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BREEDERS' DIRECTORY.

Cards of four lines or less, will be inserted in the Breeders' Directory for \$15.00 per year, or \$3.00 for six months; each additional line, \$2.50 per year. A copy of the paper will be sent to the advertiser during the continuance of the card.

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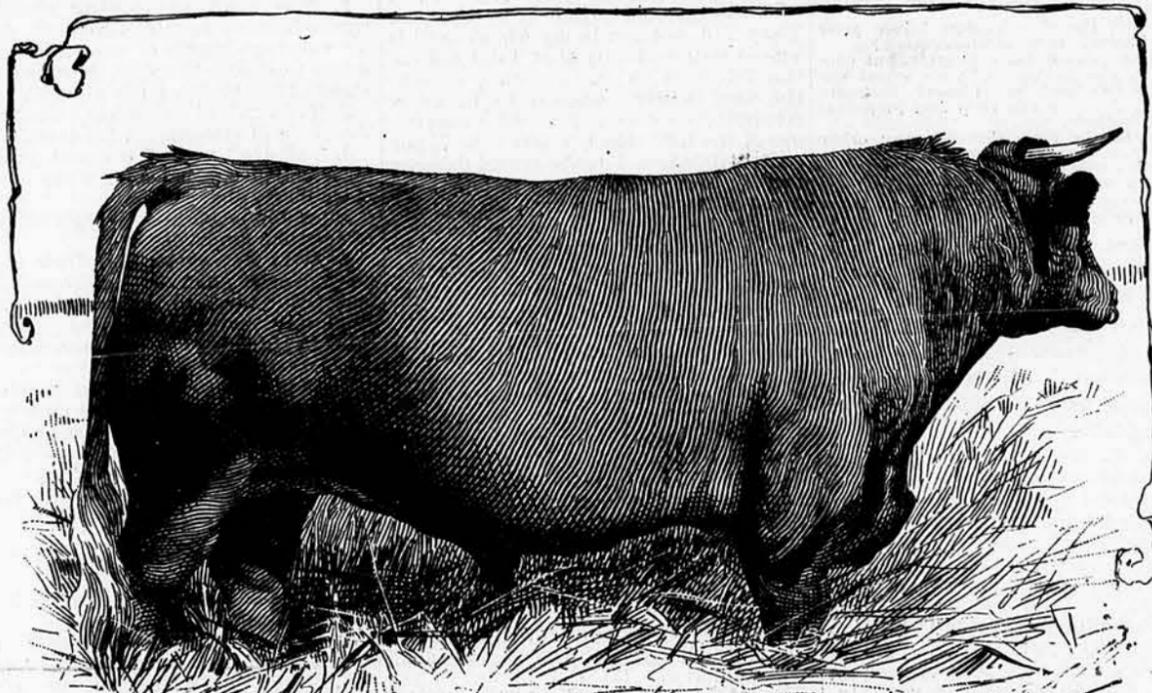
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(Continued on page 16.)

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F. F. JAQUES & CO., MANUFACTURERS, KANSAS CITY, MO.

Agricultural Matters.

PROF. SNOW'S SIXTH REPORT.

Since the issuance of the last report of the experimental station the sending out of infected bugs has gone on steadily but at a much less rapid rate than heretofore. The requests for infected bugs are really few in comparison with those of the early summer.

An attempt has been made to get the reports from farmers in some uniform shape, and to this end a blank has been sent out, of which the following is a copy:

LAWRENCE, KAS.

MY DEAR SIR:—In my next report I wish to make an estimate of what we have been able so far to accomplish by the artificial dissemination of a contagious disease among chinch bugs. To this end I ask you to answer the questions below, and to return this sheet to me at your earliest convenience.

Very truly yours, F. H. SNOW.

First—How much wheat did you have that was threatened by chinch bugs? Were the chinch bugs scattering, numerous or overwhelming?

Second—Did the chinch bugs injure your neighbors' fields? If so, to what extent? Third—Can you estimate roughly, but conservatively, what per cent. of your wheat was saved by using the infected bugs? Estimate in per cent. of the whole crop and in actual number of bushels.

Fourth—Did the bugs threaten any other crop beside wheat? If so, what, and probable benefit from using the infected bugs.

Fifth—Did your use of the infected bugs prevent the chinch bugs from getting a start in your young corn?

By means of this blank I hope to be able to offer a summary account of the value of the experiments, which shall include an estimate of the actual cash value of the work during the year. I present herewith copies of a few of these blanks as filled out by farmer correspondents:

Charles F. Morgan, Industry, Kas.:

(1) How much wheat did you have that was threatened by chinch bugs? Were the chinch bugs scattering, numerous or overwhelming? Answer:—Twenty-seven acres wheat, seven acres rye; old bugs numerous, young bugs overwhelming. (2) Did the chinch bugs injure your neighbors' fields? If so, to what extent? Answer:—Yes. As to the per cent. I am unable to answer at this time. (3) Can you estimate roughly, but conservatively, what per cent. of your wheat was saved by using the infected bugs? Estimate in per cent. of the whole crop and in actual number of bushels. Answer:—I hardly know how to answer this question, but will say by using infected bugs all the old bugs died and little or no damage was done by them. Wheat will go about fifteen bushels per acre on an average. Do not think I would have had much of a crop had it not been for the infected bugs. (4) Did the bugs threaten any other crop besides wheat? If so, what, and probable benefits from using the infected bugs? Answer:—As soon as my wheat was harvested young bugs went in my corn field, but in about eight days after I received the second lot of bugs from you, soon as I had enough of them, put them in my corn field, and at this time about half of them are dead. (5) Did your use of the infected bugs prevent the chinch bugs from getting a start in your young corn? Answer:—Yes, they were very numerous in my corn, but they have not done any damage for two weeks.

M. F. Mattocks, Wauneta, Kas.:

(1) How much wheat did you have that was threatened by chinch bugs? Were the chinch bugs scattering, numerous or overwhelming? Answer:—All of fifty acres. The bugs were scattering over most of the field. (2) Did the chinch bugs injure your neighbor's fields? If so, to what extent? Answer:—The bugs injured M. H. Hankison's wheat and H. Wendt's barley. (3) Can you estimate roughly, but conservatively, what per cent. of your wheat was saved by using the infected bugs? Estimate in per cent. of the whole crop and in actual number of bushels? Answer:—I consider I saved 10 per cent. of the whole crop by using the infection. (4) Did the bugs threaten any other crop beside wheat? If so, what, and probable benefit from using the infected bugs? Answer:—They threatened the corn, but did not damage it to amount to anything. (5) Did your use of the infected bugs prevent the chinch bugs from getting a start in your young corn? Answer:—It did not prevent them from getting in the corn, but it kept them from damaging it to any extent. Will say that the bugs are all dying and dead. Do not think they can possibly do any farther damage this season.

J. B. Dobyons, Howard, Kas.:

(1) How much wheat did you have that was threatened by chinch bugs? Were

the chinch bugs scattering, numerous or overwhelming? Answer:—Forty acres. Scattering and numerous. (2) Did the chinch bugs injure your neighbors' fields? If so, to what extent? Answer:—Some one-third and some less. (3) Can you estimate roughly, but conservatively, what per cent. of your wheat was saved by using the infected bugs? Estimate in per cent. of the whole crop and in actual number of bushels. Answer:—One-third. (4) Did the bugs threaten any other crop besides wheat? If so, what, and the probable benefit from using the infected bugs? Answer:—Yes. Corn. Killed them and stopped their ravages. (5) Did your use of the infected bugs prevent the chinch bugs from getting a start in your young corn? Answer:—Yes. Wherever the infected bugs were handled properly and as directed, they were a success in the wheat and prevented their ravages in the corn.

G. N. Conley, Patterson, Kas.:

Questions 1, 2, 3 and 4 unanswered. (5) Did your use of the infected bugs prevent the chinch bugs from getting a start in your young corn? Answer:—I used the infected bugs only in the corn. They did not get in my wheat until it was so near maturity that I did not use the infection in it. But they went to the corn in what seemed to be overwhelming numbers. I consider that the use of the infection has saved me 75 per cent. of damage; i. e., the actual damage has not been more than one-fourth as great as it would have been without the use of the infection. While the bugs are not entirely destroyed, I have, in my judgment, been largely benefited by the use of the infection, and I am still spreading it in my field. I have 180 acres of corn almost surrounded on three sides with wheat fields, and the bugs have only got in a very few rows and are not spreading; they are dying in large numbers. I have placed them in some of my neighbors' fields, and they feel benefited. I find the bugs dying in fields where the infection has not been placed, and evidently from the infection. While some of my neighbors who have tried the infection think it a failure, it is my opinion that with careful, judicious management it will prove beneficial in a large measure.

D. Weaver, Herington, Kas.:

(1) Had in ten acres of wheat. Chinch bugs numerous. (2) Did injury to 10 per cent. (3) I think about 20 per cent. (4) The young bugs went into my corn and stalks were covered about six inches. Kept putting infected bugs in the field until they all disappeared. (5) The infected bugs killed the young bugs. There have been ten men to me for infected bugs, some from fifteen miles, for bugs to put in their corn. I have supplied all of them with infected bugs and, as far as I have heard from them, all say that the bugs have disappeared.

Edmund Jackson, Brigham, Kas.:

(1) Ten acres; very numerous. (2) Yes, to a considerable extent, and are doing damage in neighbors' millet now. (3) Nine-tenths. My wheat is not threshed yet, but I believe it will thresh twenty bushels per acre. (4) Oats, millet and corn. I consider by using the diseased bugs sent by you that I have saved my crops, as the bugs are still numerous in my corn. (5) I did not get bugs soon enough? After I got the diseased bugs to work I positively kept them in check. I can find large numbers of dead bugs wherever I have placed diseased bugs in various parts of my 100 acres of corn. If I had used the diseased bugs earlier I can safely say that I would have saved a larger per cent. of wheat and oats, also damage to corn would have been less, as they were so numerous that they retarded its growth.

A. D. Todd, Poe, Kas.:

(1) Forty-five acres; overwhelming. (2) Yes, 33 per cent. (3) 13 per cent., seventy bushels. (4) No. (5) No.

My assistant, Mr. Kellogg, is now in Illinois looking up the results of the use of the infected bugs sent into that State. Over fifty lots of diseased bugs were sent to Illinois farmers.

A report from Prof. H. J. Waters, of the Missouri State University, to whom infected bugs were sent by me, is very encouraging. Prof. Waters sent infected bugs to several Missouri farmers and has so far received five reports, of which four were highly favorable. The following is a copy of one of these favorable reports:

EVANSVILLE, MO., August 22.

Prof. H. J. Waters, Columbia, Mo.:

DEAR SIR:—In reference to the results of the chinch bug experiment am happy to say I used the infected material sent me with the best success. I used as directed, and in two weeks I could find piles of dead bugs all over the field, three or four hundred in a pile. At that time they were not all dead, but at present they are, and all have disappeared. They were killing my corn at the time I received the diseased bugs, July 15, and had it not been for them would have completely

ruined it before this. Since the bugs have been killed we have had fine rains and corn is doing splendidly.

I think it is a great blessing to the farmers of Missouri that you have taken up this matter, and I am more than thankful for the benefit I have received.

Very truly yours, G. R. BARTON.

In my next report I hope to present a summary of the results of the 2,500 field experiments of the year 1891.

F. H. SNOW,

University of Kansas, Lawrence, September 24.

Draft of Agricultural Implements.

Bulletin No. 7 of the Utah Agricultural College Experiment Station is devoted to the investigation and trial of draft of mowing machines, plows, wagons, and various tillage tools, from which we publish the following summary:

MOWING MACHINES.

1. A difference of draft was found in mowing machines, but no great save in favor of one machine. This difference seemed to follow speed.
2. The draft of mowing machines varies in their relations to each other in varying kinds of mowing. This seems to be due to speed, therefore they should have two or more pinions.
3. The draft of machines varied with the point of attachment for draft.
4. The draft was 8.7 per cent. greater for a well sharpened sickle than for one more nicely sharpened.
5. An old machine well repaired drew easier than a new one.
6. A six feet cutter-bar drew easier per foot of cut than a four and one-fourth feet cutter-bar, and at a draft less than a plow carrying an average furrow; therefore a pair of horses can draw a six feet cutter-bar.
7. A pitman box set tight gave a draft less than one run quite loosely.
8. A heavy loss of force was observed when the truck at the end of the cutter-bar failed to roll, or 7.6 per cent.
9. When cutter-bar is not near right line with pitman rod the draft is increased.
10. When guards are out of true, draft is increased.
11. When cutter-bar is inclined upward the draft is decreased.
12. The draft was decreased ten pounds by the driver walking.
13. When the sections of the sickle do not strike in the center of the guards the draft is increased.

PLOWS.

1. Sulky plows drew easier down hill and much harder up hill than walking plows. The reason is evident. A rider should never ride a sulky plow or mowing machine up an incline of any importance, and should ride down hill.
2. Trials in Missouri and Utah showed that the sulky plow drew slightly harder than the walking plow, but only very slightly harder when the sulky plow is adjusted rightly.
3. The draft of plows decreases for each inch of soil turned, both with an increase of width and depth. (See Bulletin 32 of Missouri Agricultural college and No. 2 of Utah Experiment Station, from which the conclusions on draft of plows are drawn.)
4. Coulters increase draft of plows by some 15 per cent.
5. Trucks or small wheels under the end of plow beams decrease draft by about 14 per cent.
6. When the traces of harness are not in right line with the direction of draft of plow, the draft is increased.
7. A furrow 7x14 inches, on timothy sod, requires over 500 pounds draft, or more than the normal pull of three horses.
8. A share sharpened by a blacksmith increased the draft 36 per cent. over a new share. It was done badly, but in his natural method.
9. A loss of draft was found on a sulky plow when its adjustment to take land was made from the pole.
10. Lengthening the hitch decreased the draft of a plow.
11. A generally imperfectly adjusted plow drew 50 per cent. harder than one more perfectly adjusted, without coulters and with trucks under the beam.
12. A share straight on its land side and bottom, took land well and gave a slight decrease of draft.

WAGONS.

Bulletin No. 13 of the Missouri Agricultural college, and No. 4 of the Utah Experiment Station are the sources of the following summary:

1. Wheels with fellos one and one-half inches wide drew on moist but close blue grass sward 41.6 per cent. harder than wheels with fellos three inches wide did. On a dirt road, slightly moist, the former drew 12.7 per cent. heavier than the latter.
2. Draft on moist roads, according to

degree of moisture, is harder than draft on hills, varying in rise from one foot in eight to one foot in twenty.

3. Draft on a plank road is about one-fiftieth of the load, and not one-seventh of the draft found on a mud road in its ordinary condition after a rain.

4. A load over the hind wheels drew 10 per cent. easier than over the front wheels. The hind wheels drew 9 3-10 per cent. easier over an obstacle three inches high when the attachment was made to each set of wheels, but by the usual hitch drew harder on account of the downward incline of the reach connecting them with the front wheels.

5. Lowering the reach on the hind wheels decreased draft.

6. Wagons draw easier when the draft has an upward incline, and harder when horses are hitched on the end of the pole.

7. Loose burrs reduce the draft 4.5 per cent.

8. Lard, Frazer's axle grease, cylinder oil, and castor oil decreased draft in the order named.

9. The load that could be drawn on varying roads tested, varied from 1,310 pounds on a loose, gravelly road just made, to 7,355 pounds on a good gravel road, and to over 13,000 pounds on a plank road. Other varieties of roads were tested as well as the influence of grade. Draft varied on grades very closely to their theoretical variations.

TILLAGE TOOLS.

1. Less force is used in fitting the surface area of ground when only the harrow is used on stubble land than when the harrow is preceded by the plow, but when depth is taken into consideration the plow followed by the harrow moves slightly more soil than the harrow or cultivator does for a given force.

2. The relative efficacy of harrows varies with the soil.

3. The plow, acting as a wedge, compresses the soil except as it acts in separating great masses, not acting on small masses of soil save to compress them.

4. Round and square-toothed harrows act as wedges and do not loosen the soil as do other forms of harrow teeth. They do not penetrate deeply, and moving very near the surface are comparatively easy in absolute draft, but in relative draft per pound of earth moved not so easy for hard soils as some other form of harrow. They fine the soil about the average of other harrows. They may be regarded as adapted only to loose soils and for putting in seeds around which the soil should be compressed.

5. Harrows with teeth having a forward slant also act as wedges in a large measure, and leave a soil that weighs heavily, being compact. These harrows also have a medium draft per pound of soil moved, penetrate to a medium depth and fine the soil about the average. They leave an uneven bottom.

6. Harrows that lift the soil by a rolling action, thus avoiding some of the friction of the other harrows, penetrate the deepest, loosen the soil the best and move the most soil per pound of draft. They give a soil of average fineness. When the rolling cutter is a complete or unbroken circle the soil is loosened in furrows, and when it is removed it is found to have a corrugated bottom. When the rolling cutter is a broken circle, known as a cutaway harrow, it leaves the bottom soil in average order, and has the easiest draft, and it is believed forms the best harrow for surface tillage now in use for the average clay loam soil. (See Bulletin No. 6, Utah Experiment Station.)

Pleasant Employment at Good Pay.

The publishers of *Seed-Time and Harvest*, an old established monthly, determined to greatly increase their subscription lists, will employ a number of active agents for the ensuing six months at \$30 PER MONTH or more if their services warrant it. To insure active work an additional prize of \$100 will be awarded the agent who obtains the largest number of subscribers. "The early bird gets the worm." Send four silver dimes, or twenty 2-cent stamps with your application, stating your age and territory desired, naming some prominent business man as reference as to your capabilities, and we will give you a trial. The 40 cents pays your own subscription and you will receive full particulars. Address,

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The Stock Interest.

THE HOG OF THE GREAT CENTRAL BASIN.

A paper read by Col. M. Stewart, of Wichita, before the Kansas Improved Stock Breeders' Association, at Topeka, September 17, 1891.

Fifty years ago the greater portion of the territory lying between the Appalachian chain and the foot-hills of the Rockies, designated sometimes as the "great central basin," was either oozing swamp land, trackless forests, or prairies as boundless as old ocean. The solitudes of this vast domain were undisturbed by the shrill whistle of the locomotive or the basso profundo of the side-wheel steamer. Settlements there were, it is true, but like angels' visits, they were few and far between. Along the banks of the navigable streams, towns and prospective cities of some magnitude, were beginning to find their respective places on the map of the period.

Cincinnati was one of these great cities in embryo, with a population of not quite 25,000 people, but a reputation greater perhaps than is enjoyed by Kansas City to-day. It was the commercial entrepot of the great central basin, the head center of the swine interests of the world and the drovers' paradise. Hither was conveyed by wagon and sled or driven in on foot, mast-fed, corn-fed and still-fed hogs. In those days there was no incongruity in a man being a distiller and a deacon in the church at the same time. His complacency was much greater if his yards were filled with hogs growing corpulent from the refuse of his still. In the domain tributary to this initial packing point there was a constant rivalry going on as to whose bunch of hogs should tip the beam at the highest notch. The story is told that the most ambitious of these early breeders made it a point to meet on butcher day at the pens of one of their neighbors and gamble on the weights of the several hogs slaughtered. As Fairbanks was, at this early period, unknown beyond the precincts of the village of St. Johnsbury, Vt., and steelyards were a costly luxury, they devised a scheme of their own that seemed to satisfy all concerned. A beam of wood with a flat surface was laid crosswise of a fallen tree. The carcass was laid on one end of this beam and stones enough to balance on the other. A conclusion was then reached by guessing at the weight of the stones.

The spirit of rivalry existing amongst breeders could possibly result only in good, and while the hogs of those days, with a few honorable exceptions, were a mixture of all breeds, and as a rule deficient in fattening qualities and slow to mature, yet the time was at hand when out of a medley of breeds should come forth one distinct breed, one clear, clean-cut type of the *genus sus*, not the British type, or the Neapolitan type, or the Chinese type, but a type as distinct from these breeds as the human type of American-born citizens from away back differs from all other nationalities. The excellent qualities of the new breed which originated in southwestern Ohio a half century ago went begging for a name through three decades. Had the naming of it devolved upon me I should have adopted no hyphenated cognomen, but christened it, amid the blare of trumpets and the waving of flags, "The American."

I place but little store by even the best authenticated accounts of the exact crosses used in making up this superb breed. It is enough for me to know that even before I was born, a number of experienced breeders, who loved their work, all living in the same locality and during the same period, were patiently and conscientiously working out a problem with the best material at hand, that should result in producing a machine which would make more ounces of commercial pork from a bushel of corn or its equivalent than any other machine invented by God, and improved upon by man, without infringing on the original patent. In the face of bitter opposition and confronted by a prejudice as deep-seated as a canker sore, the spotted hog mildly pushed his way to the front "conquering and to conquer." Unlike the leopard who never changes his spots, except when he changes from one spot to another, this hog with the pendant ears began to discard his spots. Coming up from the ranks, as it were, as soon as he reached a certain altitude of respectability, and had his pedigree a matter of record, he began to put on airs, and like his aristocratic kinsman from across the water where nobility has fed him with a silver spoon, he needs must appear in a coat of the most faultless black, with furbelows of white. But he owes not his popularity to the color of his hair, for the most popular dam in this popular breed of the great central basin was a white hog, and if a grateful country ever wishes to do honor to the memory of a dumb brute the name of "Old Hank-rader sow" should go thundering down the ages as worthy of that honor.

The men who put their millions in hogs, in a manufacturing and commercial way, have calculated to a fraction the value of the different parts of the hog, and know, perhaps better than the breeder, the estimate to place on the value of hams. Shoulders and backbone are a necessary

appendage in the living machine, and so is snout, but was there ever a pork packer who deemed them an essential in the carcass? Hence, in the early days when the Ohio swine-raisers delivered their hogs to the Cincinnati or Hamilton packers, they acquired an object lesson on the subject of hams, which bore fruit later on in the production of a line of hogs whose hams, like the ponderous calves of the ballet-dancer, were suggestive of artificial padding. Do you suppose for a moment that Phil Armour and a score more of million-aires packers would ever have "got there" on the wedge-shaped elm-peelers of the Pilgrim fathers? Which of you by taking thought can add one cubit to his stature? and yet I say unto you, that these breeders of Ohio by taking thought have added not a few cubic inches to round out the contour of the reverse end of a hog, which same is the hog of the great central basin. I have heard, as one of the objections to this hog, that he "runs all to fat." That certain other breeds produce lean meat in a much larger proportion. From the standpoint of one who has been both a packer and breeder of swine for many years, I am of the opinion that corn-fattened hogs of any breed, when fully ripe, will show an excess of fat over lean meat.

In the winter of 1874-5, when corn was selling at \$1.15 per bushel, I fattened, or thought I had fattened, a nice bunch of pure-bred Poland-Chinas on cooked wheat. As lard was worth 15 cents per pound I concluded to get rich all of a sudden, and so slaughtered them myself. In anticipation of this, my first experience in slaughtering Poland-Chinas, I had laid in a large supply of six-gallon jars, going on the hypothesis that Poland-Chinas "run all to fat." Afterwards, when I came to take an account of stock, I found I was lamentably short on lard, but long on empty jars and lean meats.

We of the great central basin are raising hogs to supply the markets of the world with the cheapest meat in existence. We are not catering to the tastes of the few, who demand an entire change, both in the feeding of swine and the curing of meats, regardless as to cost though it may be. I have seen American bacon exposed for sale in the shops of London as cheap as you could buy the same in Boston. And I have seen Irish bacon, fed in the Irish way, in which Indian corn was no constituent part of the ration, and smoked in the Irish way, with peat, and sold in the English way at double the price of American bacon. I was afterwards told that this Irish bacon was imported from America via Queenstown, and after being fumigated with a good dose of Irish peat smoke was given a clean bill of health. That's reciprocity. If the markets demand lean meats, then let the packers meet the feeders of swine half way and offer a higher price for such animals. Fed on clover, alfalfa and peas, and rounded up on cooked food, including roots but excluding corn, the streak of fat and streak of lean hog will doubtless be heard squealing for admittance. As it is, to make the business profitable, we must give the growing stock the run of the pastures and round them up for the market on corn. The great bulk of the hogs raised in the great central basin are fed in this manner, and two-thirds of all the hogs so fed and slaughtered in the West are of the breed that originated in Ohio some fifty years ago. Do not understand me to assert that out of every ten millions of hogs slaughtered yearly that six millions and odd thousands are pure Poland-Chinas. I do claim, however, that fully that proportion and more, too, are Poland-Chinas and their crosses. When it comes to thoroughbred herds, which are the nurseries for propagating the breeding stock, the preponderance of the hog of the great central basin over all other breeds combined is marvellous. To satisfy an idle curiosity, I recently took occasion to enumerate the herds advertised in one of our leading swine journals. The result is as follows: Cheshires, 1; Tamworth, 1; Victoria, 3; Essex, 5; Yorkshire, 13; Duroc-Jerseys, 18; Chester Whites, 24; Berkshire, 27. Total, 92. Poland-Chinas, 201.

In the hands of skillful breeders, guarded by the pedigree system, there is little danger that the breed in its purity will retrograde. There is, in my judgment, no room for improvement in the breed as a breed. That there is room for improvement in individual herds and in many specimens of all herds goes without saying. The greatest danger that threatens the permanency of the Poland-China lies in the direction of overproduction. In this sense I allude strictly to the overproduction of thoroughbreds for breeding purposes, and the best remedy I know to correct this tendency is by the free application of the knife. No greater proportion than 60 per cent. of the young boars produced should be allowed to propagate their species. On my last visit to the most noted breeder of Poland-Chinas in Ohio, I observed more than thirty head of barrows and gilts in his pens being fattened for the shambles, and instead of creating distrust and doubt in my mind as to the unerring skill of this veteran breeder to produce animals of great merit, I found myself admiring the courage and conscientiousness of the man who could have disposed of every hoof at a fancy price, but preferred to take no chances in disposing of stock for breeding purposes which did not commend themselves to his judgment. This breeder's example followed literally by the host of professional breeders would raise not only the average standard of our hog of the great central basin, but would raise prices commensurate with qualifications.

Indigestion. Dizziness. Take BEECHAM'S PILLS.

TAME GRASS-FOR SHEEP IN KANSAS.

A paper by John Whitworth, of Emporia, for the Kansas Sheep Breeders' and Wool Growers' Association's annual meeting, at Topeka, September 16, 1891.

I have been requested by your President to read a paper on this subject. I consented to do so, not because I pretended to know more on this subject than many of you, but rather in the hope that it may lead to a free exchange of views, and so be of practical use to us as sheep-breeders.

In my opinion the subject is one of vital importance to all Kansas farmers, but especially to sheepmen, for the following reasons: Continuous cropping of grain, as is so extensively practiced in Kansas, must surely, if slowly, exhaust the natural store of fertility contained in our soils. Of course the millionaire can continue to draw checks on the bank for a longer time than the poor man, but even in his case the time must finally come when, if he continues to draw and put nothing back, when his check will be returned dishonored—no assets. Of course we can save and apply all the manures made on the farm, and for this purpose sheep manure is especially valuable; indeed the finest crop of corn I have seen this year is now growing near my home, on a poor, gravelly knoll that has been used for a sheep corral. The dark green foliage and large, pendant ears tell their own tale, that he who runs may read. Yet so little valued is this source of wealth that a neighboring sheepman let me have all he made (dry manure, free from litter, under water-tight sheds,) for 15 cents a double side-board load, all the horses could draw, a fertilizer equal to guano, which English farmers pay \$30 or \$40 a ton for. If we farmers are to keep our heads above water and lift the mortgages from our farms it is high time this foolishness should cease. The question then is, how can we the most economically and effectually do this? My answer is, that growing tame grasses and applying all manure made on farm will do it. Nitrogen is one of the most important elements of fertility in our soils, the soonest exhausted and the most difficult and expensive to replace. But nature here steps in and solves the difficulty; she has divided our crops into nitrogen-producing and nitrogen-consuming crops; we have therefore simply to follow the one crop with the other to the immense advantage of both crops and pocket.

All leguminous plants are producers of nitrogen, and in this class are some of the most useful tame grasses. Of the clovers I believe we can find varieties to suit all our soils. My farm is on the Neosho bottom. I have found red clover a great success, never having failed to secure a stand. It will yield two good crops a year, and, in a favorable season, three crops. Sheep eat the hay greedily, and thrive well on it, needing very little grain. Alfalfa does equally well, cutting three heavy crops of hay and lasting many years without reseeding. Sheep eat it greedily. Alsike clover is strongly recommended for wet places subject to overflow, as it stands wet better than any of the clover family. Red clover will stand more water than alfalfa, so I should recommend alfalfa in driest places, red clover next and alsike clover in wettest. I speak from experience, as this year I had a fine patch of alfalfa spoiled by water standing on it under a hot sun. Timothy does well in places, but as a sheep feed cannot be mentioned in same day as red clover or alfalfa. Orchard grass, meadow, oat grass and blue grass all do well here, and are all to be strongly recommended for pastures, but none of them improve the soil, and therefore are not to be recommended in a crop rotation.

It may be as well at this point to say something about seeding down and harvesting clover and alfalfa. Some wise man has said, "The education of a child ought to begin one hundred years before he is born." It is equally true that land intended for clover and alfalfa ought to be prepared at least the season before seed is planted. The great trouble is to give the young plants a clean seed-bed and so prevent them being choked by weeds during their first season of growth. To follow a carefully-hoed crop is the best, but I have found land put down in oats and plowed up and put in millet immediately the oats are harvested, keeps the weeds down. The land ought to be again fall-plowed, so that the frost may make a fine seed-bed. The seed should be broadcast or drilled-in as early as possible, say third week in March for clover and first week in April for alfalfa, latter being more delicate than clover when young, and run over pretty high with mower often as needed during the summer. After first year, if you have got a good stand, weeds have no chance to grow.

HARVESTING.

Cut as soon as plants are in bloom, handle as little as possible to prevent loss of foliage. Put hay, when still green, say day after mowing, in fair-sized cocks, and leave for a day or two and stack. This method preserves the color and appearance of the hay, as it cures in cock without bleaching.

For third or any crops, if weather proves uncertain, I have found it a good plan to procure some oat straw, haul the clover and alfalfa partially cured to the stack,

placing alternate layers of straw and alfalfa until finished. When used it apparently all tastes alike, as stock eat it all up clean. Hay made in this way comes out beautifully green and nice.

FEEDING QUALITIES.

Clover and alfalfa meet a long-felt want in the corn districts. We all know that corn is too fattening and heating a food, especially for young or breeding animals. Clover and alfalfa, on the other hand, are essentially muscle or flesh-producing foods, and when we feed them and corn together we have a perfect ration, the one supplying what the other lacks. There is therefore less waste and greater economy in feeding them combined.

MANURIAL VALUE.

Manure made by stock fed on clover or alfalfa is rich in nitrogen and is a valuable plant food. Again, the roots left in ground when crops are plowed under enriches it greatly, adding at least ten bushels per acre to two following corn crops. Roots of all kinds also do supremely well after clover or alfalfa. And again, the continuous mowing of these crops has given weeds no time to seed, leaving land clean and easy to cultivate the crops that follow them.

PERMANENT PASTURES.

Sow clover, orchard grass, alfalfa and blue grass, or any combination you may like best. My experience is all will die out in a few years except the blue grass, which apparently has come to stay, as it is continually spreading and encroaching upon the native grasses. It again gives good pasture fully two weeks earlier in spring and six weeks later in fall than native grasses and sheep do well on it and are very fond of it, but during July and August and often September, if too dry, it stops growing and looks like so much brown paper. As an auxiliary to native grasses it is first-class, but can hardly be called a sufficient substitute, our climate being apparently too dry for its full development. Clover and alfalfa make excellent pastures, but must on no account be overstocked. I have found it pays, whether pastured or not, to leave some growth on ground in fall as protection from winter frosts.

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W. W. STAMBAUGH.
If your dealers will not keep Steketee's Hog Cholera Cure on sale then send me 60 cents and I will send by mail. Better way still: let a few farmers club together and send for three dozen packages and I will make a fair reduction. Address G. G. Steketee, Grand Rapids, Mich.
P. S.—I will not send for less than 60 cents per single package.

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We have special arrangements with the publishers of the *Weekly Capital*, the official State paper, a large 12-page weekly newspaper with full dispatches and State news, price \$1. We can supply both the *Capital* and the *KANSAS FARMER* one year for only \$1.50. Send in your orders at once.

Attend the Topeka Shorthand Institute 521 and 523 Quincy St., Topeka, Kas.

Alliance Department.

SUB-TREASURY AGAIN.

EDITOR KANSAS FARMER:—Is our party wise in advocating the warehouse sub-treasury system? I think not, for the following reasons: The party is composed in the main of members of some half dozen industrial organizations, but in part of men of all professions and crafts and laboring men generally. I assume that it is not good policy for the Farmers' Alliance, by a majority, or even a stronger vote in some of their meetings, to commit the party—one that is destined to be a great national party—to some scheme or hobby that commends itself to a portion of the members, and in local parts, only, of the great agricultural field, and to a scheme that awakens the antagonism more or less pronounced of a large number of men who are inclined to act with us on the general issues.

The feeling that the enactment into law of the measure in question would be hurtful class legislation is too pronounced to be ignored by wise party leaders (though this is just what ours are doing). The warehouse proposition was conceived in the minds of men the products of whose farms are more susceptible of being stored in warehouses because they have greater value in less bulk than have the products of our farms in the Northwest. I allude to cotton, rice, tobacco and sugar. The scheme was brought forth by the monetary committee at the national meeting of the Farmers' Alliance and Industrial Union at St. Louis. What was the composition of that meeting? The delegates numbered, all told, ninety-six. From Northern States there were delegates as follows: Kansas, five; Indiana, one; Indian Territory, one; Oklahoma, one; Nebraska, one; a total of nine, leaving eighty-seven Southern delegates. Now the farmers in these Southern States have been in the habit of storing the products of their farms in warehouses owned by foreign capitalists on which as collateral they borrow money, or more generally hypothecate their crops, agreeing to store them when gathered, and thereby obtain large advances on them at ruinous rates of interest. So, naturally enough, the storage being so practicable to them, they easily conceived this scheme for relief by asking the government to do for them at a nominal cost what extortioners had been doing at a ruinous rate of interest. As Col. Harris aptly puts it:

"In my opinion, based upon the statements of men who were at St. Louis and Ocala, it was originated as an *offset* for the advantages given to capitalists by the banking and revenue laws and a simple extension of the privilege of borrowing money, to holders of other property."

I merely tell of the origin of this scheme to show that the farmers of the Northwest are in no wise responsible for this, to them, so impracticable, visionary, and objectionable business proposition. The plan for relief to us is no better, no worse, by having been conceived by Southern farmers. To them it seemed, and is now, practicable. In a late copy of the *Advocate*, the editor, in order to make a correspondent's strictures upon what I said at Huber's grove more severe, says:

"Brother True forgets several things in raising his objections. He forgets that this plan is the basis of an agreement between the farmers and one of the chief labor organizations of this country at St. Louis in December, 1889."

And he goes on to enumerate several things I should have forgotten in regard to this warehouse scheme. Perhaps, Doctor, it is just as well for me to have "forgotten" Mrs. Partington's proposition that "It is better to know nothing than to know something that ain't so."

Now, first, as to your knowledge of something that is not so, the statement by you quoted above is a case in hand. You evidently allude to a committee from the Knights of Labor, for no other industrial organization was represented in that meeting. Powderly, Wright and Beaumont, as a conference committee representing the Knights of Labor, did sit with the Alliance in the St. Louis meeting for two days, I think, and did with that meeting expressly ratify and agree that their organization would try to secure the enactment into law of the celebrated and comprehensive demands, the first of which will bear reading every day, and so I produce it here, familiar as it is:

1. That we demand the abolition of national banks and the substitution of legal tender treasury notes in lieu of national bank notes,

issued in sufficient volume to do the business of the country on a cash system, regulating the amount needed on a per capita basis as the business interests of the country expands; and that all money issued by the government shall be legal tender in payment of all debts, both public and private.

This resolution is comprehensive enough for the farmer and all other laborers and professional men and commercial men as well. The independent thinker and voter whose reason we should satisfy and whose vote we need, if we carry the State in '92 and later elect a successor to Plumb, will vote with us if we confine ourselves to the seven demands proper; but they will not swallow very much sub-treasury as advocated by Bro. Scott. On the other hand, not one of Bro. Scott's farmers will vote a Democratic or Republican ticket with the good times ahead that are promised, and would certainly come to us when the legislation contemplated in these seven demands has been effected. The independent, thinking farmers, thousands of them, do not approve of the warehouse scheme, Bros. McLallin, Clover and Scott to the contrary, notwithstanding. I doubt not the political farmers with whom these gentlemen are constantly thrown think the advocacy of this measure the popular thing to do; but the stay-at-home, thinking farmers—I constantly meet very many of them—emphatically disapprove of this warehouse bill. A vast majority of the farmers of the Northwest who affiliate with the People's party I am clearly convinced do desire a sub-treasury with land as a basis. Stanford's plan is the most practical thing yet offered. Land as a basis for a stable currency is as good as silver ore, or gold ore either, for that matter, only for the novelty of the proposition. But as to farm products, they are as much inferior for the purpose in question as is a chattel to a real estate mortgage as stable security, to say nothing of the utter impracticability and expensiveness of so using them.

This sub-treasury plan emanated from the monetary committee of the St. Louis meeting, as I have said. This committee reported this plan on the last day of the meeting, when Mr. Powderly and his colleagues were off in some other State. As to any other indorsement of this scheme by the Knights of Labor, it was probably about like this one, so far as it will affect their votes.

There are a few things, Doctor, I have not forgotten. I have not forgotten how signally the Missouri Alliance failed to indorse it, nor how the People's party in Massachusetts did the same thing, while they concurred with the Cincinnati conference in their resolution to form a People's party. They framed a most admirable platform, with a finance plank which made no allusion to a sub-treasury in any form, just as our own State convention adopted the seven demands proper of the St. Louis platform, and (very wisely, I think), stopped short of any expression on a sub-treasury proposition.

Mr. J. Lea Simpson asks: "May I beg the Alliance to consider how great a disaster 'crawfishing' on the principles of the sub-treasury plan must bring about?" I don't know about that, Mr. Simpson. If the delegates from one section of our country in one of our national meetings made an unwise declaration as it affects other parts of our country, a firm and respectful protest by the members of the Alliance in sections of the country not favoring the principles enunciated should not be considered a disaster, but only denotes a wise and thoughtful independence—as much so as did the retraction by the Ocala meeting from the railroad and telegraph ownership proposition put forth at St. Louis. I fear much harm may come to our party by the spirit manifested by some of the self-constituted censors of our party. The idea of calling men "seceders" who do not approve of the sub-treasury plan is ridiculous. As well call the men who went to the Cincinnati conference "seceders," because they were acting directly in antagonism to the expressed will of the last national meeting of the Alliance. Of the action in the national meeting our folks at Cincinnati were forcibly reminded by an official communication from the National President. Who will doubt the wisdom of the resolution made at Cincinnati for independent party action? Would you call them traitors? Let the South advocate their warehouse bill, if they like; but as for the Northwest, let us go in to win in '92, by standing for measures that more readily commend themselves to the reason of all independent thinkers. J. F. TRUE.

SEXTONVILLE, WIS.,
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Gentlemen:

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A Reply to Harris and Shinn.

EDITOR KANSAS FARMER:—In a late issue of the *FARMER*, Col. Harris and A. C. Shinn argue against the sub-treasury and land loan principle as advocated by the Alliance. Whether willfully malicious or not both construe those demands into class legislation of the rankest kind, opposed to everybody's interest. They entirely overlook or ignore the intention and purpose of those measures and style it class legislation without showing what class of producers of wealth will be hurt by the operation of such laws. It is now generally accepted as correct that the contraction of the currency to less than the needs of trade and commerce require, is to blame for the shrinkage of farm values and the products of the soil and factory in general, as well as for the high interest rate, which is largely in excess of our natural increase in wealth. We therefore must have more money. While free coinage of silver may be sufficient for the gentlemen named, it is not for a large majority. If every ounce of our silver product was coined into money annually it would not increase the per capita over \$1 per annum, and in consequence would take twenty-seven years from that source alone to bring our circulation up to the standard of 1865, when our Secretary of Treasury reported the people practically free from debt. We don't want to wait a generation for that happy time to recur. The government can't give money away; we do not want it brought into circulation by extravagant appropriations; what other source of distribution or emittance have you, unless it be loaning the credit of the government to all citizens, instead of a few favored bankers as at present. But maybe Col. Harris and A. C. Shinn are afraid any large increase in the currency will depreciate the value of somebody's bonds and mortgages, of somebody's gold or silver. Will your horror for class legislation lead you to advocate the abolishment of all existing class laws, to-wit: our tariff laws, banking laws, all laws relating to corporations, laws giving free mail delivery in cities? Will you kindly tell me which class of wealth-producers will be seriously hurt by an increase of currency? Or do you claim that it is not class legislation to give to gold and silver, "both being non-essential luxuries of life," a privilege that we deny to land and labor, the very foundation of all life, all government, all human existence and happiness? Is a certificate based upon gold and silver any better than one based upon land and labor? Or if it must be gold, will you kindly furnish the metal free? Is a certificate reading somewhat as follows: "This note is secured by United States bonds or by gold and silver dollars deposited in United States treasury," any more constitutional or valuable than one reading: "This note is secured by a real estate mortgage double the value of face of said mortgage," or by warehouse certificates, value 25 per cent. in excess of face of certificates? Is \$1 in gold or silver or bonds a better security to people than \$2 worth of land or \$1.25 worth of produce? All humanity depends upon land and its products. Who does upon gold? What right have we to issue gold or silver certificates? If gold and silver are money, why use any substitute?

In speaking of the St. Louis platform, Col. Harris certainly did not study it carefully, for it contained the sub-treasury plank at the head of all others. Is not the maxim, "the greatest good to the greatest number," (old Democratic doctrine), good enough for the Colonel? What are the rights of non-producing capital in

nature's laws? Does nature entitle one man to greater comforts than another, especially the one that does not produce anything? Will he define clearly the purposes of all governments?

As to Brother Shinn's claim that the government has to tax somebody to loan its credit; that sounds curious. At present the banker takes his bonds, the gold and silver owner his metal, and has certificates issued to himself. Now what is the difference if the owner of land, or produce thereof, takes a trust deed or mortgage, or warehouse certificate, and asks a like privilege? Of course he can not take his land or produce to the treasury, but he just as completely surrenders to government all his title thereto, as the bond or gold owner. The government taxes no one to issue gold or silver certificates and will have to tax no one to issue land loan or sub-treasury certificates? But we even propose to pay the government for the use of credit and convert a species of taxation enjoyed by non-producing individual capital to its rightful authority, for interest is only a tax upon productive industry by non-producing capital. All the capital on earth piled up will not produce 1 cent worth of wheat without labor's aid. What do we pay interest for if not as a tax? Government is the only authority that has the right to tax us lawfully. We can not abolish that unjust taxation by capital unless we adopt measures like the ones named. We must create a source of supply for cheap money, good money, land money.

Land money, or sub-treasury money, must be as good, or better, than gold, for land can never fluctuate in amount; it can not depreciate, for as long as mankind exists and increases the value of land will increase as well as the demand for the products thereof. It will not hide or flee from the county in danger. The security is equally distributed, and a foreign invasion or domestic insurrection could not capture security like it could gold, silver or bonds, and carry them away and use them elsewhere. We can use our gold for foreign trade until other nations also become sensible enough to use the safest basis for money existing, viz., land and produce thereof. If Col. Harris or A. C. Shinn have a better way of increasing the circulating medium than the sub-treasury and land loan bill provide, let them "trot it out." More money is the watchword, and more money we will have, unless more reasonable arguments are brought against our measures, and by advocating those measures we will be just as noble and true members of Alliance as if we had other views. Equal rights, you know. No one man or a dozen possess all the knowledge, and we may all be mistaken.

Yours fraternally,
A. R. NOEBINS.
Pierceville, Kas.

Sub-Treasury.

EDITOR KANSAS FARMER:—It seems to me that Bros. Shinn, Harris, Scott and Cozad get in a great many words, lines and paragraphs, and but little sub-treasury. Bros. Harris and Shinn, on the whole, claim that it is class legislation. There is 45 per cent. of the population that is directly interested in farming; and another 45 per cent. indirectly interested, that this bill is in the interest of. There is only 10 per cent., probably, that it would cut off. Those who rob and murder for a living could as well cry out against the statutes that are intended to punish these crimes.

The Pickler bill, introduced in the House, is not the sub-treasury plan, as intimated by Mr. Cozad. Neither is the bill

introduced in the Senate by Mr. Vance. The sub-treasury plan provides for the issuing of money direct to the people, by the people, for the people; the interest is paid to the people, by the people, for the people.

The warehouse is incidental to but not a part of the sub-treasury plan. And here let me give a few reasons for the faith that is within me, and why the sub-treasury plan should be enacted into law and made a part of the constitution:

First.—It should be made a part of the constitution, to forever prevent Congress from changing it.

Second.—Because the people are the loaners.

Third.—Because the interest returns to the people.

Fourth.—Because it will forever destroy the power of money to oppress.

Fifth.—Because it cannot be cornered.

Sixth.—Because it will effectually prevent a general depression in prices during the selling season of produce.

Seventh.—Because the value of money will be stable.

Eighth.—Because the circulation is based on the wealth of the nation instead of, as now, its debts.

Ninth.—Because it will knock class legislation higher than Beecher's "Life of Christ."

Tenth.—Because it will provide for an increase in the volume of the currency when there is an increased demand.

Eleventh.—Because it will forever bring the hire of money below the average of production.

Twelfth.—Because the individual who borrows will pay interest to himself.

Thirteenth.—Because any thrifty citizen of the nation can go to the government and get money when he needs it.

Fourteenth.—Because one can return his borrowed money at any time—save Sunday, perhaps, and stop the interest.

Fifteenth.—Because the currency will be better than gold—stay with the people.

Sixteenth.—Because it will forever abolish the most abominable idea since the world was known—a specie basis.

Seventeenth.—Because it comes under the head of "Equal rights to all."

Eighteenth.—Because it will abolish tramps, hunger, penury and want from our overflowing land.

Nineteenth.—Because it will lift the civilized world several steps nearer a seat at the right hand of God.

In my wind-up, let me say to my unbelieving brethren, Mr. FARMER, that I was, at first, where they are now. But go on, brothers. Kick it, mash it, knock it down, chew it; but when you have shoved aside all selfishness and desire to lend your aid to an act that will benefit humanity when you are stilled in the grave, and you have thoroughly digested the sub-treasury plan from every standpoint of reasoning, you will say, "It is the remedy." I say, we will have it; we are going to have it; "by the eternal" we have got to have it.

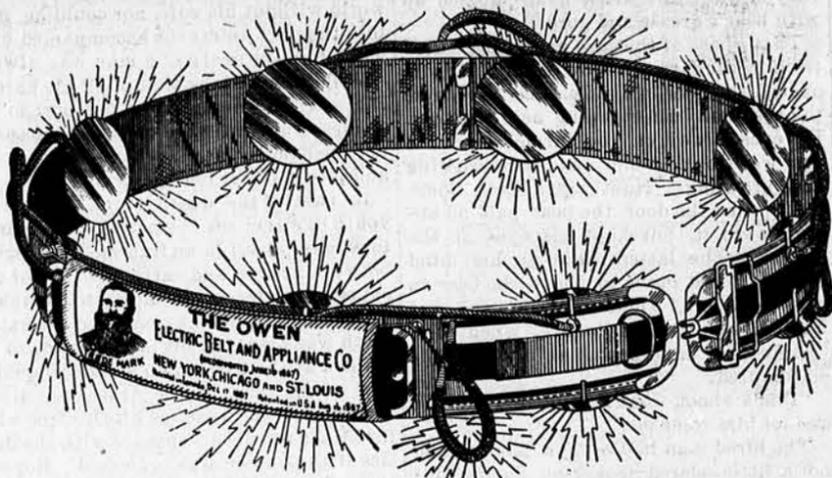
Osawatimie, Kas. JIM M. KANE.

Matchless 48748.

The subject of our first page illustration was bred and owned by James C. Stone, Jr., Leavenworth, Kas., and is one of the best individuals ever seen in Kansas. In the same day Mr. Stone refused an offer of \$2,000 for him and also an offer of \$700 for the rent of his dam for one year, from one of our most prominent breeders. He was sired by Kirklevington Lad 3d 32982 (for whom \$2,500 was refused as a two-year-old), who was sired by the famous \$10,000 Tenth Earl of Oxford. His dam, Scottish Lady 2d, was sired by the \$6,250 Breast-plate 11431, the most famous show bull of his day, and considered so good by Prof. E. M. Shelton (formerly Professor of Agriculture, at Manhattan), that he used his picture in his class-room to show the students what constituted a perfect animal.

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- Mrs. Martin Finch, Verona, Ill., Cured of FEMALE WEAKNESS and NERVOUS PROSTRATION.
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- Mrs. Ella Trautman, Colebrook, Ohio, Cured of FEMALE WEAKNESS and NERVOUS PROSTRATION.
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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.

The After-Time.

There cometh a time for laughter,
And joy for the days and years;
But ever there cometh after
A time and a place for tears.
Wearied of revel and riot,
Sick of the worldly strife,
Cometh the peace—the quiet—
That quicken the founts of life.
And the spirit is disenchanted
With joys that are bitter-sweet,
And the soul which for rest had panted
Falls down at the Master's feet;
The world and its ways seem lonely,
And love at the best seems loss—
What help is there, then, but only
To cling to the crimson cross?
To cling to the cross that blossoms
With blood for the erring shed;
On the tenderest of tender bosoms
To pillow the weary head;
To feel the love that is quick to beat,
From the heart that is quick to beat,
With even the harsh nails going
In the beautiful scarred white feet.
O, bird by the storm-winds driven,
Where never a sweet bird sings,
From the wild and the angry heaven,
Fly homeward with weary wings!
And ye that are worn and weary—
Who faint by the way and fall—
Fly fast from the darkness dreary
To the Rock that was cleft for all!
—Atlanta Constitution.

THE BEAR BLOCKED THE WAY.

[Forkston, Pa., correspondence to New York Sun.]

Jabez Comfort and his wife live on the Truesdell farm in Bear Creek, a region that is aptly named, for bears have been numerous there as long as any one can remember. The other day Mrs. Comfort took her three-year-old child and went on an errand to a neighbor's, a half mile or so away. Her husband was busy at his haying. Mrs. Comfort was gone but an hour, but when she returned she found the kitchen door open and a bear standing in it, blocking the way. The bear was apparently as much surprised at the appearance of Mrs. Comfort on the scene as the latter was at seeing the bear, for it stood stock still, and gazed at the farmer's wife. The latter did not scream, or faint, or run. A good many sheep had been missed in that locality this summer, and Mrs. Comfort had an idea that perhaps this bear might have had a hand, or rather a paw, in causing their disappearance. So, as soon as she recovered from her first surprise, she resolved to prevent the suspected sheep-stealer from escaping, if she could. Grabbing up a basin of water that stood on the porch, she dashed its contents full in the bear's face. Bruin, sniffling and shaking his head, and blinking his eyes, quickly backed out of the doorway into the kitchen, and when he had got to the middle of the room Mrs. Comfort quickly closed the door, and shut the bear inside. Then she hurried over to the hay field, where her husband was at work, and told him how she had just cooped a bear up in the house, and that he had better go and kill it.

Farmer Comfort and his hired man hurried back with Mrs. Comfort, but when they reached the house the farmer suddenly stopped and looked queer.

"You've cooped up the bear, Mandy," said he, "but you've cooped up my gun with it!"

Here was a complication that threatened to block the farmer's little game of killing the bear just then, for the nearest other gun in the neighborhood was John Roy's, at the Forks, two miles distant, and, besides, Roy was out hunting with that one. The hired man peered through the kitchen window. The bear was nowhere to be seen. The gun was on its peg on the kitchen wall, and the farmer thought he could sneak in and get it before the bear could come up out of the cellar or out of the sitting-room, in either one of which retreats he must be, the door of each being open. So Comfort opened the kitchen door softly and went in. He got to the side of the room where the gun hung, and was taking it down when the bear walked out of the sitting-room and was making for the open kitchen door. But Mrs. Comfort jumped forward and shut the door, the possible escape of the bear and the preventing of it, being uppermost in her mind. The bear then stood between the door and Farmer Comfort, and the latter found himself in turn cooped up with bruin and the gun.

"Holy poker, Mandy!" he yelled. "Open that door!"

"Shoot him! Shoot him, John!" re-

plied Mrs. Comfort. "He'll git away if I open the door!"

"Let him run and be darned to him!" the farmer shouted back. "I haint no bear fighter! And s'pose I do shoot him? Do you want this kitchen all mussed up with bear's grease and gore?"

That phase of the case hadn't presented itself to the farmer's wife before, and she opened the door in a jiffy. All this time the bear had been standing near the door. His eyes turned on the farmer since the door was closed on him, and began bristling and growling. Now, when Mrs. Comfort opened the door, the bear paid no attention to it, but kept his eyes on the farmer. The latter made up his mind that he would have to shoot the bear in close quarters, whether or no, and was hauling up his gun to fire, when Mrs. Comfort, her mind now fixed on her kitchen, shouted:

"Don't shoot, John! Run down cellar and let him come out!"

The hired man had been a passive and not a little scared looker-on during this part of the proceedings, and Mrs. Comfort suddenly remembered him and cried out to him:

"What be you standin' there like a shiverin' houn' pup for? Go in an' drive out that bear before John shoots him an' musses that kitchen all up!"

But his wife's suggestion that he run down cellar and let the bear come out unmolested had struck Farmer Comfort as an excellent one, and he at once proceeded to carry it out. He made a dash for the open cellar door and disappeared, slamming the door after him and taking the gun. Then the hired man, Mrs. Comfort and the baby retreated to a safe distance and waited for the bear to come out. But the bear's intentions seemed to have been changed by the hostile demonstrations that confronted him, and he didn't come out. He walked deliberately back into the sitting-room, and after waiting a while for him to come back and leave the house, and he not having made up his mind to do so, Mrs. Comfort ordered the hired man to go and see what had become of him. The hired man started with reluctance, but he had gone but a few steps when he was stopped by an exclamation from the farmer's wife.

"Yonder he is, in the chimney!" she shouted.

Sure enough, there was the bear's head sticking up out of the top of the big stone chimney that led from the fire-place in the sitting-room. This news was communicated to Farmer Comfort in the cellar, and he came out and joined the family group.

"Well, the contrary cuss!" he remarked, as he got sight of the bear's head in the chimney. "Now I'll blow his head off!"

But the bear just then drew his head below the chimney top, and it wasn't blown off. At the same moment a brilliant idea struck Mrs. Comfort. She sent the hired man on the double-quick to the barn for a bundle of straw. When he came back with it she told him to go into the sitting-room, put the straw into the fire-place, and set fire to it. The hired man hesitated, and the farmer's wife snatched the bundle from him and ran in and started fire to it herself. She had hardly returned to the yard when a streak of smoke began to come out of the chimney, and not long afterward the bear's head appeared again, and not only his head but his body, until the big animal was entirely on the outside of the chimney and letting himself down to the roof.

"Now ping him!" shouted Mrs. Comfort, and the farmer pinged him.

The shot took good effect, and the bear dropped to the roof, clutched a moment at the shingles, and then rolled down the steep side and tumbled to the ground all in a heap. He made an attempt to get up, but whether he would have been able to or not if the farmer had not given him the contents of his second barrel will never be known, for that settled him for all time. Mrs. Comfort looked at the big carcass and the streams of blood that poured from its wounds and soaked into the ground, and then said:

"If you'd a-shot that bear in my kitchen, John, me an' you'd a-parted next minute!"

The many remarkable cures of catarrh effected by the use of Ayer's Sarsaparilla is conclusive proof that this loathsome and dangerous disease is one of the blood, only needing such a searching and powerful alternative to thoroughly eradicate it.

Widow Strangling in Fiji.

Woman in Fiji theoretically occupied a high position, being regarded as an essential and integral part of her husband. A man was not considered complete in this world without his wife, nor could he pass into the next unless she accompanied him. Therefore the death of a man was always closely followed by that of all his harem. If a married woman died a passport to the shades was furnished her in the shape of her husband's beard, which was cut off and placed under her left arm.

In case of the death of an unmarried youth of either sex the person was doomed to wander about in an intermediate region between heaven and earth until one of the opposite gender came along to complete the couple. When any one died a whale's tooth was placed in his or her hand, to be thrown at the tree which stands as guide-post on the road to the other world. If the ghost of the deceased hit this tree with his or her missile acceptance with the duties of the unseemly was indicated. Beyond this tree sat "Nangga-Nangga," guardian of the path, who permitted no man to pass unless he had his wife with him. This spirit was, however, credulous and easily deceived, and often had grandmothers and maiden aunts palmed off on him as the wives of chiefs who essayed to pass him.

The Fijians were always a practical and farseeing people, and where a man left behind him a pretty widow his kinfolk often voted it foolish to give her away to a ghost. Accordingly she was appropriated by some man who was strong enough to drag her away and maintain his claim to her with the club, and some tough and ancient female relative suffered the cord in her place. This was not accomplished without a terrible row, the widow, as well as all her connections, resisting him tooth and nail, for it was considered etiquette for the relatives of the deceased to resent as an insult a proposal to marry the widow. Obstruction was not, however, carried too far, and although the wooer might take the marks of his courtship to the grave, the opposition always drew off before he was quite overpowered.

Widow strangling was carried out with imposing ceremonies. All the relatives of the deceased assembled in the hut which he had occupied in life, and to them the widow was brought in. Her brother, if she had one, was the executioner, and the instrument was his waist cloth, which he unwound at her entrance. The victim was made to assume a position on hands and knees and the long cloth was given a turn about her neck and held on either side by her brother and another man. She was then instructed to expel all the air from her lungs and hold up her hands as a signal that all was ready, which, being done, the cloth was drawn tight and a swift and nearly painless death ensued.

When a man had but one wife she was laid side by side with him in the grave. In the case of chiefs possessed of several consorts, all their wives were strangled and placed in the grave for him to lie upon. This, in the direct and expressive speech of Fiji, was called, "carpeting the grave."—Boston Journal.

Home-Made Vinegar.

When apples are so plentiful and cheap as they are this season, there is no reason why any one should buy vinegar. The *Homestead* says that "the cost of the vessel and the labor in extracting the juice out of the fruit and the removal of the liquid from the settlings and of the cask at proper seasons is all the expense and labor involved. Three to ten dollars per family can be saved. During the present abundance of fruit but little expense other than the cask is necessary.

"All having orchards and cider presses need no directions. Place the apples to be used over a fire in vessels and stew until well cooked. Squeeze out the juice of the apples by hand or otherwise. Pour the liquid into a keg, barrel or large stone jar. If put in kegs or barrels the head should be removed so all the air possible can come in contact with the liquid. Add one-fourth its quantity of water. Put some yeast in with the mixture and set the vessel in the sun with cheese cloth tied over the top to keep out insects. After fermentation sets in, set in a shaded, dry and covered place. If sugar is added to the mixture it will improve its strength and hasten its action. After the vinegar plant is formed it should be taken out and rinsed in clear water, and the liquid poured off the settlings, the vessel

What is Scrofula

It is that impurity in the blood, which, accumulating in the glands of the neck, produces unsightly lumps or swellings; which causes painful running sores on the arms, legs, or feet; which develops ulcers in the eyes, ears, or nose, often causing blindness or deafness; which is the origin of pimples, cancerous growths, or many other manifestations usually ascribed to "humors." It is a more formidable enemy than consumption or cancer alone, for scrofula combines the worst possible features of both. Being the most ancient, it is the most general of all diseases or affections, for very few persons are entirely free from it.

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Hood's Sarsaparilla

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100 Doses One Dollar

cleansed and the liquid returned and the mother put back. The oftener this is done the nicer will be the article. But it is not necessary to do this more than twice.

"If the liquid will not ferment or the vinegar at any time loses its strength, add sugar, rinsings from syrup jugs, honey vessels or put in anything that is sweet of such nature. If the tendency of the vinegar is to get too acid and all run to mother, add more water, and it may be necessary to take out a portion of the plant and throw it away. The greatest mistake is to keep vinegar in a cellar and especially a damp one. It should be kept in a dry, warm place as long as it does not freeze, and should be kept in cellars the shortest time possible during the winter. It is best to keep it in a dry, warm room. "Since sugars are so cheap, vinegar can be started and made by adding and stirring some in water and starting fermentation by adding yeast, after which it can be treated as any other vinegar."

Queen Victoria has a remarkably fine head of hair, for a lady of her age; but her son, the Prince of Wales, is quite bald. Had he used Ayer's Hair Vigor earlier in life, his head might, to-day, have been as well covered as that of his royal mother. It's not too late yet.

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EDITED BY MAMIE M. BRUNER.

Spring in Ravenna.

[Ravenna is a picturesque historical city in Italy. It is noted for its great number of churches, whose interior beauty is beyond description.]

The sun is up, and 'tis a morn of May.
Round old Ravenna's clear-shown towers and hay.

A morn, the loveliest which the year has seen,
Last of the spring, yet fresh with all its green;
For a warm eve, and gentle rains at night,
Have left a sparkling welcome for the light,
And there's a crystal clearness all about;
The leaves are sharp, the distant hills look out;
A balmy briskness comes upon the breeze;
The smoke goes dancing from the cottage trees;
And when you listen, you may hear a coil
Of bubbling springs about the grassy soil,
And all the scene, in short, sky, earth and sea,
Breathes like a bright-eyed face that laughs
out openly.

'Tis nature, full of spirits, waked and spring-
ing;

The birds to the delicious time are singing,
Darting with freaks and snatches up and down,
Where the light woods go seaward from the
town,

While happy faces, striking through the green
Of leafy roads, at every turn are seen;
And the far ships, lifting their sails of white
Like joyful hands, come up with scattered
light.

Come gleaming up, true to the wish'd-for day,
And chase the whistling brine and swirl into
the bay.

—Leigh Hunt.

JAMES HENRY LEIGH HUNT.

This English writer of essays and miscellaneous works, was born October 19, 1784, at Southgate.

On account of an impediment in his speech, he could not attend the university, so he was educated at Christ's hospital.

On account of too liberal views which were too freely expressed, his father was obliged to flee from England. He fled to Philadelphia and became a school teacher. In the meantime Leigh remained in England and spent his time in visiting his school-mates, loitering around book-stalls and writing verses.

At the age of 18 he published "Juvenilia," his first book.

He wrote for the newspapers and magazines, and finally assumed the editorship of a paper entitled *Examiner*. This paper acquired a high reputation for independence; but on account of an attack upon the Prince Regent, Hunt was arrested and sentenced to two years imprisonment in the Surrey jail. By his cheerfulness and gaiety during his imprisonment he became very popular. Among those who visited him were Byron, Moore and Shelley. He was set free in 1815 and a year afterward published his "Story of Rimini." At this time his wife's health and his own failed, and they were saved from financial ruin by Shelley, who was about this time harassed by domestic troubles. Hunt, who had again taken charge of the *Examiner*, ably defended his friend and deliverer in the charges made against him.

In 1818, Byron and Shelley sailed for Italy. They finally persuaded Hunt to join them there, and establish a periodical in which they could state their opinions with more freedom than at home. He did not reach Italy, however, until June, 1822, and soon after this Shelley met his death by drowning in the Adriatic, while out yachting. This destroyed all prospects of their periodical, the *Liberal*, as it continued only a year after the death of Shelley. In 1825, Hunt returned to England. Two years afterward, notwithstanding the generosity and friendship that Byron had bestowed on the poverty-stricken editor, he showed his ingratitude by publishing his "Lord Byron and His Contemporaries." This was rather a correction on Lord Byron, but it did the author of the book more harm than it did harm to Lord Byron.

It is said that Hunt was more deeply hurt over the criticisms of Moore than of all other attacks on his work.

Leigh Hunt died in the year 1859. Like all human beings, he had good and bad traits of character. He was delicate and refined, and his poems are clothed in language which is simple yet beautiful. His other traits of character can be gleaned from the above story of his life, but you will learn, as you read the stories of authors, that all poets are men, and none are faultless; their poems seem to be the index to a beautiful character, yet none are so spotlessly white as to entirely exclude human passions of weal and woe.

Leigh Hunt's writings: "Sir Ralph Esher," "Captain Sword and Captain Pea," "Legend of Florence," "The Pal-

frey," "Solomon's Ring," "A Jar of Honey from Mt. Hiblea," and "Abou Ben Adhem."

Abyssinia.

This extensive country, covering 200,000 square miles, lies in eastern Africa. The name Abyssinia, or Habessinia, is derived from the Arabic word *Habesch*, which signifies mixture or confusion. Now as the inhabitants of this plateau were of a mixed character, the Arabs gave them the name Habesch. It has since been Latinized by the Portuguese into Abassinos, and hence our English word Abyssinia. This plateau is a mountainous one and its elevation ranges from 6,000 to 10,000 feet above the sea level.

It is traversed by three broken chains of mountains, which run from north to south. They are the Samen, which is the highest, the Lamalmon, and Lasta. The principal rivers which drain the plateau are the Mareb, Atbara and Abai, all tributaries of the Nile.

As regarding climate, there are three seasons—the cold, hot, and rainy. The cold extends from October until March, the hot from March until the middle of June, and the rainy from that time until the first of October. The wet season is an important season, as it equalizes the temperature, increases fertility, and is an important factor in the overflow of the Nile.

The summits and slopes of the mountains support the vegetation found in the temperate zones, while on the lower slopes of the hills and in the valleys are found plants of the warmer climes.

The principal products are coffee, cotton, dates, oranges, lemons, pomegranates, bananas, grapes and sugar cane.

Abyssinia contains numerous birds, and they are remarkable for their bright and brilliant plumage.

The inhabitants, of whom there are several distinct races, consist of Caucasians, Jews, Arabs, Negroes and others—the Caucasians outnumbering the others. The whole population is about 4,000,000. They are, as a whole, rude and barbarous, and continually engaged in warfare. The taking of human life is a common occurrence, and they do not regard it either with surprise or fear. If a murderer is convicted he is given over to the relatives of the deceased, and they may kill him or accept a ransom, just as they see fit to choose.

The prevailing religion is a corrupted form of Christianity, but Jews and Mohammedans are also found here.

Their government is a monarchical form of long standing, and they have, as far in the past as we have any historical account given of them, been governed by an Emperor. The country is divided into three provinces, each ruled by its governor. They are, Tigre, in the north; Amhara, in the center, and Shoa, in the south. Gondar is the capital.

The Abyssinians were in possession of Yemen, one of the richest provinces of Arabia, for sixty-seven years, but at last relinquished it.

In 1867 the English undertook to conquer Abyssinia, but were afterwards glad (when the Emperor sued for peace) to leave Abyssinia and its people in peace.

Ships.

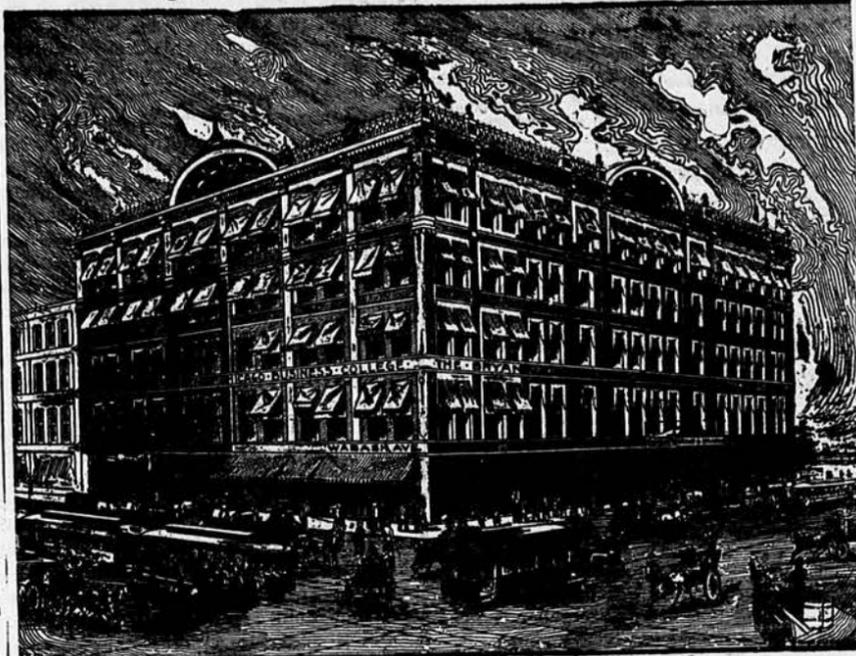
The word "ship" conveys to our minds simply a large vessel adapted to navigation, a vessel with the customary masts, sails, rigging, etc.

But when we call a ship by name, what a different impression. "Mayflower," that magic name, carries us back to the little band of Pilgrims who went on board her on that memorable day, when she started on her voyage across the stormy ocean in search of America—that new country where every one might enjoy their well-earned freedom; when, after a weary voyage, the ship cast anchor on the bleak New England coast; the trials and struggles of that little band, and as our thoughts trace their career, we find ourselves gradually drifting into the history of our country, and we drift on, and on, through the scene of the "Boston Tea Party." The great ship (name unknown) that held the tea was an immense tea cannister, whose contents were emptied all at once into the great teapot (the ocean bed) which was filled to the brim by the waters of the Atlantic ocean. On, on, until our gaze rests on the "Bon Homme Richard," and we see Paul Jones and his gallant crew fighting with great success in the English channel. Down through

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Quotations.

Fortune, men say, doth give too much to many,
But yet she never gave enough to any.
—Sir John Harrington.

How happy is he born and taught
That serveth not another's will,
Whose armor is his honest thought,
And simple truth his utmost skill.
—Sir Henry Wotton.

For who did ever yet, in honor, wealth
Or pleasure of the sense, contentment find?
Who ever ceased to wish, when he had health?
Or having wisdom, was not vexed in mind?
—Sir John Davies.

Topics for Composition.

[Contributors please send manuscript two weeks in advance.]

- October 14—Benefits of civilization.
- October 21—Famous Painters.
- October 28—Superstitions of the Savages.
- November 4—Peter the Hermit.
- November 11—Progress of the Nineteenth Century.
- November 18—Mountains.
- November 25—Beetles.

Questions—No. 5.

[The boys and girls who read this paper are invited to contribute to this department.]

1. Name two famous American artists and two European artists.
2. What comprised the ancient Greek phalanx?
3. Where is the largest theater in the world?
4. How long have the British occupied Egypt?
5. To what languages is the Portuguese language strongly allied?

ANSWERS TO QUESTIONS NO. 3—SEPTEMBER 23.

1. "The Marble Faun" is said to be his best, but "The Scarlet Letter" his most important.
2. The Roman legion was composed of 6,000 men, comprising ten cohorts of 600 men each, with 300 horsemen.
3. The Iceland geysers are, the "Great Geyser" and the "Strokkur;" in the Yellowstone Park, in Wyoming, are the "Giantess," "Castle" and "Old Faithful."
4. Members of the royal household lose their surname. The queen's name is Alexandrina Victoria R.
5. The largest tunnel in the world is the St. Gothard, on the line of railroad between Lucerne and Milan, Italy. It is nine and one-half miles long, twenty-six and one-half feet wide and eighteen and five-sixths feet from the floor to the crown of the arched roof.

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Washington's, Adams' and Jefferson's administrations, and now to Madison's. We are in another great war—the war of 1812. Land and naval battles pass before our eyes in rapid succession, and "Chesapeake" stands out in bold relief, but coupled with the dying words of Captain Lawrence, "Don't give up the ship." Now, through times of peace and political campaigns, again are we launched into a scene of bloodshed and desolation—the great civil war—and as we follow the progress of the armies on land, our gaze chances to rest on the water. Steaming out of Norfolk, we watch the progress of the old "Merrimac," but she now has another name, "Virginia." She comes furiously along, destroying all the other ships as they come in her way. What is that queer-shaped box approaching the "demon of mischief?" Surely that little "cheese box," bearing the name of "Monitor," will not attack the large ship! The conflict has begun and ended. The "cheese box" sits placidly upon the water and the "demon" sails off, puts into port and fights no more.

Event succeeds event, and we drift into scenes of the present. As we again gaze on the waters our eyes behold the "Great Eastern," the largest ship in the world—680 feet long, 83 feet wide and 60 feet deep. Valencia. MINNIE PALMER.

Experiments.

A beautiful experiment illustrating the effects of oxygen, can be made with the following: Take a glass tube, closed at one end, and partly fill with chloride of potash. Hold it over a spirit lamp until the potash melts and becomes hot. You now have oxygen in the tube. Amuse yourselves by throwing matches into the tube. We assure you that you will be delighted with the effect.

To show how to produce carbonic acid gas, and also show its action on a lighted match or candle, we give the following: Put common chalk or limestone into a fruit jar. Pour over it a small quantity of muriatic acid, and cover the jar until the limestone or chalk is decomposed. Now remove the cover and thrust a lighted match or candle in the jar. An animal inhaling it will soon die.

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The following editorial paragraph from the *Kansas City Star* of October 2, has a significant interest to all Kansans: "To say the very least, the friends and admirers which Prof. Canfield left behind him in Kansas when he removed to Nebraska will be disappointed to learn that he has come out as an advocate of the principles of the Farmers' Alliance."

There is now a Baby Cleveland, and yet the Kansas Democracy is not altogether happy, because it is a girl, and not a future voter in Democratic ranks. Papa Cleveland has always been in favor of "free trade," but as he looked at the smiling little one asleep in its rose-lined crib, he was inspired to say: "Its no use talking, we must protect our infant industries."

During the past few days every part of Kansas has had a good wetting, and wheat seeding, although later than usual, is progressing with great activity, and in view of the experience of the last two years it is just as well, because the late seeding is seldom troubled with the "fly." The dry weather has curtailed the area intended to be sown somewhat, but from present indications the acreage of winter wheat will not fall short of the area harvested this year.

The *KANSAS FARMER* is the first paper to give to the world the actual results of the "alcohol process" of sorghum sugar-making as demonstrated by Dr. Wiley, chief chemist of the United States Department of Agriculture, at the government experiment station, at Medicine Lodge, Kas. It is with pride that we announce this very important agricultural achievement to our readers, and it was only done by having one of our staff present at the final tests. Full details are given in another column.

Superintendent Thompson, in the last issue of the *Industrialist*, is to be commended for his clear-cut, practical judgment in offering the following suggestion to farmers in order that they may be more in touch with the times and prosperous in their business. He says: "Why should not the farmer who wants to treat himself and his family fairly set aside a certain sum every year for newspapers and magazines? Both are cheap, and would yield greater returns in profit and pleasure than a like amount invested in any other way. Ten dollars isn't much money to spend for reading matter, yet it will pay for a year's subscription to the local weekly, the ten-page city weekly, a high-class magazine, two farm papers, and a domestic magazine. Three or four dollars more would bring the metropolitan daily, with its wealth of good things, to the reading table. Let some other man take neighbor Smith's helper, even though it be 'dirt cheap,' then buy a year's supply of printed matter, and give the faithful old almanac a rest."

THE ALCOHOL PROCESS IN SUGAR-MAKING.

The experiments of the United States Department of Agriculture in the practical application of the alcohol process in the manufacture of sorghum sugar are successful beyond the most sanguine expectations. On last Friday a test run was made on eight and one-half tons of sorghum, resulting in the unprecedented yield of 1,330 pounds of sugar of the grade known in the market as yellow clarified. This is 156½ pounds per ton of cane. The molasses made in this operation is still rich in sugar and it will be boiled again. Dr. Wiley expects by this means to bring the total yield up to 200 pounds per ton.

Several points of interest are to be observed in comparison with the results of processes heretofore used in sugar-making. These are (1) the greatly increased yield, being fully fifty-six pounds per ton of cane as to first sugar with an almost certain further increase as to second and third sugars sufficient to make the total increase seventy-five pounds per ton over the best results heretofore attained. (2) The improved quality of the sugar. The characteristic sorghum taste is entirely removed; the grain is larger and firmer; the color is very much lighter. By a slight improvement in the process the production of white sugar will be made perfectly certain, thus giving a product which will go directly into consumption without the intervention of long hauls to and from the refinery or the addition of the refiners' profits. (3) The separation of the sugar from the molasses is rendered easy and rapid. One centrifugal machine is able to separate as much sugar when the alcohol process has been used as can be separated by five like machines when the old process alone has been used.

What is this "alcohol process" which gives such important results? It is simply an addition to the processes heretofore used in the manufacture of sorghum sugar. When the cane juice has been reduced to a thin sirup, preferably to a sirup containing about 45 per cent. of water by weight, a quantity of 95 per cent. alcohol is mixed with the sirup. This alcohol immediately precipitates the gums, starch and kindred ingredients of the sirup. These substances then settle rapidly to the bottom of the tank, leaving a mixture of sirup and alcohol in the upper part of the tank. This mixture of sirup and alcohol is thus drawn off into another tank. The precipitate in the lower part of the tank also contains mixed with it a considerable quantity of the mixture of sirup and alcohol. This is recovered by the usual method of filtering by means of a filter press, and is added to that drawn off, as above described. The alcohol is separated from the sirup by distilling. The sirup is thenceforth treated by the usual methods of first-class sugar factories. The alcohol, as it comes from the sirup, brings with it considerable quantities of water, so that it is below the desired strength. It is brought up again to 95 per cent. by redistillation.

The experimental work in the laboratory at Washington had given clear indications as to what was to be expected in the use of this "alcohol process" which, as appears above and will become more apparent further on, is simply a step interjected into the usual processes of sugar manufacture. Laboratory results are sometimes, indeed frequently, not attained in practical work. Work on a larger scale often also presents difficulties and losses not realized in the laboratory. In this case some apprehension was felt as to two points, namely (1) the loss of alcohol and the consequent expensiveness of the process; (2) the difficulties of filtration. The practical work so far accomplished, however, sets these apprehensions at rest. The loss of alcohol is inconsiderable, being not more than 1 to 2 per cent., so that the same stock of alcohol, with only slight additions can be used repeatedly throughout the season and even year after year. Further, the gums, etc., which are precipitated by the alcohol, are themselves fermentable and can be converted into alcohol at small cost. The filtration is effected without difficulty, being far more rapid and perfect than was expected.

But one unforeseen contingency has been encountered. It is found that in separating the alcohol from the sirup by the ordinary method of distillation the sirup becomes somewhat scorched, impairing its color and giving it a slightly burnt-sugar taste. This can be remedied

by distilling at the low temperature at which this operation may be performed in a partial vacuum.

The full process of sugar-making as now developed, including the steps with alcohol, may be summarized as follows:

1. The topped cane is delivered at the factory by the farmers who grow it.
2. The cane is cut by a machine into pieces about one and one-third inches long.
3. The leaves and sheaths are separated from the cut cane by means of fans.
4. The cleaned cane is cut or "shredded" into fine bits called "chips."
5. The chips are treated in a series of connected iron tanks called a battery by the process called "diffusion," whereby through the means of hot water the sugar is taken out.
6. The juice obtained by diffusion has its acids nearly or quite neutralized with milk of lime, and is heated and skimmed.
7. The clarified juice is boiled to a thin sirup in a vacuum apparatus.
8. The sirup has mixed with it an equal volume of 95 per cent. alcohol.
9. The precipitated impurities are separated by settling and filtration.
10. The alcohol is separated from the sirup by distillation. The alcohol is again brought up to the required 95 per cent. by redistillation.
11. The sirup is boiled again in a vacuum pan.
12. The mixture of sugar and molasses is passed through a mixing machine into centrifugal machines, which throw out the molasses and retain the sugar.
13. The molasses thrown out by the centrifugal machines is again boiled in the vacuum pan to the proper consistency; it is then set aside in a warm place for a few days to allow remaining sugar to crystallize. This second crop of sugar crystals is then separated as was the first in the centrifugal machines.
14. The molasses resulting from the operations described above in 13 is again boiled, etc., and a third crop of crystals obtained as was the second in 13, except that the reboiled sirup is allowed to remain in the warm room much longer before the "third sugar" is thrown out.

It will be seen from the above that the "alcohol process" consists of the steps above numbered 8, 9 and 10. It will be easily learned by competent sugar-makers and with proper machinery will be easily applied. The necessary machinery and buildings will add probably 10 or 15 per cent. to the former cost of a well equipped sugar factory.

It is not improbable that a subsidiary operation, namely, that of making alcohol of the otherwise waste gums, etc., will be added, and it is highly desirable that the revenue laws be so modified as to permit sugar-makers to thus produce their own supply of this hereafter necessary agent in the production of sugar from sorghum.

The alcohol process will be of great advantage in the manufacture of sugar from tropical cane in Louisiana, Texas and Florida, but its advantages for this purpose will be far less than in the case of sorghums, the percentage of gums, starch, etc., being much greater in the Northern than in the Southern cane. It is entirely to be expected, however, that progressive Southern sugar-planters will avail themselves of the moderate advantages afforded by the new process to their industry.

But the results already attained with sorghum place it at once at the top of the list of sugar-producing plants in the United States. It is true that a somewhat larger yield can be obtained from tropical cane or from beets, but the comparative expense of production is so favorable to sorghum that the advantage of a slightly larger yield from the other plants is greatly outweighed. Thus the sorghum from which the results mentioned at the beginning of this article were obtained contained in its juice 14 per cent. of sugar and would have sold on the market at a Kansas sugar factory at \$2.25 per ton, including leaves, or if the leaves are accounted waste, at \$2.50 per ton for the cleaned cane. The cost of tropical cane or sugar beets capable of yielding such results would be at least \$4 per ton. The leaves are far from waste, but are doubtless worth for feeding purposes the \$2.25 per ton at which they are purchased with the cane, so that the cost of the raw material is greatly in favor of the sorghum, and its yield of sugar will hereafter be but slightly inferior to that of its competitors.

The service rendered by the United States Department of Agriculture in this

industry is singularly valuable, and the results are such as would scarcely have been attained by private effort.

AT THE COLLEGE FARM.

In connection with Secretary Mohler, of the State Board of Agriculture, one of the *KANSAS FARMER* staff made a brief visit on last Friday afternoon to the State Agricultural college farm, which, by the way, is a place where every farmer who does not already "know it all" should visit, and familiarize himself with what is being done here for the advancement and benefit of agriculture in its broadest sense. The writer does not mean to intimate that a visitor in a single visit would be able to inform himself as to every detail of the work done or sought to be accomplished, but he would receive an object lesson that would well repay him for any time or expense expended in making the trip, besides if he had any sons or daughters he would see to it that they received the advantages and opportunities offered by this creditable institution. President Fairchild states that the attendance was never larger at any first term before. Fully five hundred of our youth are now enrolled as students.

Much of the time allotted for this brief visit was spent with Prof. Popenoe, looking over the experimental garden, vineyards, orchard, etc. He has eighty sorts of strawberries, and each variety is cultivated by two systems—one the hill system and the other in matted rows. A bulletin will soon be issued giving full details. The experiments being made with forest and ornamental trees, and evergreens of all kinds, is one of the most attractive and interesting features of this department. The greenhouses are overcrowded and double the room is needed.

Prof. C. C. Georgeson, the worthy successor of Prof. Shelton, drove us to the upper farm and showed us the cattle, consisting of very fine representatives of the Short-horn, Angus and Hereford breeds. It was gratifying to note the decided improvement that has been made in the college herds, which now are highly creditable to the college and the State. The fancier of the little Jerseys will be pleased to learn that the inferior class of Jerseys which has been so long the weak feature of the college herds has finally been disposed of for what they would bring, and first-class A. J. C. C. Jerseys are being substituted, and with this improvement, the college herd of Short-horns, Herefords, Aberdeen-Angus, Holstein-Friesians and Jersey cattle are equal to the best herds of our country, both as to individual excellence and breeding. At another time something will be said regarding the breeding bulls, which are far superior to any ever owned before at the college.

A new hog and sheep barn is badly needed for the accommodation of this class of stock. The only breeds of swine now on hand are the Berkshires and Poland-Chinas. The addition of sheep to the live stock on the college farm, is an enterprising departure from a former custom which ignored this class of stock. A small start only has been made, but the imported Shropshire buck is one of the best specimens of the breed the writer has ever seen, and if the flock of sheep are kept to this high standard of excellence, all Kansas will have an object lesson that will result in enhanced prosperity to the animal industry of our State, provided our stockmen are sufficiently enterprising to keep pace with the grand work being done by Prof. Georgeson in his management of live stock at the Agricultural college farm.

It is utterly impossible in a single article to give an adequate idea of the work being done at this institution, but there is one thing that must impress every visitor to the State Agricultural college farm, and that is that it is one of the poorest farms naturally in the State, and for that reason if they can succeed in growing any tree, plant or crop on this farm, there is certainly good reason to believe that the same may much more easily be done with even less skill on any other cultivated farm in the State.

POPULATION OF KANSAS.

Census Bulletin No. 114, giving the population of Kansas in detail, by counties, townships, cities, wards of cities, and villages, according to the official count of the returns made under the eleventh census, is before us. From it we learn that the population of the State in 1880 was 996,096; in 1890 the population returned was 1,427,096, an increase of 431,000, or 43.27 per cent. Since 1880 six of the 106 counties show a decrease. In 1880 ten cities only in the State had a population of 4,000 or more, with an aggregate population of 84,307. Under the eleventh census nineteen cities have a population of 4,000 or more, with an aggregate of 223,074.

UNUSUAL SEPTEMBER WEATHER.

The KANSAS FARMER is in receipt of the weather-crop bulletin for the month of September from the United States Department of Agriculture Weather Bureau.

This monthly statement of the more important meteorological elements is of special interest owing to the unusual conditions which existed during the month of September, and as it forms a supplement to the weekly weather-crop bulletin the data is placed in such form as to enable those who are interested in the staple crops to become familiar with the meteorological conditions which prevailed over the principal agricultural districts at the close of the crop season. The information contained in the present bulletin is of current interest, as it presents a statement of conditions which forced the rapid maturing of the corn crop, and secured its safety from injury by frost, while at the opening of the month this important crop was from ten to twenty days late and in danger from frost. Not only is the information thus furnished of current value, but it serves as a record of comparison between the actual yield of the more important crops and the meteorological conditions which prevailed during the growing season.

"The month of September has been warmer and drier than any previous September of which there is record in the Weather Bureau over the principal agricultural districts east of the Rocky mountains. The greatest excess in temperature occurred over the Northern States, where the daily average was from 4° to 8° higher than usual. In the upper Mississippi valley the average daily temperature was from 6° to 8° higher than usual. During the ten days ending September 28, throughout the Mississippi and Ohio valleys and the lake region, the mean maximum temperature exceeded by 12° to 15° the normal maximum temperature for the third decade of September, and actual temperatures were observed from 2° to 9° higher than any other of which the Weather Bureau has record for this season of the year.

"The following are some of the maximum temperatures as taken throughout this region, with their relation to the highest previously observed temperature for the third decade of September, viz.: On the 24th, Memphis, 96°, 5° above; Nashville, 94°, 3° above; Milwaukee, 92°, 6° above; La Crosse, 92°, 7° above; Toledo, 92°, 6° above; on the 19th, Marquette, 96°, 9° above any previous record. The high temperature did not extend to the west of the Rocky mountains, and on the Pacific coast about the normal temperature prevailed. In the cotton region the temperature for the month was slightly above the normal, except near the Gulf coast and extreme southern portions of Georgia, where the month was slightly cooler than usual.

"Throughout the central valleys and on the Atlantic coast, except in Florida, the deficiency in rainfall was marked, and in most sections it was two inches less than the usual amount. Over the greater portion of Florida, in the central Rocky mountain regions, and on the north Pacific coast the rainfall was in excess, the precipitation being very heavy in Florida, and the local rainfall in the central Rocky mountain regions caused considerable damage to railroads by washouts, the floods in northern New Mexico being specially severe. Over limited localities in Georgia, southeast Texas, eastern Michigan, and northern Minnesota excessive rains occurred, which are indicated on the accompanying rain chart."

Details for Kansas are given in Prof. Snow's report for September, from observations taken at Lawrence, which says that four Septembers on our twenty-four years' record have had a higher average temperature (1881, 1882, 1884 and 1886); but the mean temperature of the second half of this September (71.66°) was 5.34° higher than that of the first half and higher than the second half of any preceding September. The sky was extraordinarily clear, only one preceding September having been clearer (1888). The rainfall was more than one-third below the average; and the barometer had a very slight range.

The mean temperature was 69°, which is 2.91° above the September average. The highest temperature was 90° on the 15th and 18th; the lowest was 43° on the 29th, giving a range of 47°. Mean temperature at 7 a. m., 61.32°; at 2 p. m., 70.24°; at 9 p. m., 67.72°.

The rainfall was 2.23 inches, which is

1.37 inches below the September average. Rain fell in measurable quantities on five days. There was one thunder shower. The entire rainfall for the nine months of 1891 now completed has been 38.75 inches, which is 9.88 inches above the average for the same months in the preceding twenty-three years, and 3.21 inches above the entire average annual rainfall for this station, the month being 16.97 per cent. clearer than usual. Number of clear days (less than one-third cloudy) 22; half clear (from one to two-thirds cloudy) 7; cloudy (more than two-thirds) 1. There were nine entirely clear days and one entirely cloudy. Mean cloudiness at 7 a. m., 32 per cent.; at 2 p. m., 29 per cent.; at 9 p. m., 9 per cent.

NOTES FROM THE FAIRS.

AT WAMEGO.

The Pottawatomie and Wabaunsee fair opened at Wamego, September 29, with a fair representation of the products of Pottawatomie and Wabaunsee counties. The displays in the agricultural department were small as compared with those exhibited at the State fair, but were undoubtedly equal in quality, showing that Pottawatomie and Wabaunsee are not behind their sister counties in productiveness. The mercantile department was fairly well filled and represented the different lines of business carried on in Wamego. Judging from appearances, these counties must be engaged almost exclusively in fruit-growing, as the most extensive display on the grounds was in the horticultural department, which occupied the entire east wing of the hall. The fruit exhibited here was fully equal, if not superior to that shown at the State fair two weeks ago. The stock interests were represented by horses and swine only. No cattle, sheep or poultry were shown. In draft horses, Percherons and Clydesdales took the lead. Poland-China hogs seem to be the choice, as none others were on exhibition. Owing to rain on Thursday the fair was declared off and the day's programme postponed until Friday, on which day the trotting and pacing races took place. It was intended to extend the fair through Saturday, but rain again interfered and so the fair ended with practically only one good day. While the unpropitious weather was detrimental to the interests of the fair, the farmers are jubilant, as the rains enable them to prepare their ground and finish wheat-sowing, in which they are much behindhand, hence it is indeed "an ill wind that blows nobody good."

Unquestionably the largest and best display in the department of horticulture was that of Mr. N. H. Pixley, of Wamego, Kas., and so seemed to think the awarding committee, also, as his display of fruit, both green and evaporated, consisting of about 140 plates, of apples, pears, peaches, crabs, plums, grapes, etc., all of his own growing, was profusely decorated with ribbons. His display covered the entire north side of the east wing of agricultural hall, and captured for its owner a number of first and second premiums. Mr. Pixley has about fifty acres in various kinds of fruit. He makes a specialty of filling family orders for winter fruit as well as shipping. In connection with his fruit farm he operates a steam evaporator, consuming about 100 bushels of apples per day. His samples shown at the fair show the care exercised in producing only first-class goods. Mr. Pixley is also an extensive grower of sweet potatoes, having this year twenty-four acres in cultivation. He has a large spring trade in seed sweet potatoes and plants, which he always tells the people of through the advertising columns of the KANSAS FARMER.

C. B. T.

AT OTTAWA.

The Ottawa fair, held last week, was one that can be marked good. The most beautiful grounds in the State were comfortably filled on Friday, but the threatened rain of Thursday kept many away.

The cattle display was above the average. I. L. Whipple showed a herd of his widely-known Short-horns that excited much favorable comment. He took everything in his line, including sweepstakes for general excellence. He certainly deserved it, for no better Short-horns ever stood in those stalls. He also showed Poland-Chinas, and took premium on Protection. Mr. Whipple gives a sale of his best stock near Ottawa, October 22. In Holstein-Friesians, P. I. McEchron took everything in sight, showing a herd of those fine cattle. He also gives a sale of

fine hogs, horses and cattle, at his home, near Richmond, October 15. Messrs. Leeds and Locke showed a large herd of Herefords, taking all premiums in this class. Mr. Locke's bull, Theodore, was much admired.

The Duroc was the only breed of swine absent. A. E. Staley & Son exhibited Chester Whites. Among them were five four-month's pigs weighing 450 pounds, a yearling boar and a yearling sow weighing 600 pounds. Their display of Berkshires from Onward (25383) was excellent and all took the ribbon. (See their card in this paper). Deitrich & Gentry took a high standard with their Poland-Chinas, while S. M. McCullough took the sweepstakes on size and excellence of his Berkshires. He made several good sales of his widely-known hogs.

No line was better represented in all departments than the horse show. P. Blow showed Clydesdales, among them Harvester Prince and Cassie Pollock, who took first. Many standard-bred horses were also exhibited.

The races were interesting.

The display of farm products, of fruits and vegetables prove Franklin county to be a leading one in Kansas.

The Ottawa Carriage Co.'s exhibit at the Ottawa fair deserves mention for its merit alone. This company is turning out vehicles that are unexcelled anywhere in honest workmanship, material and finish.

C. S. H.

AT WICHITA.

The Southern Kansas fair, held at Wichita, last week, was one of the great Kansas fairs this year, and in importance was next to the State fair. Every class of live stock was fairly well represented and there was competition in nearly every class. The horse exhibit consisted of a full show of draft and roadster horses. In the draft rings there were Percherons, English Shires and Clydesdales. The show of standard-bred horses was very large, and a better quality of stock never was shown. The principal exhibitors were H. G. Toler, Grant Hatfield, Mr. Owen and Mr. Wilson, of Wichita, and O. B. Hildreth, of Newton. H. G. Toler's Ashland Wilkes won the grand sweepstakes in the standard class, and his dam, Daisy B., won the sweepstakes for standard-bred mare.

The rainy weather interfered largely with the races, and a number were necessarily declared off. The notable performance in the speed ring was made by the yearling colt, Mary, owned by Robert I. Lee, Topeka. She was the get of McCullamore, and he by Robert McGregor. This yearling made a record of 2:48, which was considerable lower than her former record, and is the best yearling record made in Kansas this year. This record for yearlings has only been beaten five seconds anywhere in the United States this season. The expert judge on all classes of horses was W. P. Popenoe, Jr., of Berryton, Kas., who tied the ribbons quite satisfactorily to the exhibitors and with credit to himself and the association.

In the cattle department the notable exhibits consisted of Short-horns shown by Williams Bros., of Eureka, W. P. Harned, Princeton, Mo.; Holstein-Friesians were shown by Lloyd Ferrell, Beaumont, Kas., and the show of Jerseys was made by C. W. Talmage, Council Grove, Kas., W. H. Litscomb, Benton, Kas., W. E. Gresham, Burrton, Kas., and Mr. Warner, Wichita, Kas.

The swine exhibit was made by T. A. Hubbard, Rome Park, Kas., Stewart & Cook, Wichita, K. N. Friesen, Halstead, W. E. Gresham, Burrton, Kas., and G. W. Berry, Berryton. Mr. Hubbard exhibited Berkshires only, and won first premium on 2-year-old boar, yearling boar, boar six months, boar and five of his get, boar and four sows one year old, boar and four sows over one year old, and second premium on boar under six months, sow under six months, and grand sweepstakes on boar and five of his get, any age, together with Campbell's special sweepstakes of \$50 for best boar of any age or breed bred by any exhibitor. Mr. G. W. Berry exhibited twenty-one Berkshires—young herd—and won first premium on boar under six months, sow 2 years old, sow and litter, and best sow any age or breed; the second premium on 2-year-old boar, yearling boar, boar under one year, and herd of boar and four sows. Mr. Gresham took three first prizes and two seconds on his Poland-Chinas. Stewart & Cook's Poland-Chinas captured twelve first and two sec-

onds, including grand sweepstakes on boar of any age or breed.

There was a good showing of sheep, and the different breeds were fairly well represented. Hogue & Carey, of Rose Hill, had a good show of sixteen fine Shropshires, and won six first prizes; S. M. Craft, of Anthony, exhibited twenty-five Southdown sheep and captured three first and four second premiums; Reed Freeze, of Wellington, took seven first prizes with a show of thirteen Merinos; H. H. Hague, of Newton, had a show of seven Merinos and eleven Cotswolds, and won three first and two second prizes; Jas. Walton, of Newton, had eleven Cotswolds which won three first prizes; and J. W. Milene, Putnam, Kas., showed eleven Cotswolds, and won first premium on ram 2 years old.

The displays in the other departments were highly creditable to the association, and Wichita has now demonstrated to the world that she possesses a location where great fairs may surely be expected every year.

W. S. D.

Gossip About Stock.

About 10,000,000 head of all kinds of live stock has been received at Chicago so far this year.

The *Stock Grower*, of New Mexico, says that the Enterprise cattle syndicate lately shipped twenty carloads of cattle from that Territory to Chase county, Kansas, where they are to be pastured and fed for market.

The Kansas City *Times* of October 3 says: "Geary county has sold several carloads of horses for shipment. Wherever Bob Young resides you can safely wager that there are lots of horses, and mighty good ones, too."

Mr. W. H. Bignall has begun breeding thoroughbred Poland-China hogs at Louisville, Kas. His exhibit at the fair at Wamego last week gained him a number of premiums, and shows that, though a beginner, he is not new to the business.

From the Clayton (N. M.) *Enterprise* we learn that Thos. S. Holland, of that Territory, lately sold a bunch of 250 head of yearling steers to Remick Bros., Clay Center, Kas. These yearlings are well graded up, are fat and well worth the price paid, \$12.50 per head.

I. L. Whipple & Sons, Ottawa, Kas., proprietors of the well-known Ottawa herd of Poland-China hogs and Short-horn cattle, write us that they will hold their public sale October 22, at which they will sell 100 head of hogs and pigs and twenty head of thoroughbred Short-horn cattle. Their herds are headed by the best breeding animals that could be procured.

F. M. Lall's sale of pure-bred Poland-China swine occurred as advertised, at Marshall, Mo., Tuesday, September 22. Buyers were present from Missouri, Illinois, Iowa, Nebraska and Kansas. The bidding is reported as being quite lively. One hundred and ten head brought \$2,446, an average of about \$22.25. Robert Rounds, of Morganville, Kas., was one of the heaviest purchasers, as follows: Three boars, at \$10, \$15 and \$52.50; ten sows, ranging from \$10 to \$39. Mr. Rounds carried off several of the choicest "plums."

L. A. Knapp, the successful breeder of Short-horn cattle, has been nominated for Register of Deeds of Wabaunsee county. Mr. Knapp's farm consists of 320 acres. He is a man of education and refinement, and has the qualifications for a good officer. And to demonstrate his business capacity and otherwise verify his fitness the KANSAS FARMER suggests that all his friends turn out to his public sale of pure-bred and grade Short-horn cattle on October 14. Stockmen from other counties will find some choice stock and, in view of his candidacy, realize some rare bargains.

J. G. Cassida & Sons, Chula, Mo., breeders of Poland-China, Chester White and Berkshire hogs, Bronze turkeys and Light Brahma chickens, in writing us, says: "We established our herd of hogs five years ago, commencing with five sows and two boars—two Arnold sows, one sow from Sample Bros., of Ohio, two Chester White sows from N. G. Alexander, of Illinois, and one Silver boar. We now have increased our herd to twenty-five sows and four first-class boars, loaded with as good blood as can be found. From this herd we now have over 100 head of pigs for sale, which we offer at very low prices."

Men and women prematurely gray and whose hair was falling, are enthusiastic in praising Hall's Hair Renewer for restoring the color and preventing baldness.

Horticulture.

ROOKY MOUNTAIN FARMING—No. 3.

Special correspondence KANSAS FARMER.

Perhaps in no particular has Colorado agriculture made such rapid development as in fruit-growing. The very considerable demands of the non-producing mining and manufacturing population for horticultural products, which have heretofore been met by the fruit-growers of Kansas, Utah and California, are now met, to a large degree, by home orchards. It may be stated as a general fact that all efforts at horticulture in the State are made by means of irrigation, and that little work of the kind is attempted at altitudes above 6,000 feet. In the eastern half of the State the conditions surrounding the farmer are so similar to those of western Kansas that they may be considered identical. Much fruit is grown here, and of good quality, but it lacks in an element of perfection which is noticeable on the western slope of the continental divide, viz., flavor and evenness in ripening. It is also quite noticeable that the fruits grown on the western slope are remarkably free from insect depredations.

Perhaps the greatest fruit district in the State, in prospect at least, is the Grand river valley, in its lower portion. From Glenwood Springs, at the mouth of the Grand river canyon, to Grand Junction lies a very hot and dry valley which, when irrigated, seems capable of producing most satisfactory results. The valley is quite narrow for the greater portion of its length and the soil of a loose, sandy, alkaline nature, and, naturally, produces little but sage brush and cacti, but of these an abundance. It is bordered on both sides by low, desolate mountains, whose only growth is stunted pinyons and cedars. This is probably one of the hottest valleys in the State, and is about as hot a place in summer time as the average Kansan will care to reach. While the river water in this valley is abundant and pure the well water is generally very bad, on account of the alkaline earth through which it filters. In the narrower portions of the valley farms are few, or impossible, but in the broad valley about Grand Junction the area of cultivated land is practically limited only by the skill of the engineer in building irrigation ditches. In this hot and dry climate fruits of all kinds seem to do well when properly watered, but the peach, grape and apricot seem to find this locality especially congenial. As in the case of many other localities, the land agent seems to be the most thriving product of this vicinity, and through his efforts to "boom" the valley, lands which are wholly valueless without water, and whose prospects for getting water are exceedingly remote, are selling as high as \$5 to \$8 per acre. Lands "under the ditch" are sometimes sold as low as \$30 per acre, and often as high as the purchaser's credulity and cash will permit. One hundred dollars per acre for irrigated lands with very little improvements besides the irrigation ditch, and lying ten miles from town, is a not uncommon price in this valley.

The yield of fruit is very large and very regular. As the rainfall amounts to but little its influence upon the crops is practically nothing, and as that portion of the valley under consideration is nowhere higher than 5,000 feet, it is found practicable to grow to maturity corn and other crops which would hardly be possible at this altitude in other localities.

This valley is particularly noted for its peaches, which here grow to great perfection in size, color and flavor. Indeed the flavor of all the fruits grown here is something remarkable and far exceeds any fruit product of California which the writer has ever seen. Of peaches, Old Mixon and Crawford seem to be the best varieties, and these are marketed by carloads during August. As the climate is somewhat similar to portions of California, the first attempts at grape-raising seem to have been made with varieties of the raisin grapes, which there attain such perfection, but latterly considerable attention is being paid to the American varieties, and Concord, Delaware and others can now be found in greater perfection.

Selling prices for fruits, vegetables and ranch products appear quite high to a Kansan, but they are rapidly getting lower, as the country is more developed. It was noticed that retail prices for farm

products ranged from 25 to 50 per cent. cheaper than those prevailing in the same locality one year ago.

In this valley are located some of the largest irrigating enterprises in the State. At Antlers, in Cactus valley (now called Grass valley by the land agents), there is being constructed a large dam across a natural pass in a peculiar ridge of hills known as the "Hog-backs," which will create an immense reservoir of many acres in extent. The water for this reservoir will be taken through about twelve miles of ditch and sluice from Rifle creek, and, it is claimed, will afford an ample supply for irrigating not only the valley itself but also a large valley-like depression which lies between the "Hog-backs" and the mountains proper. This enterprise has cost the originators about \$150,000, and is not yet finished. When this enterprise is complete several thousand acres of as good fruit land as there is in the valley will be thrown open to the public. At Grand Junction another large ditch is now being built which will serve to open many more acres of fruit lands, and it is safe to predict that very nearly all of the irrigable land in this valley will, before many years, be devoted to the purposes of horticulture.

In reply to the oft-repeated question, "is this a good country for the Kansas farmer or fruit-grower, who would better his condition, to emigrate to?" the writer can only say, "that depends." The Kansan who has a good farm, located in a good part of the State, and who knows how to farm, ought not to hope for a better location upon this earth. That portion of Colorado under discussion has many disadvantages under which the Kansan no longer has to live. It is a new country, and the immigrant will be obliged to live as best he can. Owing to the peculiar formation of the country and the difficulty experienced in making the waters available for the purposes of irrigation, it can never become very densely settled. The temperature in summer is most torrid and desert-like. The drinking water is generally alkaline and poor. The natural vegetation in the valley is practically nothing, and the farmer is obliged to raise every mouthful of feed eaten by his stock, and he must irrigate to do it. The high prices received for farm products are offset by the high prices of land and the high rates of wages and cost of living. As the population is confined to the narrow valleys, the schools and churches must of necessity be somewhat far apart, and as Colorado is not a prohibition State, the open saloons will be found quite near together. On the other hand, the immigrant farmer who can own an irrigated farm in this valley can be assured of very large yields of most delicious fruits, for which there is at present a good home market. He can raise abundant crops of alfalfa and, with plenty of water, a fair crop of corn. The small grains seem to do better in higher altitudes, but fair crops can be grown. Vegetables and garden-truck generally do remarkably well here, and the potatoes are exceptionally fine. I. D. GRAHAM.

Medicine in Vegetables.

A writer in the *Western Rural* says: "Spinach has a direct effect upon the kidneys. A common dandelion used as greens is excellent for the same trouble. Asparagus purges the blood. Celery acts admirably upon the nervous system and is a cure for rheumatism and neuralgia. Tomatoes act upon the liver. Beets and turnips are excellent appetizers. Lettuce and cucumbers are cooling in their effects upon the system. Onions, garlic, leeks, olives and shallots, all of which are similar, possess medicinal virtues of a marked character, stimulating the circulatory system and the consequent increase of the saliva and the gastric juice, promoting digestion. Red onions are an excellent diuretic, and the white ones are recommended to be eaten raw as a remedy for insomnia."

The Course of Empire,

The poet informs, is westward. Emigrants in that direction should be provided with Hostetter's Stomach Bitters as an antidote to malaria, the bane to newly settled clearings. Moreover, the peerless fortifying agent neutralizes the pernicious effect of damp and exposure, mental and bodily fatigue and nervous strain. Travelers, tourists, miners, navvies and mariners use it with advantage.

A GOOD APPETITE

Is essential, not only to the enjoyment of food, but to bodily health and mental vigor. This priceless boon may be secured by the use of Ayer's Sarsaparilla.

"Feeling truly grateful for the benefits realized by the use of Ayer's Sarsaparilla, I gladly offer my testimony in its favor. For several months I had no appetite; what food I ate distressed me. I was restless at night, and complete prostration of the nervous system seemed imminent. Three bottles of Ayer's Sarsaparilla cured me."—Miss A. E. Vickery, Dover, N. H.

"I have been suffering, full two years, from troubles consequent upon a severe fall. My blood became very much impoverished, and I suffered severely from weakness of the system and loss of appetite, when a friend recommended me to try Ayer's Sarsaparilla. Am now on my third bottle, and find myself greatly benefited by its use."—Mrs. M. H. Howland, South Duxbury, Mass.

Ayer's Sarsaparilla,

Prepared by Dr. J. C. Ayer & Co., Lowell, Mass. Sold by Druggists. \$1, six \$5. Worth \$5 a bottle.

The Stable Shelf

ought to have on it a bottle of Phenol Sodique for bruises, cuts, sore spots, &c.

Just as good for a man.

If not at your druggist's, send or circular.

HANCE BROTHERS & WHITE, Pharmaceutical Chemists, Philadelphia.

Look out for counterfeits. There is but one genuine. Better cut the advertisement out and have it to refer to.

The Poultry Yard.

Treatment for Lice.

EDITOR KANSAS FARMER:—Can any one tell me what is good to kill chicken lice? They are in my chicken house; but still they don't seem to bother the chickens a great deal. They are in the nests and all over everything. They don't look like a regular chicken louse. I had them on my sitting hens last spring, but those did not look like these. I believe they are a different kind. I have not lost any chickens from them. I have kept the hen-house clean and burnt and scattered sulphur and sprinkled lime around, but it did no good.

They are a little red bug at first, and as they get larger they are white with a black spot on their backs, and I have seen a few little tiny white ones, hardly as large as ants. MRS. EMMA RADCLIFF.

Gaylord, Kas.

The best fumigation known to us is as follows: Take a small furnace, or stove, or iron kettle, into which place a pound or two of crude roll sulphur, broken up. Close the doors and windows (during the absence of the fowls in the forenoon) and set the contents of the vessel on fire in the center of the floor. Shut the house up tight and leave it to smoke a couple of hours. Then open all the windows and doors for thorough ventilation.

If, as we suspect, Mrs. Radcliff's poultry house is infested with red mites or red spider lice, we suggest the use of kerosene, as it is said that it kills them at once. As their haunts are the cracks and crevices of the roosting poles, the sides of buildings, nest boxes, etc., they are easily destroyed. Where they are numerous, go over the whole inside of the building with hot whitewash, using it quite freely, so as to fill every crack and crevice. Clean out and whitewash the nest boxes, clean up the floor and put in fresh sand.

If any of our readers have more effective remedies to suggest, we will be pleased to hear from them.

How to Select a Good Laying Hen.

Even men who profess to be judges of poultry, says the Portland (Maine) *Transcript*, "are often in reality ignorant of the characteristics of a good bird. How many poultry men can pick out a good laying hen from a strange flock? Not many can do it, yet it can be accomplished after a short study of make-up and habits. There goes a hen with a thick neck, large head, ill-shaped, walks listlessly about, seemingly with no purpose in view. She doesn't care to scratch, but hangs around the house, evidently waiting for her next feed. She gets up late in the morning and goes to bed early in the evening. That hen may be put down as a very poor layer. The eggs of some of the other hens go to help pay her keeping.

"Here comes another hen. She walks briskly and there is an elasticity in her movements that denotes she has something in view. She is neat and natty in appearance, small head with a slim neck, nicely arched or curved. She forages and scratches all day long, and may be too busy to come to her evening feed. She is at the door in the morning, waiting to be let out. She snatches a few mouthfuls of feed and is off to the meadow looking for insects. Before she gets out in the morning she generally deposits her daily egg in the nest or returns after a short forage. She is neat, tidy and clean, with a brightness and freshness pleasing to the eye. That is the hen that pays for her feed and gives a good profit all the year round. By studying these traits any man may in a few years by selection have a fine laying flock of hens."

STEKETEE'S



IMPROVED HOG CHOLERA CURE

What They Say of Stekete's Hog Cholera Cure:

BRIDGTON, Mo.—I am well pleased with your Hog Cholera Powders. BARNY SOLOMON.
EUREKA, Ill.—I will say in regard to your Hog Cholera Cure, that my hogs look better since using your powders. DANIEL BAKER.
MELLETTE, S. D.—I am well pleased with the results of your Hog Cholera Cure. A. D. BELL.
GALLENVILLE, Wis.—I want a package of your Dry Bitters, if they are as good as your Hog Cholera Cure is for worms. Your Powders do kill worms. G. W. KLEIN.

These Powders are 50 cents per package at the drug stores, or 60 cents by mail; three for \$1.50, express paid.
P. S.—Stekete's Hog Cholera Cure is the same thing as used for Pin-Worms in Horses. Address

G. G. STEKETE,
Grand Rapids, Mich.

Mention KANSAS FARMER.

Tutt's Pills

stimulates the torpid liver, strengthens the digestive organs, regulates the bowels, and are unequalled as an

ANTI-BILIOUS MEDICINE.

In malarial districts their virtues are widely recognized, as they possess peculiar properties in freeing the system from that poison. Elegantly sugar coated. Dose small. Price, 25cts.

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TREES AND PLANTS

The Largest and Nicest stock in the West of all kinds of FRUIT TREES, GRAPES, VINES, Forest Seedlings and SMALL FRUITS. Write for our New Price List and our pamphlet on "Cost and Profit." HART PIONEER NURSERIES
Mention this paper. Fort Scott, Kansas.

600 ACRES. 13 GREENHOUSES.

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We offer for the Fall trade a large and fine stock of every description of FRUIT and Ornamental TREES, Shrubs, Roses, Vines, SMALL FRUITS, Hedge Plants, Fruit Tree Seedlings and Forest Tree Seedlings. Priced Catalogue, fall of 1891, mailed free. Established 1829.
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FRUIT TREES PEACH—A Specialty

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JOS. H. BLACK, SON & CO.,
Village Nurseries, Hightstown, N. J.

In the Dairy.

How to Select a Good Cow.

The faculty of selecting a good cow, without previous knowledge of her production at the pail or churn, is something that must be gained by experience. Rules for judging them have been published time and again, but, as the *American Cultivator* says, they "were nearly all formulated in the days when thoroughbred stock was almost unknown, and were intended for the 'general-purpose' cow, which was expected to give some milk and make some butter for a few years, and then fatten well and make a good tub of beef. To-day the demand is for a cow that will make a great deal of milk or a great deal of butter, and continue to do so the greater part of the year, and her value for beef when her milking days are past are but little more considered in New England than it would be if beef were not an article of food.

"One who is purchasing a thoroughbred or a high-grade animal should examine the standard of the predominating breed, and look for the distinguishing marks of that breed first. But with them, or in an animal that is so crossed as to lack the distinctive characteristics of any especial breed, or where the form indicates one breed and the color another, the inexperienced farmer is often at a loss. Yet among such there are often good cows, and there are certain shapes and marks that may be considered indications of a good cow of any breed, and it is well to bear them in mind.

"We will modify or modernize one of those old descriptions of a good cow: A long head and face, with small muzzle and full nostrils. Eyes bright, full, and yet mild, with wide space between them, with head narrower above the eyes. Horns, if she has any, small, and wax-colored rather than white, and swelling a little a few inches from the head. Neck slim and thin. Shoulders a little higher than neck or back. Back straight and wide in the loin. Hind legs small and standing well apart, with the fore legs small below the knee and good size above, and the hoofs nearly round as she stands on them, and dark colored and glossy-looking. In form she should be light in the shoulder and broad in the hind quarter, deep in the flank and round in the body, the body holding its size well back to the hind legs. A full breast with the brisket projecting well forward. The milk veins should be prominent, but need not necessarily be large, and the udder should run well forward of the legs, rather than to project behind, while the teats should be of convenient size to grasp well. While their size may have no effect upon the milk production, they have much to do with the ease of milking. The udder, when empty, should be soft and flabby, and free from any hard lumps or kernels, which, if present, would indicate a tendency to garget.

"The hair upon the body, and especially upon the udder, should be thick, soft, and with a silky feeling, and the skin should be soft, and move easily upon the back and hips, showing the layer of fat under it, which makes a thrifty animal, and one that will keep more cheaply and produce more and richer milk than one whose hair is harsh, coarse and wiry, and whose skin seems to be grown fast to the backbone, or what is called 'hide-bound.' The nose should be moist and cold. This, with the bright, full eye, is one of the best indications of good health. The full breast and deep body indicate plenty of lung and heart room, which are necessary to a strong constitution, and the large size of body forward of the hind legs gives room for the digestive organs, which should be capa-

RELIABILITY!!!

Reliability in all things is what every person wants; especially in the case in buying Buggies and Harness; hence shrewd and wise men always buy the world-renowned

"MURRAY"

\$55.95  **\$5.95**
BUGGIES **HARNESSES**

Are you looking for the finest, the best, the most durable, the most stylish, the most highly recommended, the most widely used and the only reliable low-priced Buggies and Harness? If so, there is only one make to buy, and that is the celebrated and original "MURRAY" Brand. The following standing offer has never been accepted and shows we are the only firm that is "in it" when it comes down to real business.

Many Firms Make Big Claims, BUT WE PROVE OUR WORDS BY DEEDS AND WILL WAGER \$1000 (One Thousand Dollars), with any Carriage and Harness Firm in the U. S., same to be given to any Charitable Institution by the loser, that we can show more honest and better testimonials for the "MURRAY" Buggies and Harness for the time our goods have been on the market, than any one Factory in the World.

We were the first Buggy and Harness Factory to openly denounce all Pools and Trusts and sell direct to the consumer. Our success has caused many imitators to copy our work and see that you get the genuine "MURRAY" Buggies and Harness. Write at once for our large, illustrated Catalogue, containing full description and net cash prices of our work. We will mail it to you free. **WILBER H. MURRAY MFG. CO., Murray Bldg., 139 W. Front St., Cincinnati O.** We invite all persons visiting Cincinnati to make our house their headquarters. We will always be glad to see you, whether you wish to buy or not, and will try to make you feel at home while here.

acious enough to hold as much as she can convert into milk.

"Such a cow should give a good supply of milk of good quality, containing its full proportions of solids, if decently fed and well taken care of. If butter is the main object desired, she should have some of the marks of the well-known butter breeds, the Jersey or Guernsey, rather than of the Ayrshire or Short-horn; but if she has not them, and has the soft skin with a tinge of yellow in it, and a yellow color inside the ear, which should be thin and almost transparent in the sunlight, she can scarcely fail to be a good butter cow, let the breed be what it may."

"German Syrup"

"We are six in family. We live in a place where we are subject to violent Colds and Lung Troubles. I have used German Syrup for six years successfully for Sore Throat, Cough, Cold, Hoarseness, Pains in the Chest and Lungs, and spitting-up of Blood. I have tried many different kinds of cough Syrups in my time, but let me say to anyone wanting such a medicine—German Syrup is the best. That has been my experience. If you use it once, you will go back to it whenever you need it. It gives total relief and is a quick cure. My advice to everyone suffering with Lung Troubles—Try it. You will soon be convinced. In all the families where your German Syrup is used we have no trouble with the Lungs at all. It is the medicine for this country." **John Franklin Jones.**

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WE RECEIVE AND SELL BUTTER, EGGS, POULTRY, VEAL, HAY, GRAIN, WOOL, HIDES, POTATOES, GREEN AND DRIED FRUITS.

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- 1 Dozen 3 lb. Cans Tomatoes for..... .90
- Cream City Savon Soap, 72 Bars for 1.60
- Kirk's Savon Imperial Soap, 60 lbs. for 2.40
- Kirk's White Russian Soap, 100 Bars for..... 3.85
- Fairbank's Santa Claus Soap, 100 Bars for..... 4.00
- A 5-Gallon Keg (Full Measure) Fine Table Syrup for..... 1.50
- A Good Green Rio Coffee (no bad beans), per lb19
- After Dinner Java Coffee (this is the best), per lb25
- Japan Tea, from 19c. to 44c. per lb09
- Good Japan Tea Dust, per lb..... .36
- P. J. Sorg's Spear Head Plug Tobacco, per lb..... .36
- Lorillard's Climax Plug Tobacco, per lb..... .36

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And Grocery List furnishes practically everything you eat, use or wear. We mailed a copy to our regular customers free of cost. Send 6 cents to pay the postage, with your request for a copy. As we furnish the book free, you ought to be willing to pay postage to get it. You cannot afford to be without it.

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Wholesale Farmers' Supply House,
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\$1,000 FOR AN OLD COIN.

IF YOU HAVE ANY COINS dated before 1871, with plain date, send us a list. We pay high prices for hundreds of dates and kinds. Among coins that we want are: silver dollars dated between 1794 and 1808; dates of half dollars before 1864; quarters of all dates before 1868; all dates twenty-cent pieces; all dates dimes before 1869; silver five-cent pieces before 1867; five-cent nickels of 1877 and 1883; all dates of silver three-cent pieces; nickel three-cent pieces before 1870; two-cent pieces between 1864 and 1873; all large copper cents, also small cents with eagles on, also cents of 1873 and 1877; all half-cents; foreign coins, fractional and Confederate currency, etc. For above we pay big amounts over face value, if in required condition. This is a comparatively new business. Others have done even better. The *New York World* says: "Many people have become rich by looking after coins wanted by collectors." The *Home Journal* says: "Collecting coins is a very profitable business now-a-days, as there are but few in it. One Boston broker, Mr. W. E. Skinner, buys from agents all over the country, and pays them big sums for rare coins." Coins that are very hard to find in one section of the country are often easily found in others. Largest business, highest prices. Write at once for further particulars enclosing stamp for reply, which may be worth hundreds of dollars, perhaps a fortune to you. **W. E. SKINNER, Reliable Coin Broker, 325 Washington St., Boston, Mass.**

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The Veterinarian.

We cordially invite our readers to consult us whenever they desire any information in regard to sick or lame animals, and thus assist us in making this department one of the interesting features of the KANSAS FARMER.

INJURED EYE.—I have a six-year-old horse that has a white scum over his left eye, caused by a blow with a halter-strap. He received the injury five days ago, and has been blind in that eye ever since. What must I do to save the eye?

Answer.—Bathe the eye twice a day, for half an hour at a time, with very warm water, using a soft cotton cloth and getting as much heat to the eye and surrounding parts as possible, then wipe dry and, with a camel's-hair pencil or a soft feather, apply a little of the following lotion to the eye-ball: Nitrate of silver, 4 grains; distilled water, 1 ounce. Keep the bottle closely wrapped and in a dark cool place when not using.

BLOOD-POISONING.—I have a four-months-old sucking colt with several boils or abscesses. I have opened them and they discharge copiously. I do not know the cause. Perhaps it is from the mother's milk or from a bruise, not opened soon enough, and the pus was taken up into the circulation, and now the whole system is corrupted. I have weaned the colt. What is the cause and what treatment would you recommend?

Answer.—The trouble is most probably blood-poisoning from the absorption of pus. Give, three times a day, in a little gruel, ten grains of quinine. Wash the sores twice a day with warm water and apply a little of the following: Acetate of lead, 1 ounce; sulphate of zinc, 6 drachms; carbolic acid, 3 drachms; soft water, 1 quart; mix.

THOROUGHPIN.—A mule, eleven years old, has a thoroughpin. There has been a puff on each side of the hock joint for two years, but she has been lame but a short time. Please advise through the KANSAS FARMER.

Answer.—Make a blister as follows: Biniodide of mercury, 1 drachm; lard, 6 drachms; mix cold; powdered cantharides, 1 drachm; lard, 6 drachms; mix hot. Now mix the two together and rub a sufficient quantity well into the puffs and down the inside of the joint. The more it is rubbed the better it will take hold. Tie the mule's head up for twenty hours, then rub on a little grease and turn into a box-stall. Repeat the blister in a month. Give complete rest while under treatment.

S. I. Ghramm, Hugoton, Kas.—As the patient seems to have survived, there is no need of a prescription, and we do not discuss the merits or demerits of the treatments of others.

That tired feeling now so often heard of, is entirely overcome by Hood's Sarsaparilla, which gives mental and bodily strength.

Lakin Index: The premium peach of the season was placed on our table on Wednesday last by Walter Longstreth, from his father's Southside orchard. It weighed a solid half pound and measured ten inches in circumference.

St. Bel, 2:24.

Miller & Sibley, of Franklin, Pa., owners of St. Bel, brother of late Bell Boy, write: "We have used Quinn's Ointment with great success and believe it fulfills all claimed for it. We cheerfully recommend it to our friends." For Curbs, Splints, Spavins, or Bunches, it has no equal. Trial box 25 cents, silver or stamps. Regular size \$1.50 delivered. Address W. B. Eddy & Co., Whitehall, N. Y.

Mound Valley Herald: A specimen apple was brought to our office to-day from C. M. Wallingford's that measured fifteen and one-fourth inches in circumference, five inches in diameter and weighed one pound and nine ounces. It's a whopper. Who can beat it?

The Best He Ever Used.

G. G. STEKETEE:—Please send me one more package Steketee's Hog Cholera Cure. I used one package on a horse. I think these powders are the very best I ever used for horses. CHAS. AUBEL, Young Hickory, N. Y.

No farmer should be without a package of Steketee's Hog Cholera Cure. A stitch in time saves nine. Read Steketee's advertisement in this paper.

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Of Pure Cod Liver Oil and HYPOPHOSPHITES of Lime and Soda

is endorsed and prescribed by leading physicians because both the Cod Liver Oil and Hypophosphites are the recognized agents in the cure of Consumption. It is as palatable as milk.

Scott's Emulsion is a perfect food. It is a wonderful Flesh Producer. It is the Best Remedy for CONSUMPTION, Scrofula, Bronchitis, Wasting Diseases, Chronic Coughs and Colds. Ask for Scott's Emulsion and take no other.

MARKET REPORTS.

LIVE STOCK MARKETS.

Kansas City.

CATTLE—Receipts 7,400, mostly rangers, of which 3,000 were in the Texas division. Good stuff was scarce; trade a little quicker, but not rushing. Beef steers, \$3 12 1/2 to \$5 20; wintered Texas, \$3 35; wintered Colorado, \$3 05 to \$3 35; Western steers, \$2 10 to \$2 95; cows, \$1 42 to \$2 45; bulls, \$1 15 to \$2 00; heifers, \$1 30 to \$2 40; Texas steers, \$1 75 to \$2 75; Indian steers, \$1 50 to \$2 40; Colorado steers, \$1 90; stockers and feeders, \$2 35 to \$2 80.

SHEEP—Receipts 4,677. Best muttons were steady, lambs lower, and common stuff and stock sheep dull. Lambs, \$3 00 to \$4 70; ewes, \$3 50. HORSES—5 to 7 years: Draft, extra, \$1 35 to \$1 75; good, \$1 00 to \$1 25. Saddlers, \$1 25 to \$1 50. Mares, extra, \$1 25 to \$1 45; good, \$70 to \$80. Drivers, extra, \$1 40 to \$2 00; good, \$75 to \$1 20. Streeters, extra, \$1 00 to \$1 15; good, \$70 to \$80.

MULES—5 to 7 years: 14 hands, \$60 to \$70; 14 1/2 hands, \$70 to \$75; 15 hands, \$100 to \$110; 15 1/2 hands, medium, \$105 to \$125; 15 1/2 hands, extra, \$140 to \$150.

Chicago.

CATTLE—Receipts 16,000. Market steady. Prime to extra natives, top prices, \$5 00 to \$5 90; medium to fair, \$3 50 to \$4 75; others, \$2 30 to \$2 65; Texans, \$2 35 to \$3 30; rangers, \$3 75 to \$4 75; butcher cows, \$2 25 to \$2 50.

HOGS—Receipts 17,000. Market higher. Rough and common, \$4 00 to \$4 50; mixed and packers, \$4 70 to \$5 00; prime heavy and butcher weights, \$5 10 to \$5 45; light, \$4 25 to \$5 50.

SHEEP—Receipts 4,000. Market steady to higher. Native ewes, \$4 00 to \$4 60; Texans, fed, \$4 35; Westerns, \$4 00 to \$4 60; lambs, \$3 50 to \$5 65.

CATTLE—Receipts 2,900. Market steady. Good to choice native steers, \$4 50 to \$4 75; fair to good natives, \$2 80 to \$4 90; Texans and Indian steers, \$2 50 to \$3 00; do. canners, \$1 50 to \$2 40.

HOGS—Receipts 2,000. Market stronger. Fair to fancy heavy, \$4 90 to \$5 10; mixed grades, \$4 60 to \$4 90; light, fair to choice, \$4 60 to \$4 80.

SHEEP—Receipts 400. Market steady. Fair to good, \$2 40 to \$4 50.

GRAIN AND PRODUCE MARKETS.

Kansas City.

WHEAT—Receipts for past 24 hours 132,500 bushels. Market dull and lower. By sample on track: No. 2 hard, 81c; No. 3 hard, 77c; No. 4 hard, 70a73c; No. 2 red, 89c; No. 3 red, 83c; No. 4 red, 78a79c.

CORN—Receipts for past 24 hours 8,500 bushels. Scarcity continues to hold the market up fairly. Free arrivals of new corn, which are selling well and can be had at 45c per bushel, favored buyers and enabled them to successfully squeeze prices. By sample on track: No. 2 mixed, 49c; No. 3 mixed, 48c; No. 4 mixed, 47c; No. 2 white, 50 1/2c.

OATS—Receipts for past 24 hours, 35,000 bushels. A good many coming in and prices weak. By sample on track: No. 2 mixed, 28c; No. 3 mixed, 25c; No. 4 mixed, 24c; No. 2 wintered, 27c; No. 2 red, 27c.

RYE—Receipts for past 24 hours, 9,000 bushels. By sample on track: No. 2, 77 1/2c; No. 3, 73 1/2c.

FLAXSEED—We quote crushing at 80c per bushel on the basis of pure.

HAY—Receipts for past 48 hours 400 tons. We quote: New prairie, fancy, \$6 00; good to choice, \$5 00 to \$5 50; prime, \$3 50; common, \$3 00. Timothy, fancy, \$8 00; choice, \$8 50.

WHEAT—Receipts 191,000 bushels. No. 2 spring, 95c; No. 3 spring, 88a88 1/2c; No. 2 red, 95 1/2c.

CORN—Receipts 73,000 bushels. No. 2, 52 1/2c.

OATS—Receipts 245,000 bushels. No. 2, 26 1/2c; No. 2 white, 29a30c; No. 3 white, 27 1/2c.

WHEAT—Receipts 168,000 bushels. No. 2 red, cash, 94 1/2c.

CORN—Receipts 35,000 bushels. No. 2 cash, 53a54 1/2c.

OATS—Receipts 121,000 bushels. No. 2 cash, 27a27 1/2c.

WOOL MARKETS.

St. Louis.

A healthy feeling prevailed; demand fairly active for the better grades, and equal to the offerings of all descriptions. Prices firm, although it is difficult to give accurate quotations, terms being kept private on most sales. Movement fair from first hands—mainly of lots held since early in the season, the current arrivals being light.

Kansas and Nebraska: Medium light bright, 20a21c; coarse, 10a18c; light fine, 17a18c; heavy fine, 14a15c; low and earthy, 12a13c.

Broom Corn

Kansas City Your Best and Nearest Market.

Mail me sample of your Broomcorn, stating how much you have and when you will be ready to ship, and by return mail I will write you what I will give for it on board cars at your station. Or, if you wish to hold for better prices, I will advance you 60 per cent. of its value and store it for you.

HUGH E. THOMPSON, 1412 & 1414 LIBERTY ST., KANSAS CITY, MO.

REFERENCES:—National Bank of Commerce, R. G. Dun & Co. or Bradstreet's Commercial Agencies.

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Commissions one cent per pound, which includes all charges after wool is received in store until sold. Sacks furnished free to shippers. Cash advances arranged for when desired. Write for circulars. Information furnished promptly by mail or telegraph when desired.

Denver Market.

Ship to PATCH FRUIT & PRODUCE CO., Denver, Colo.,

COMMISSION MERCHANTS. Wholesalers and jobbers of Poultry, Butter, Eggs, Apples, Peaches, Plums, Sweet Potatoes, Nuts, Popcorn, and all kinds of produce and fruit. References:—Dun or Bradstreet. Write for tags, stencil and general information regarding shipment.

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Highest market prices realized and satisfaction guaranteed. Market reports furnished free to ship pers and feeders. Correspondence solicited. Reference:—The National Bank of Commerce, Kansas City.

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A SAFE, SPEEDY AND POSITIVE CURE for Curb, Splint, Sweeney, Capped Hock, Strained Tendons, Founder, Wind Puffs, Skin Diseases, Thrush, Diphtheria, all Lameness from Spavin, Ringbone or other Bony Tumors. Removes all Bunches or Bleaches from Horses and Cattle.

SUPERSEDES ALL CAUTERY OR FIRING. IMPOSSIBLE TO PRODUCE SCAR OR BLEMISH. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE, WILLIAMS CO. Cleveland, O.

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THE STRAY LIST.

FOR WEEK ENDING SEPT. 23, 1891.

Dickinson county—M. H. Bert, clerk. HORSE—Taken up by W. A. Weaver, in Lyon sp, one iron-gray horse colt, 8 years old, about 15 hands high, no marks or brands; valued at \$30. Cherokee county—J. C. Atkinson, clerk. HORSE—Taken up by A. B. Saunders, August 25, 1891, one bay gelding, about 8 years old, about 15 1/2 hands high, star in forehead; valued at \$30. HORSE—Taken up by Burrell Owing, one bay horse, about 15 hands high, small white spot in face, two small white spots on left side caused by saddle, long mane; valued at \$25.

FOR WEEK ENDING SEPT. 30, 1891.

Johnson county—W. M. Adams, clerk. HORSE—Taken up by Howard Holloway, in Shawnee sp, P. O. Shawnee, July 10, 1891, one brown horse, 14 hands high, weight 700 or 800 pounds, 10 or 11 years old, a little white in forehead, right hind foot white; valued at \$20. Jackson county—A. E. Crane, clerk. COW—Taken up by G. D. Abel, in Liberty tp., August 21, 1891, one roan cow, medium size, no marks or brands; valued at \$12. COW—By same, one roan and spotted cow, medium size, no marks or brands; valued at \$12.

Allen county—E. M. Eckley, clerk. HORSE—Taken up by J. D. Mann, in Osage tp., P. O. Bayard, September 11, 1891, one dark bay horse, dark mane and tail, some white on left nostril, right hind foot white, some white hairs on body, about 15 hands high, about 8 years old; valued at \$60. Lyon county—C. W. Wilhite, clerk. MARE—Taken up by D. S. Vancleave, in Center tp., September 22, 1891, one gray mare, medium size, about 20 years old, branded 76 with half circle underneath; valued at \$20. Ness county—E. E. Beeler, clerk. HORSE—Taken up by Annie Lewis, in Ohio tp., P. O. Utica, August 21, 1891, one brown horse, 4 years old; valued at \$20.

FOR WEEK ENDING OCTOBER 7, 1891.

Johnson county—W. M. Adams, clerk. 2 HORSES—Taken up by Isaac Lawson, in Oxford tp., P. O. Stanley, September 12, 1891, two horses—one bay and one black; bay has star in forehead, rat tail, 10 years old; black is blind in left eye, 15 years old; valued at \$35 and \$20. Lyon county—C. W. Wilhite, clerk. MARE—Taken up by Robert Glenn, in Agnes City tp., June 25, 1891, one sorrel mare, no marks or brands, 10 or 12 years old; valued at \$25. Brown county—N. E. Chapman, clerk. COLT—Taken up by Felix O'Neal, in Padonia tp., September 2, 1891, one bay horse colt, 2 years old, some white hairs in forehead; valued at \$20.

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HOLSTEIN-FRIESIAN CATTLE.—Gerben's Royal and Empress Josephine 3d's Consolation at head. Butter record in seven days: Gerben 32, Empress Josephine 3d, 31 1/2 lbs. at 4 years. Everything guaranteed. Write for catalogue. M. E. Moore, Cameron, Mo.

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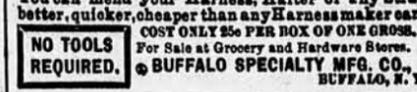
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In the Circuit Court of Shawnee county, Kansas.

N. B. Gale, plaintiff, vs. Mary E. Johnson et al, defendants.

No. 610.

TO D. L. Newberg and Joseph L. Newberg, partners as D. L. Newberg & Son; Joseph Klein; David Present and Hannah Present, partners as Present & Co.; Lewis Hornthol, Leopold N. Whitehead, Leopold Weisman, William E. Lauer, Simon Reim, Edwin Whitehead and Joseph Benjamin, partners as Hornthol, Whitehead, Weisman & Co.; Lewis Levi, N. J. Patterson, Albert N. Wechsler, Abraham F. Sterne, H. Mangold, Eilenbogen Fattersen, Benjamin Wechsler, partners as Levi, Wechsler & Co.; Herman Mendel, Andrew Mendel, Leopold Mendel and Leon F. Mendel, partners as Mendel Bros.; Ansel Mendelbaum and Abraham B. Frank, partners as Mendelbaum & Frank; William T. Brigham, Robert B. Hopkins and Isaac H. Francis, partners as Brigham, Hopkins & Co.; Isaac Strouse, Leopold Strouse, Eli Strouse, Samuel Strouse, Leopold Strouse and Benjamin Rosenwald, partners as Strouse Bros.; Levi Adler, Abraham Adler and Simon Adler, partners as Adler Bros. & Co.; Isadore Eisenstadt, Rudolph Eisenstadt and Solomon H. Eisenstadt, partners as Eisenstadt Bros.; Samuel Rosenwald, Julius Rosenwald, Morris S. Rosenwald and Julius E. Weil, partners as Rosenwald & Well; Morris Wise, Jacob H. Bauland, Joseph Austrian, Julius R. Austrian and Jacob Harry Selz, as executors of the last will of Solomon Austrian, deceased; Edward Knox; Dunlap, Lawton & Hall, partners:

You and each of you are hereby notified that you have been sued in the Circuit court of Shawnee county, in the State of Kansas, together with Mary E. Johnson, J. C. Johnson, Jacob Levi, Hannah Levi, the Bank of Topeka (J. R. Mulvane, president), Joseph Reed, A. Bergen and John R. Mulvane, as trustees, by N. B. Gale, who filed his petition in said court, August 18, 1891, in the office of the Clerk of said court; that you must answer said petition so filed on or before November 9, 1891, or said petition will be taken as true, and judgment rendered therein against Mary E. Johnson and J. C. Johnson in favor of the plaintiff for the sum of \$2,144 20, with interest thereon from August 2, 1891, at 12 per cent. per annum, and also a judgment for the sum of each of said amount against all of the above named defendants upon the following described real estate, in the city of Topeka, county of Shawnee and State of Kansas, to-wit: Lots numbered 337 and 359, on Jackson street, in said city, also barring you and each of you from any interest you may have in or to said premises or any liens thereon, together with your equity of redemption in and to said premises.

N. B. GALE.

[SEAL] By Hazen & Isenhart, Attorneys.

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A laundrymaid pretty and stout,
Was lately in trouble and doubt,
For her best counterpanes
Had some very black stains
But CLAIRETTE SOAP took them out.
CLAIRETTE SOAP—made only by N. K. FAIRBANK & CO., St. Louis.

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The Best. 8th Year. No Experiment. Weaves both farm and lawn fence. Every farmer can build his own fence better and cheaper than he can buy. 35 to 50c per rod complete. One man can build 50 rods a day. Works perfectly over hilly ground, and with any kind of pickets. Over 11,000 in use. Wire cheap. Catalogue free. Address, EMPIRE MACHINE CO., Richmond, Ind.

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Granary and Automatic Feeder Combined
For saving feed and work and protecting hogs from disease by feeding nitrogenous and laxative food with corn, thus preventing constipation and fever. Warranted to save 20 per cent. over usual way of feeding or produce an average gain of from 12 to 14 pounds from each bushel of corn (or its equivalent) fed. Farm rights (covering 160 acres or less) with full printed instructions about building and mixing feed, \$5.00. Plans embrace both portable and standard size. Any farmer can build it. Send for circulars.
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Cattle-feeders of twenty years experience say they find in this machine just what they have been wanting, and that it is the BEST AND MOST PRACTICAL MACHINE ever invented for the purpose, combining in its workings Ease, Rapidity and Efficiency, preparing the corn in the best possible condition for cattle-feeding at the rate of 100 bushels or more per hour with two to four horse-power. Will shell and crush or crush cob and corn. FEEDERS, DO NOT RISK YOUR CORN. It is much the best with the husk on. Can be crushed in the ear, either with or without husk, wet or dry, frozen or soft. Sold on trial, shipped from most convenient store-house, located throughout the country. For free and full descriptive circulars with testimonials, etc., address the sole manufacturers, E. A. PORTER & BROS., Bowling Green, Ky.

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Will sell their own improved farms or ranch properties on most favorable terms, very cheap. Write for description, etc.

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PLUMMER CHAIR CO., Arkansas City, Kansas.

BREEDERS' DIRECTORY.

(Continued from page 1.)

SWINE.

G. A. R. HERD.—Jas. Purcell, Fiqua, Woodson Co., Kas., breeder and shipper of registered Poland-China swine of the most fashionable strains. Herd consists of 150 head. Can supply show pigs or sows bred, as desired. Correspondence invited.

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LANGSHANS FOR SALE.—I have several hundred first-class Langshan chicks, and will be able to furnish birds for the fall and winter fairs. In the meantime, I offer to sell the greater part of the present breeding stock at one-half of former prices, as I cannot use them longer in my herd. Eighty per cent. of his calves are heifers. Investigate. Sire of Lord Felch, the Felch, making Alta Vista an inbred Felch bull. Dropped June 1, 1888. Sold because I cannot use him longer in my herd. Eighty per cent. of his calves are heifers. Investigate. Sire of Lord Felch, the Felch, with ten tested daughters in the tested list; his dam made 11 pounds of butter with first calf and has since made 17 pounds in seven days. Alta Vista is a mulberry-fawn with very little white, large body, lengthy build, of wedge form, level back and rump, good hips, sharp withers, long, slim neck, beautiful head, large, prominent eyes. Calves all fawn-colored. M. F. Tatman, Rossville, Kas. Call and see him.

EUREKA POULTRY YARDS.—L. E. Pixley, Emporia, Kas., breeder of Wyandottes, B. B. R. Games, F. Rocks, B. and W. Leghorns, Buff Cochins and Pekin Ducks. Eggs and birds in season. Write for what you want.

MISCELLANEOUS.

AUTOMATIC STOCK-WATERER.—Send for full descriptive circular to the manufacturers, Perry & Hart, Abilene, Kas. Mention KANSAS FARMER.

SHROPSHIRE SHEEP.—You can buy high quality Shropshires of the highest breeding and Hereford cattle of Will T. Clark, Monroe City, Mo., located on H. & St. Joe and M., K. & T. R. E.

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S. A. SAWYER, FINE STOCK AUCTIONEER. S. Manhattan, Riley Co., Kas. Have thirteen different sets of stud books and herd books of cattle and hogs. Complete catalogues. Retained by the City Stock Yards Commission Co., Denver, Colo., to make all their large combination sales of horses and cattle. Have sold for nearly every importer and noted breeder of cattle in America. Auction sales of fine horses a specialty. Large acquaintance in California, New Mexico, Texas and Wyoming Territory, where I have made numerous public sales.

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 the order. It will pay you! Try it!

WANTED.—To buy a well-bred pedigree Holstein bull, 2 to 5 years old. J. C. Evans, Valley Falls, Kas.

TREES.—A full line of all kinds of nursery stock for the fall and spring trade at low rates. Send for catalogue. Douglas County Nursery, Lawrence, Kas. Wm. Plasket & Son.

FOR SALE.—Pekin ducks. Address 1039 Central Ave., North Topeka, Kas.

BOYS.—If you wish to attend the best business college, in the estimation of the business and moneyed men of the State, you will have to go to Ford's, Topeka, Kas. This school stands head and shoulders above all other schools in the ability of its graduates to make money, and is not this just what you are looking after?

IF YOU WANT TO BUY.—Berkshires (either sex), Poland-Chinas (either sex), Cotswold sheep, any variety of poultry, write to James Elliott, Enterprise, Kas. (Circulars).

\$7 PER HUNDRED.—For first-class apple trees, at The Seneca Nursery. No agents! No commission! Buy direct from the nursery at wholesale prices. I grow my own stock. Have everything you want in apple, pear, peach, plum, cherry, apricot and ornamental trees, have millions of strawberry plants, raspberries, blackberries, gooseberries, currants, grapes, roses and shrubs, forest trees and hedge plants. Five thousand budded peach trees, best early varieties. Good facilities to ship north, south, east and west. Send for free catalogue. S. J. Baldwin, Seneca, Kas.

FOR SALE.—I will sell for the next thirty days thoroughbred Poland-China pigs at greatly reduced prices. M. C. Vansell, Muscotah, Kas.

WILL EXCHANGE.—Unimproved land, well timbered, medium upland, above overflow, within two miles of the St. Louis, Arkansas & Texas railroads, and within one mile of White river, a fine navigable stream, for good young mares, a station and some sheep (Cotswold or Merino). Address S. P. Hughes, Little Rock, Arkansas.

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TWO-CENT COLUMN—(Continued.)

MAPLE GROVE HERD.—Owned by Wm. Plummer, Oasge City, Kas., breeder of first-class Poland-Chinas and pure Felch Light Brahma at farmers' prices for ninety days.

OTTAWA TELEGRAPH INSTITUTE.—J. T. Preshaw, Manager, Ottawa, Kas. Teaches the art of Telegraphy in shortest time and puts you in positions. Write for terms and particulars.

FOR SALE.—The high-bred Jersey bull Alta Vista; sire Lord Felch 16199, dam Katy Felch 11000, half sister of Lord Felch, making Alta Vista an inbred Felch bull. Dropped June 1, 1888. Sold because I cannot use him longer in my herd. Eighty per cent. of his calves are heifers. Investigate. Sire of Lord Felch, the Felch, with ten tested daughters in the tested list; his dam made 11 pounds of butter with first calf and has since made 17 pounds in seven days. Alta Vista is a mulberry-fawn with very little white, large body, lengthy build, of wedge form, level back and rump, good hips, sharp withers, long, slim neck, beautiful head, large, prominent eyes. Calves all fawn-colored. M. F. Tatman, Rossville, Kas. Call and see him.

FARMERS and many others will fall to consider their own best interests if they do not get my list of bargains in farms, etc. RENTERS Now is the time and North-west Kansas the place to buy. 100 per cent. profit may be made in one year. Address ISAAC MULHOLLAND, Colby, Kas.

AUCTION SALE.—Wm. Brown, Lawrence, Kas., will sell on Thursday, October 15, 1891, his entire herd of Holstein-Friesian cattle, a choice lot of Jersey, and a fine four-year-old grade Clyde stallion. Write for circulars.

1,000,000 WANTS SUPPLIED.—If you want to sell or exchange farms, ranches, live stock, machinery, or anything whatsoever, enclose \$1, with full description of property, and be placed in communication with parties seeking such property. No commissions. If you want to buy real estate, live stock, implements, machinery, merchandise or anything, enclose a stamp and ascertain what we can do for you. National Want and Supply Bureau, 107 E. Sixth St., Topeka, Kas.

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CHEAP FARM.—890 acres, all under fence and in good condition, between Topeka and Emporia. One-half cash; or will trade for Kansas City, Topeka or Emporia property. For particulars call on or address Thomas H. Bain, 521 Kansas Ave., Topeka, Kas. Dr. Eldson, Emporia, or M. W. Stratton, Reading, Kas.

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HOWARD'S CATTLE RACK saves toll and expense. Agents wanted. Liberal commission. Address H. Howard, Louisville, Kas.

WANTED.—Family orders for winter fruit of all kinds. Also evaporated fruit of all varieties for sale in ton lots or less. Correspondence solicited. Samples furnished if desired. N. M. Pixley, Wamego, Kas.

A BEAUTIFUL TWO-YEAR-OLD STALLION—will make a 1,200-pound horse, standing 16 hands, highly bred, trotted in public race last July in 3:20 and 3:12—will beat 3 minutes now. Strictly sound. \$350 (no less). G. D. Austin, Larned, Kas.

HOLSTEIN CATTLE.—Our cows milk from 60 to 100 pounds per day. All ages for sale. Special sale of choice young bulls. SHROPSHIRE SHEEP.—The largest and best stock in the West. New importation due in August. Special sale of ram lambs.

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Western Draft and Coach Horse Register Association.

Incorporated and established for the purpose of encouraging and remunerating farmers who breed their mares to pure-bred and registered stallions of any of the following breeds: Percheron, French Draft, Clydesdale, English Shire, Belgian, French and German Coach, Suffolk Punch, Cleveland Bay and Hackney. Write for information and blanks to L. M. PICKERING, Secretary, Columbus, Kas.

Your Neighbor

Read the matter contained in this space last month and took its advice. He insured his property in the Kansas Farmers' Fire Insurance Company, and now sleeps well and soundly, knowing that he is protected against loss by fire, lightning, tornadoes, cyclones and wind storms. He paid cash for his policy, but, if you cannot do so, our agent will accommodate you by giving you such time as you need. Don't be a clam! Sooner or later you will get roasted. Keep your money at home. Patronize the only home company, the KANSAS FARMERS' FIRE, OF ABILENE, KANSAS. Losses paid in Kansas over \$75,000. "Protection for the Farmers" is our motto.

The Kansas City Stock Yards.

Are by far the most commodious and best appointed in the Missouri Valley, with ample capacity for feeding, weighing and shipping Cattle, Hogs, Sheep, Horses and Mules. They are planned throughout, no yards are better watered, and in none is there a better system of drainage. The fact that higher prices are realized here than in the East is due to the location at these yards of eight packing houses, with an aggregate daily capacity of 3,400 cattle and 37,500 hogs, and the regular attendance of sharp, competitive buyers for the packing houses of Omaha, Chicago, St. Louis, Indianapolis, Cincinnati, New York and Boston. All the sixteen roads running into Kansas City have direct connection with the yards, affording the best accommodation for stock coming from the great grazing grounds of all the Western States and Territories and also for stock destined for Eastern markets. The business of the yards is done systematically and with the utmost promptness, so there is no delay and no clashing, and stockmen have found here, and will continue to find, that they get all their stock in worth with the least possible delay. Receipts for 1890 were 1,472,229 cattle, 76,568 calves, 2,865,171 hogs, 535,869 sheep, 37,118 horses and mules. Total number of cars, 108,160.

Kansas City Stock Yards Co. Horse and Mule Market.

CAPT. W. S. TOUGH, Manager. This company has established in connection with the yards an extensive Horse and Mule Market known as the KANSAS CITY STOCK YARDS HORSE AND MULE MARKET. Have always on hand a large stock of all grades of Horses and Mules, which are bought and sold on commission or in carload lots. Regular trade auction sales every Wednesday and Saturday. In connection with the Sales Market are large feed stables and pens, where all stock will receive the best of care. Special attention given to receiving and forwarding. The facilities for handling this kind of stock are unsurpassed at any stable in this country. Consignments are solicited with the guarantee that prompt settlements will be made when stock is sold. C. F. MORSE, General Manager. E. E. RICHARDSON, Secretary and Treasurer. H. P. CHILD, Superintendent.

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SHORT-HORN CATTLE DON'T NEGLECT IT. 170 registered and high-grade Cattle. 25 Morgan Horses. 30 Poland-China and Chester White Swine. 70 Milch Cows—thirty-five fresh. 12 Bulls—Your months to four years. Tuesday, October 27, 1891.

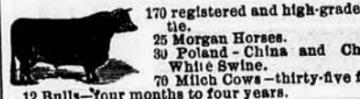


I will sell at my farm, three miles from Leavenworth, Kansas,

SIXTY-THREE HEAD Thoroughbred Short-horns, many directly descended from the famous herd of Amos Cruickshank, of Scotland, the real maternal Young Marys, Phyllis and other valuable strains, and individually a very superior lot. All red but four (roans). TERMS:—Six months credit without interest; 5 per cent. deducted for cash payment. A longer credit on lead or other security at 8 per cent. interest, as follows: Five years on all sums of \$1,000 or over; three years on all sums of \$500; eighteen months on all sums of \$250. Catalogue on application. Lunch at 11:30; sale at 1. JAMES C. STONE, JR. COL. L. P. MUIR, Auctioneer.

STOCK SALE

POLAND-CHINAS! SHORT-HORNS! I. L. WHIPPLE & SONS will hold their annual sale of Poland-China hogs and Short-horn cattle at their farm, three and a half miles southeast of Ottawa, Kas., Thursday, October 22, 91. One hundred head of spring pigs, many sows of 1 to 3 years, two No. 1 fall boars, and the fine yearling, Protection No. 6907 S. R., sired by Free Trade No. 4649. TWENTY HEAD SHORT-HORNS, Consisting of ten fine cows with calves at side, seven yearling bulls and bull calves, and several yearling heifers. This strain traces to imported Rose of Sharon, Rosemary, Armands, White Rose, etc., sired by the famous Mar or (4890), Fred Douglas, Rosette Duke, Duke of Ottawa, etc. Knight Templar II (No. 3259) stands at the head of herd. He weighed over 2,000 pounds at 3 years. Sale commences at 10. Lunch at noon. This stock will be sold regardless of price and we offer you a chance to buy stock and make it pay for itself many times over. TERMS:—All sums over \$10, one year without interest; if not paid at maturity, 10 per cent. from date. Parties from a distance notifying Occidental hotel in advance, will be carried free from Ottawa to the sale. You cannot afford to miss this sale. I. L. WHIPPLE & SONS. In writing advertisers please mention FARMER



Special attention is called to the above sale. This stock is unexcelled from any point of view. TERMS:—Twelve months without interest; 10 per cent. off for cash. P. I. McEHRON, Five miles northeast of Richmond, Kas., or seven miles west of Lane, Franklin Co., Kas. Give me notice and I will meet you at above points.

PUBLIC SALE

Pure-bred and High-Grade Short-horn Cattle. I will sell at my farm, six miles northwest of Dover and six miles southeast of Maple Hill, Kansas, WEDNESDAY, OCTOBER 14, 1891, Forty head of cattle or more. Ten pure-bred yearling bulls. All my grade cattle. There are some very desirable grade cows, two-year-old and yearling heifers and steers. I will offer some pure-bred cows and heifers if desired. One fine five-year-old mare, one fine three-year-old horse, light cream, a dandy. I take this means of reducing my stock, as I expect to breed only pure-bred cattle. TERMS:—Eight months time on satisfactory paper at 6 per cent interest; 5 per cent. off for cash. Sale positive, rain or shine, commencing at 10 o'clock sharp. L. A. KNAPP, Dover, Kas. S. A. SAWYER, Auctioneer.

Morgan HORSES. Send for catalogue containing pedigrees to Morgan Horse Co., DUNDEE, ILL. Mention this paper.



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Varieties (VINES, PLANTS, Etc.) Applt. Pear, Peach, Cherry, Plum, Quince, Strawberry, Raspberry, Blackberry, Currants, Grapes, Gooseberries, &c. Send for catalogue. J. S. COLLINS, Modestown, N. J.

BERRY PLANTS, Grape Vines, Small fruit plants, Fruit Trees. Low prices. Catalogue free. WM. STANL, Quincy, Ill.

FARMERS Wanted.—To sell strictly first-class Nursery Stock. Salary or commission. Brown Bros., Nurserymen, Chicago, Ill.