fruit trees. When one has room, though, it would be better to plant separately, as the berries require more water than the trees.

The Souhegan and the Gregg are the best of the black-cap varieties of raspberries, while Cuthbert and Turner do the best of the reds. The red sorts, though, are only shy bearers at best. Shaffer Colossal is too tender for general planting.

In blackberries, Kittatinny should head the list, followed by Taylor's Prolific. Snyder, which usually stands at the head of the late sorts in the eastern part of the State, is a failure here. The vine is hardy enough, but the berry is small and worthless. The name might, not inappropriately, be shortened by changing "y" into "i" and dropping the "r."

In gooseberries, Houghton is a heavy bearer, while with strawberries most varieties in general cultivation pay well.

Rhubarb and asparagus are so easily grown and come so early in the spring that all should have a plentiful supply. A planting of rhubarb should be made each year, as the bunches get too thick after the third year. We have two acres of asparagus, which requires no more work than corn or potatoes. It usually nets us from 8 to 10 cents per pound, and as an acre well cared for will produce from 1,500 to 2,000 one-pound bunches, it can be made to pay as well as some other crops.

I am sorry the subject of floriculture has not been assigned to some one, as it is deserving of more attention than it generally receives. When one considers how easily flowers may be grown, it is surprising that so few are grown. Only last week I dug out and threw away several thousand plants of roses, trumpet flowers, etc., which were in the way.

In conclusion, don't let a few years of waiting deter you from planting an orchard. The first thing you know the few years have gone, and the fruit you might have had is still unplanted. "Procrastination is the thief of time," you know. As Sir Walter Scott said, "be sticking in a tree, 'twill grow while ye are sleeping," provided, of course, you don't sleep too long. And remember, that "all things come to those who labor and wait."

#### Where is the Georgia Peach Belt?

EDITOR KANSAS FARMER:—In what part of Georgia is the peach belt located, or at what point in the State is Mr. Hale's peach orchard located? Mr. J. F. Cecil, in KANSAS FARMER, refers to the matter. An item in the FARMER would be of interest.

J. A. ALLISON.  
Welda, Anderson Co., Kas.

[The great peach orchard which Mr. J. H. Hale, of Connecticut, is growing in Georgia is about eighteen miles southwest from Macon.—EDITOR.]

In Bulletin 27 of the Virginia station it is reported that the spring-set strawberry plants do the best, and the fall-set plants did very little the first year. If the blossoms are removed for the



Cut this ad out and send to us and we will send you the revolver by express C. O. D. If you find it satisfactory and equal to revolvers sold by others at \$5.00 and upwards, pay the agent \$1.00 and express charges and keep it, otherwise **DON'T PAY A CENT.** It is a .38, uses Smith & Wesson cartridges, self-cocking, patent ejector, full nickel and the best revolver ever advertised in a paper. Address, Sears Roebuck & Co., Big Gun Catalogue Free. Chicago, Ill. Mention Kansas Farmer.



## Saved Her Life.

Mrs. C. J. WOOLDRIDGE, of Wortham, Texas, saved the life of her child by the use of Ayer's Cherry Pectoral.

"One of my children had Croup. The case was attended by our physician, and was supposed to be well under control. One night I was startled by the child's hard breathing, and on going to it found it struggling. It had nearly ceased to breathe. Realizing that the child's alarming condition had become possible in spite of the medicines given, I reasoned that such remedies would be of no avail. Having part of a bottle of Ayer's Cherry Pectoral in the house, I gave the child three doses, at short intervals, and anxiously waited results. From the moment the Pectoral was given, the child's breathing grew easier, and, in a short time, she was sleeping quietly and breathing naturally. The child is alive and well to-day, and I do not hesitate to say that Ayer's Cherry Pectoral saved her life."

## AYER'S Cherry Pectoral

Prepared by Dr. J. C. Ayer & Co., Lowell, Mass.  
Prompt to act, sure to cure

## FITS CURED

(From U. S. Journal of Medicine.)

Prof. W. H. PEEKE, who makes a specialty of Epilepsy, has without doubt treated and cured more cases than any living Physician; his success is astonishing. We have heard of cases of 20 years' standing cured by him. He publishes a valuable work on this disease which he sends with a large bottle of his absolute cure, free to any sufferer who may send their P. O. and Express address. We advise anyone wishing a cure to address, Prof. W. H. PEEKE, F. D., 4 Cedar St., New York.

first an enormous supply of plants is obtained for the next year, but if they are allowed to fruit the first year the plants are so weakened that a good stand cannot be obtained for the succeeding season. Summer planting proved a failure on account of the droughts. Plants set out in the spring did well, filled up the rows thoroughly, and presented an excellent crop the following season. When the plants are set out in the spring the blossoms are all removed. Those who grow the berries for market should plant every year, but when used simply for the home table several annual crops can be gathered from the plants. Mulch should be placed on the plants in the fall of the year just as soon as freezing weather has checked the growth of the plants, and not before that. The Haverland, Beder Wood and Parker Early are all recommended as good varieties for home use, but if raised for shipment an early, firm and bright berry is desired, such as Hoffman and Westbrook.

**Small Fruits.** 999,999 Strawberry plants, over sixty varieties. Large stock of Kansas, Palmer and Older Raspberry tips. All other kinds of plants at lowest prices. Write for catalogue. F. W. DIXON, (Successor to Dixon & Son,) NEWARK, KANSAS.

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from others. It is intended to aid the **BEKRY GROWER** in selecting the soil; tells how to prepare it; how to plant; how to cultivate; with observations about variety, hints about markets and other information. B. F. SMITH, Highland Small Fruit Farm, Box 8, Lawrence, Kansas.

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A general line of Nursery stock. For Descriptive List and prices, address  
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## In the Dairy.

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

### The Butterine Problem—Shall it be Pink?

The courts of Minnesota have upheld the constitutionality of the law requiring the bogus product to be colored pink. This will most effectually stop its sale in that State; and the lumber and mining regions, as well as the large cities, will consume only good pure butter. As evidencing that they do not intend to ignore the law, Armour & Co. reshipped to Chicago a large lot which arrived at St. Paul the day succeeding the decision of the court. The Dairy and Food Commissioner of that State deserves the thanks of every producer and consumer in the country for forcing to its successful issue the precept of law. New Hampshire also has the same law and so far we have not heard of its violation. If it shall have been, then the dairymen of that State must push to the same conclusion their rights, for which the Minnesota decision furnishes ample precedent.

Many thoughtful men have held that the only solution for this problem was in having a national law prohibiting the use of any coloring matter whatever in the fraudulent product and compelling its sale on its merits. This would give national jurisdiction over the whole country and would make such a law more valuable than the different State laws, inasmuch as it would furnish protection to those States who have not the power or disposition to provide or enforce laws of this character. Connecticut has a law forbidding the use of color in the fraud. Its constitutionality is to be tested in her courts. Her judges cannot uphold the law in the face of similar precedents, for it matters not whether it be colored pink, or uncolored, the intent of the law is the same, i. e., to prohibit the sale of a fraud in competition with an honest product.

We believe the "pink" law is to be the most desirable. People are not going to eat a compound of this color, while if the uncolored compound was allowed sale, its manufacturers would use every effort to make it as yellow as possible. This they could do by using more "oleo," cotton oil and butter, and less lard. While it would not have the same color of butter, nor the June tint, yet it would resemble dairy butter outside of the grass season, and could be stomachached better than were it "pink." Pink is a pretty shade anyway, so let us help along these "oleo" fellows and work for a law compelling them to use this color. Their vile product would look nice and its looks would condemn it to the consumer. If he could stomach it and wanted "pink grease" to put on his bread, let him have it; a person who would use it would not buy much butter anyway, and so depraved a taste would not be worth catering to.

Another good thing would be to secure that part of the French law which forbids the sale of butter and butterine from the same store. Over there you cannot serve both God and mammon, at least as far as the butter product is concerned. They have a fashion over there of dealing most summarily with the offender and not only force him to pay the costs of prosecution, but compel him to publish the fact of his own conviction. This is mighty poor advertising for any dealer who values his trade and its consequences so dire that it is disastrous to his business to be convicted. If we could secure a "pink" law with the French provision above we will be in a fair way to drive out the compound and place our dairy industry in complete possession. The subject is worthy a national convention and eternal agitation; as far as this paper is concerned we are in the fight to stay. If all the dairy and farm papers will work together the result can be accomplished.—*American Creamery, Chicago.*

The prohibition of the manufacture and sale of the different articles which are being palmed off on the unsuspecting public as pure products is out of the question. There is nothing left to do but regulate it. This being true, the efforts expended should be concentrated

in the one direction. In fighting this enemy of the dairyman, Canada has set an example that might be imitated to advantage by the people of this country. The laws in that country define the imitation of foods and food products as direct counterfeiting, and the man handling or manufacturing such goods is subject to the same punishment as if making or handling counterfeit money. With a term in some penal institution staring them in the face for each offense, manufacturers and dealers in counterfeit butter would not be so ready to take the chances in engaging in the traffic. The dairymen of this country never needed to look after their interests more than they do now, and they never were in better shape to do it.

The handsomest cow in the herd is the one that gives the largest quantity of rich milk, because "handsome is as handsome does."

## The Poultry Yard.

### The Rices' Egg Factory.

EDITOR KANSAS FARMER:—The season of making garden and setting hens is at hand, and in the hope of stimulating the latter industry, I ask space for this true history:

When I was a boy, up in Michigan, we had a neighbor who was noted for his thrift and "faculty" of doing things. He managed to nearly always get a good "stand" and rarely failed on a crop. In our country phrase, he was "handy with his hands," and as for handling horses, he was the only man among us who habitually drove two teams and wagons—the second team and wagon tied behind and following the first—in doing his heavy hauling. He was out of debt and had money in the bank. His name was, and is, Artemus Rice. I mention these particulars about him at length because the impression is prevalent that well-to-do people scorn chickens and that that particular industry is reserved, by a sort of tacit understanding, for those who have failed at everything else. I confess to having felt some quiet amusement when I heard, a few years ago, that "Art." Rice "had gone into chickens," and said to myself, "Well, he's rich enough to afford it." It was no sport with him. He took it up with as much seriousness and attention to details as though he had to make it pay. Last spring I was back at the old homestead on a visit, and went over to see him. The outline of his operations, which I give, may be depended upon as accurate—not only "it is the way approved by the profits."

To begin with, he keeps a chicken diary and a chicken account book. From first to last, he can tell what he has done and how he has done it, and what it cost him and what it made him. When I was there, some forty coops, each containing a hen and chickens, were scattered about a small yard. The coop used was a double structure; the day part slatted on the south, and with earth floor; the night part, had movable bottom, for convenience in cleaning, and was vermin-proof. Mr. Rice set, last spring, fifty hens; hatched 468 chickens; lost twenty-five; raised 443. He does not use incubators, but says he would if he was running on a large scale. Early in the season each hen has given her from eighteen to twenty chickens, in her coop; later, she would have twenty-five to thirty. Several hens are always set the same day, so that the "doubling-up" process is easy. The liberated hens soon forget their chickens and go back to laying. When the chickens leave the coops, they have practically the run of the farm till they are shut up for winter. The young roosters are sold when they weigh about two pounds, though no especial effort is made to fatten them.

Year before last (1892-3), the Rices put into winter quarters 170 old hens and 200 pullets. The pullets began laying in November. The yield was 210 dozen eggs in December, 270 dozen in January, 300 dozen in February, 499 dozen in March. These eggs were not sold at the "store." They were shipped to Brooklyn, N. Y., mainly by freight (refrigerator car), 33 cents per case;

Highest of all in Leavening Power.—Latest U. S. Gov't Report.

# Royal Baking Powder

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sometimes by express, in very cold weather, at \$1.17 per case. The cases are owned by the "factory," are conspicuously stenciled with shippers' address and guarantee that contents are strictly fresh. Every egg that is not already clean, is washed. Shipment is made every week. At first they got no more than the market price for eggs; now they get several cents above it. Fancy eggs, fancy butter and Mr. Hale's fancy peaches all find a market at fancy prices. These prices are open to all applicants and have but two conditions precedent—uniformity and excellence. The average returns for the four months I have given was over 25 cents per dozen.

In the winter, these fowls are kept in tight houses, double-boarded, paper-lined, thoroughly celled, with very little ventilation. They are so warm that they never freeze, except a little the very coldest nights. Each house has a ventilating shaft six inches square, which starts near the floor and runs out through the roof. Sometimes the double windows are also opened a little—the outer one lowered and the inner one raised, so as to make no draft. The size of the 200-fowl house is 36x18, nine foot ceiling, with bath-house adjoining, 12x15 feet. The first gallinaceous maxim of the Rices is, "That the foot of the fowl should never touch the snow," and all winter long their hens did not see the outside of their quarters.

Chicken lice they never have. The perches, nest-boxes and run-ways are painted with kerosene twice a month. The droppings are frequently neutralized with coal ashes and sawdust; the floor is kept covered with straw and chaff in which the grain fed is scattered, in order to make the chickens scratch for exercise. Each house has a dust bath with lots of dust—not dirt—in it, perhaps a foot deep.

The food of the fowls consists of ground green bones and ground oyster shell set before them all the time. They have boiled potatoes for breakfast every day. Every other day they have a lunch of raw cabbage. Their staple food is wheat, mixed with a little corn. Each house has a little field, surrounded by a hen-tight fence, connected with it. The field is frequently plowed up and sowed with small grain. Then the hens scratch it up. The mature fowls have no further range.

Just what the receipts were, Mr. Rice would not tell me. He would only say "the business is profitable," and left me to draw my own conclusions from such figures as he did give me. Counting, then, the winter and March eggs, 1,279 dozen, as given, at 25 cents per dozen, which is within the mark—one shipment netted 37 cents—and we have \$339.75; counting the eggs for the other eight months at the same gross sum; 200 little roosters at 15 cents each, and 200 old hens at 25 cents each, we have: Eggs, \$679.50; roosters, \$30; hens sold, \$50; total, \$759.50.

I have read that the beginning of Cincinnati's prosperity came from its discovery of how to jack fifteen bushels of corn into a three-bushel barrel. Here is a man who is jacking corn that don't pay, 50-cent wheat, small potatoes that he can't sell and refuse cabbage, into egg-cases at a percentage of profit that Cincinnati never knew. More

than that, he is substituting brain for brawn—making his head save his heels; thinking instead of lifting; selling care, attention to details and mental alertness instead of labor. Furthermore, the bulk of the time put in on this enterprise is furnished by the ladies (and they are ladies in every sense of the word) of the household. Is not their example and their success an answer to thousands of Kansas wives and daughters, who, like Rebecca, are looking out upon a struggle they are the centers of, wringing their hands, wishing they could help and not knowing how?

When we ship corn, it takes one bushel to carry another to market. Mr. Rice makes one egg pay the freight on forty-five eggs. At our distance the freight might perhaps be doubled and one egg only carry, say, two dozen. The corn-raiser in the East has us at a great disadvantage in his freedom from freight; but in the case of butter and eggs we have him upon a substantial equality. Instead of selling wheat at 40 cents per bushel, are there not many of our people who could advantageously put the shoe upon the other foot and buy it of themselves at that figure and then imitate Mr. Rice in running it through an egg factory?

EDWIN TAYLOR.

Edwardsville, Kas.

### Poultry Association of Kansas.

EDITOR KANSAS FARMER:—With your permission, I desire to say to those of your readers interested in the poultry industry, especially those residing in Kansas, that if they desire to advance the industry, there is no way, in my opinion, that it can be done so cheaply and yet so effectually, as by becoming a member of the Poultry Association of Kansas. The small fee for each, per year (50 cents), under the economical methods adopted by the society, goes a great way in preparation for the annual show. The show of 1895 promises, even at this early day, to eclipse anything of the kind ever held in the State. At this exhibition there will be introduced some new features never before attempted at poultry shows, which will be practical and interesting, and worth to all who attend more than many years dues. Ladies and gentlemen, let me hear from you.

D. A. WISE, Secretary,  
707 E. Tenth St., Topeka, Kas.

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PERMANENTLY



## Horse Markets Reviewed.

J. S. Cooper, Union stock yards, Chicago, reports:

"The week opens with much lighter receipts and a very large number of buyers, and in consequence a very strong and active market ruled. Added to these influences fine weather and liberal buying on orders from England gave life and tone to the market. There was some demand for draft horses and farm mares, but chunks, 1,000 to 1,300 pounds, and drivers commanded readiest sale, the smaller ones for the South and the larger ones and drivers for the Eastern markets. These when smooth, sound and in good flesh sold at about the best prices of the season. The market has all the appearance of a permanent revival in trade, and it is quite probable that from now on activity and strength will be the rule. Good smooth chunks, 1,100 to 1,400 pounds, and drivers will command readiest sale and highest prices."

## Relative Value of Hay.

The question has been asked: "What is the relative value of the hay crop of the United States to that of corn, wheat, oats and cotton?" We reply by publishing the following table, showing the farm value of the crops mentioned for 1892, at current prices, as compiled by the Census bureau:

Corn	\$550,000,000
Wheat	325,000,000
Oats	218,000,000
Cotton	300,000,000
Hay	550,000,000

The cotton crop of 1888 was estimated at \$245,619,745, that of hay, \$408,499,565, showing an increase during the four years of \$54,380,255 in the product of cotton, and \$141,500,435 in that of hay. While we are dealing in figures it may be interesting to our readers to know that the average tonnage of hay grown in the United States in 1892 was 1.17 tons per acre, with an average value at the farm of \$8.49 per ton.

That the amount of hay exported to Europe through the ports of New York and Boston since last July has been 8,193 car loads, 90 per cent. of it being Canadian goods going through in bond.

That the amount of hay imported into the United States in 1890 under the old tariff rates was 101,713 tons, while in 1892, under the new rate, it was 67,067, showing a falling off of 43,646.—Hay Trade Journal.

## Sure Death to Prairie Dogs.

We have been asked time and again for a remedy that will kill prairie dogs, make sure work of it and rid a field of the greatest rodent pest with which the Western country is afflicted. Arsenical poison is no doubt the best remedy yet devised, and we are satisfied that the best formula yet devised is the one now known all over the West as the *Field and Farm* remedy, which is made as follows: To three pints of water add five teaspoonfuls of sugar, of which any kind will do, but granulated is generally preferred. To the solution add one-eighth of an ounce of strychnine. Put the mixture in a tin pail or glass jar. Then fill the same with wheat to within one inch of the top of the water. Set the receptacle away, and when the wheat swells to the top of the water it is ready for use.

Now, go around in the dog town, placing a tablespoonful one foot from the entrance of each hole. It is best to repeat the visit as long as there are any dogs to be seen, placing the wheat where it had previously been taken, and when the wheat is found undisturbed fill up the hole. It may take some time to get rid of them, but a little persistence will finally conquer. Be sure to get the sulphate of strychnine, as it will dissolve in water, while the crystallized will not dissolve.

Many of the dogs manage to get back to their holes and die there, although we have seen over three dozen dead animals outside within an hour after putting out the poison. The best time to kill prairie dogs is in the winter when there is snow on the ground, but work may be continued until the green herbage comes on. Feed is scarce at that time and they will eat the wheat readily. If wheat is not conveniently at hand chop or corn will do. Be sure to make the mixture sweet enough for the dogs to eat, for strychnine is naturally very bitter. Although we have not tried other grain in our experiments, we are under the impression that rye or barley prepared in the same way as wheat would answer the same purpose. Just as soon as dogs begin to die in the burrows, those that are not poisoned will soon desert the village. The prairie dog is a suspicious little animal and very much dislikes to have a funeral on its hands.

You are too young, no matter what your age, to lose your hair. Save it by the use of Ayer's Hair Vigor. It removes dandruff, prevents baldness, restores gray and faded hair to its original color, and makes it soft, glossy and abundant. No toilet is complete without it.

## Initiative and Referendum Lectures

On direct legislation. For information and history, as well as plan for State organization, write to

W. P. BRUSH, Topeka, Kas.

## THE STRAY LIST.

FOR WEEK ENDING MARCH 7, 1894.

Wichita county—W. S. Place, clerk.

COW—Taken up by W. H. Burch, in Linn tp., P. O. Leoti, August 1, 1893, one yellow cow, 8 years old, branded W on left hip; valued at \$15.  
2 YEARLINGS—By same, two blue heifers, 1 year old, branded X on left hip; valued at \$20.  
STEER—By same, one spotted steer, 1 year old, branded X on left hip and T on right hip; valued at \$10.

STEER—By same, one brindle steer, 2 years old, branded T on right hip; valued at \$10.

Comanche county—D. E. Dunne, clerk.

HORSE—Taken up by J. W. Platt, in Rumsey tp., P. O. Evansville, December 15, 1893, one bright bay horse, weight about 600 pounds, about 8 or 9 years old, small white mark on left shoulder, mark on left front foot; valued at \$5.

Stafford county—L. S. Lewis, clerk.

PONY—Taken up by Leonard E. Forrester, in Douglass tp., February 2, 1894, one small bay mare pony, branded K on left hip; valued at \$10.  
COLT—By same, one black mare colt, no marks; valued at \$15.

Shawnee county—C. T. McCabe, clerk.

MARE—Taken up by F. B. Baird, in Monmouth tp., January 18, 1894, one white mare, 8 or 9 years old, lump on hind leg; valued at \$15.

Woodson county—H. H. McCormick, clerk.  
STEER—Taken up by P. F. Black, in Toronto tp., P. O. Toronto, January 1, 1894, one pale red steer, 1 year old, crop and under-slope in each ear; valued at \$12.

FOR WEEK ENDING MARCH 14, 1894.

Greenwood county—J. F. Hoffman, clerk.

STEER—Taken up by Wm. Barnegrove, in Janesville tp., one light red steer, 1 year old, branded — on left hip.

Woodson county—H. H. McCormick, clerk.

STEER—Taken up by Charley M. Smith, in Perry tp., P. O. Center Ridge, on February 17, 1894, one white steer, dehorned, nearly 3 years old; valued at \$18.

Wichita county—W. S. Place, clerk.

PONY—Taken up by Wm. Watterson, in Slinn tp., P. O. Selkirk, March 3, 1894, one bay horse pony, 8 years old, marked U on left shoulder; valued at \$10.

PONY—By same, one light bay mare pony, 8 years old, marked BX on left hip; valued at \$15.  
PONY—By same, one roan mare pony, 8 years old, marked BX on left hip; valued at \$25.

PONY—By same, one bay mare pony, 9 years old, no marks visible; valued at \$20.  
PONY—By same, one bay mare pony, 8 years old, no marks visible; valued at \$20.

Johnson county—Jno. J. Lyons, clerk.

2 MULES—Taken up by Frank Geolbert, in Mission tp., P. O. Red Clover, January 27, 1894, two dark bay mare mules, 15½ and 16 hands high; valued at \$25.

FOR WEEK ENDING MARCH 21, 1894.

Pawnee county—James F. Whitney, clerk.

MARE—Taken up by A. P. Latus, in Grant tp., January 20, 1894, one black mare, white spot in face, fifteen hands high, 7 years old; valued at \$15.

COLT—By same, one gray mare colt, 2 years old, thirteen hands high; valued at \$8.  
COLT—By same, one bay mare colt, 2 years old, thirteen hands high, long white spot in face; valued at \$10.

Hodgeman county—John L. Wyatt, clerk.

PONY—Taken up by W. A. McAnulty, in Marensa tp., P. O. Burdette, March 3, 1894, one sorrel mare pony, four feet high, branded AA on left shoulder and bar on left hip; valued at \$15.

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sell my new, smooth nicotine, gives a cool smoke, all want it. Sample 15c. B. F. KIRTLAND, So. Evanston, Ill.

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## MISCELLANEOUS.

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WITH GRAPHITE BOXES and STEEL TOWER. Prices satisfactory. Warrant covers all points. Investigate before buying. Catalogue free. PERKINS WIND MILL CO., 26 Bridge St., Mishawaka, Ind.

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We manufacture the Improved Hot Water Incubator in four sizes. No. 1, 320 eggs, \$25; No. 2, 250 eggs, \$20; No. 3, 100 eggs, \$15. Also for fanciers and children, No. 4, 50 eggs, \$7.

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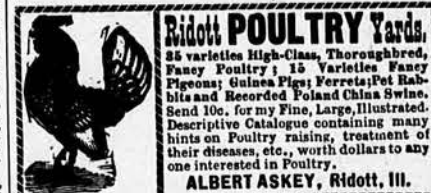
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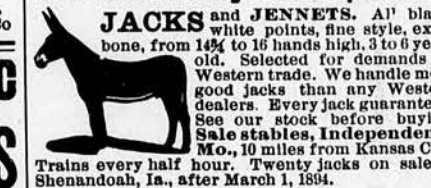
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Official Receipts, 1893.....	1,746,828	1,948,373	569,517	35,097	99,755
Slaughtered in Kansas City.....	956,732	1,427,763	372,385		
Sold to feeders.....	249,017	10,125	71,284		
Sold to shippers.....	360,237	510,469	15,200		
Total sold in Kansas City.....	1,566,046	1,948,357	458,869	22,522	

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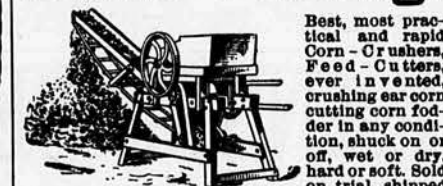
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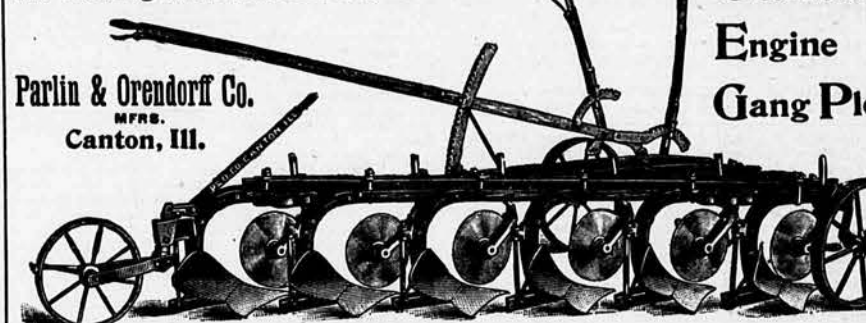
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## TWO-CENT COLUMN.

"For Sale," "Wanted," "For Exchange," and small advertisements for short time, will be charged two cents per word for each insertion. Initials or a number counted as one word. Cash with the order. Special!—All orders received for this column from subscribers, for a limited time, will be accepted at one-half the above rates, cash with order. It will pay. Try it!

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**EARLY OHIO AND ROSE POTATOES** for sale, 75 cents per bushel in sacks. Special price in car lots. Topeka Commission Co., 133 Kansas Ave., Topeka, Kas.

**CHICKENS } WANTED, TO BUY 2,000.**  
**PIGEONS } Topeka Commission Co.,**  
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**RED KAFFIR CORN.**—For sale. D. P. Norton, Council Grove, Kas.

**CANE SEED WANTED.**—If any cane seed to offer, address F. Barteldes & Co., Lawrence, Kas.

**FOR PURE ALFALFA SEED.**—Direct from the grower, address E. G. Jones, Syracuse, Kas.

**CHOICE EARLY OHIO SEED POTATOES.**—Grown especially for seed purposes, and for sale by car lot, barrel or bushel. Write for prices to A. Tomlinson, North Topeka, Kas.

**FOR SALE.**—Four young Jersey bulls from cows that are making over 300 pounds of butter a year. St. Lambert and Champion of America blood. Write A. E. Jones, Topeka, Kas.

**SEED OATS.**—The true Southern Red Rust-Proof Winter oats (not Texas Red oats), only twice grown North. First crop from 128 pounds seed on two acres, 206 bushels. Seed absolutely pure. First seed from Southern Mississippi. A spring oat North. Matures early; clean, bright, stiff straw; heavy grain. One to five bushels, 75 cents, free on board cars. For larger quantities, terms and sam-ple, address D. J. Fraser, Peabody, Kas.

**W. F. B. SPANISH AND S. C. B. LEGHORN EGGS** \$1.25 per fifteen or \$2 for thirty. John Black, Barnard, Kas.

**FOR SALE.**—By John McCoy, Sabetha, Kas., eight head of extra good useful short-horn bulls, all well-bred, good color, and old enough for service. Not wishing to make public sale will sell at private sale.

**LIGHT BRAHMA AND S. C. B. LEGHORN EGGS** \$1 per setting. Dan Green, Dighton, Kas.

**J. H. PEGRAM,** Virgil, Kas., breeds prize-winning J. chickens, Black Langshans, Plymouth Rocks and Golden-Spangled Polish—non-sitters.

**"PRIDE OF THE NORTHWEST" SEED CORN**—Selected Northern-grown pure yellow and white seed corn, put up in three-bushel ten-ounce burlap sacks, even weight, delivered on board cars at Kansas City, small lots or by carload, any railroad station in Kansas, \$2 per sack. Order by sack. German millet and cane seed for sale, any sized order. Kansas City Grain & Seed Co., Kansas City, Mo.

**E. E. FLORA,** Wellington, Kas., breeds Barred Plymouth Rocks, Single-comb White Leghorns, Partridge Cochins. Eggs \$1.50 per setting. M. B. turkey eggs 15 cents each.

**FOR SALE.**—Mammoth Chester Co. seed corn. First premium yellow corn at Kansas State fair, 1893. From seedman last year. One dollar per bushel. N. H. Brosius, Topeka, Kas.

**FOR SALE.**—100 acres good land. Good water, pasture, house, orchard, barn, granary, fifty acres wheat. Price and terms by Conrad Krueger, Pfeiffer, Kas.

**WE HAVE A FEW GOOD RECORDED CLEVELAND** Bay stallions to trade for land, merchandise, cattle, sheep or work horses. What have you to offer? Stericker Bros., Springfield, Ill.

**BELLEFONT NURSERY.**—Honey and black locust for timber claim planting in western Kan-sas. Prices—5 to 10 inches, \$1.50 per 1,000; 12 to 18 inches, \$2.25 per 1,000; 20 to 30 inches, \$3 per 1,000. We are prompt and will ship with the greatest care. Address J. E. Mellecker, Bellefont, Ford Co., Kas.

**APPLE TREES FOR SALE CHEAP.**—I have at wholesale rates about 50,000 three and four-year-old apple trees. Best varieties, true to name. Call on or address Mrs. Geo. W. King, Box 101, Solomon City, Kas.

**FOR SALE.**—Two thousand bushels of seed sweet potatoes, nine best kinds, cheap. For prices write to N. H. Pixley, Wamego, Kas.

**FOR SALE OR TRADE FOR OTHER STOCK.**—Sheep preferred, imported English Shire stallion. Recorded, large, sound; a good breeder, as his stock shows. Address Wm. Roe, Vinland, Douglas Co., Kas.

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**ONE MILLION BLACK LOCUST SEEDLINGS** at extremely low prices. Also apple trees. Ad-dress J. A. Gage, Fairbury, Neb.

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**FOR SALE OR TRADE FOR LAND.**—Imported French Draft stallion, Robert, (registered, No. 6109 American and 1484 French Stud Book); 7 years old; No. 1 breeder, as his colts will show. A bar-gain if taken soon. John Schwab, Cherokee, Kas.

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**SURPLUS NURSERY STOCK.**—Send for price list. It embraces everything you want and cheaper than ever. Try me. Send at once. Frank Hol-singer, Rosedale, Kas.

**MAMMOTH YELLOW DENT.**—And Hill's Large White corn, \$1 per bushel. James Bottom, Onaga, Kas.

**WANTED.**—Ten thousand bushels German millet; 10,000 bushels sorghum seed. Send samples. Kansas City Grain & Seed Co., Kansas City, Mo.

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**DOUGLAS COUNTY NURSERY.**—Offers for the spring trade a full line of nursery stock—fruit trees, small fruits, shrubbery, bulbs and roses; grape vines in large quantities; 800,000 hedge and forest tree seedlings. Prices to suit the times. Send for catalogue, free. Wm. Plasket & Son, Lawrence, Kas.

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**RASPBERRY AND BLACKBERRY PLANTS.**—For sale. J. C. Banta, Lawrence, Kas.

**TWO REGISTERED HOLSTEIN BULLS.**—For sale cheap. Will exchange one if desired. Cor-respondence solicited. G. J. Coleman, Mound Val-ley, Kas.

**SEED CORN.**—The best ninety-five day Yellow Dent seed corn on earth. Took an award at the Columbian Exposition in competition with the world. One dollar per bushel. A. E. Jones, Topeka, Kas.

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**FOR SALE OR EXCHANGE.**—Shire stallions, Jack, Jennets, Galloway bulls and cows. Commodore Dapple gray, foaled in 1887, never has been beaten for sweepstakes prize. Starbuck Town—Dark brown, foaled in 1887, weighs 1,380 pounds; sired by Gilbey's Spark, winner of first prize at Royal show, England; colts here will show breeding of above horses. Jack, Monte—Black, foaled in 1887; 15½ hands high; weight 1,040 pounds; sired by Black Prince, he by Black Satan, he by Bond's Phillip, etc.; first dam by Rehn's Mammoth, second dam by Mogul, etc. Monte's reputation is A. 1 as a breeder, and sold upon con-dition that Jennets are disposed of first. Jennets—Are a selected lot that cost upon an average of \$400 each for the original stock. Galloway Bulls and Cows—Are of the best strains of the Galloway breed. Contemplating a change in my business, will dispose of above animals at very low prices. Address Chas. E. Musick, Hughesville, Mo.

**THE HYDRO SAFETY LAMP.**—For incubators and brooders. Perfectly safe and reliable. I am also agent for the Webster & Hannum green bone-cutter, and handle all kinds of poultry supplies, such as oyster shells, ground bone, dried blood, sunflower seed, etc. In poultry, I only breed the E. B. Hamburgs, the best egg-pro-ducer raised. Send for circular of what you want. J. P. Lucas, Topeka, Kas.

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Three more choicely-bred Jersey bulls, all solid color, 6 to 8 months old. LaVeta Jersey Cattle Co., Topeka, Kas.

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**AGENTS, OWNERS, READ!** I have Topeka property paying annual rental, in cash, from \$650 to \$900, free of incumbrance and light taxes, that I will exchange for a farm. Want one quick, this spring. Write at once, answering these questions: Loca-tion, number of acres, cash value, incumbrance, improvements, etc. Address "Farmer," care of Elk Club, Topeka, Kas.

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MILLET A SPECIALTY.  
Red, White, Alfalfa and Alsike Clovers,  
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Cane, Millet Seeds, Kaffir, Rice and Jerusalem Corn, Yellow and White  
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ALL KINDS AND ALL SIZES. WRITE FOR PRICES  
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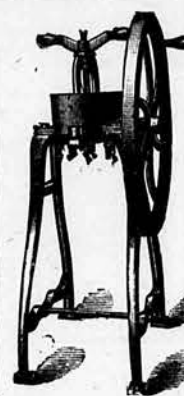
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extra bunch of fall pigs for sale. John D. Ziller,  
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**ALFALFA SEED.** For NEW CROP  
ALFALFA Seed  
Write to  
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**HOMES** IN SO. DAKOTA  
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FOR SALE \$5.00 to \$10.00 per acre.  
10 years time, low int.

**FARMS TO RENT OR EXCHANGE.**  
Rich soil, healthy cli-mate, good schools,  
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