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SWINE.

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Five yearling Scotch and Waterloo bulls for sale. Now offer one choice seven-eighths Scotch by the Linwood Lord Mayor, which we had reserved for service in our herd. Send for catalogue.

J. F. TRUE & SON, Newman, Kans.

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Imp. British Lion 133692 and Imp. Lord Lieutenant 120019 in service. Sixty breeding cows in herd. Lord Lieutenant sired the second prize yearling bull at Texas State Fair, 1898, that also headed the second prize herd of bull and four females, any age, and first prize young herd of bull and four females.

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Scotch and Scotch-topped
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Herd bulls, Sir Knight 124403 and Violet Victor 137574. Herd boars, Black U. S. 2d 50066, and L's Sensation 2d 18905. Representative stock for sale. Address **ANDREW PRINGLE, Harveyville, Kansas.**

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Herd bulls: Principles 66653, Ben Butler 54079, and McKinley 68926. Ten yearling bulls and a few females for sale.
STEELE BROS., Belvoir, Douglas Co., Kans.

CLOVER CLIFF FARM. Registered Galloway Catt' Also German Coach, Saddle and Trotting-bred horses. World's Fair prize Oldenburg Coach stallion, Habbu, and the saddle stallion, Rosewood, a 16-hand, 1,100-pound son of Montrose, in service. Visitors always welcome. Address **BLACKSHERE BROS., Elmdale, Chase Co., Kas.**

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MEADOW BROOK SHORTHORNS—Headed by the Scotch bull, 20th Earl of Valley Grove 122381, a son of Lord Mayor. Breeding cows by such bulls as Imported "Thistle Top" and "Earl of Gloster." A car lot of high grade cows for sale.
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Scotch and Scotch-topped, with the richly-bred Cruikshank bulls, Champion's Best 114671 and Gwendoline's Prince 130913, in service. Also high-class **DUROC-JERSEY SWINE.** Can ship on Santa Fe, Frisco and Missouri Pacific railroads.

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BARRED PLYMOUTH ROCKS.
E. R. LOCK's Barred Plymouth Rocks are still in it. Twice in succession my birds have won all of the prizes where shown. Write me for prices on stock Eggs \$1 to \$2 per 15. Catalogue free for writing.
E. R. LOCK, Hutchinson, Kans.

Partridge Cochins and White Leghorns at Hutchinson show took sweepstakes. In Asiatic and Mediterranean classes (silver cup and silver tea-pot); Shellabarger judge. Eggs, after May 1st per 15. Write for descriptive circular. Address, **J. W. Cook or Carrie A. Cook, Hutchinson, Kans.**

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Fifteen White P. Rocks, 15 Silver Wyandottes, 20 Brown Leghorns, 10 Light Brahmas, 10 S. S. Hamburgs, 10 Black Langshans, 5 Black Javas, 12 Pekin drakes. All strictly first-class. Some are scored by Hewes and others.

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H. T. FORBES L. C. FORBES, Breeders of.....

THOROUGHbred BUFF COCHINS
Eggs and stock from prize-winners at Kansas State Poultry Show, January, 1899. Write for description and prices. Address **H. T. & L. C. FORBES, Topeka, Kans.**

Barred and White Rock COCKERELS.

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Now is the time to buy, as I can sell you fine early hatched birds at \$1 each, which will, later on, command from \$3 to \$5 each. Finest lot of youngsters I ever had. Pullet, 75 cents. Order quick and get the best.
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PRIZE-WINNING LIGHT BRAHMA CHICKENS ...EXCLUSIVELY...

Our record for 1898-99: Won 5 out of 6 first premiums at State show in Topeka, including sweepstakes, in January, 1899. Won 6 out of 7 first premiums, including sweepstakes in Asiatic class, at Sedgwick (Kansas) show in December, 1898. Won 6 out of 6 first premiums, including sweepstakes, at Butler County show, held in Eldorado, December, 1898. Eggs \$1 to \$3 per sitting. Also breeders of Red Polled cattle. Address **CHAS. FOSTER & SON, Eldorado, Kans.**

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Black Rocks, White P. Rocks, Partridge Cochins, Light Brahmas, Black Langshans, Blue Wyandottes, White Wyandottes, Blue Hamburgs, Brown Leghorns, White Leghorns, Pekins, and Pekin ducks. All our fine breeders this season, and our earliest spring chicks will be half price during summer. Write me your orders. Circular free.
A. H. DUFF, Larned, Kans.

Chicken Fixin's.

If you want anything in this line, from a leg-band to an incubator or brooder, I've got 'em—it's a part of my business. Write me for prices, or better, send ten cents (silver or stamps) for my Guide to Poultry Culture, catalogue and price list. It may be worth dollars to you. I also breed first-class poultry, and am now selling EGGS AT HALF PRICE. Send for circular giving varieties and matings for 1899—it's free for 1 cent stamp.

EXCELSIOR FARM, C. B. Tuttle, Prop'r, Topeka, Kans.

When writing to any of our advertisers, please state that you saw their "ad." in Kansas Farmer.

Agricultural Matters.

HOME-MADE MACHINERY.

Editor Kansas Farmer—As Brother C. J. Norton wishes to have the farmers give one another their ideas through the Kansas Farmer, I will give a description of a home-made potato-digger, and also a planter. I have used the planter four years and the digger two years, and both have given good satisfaction.

No. 1 is the digger. For the running-gear I used an old Champion rear-cut combined reaper and mower, such as was used twenty years ago. Cut off the casting that protects the pitman-wheel, also the other surplus irons, leaving just the square frame and running-gears, cut off the heavy side

tongue in front and fastening them to axle by means of straps of iron at (b). The hopper (c) is also held firmly to axle by means of a stick of two by four scantling (d) on each side and is fastened by bolts and screws to hopper, these being fastened to hopper by straps of iron passing under axle at (e). The front end of hopper is held in position by a stick, or piece of wood, fastened to tongue, and a bolt through front end of hopper and has several holes so that the hopper can be adjusted to any desired pitch. The hopper is thirty-six inches long, twenty inches deep, and twelve inches wide at back top end, while the front, or bottom side, is two inches in the clear, this being where the drop passes under it, this side being cut at about the same angle as a quarter-pitched roof would be (if the hopper was

of two plow-shares welded together at the shin and ground on an emery-wheel. The shoe is fastened to a piece of two by twelve inch wood, which is lipped in between the tongue pieces and bolted securely. It also has a brace of strap-iron running from upper front end of shoe to tongue. I thought this necessary as I used the machine mostly among stumps. The scrapers (q) are made of old spring steel four inches wide and eighteen inches long and are set twelve inches wide in front and six inches at back end, and are hung by a piece of wire to seat frame so they won't go too deep. Of course none of the bearings on the axle should be too tight, as it must turn in them. The lever (r) is fastened to axle by means of stirrups at (s) and at lower turn of axle. The shoe is held in the ground by a strong hook eighteen inches long, which is fastened to the seat brace at (t), and is dropped into an eye in lever just opposite. (Cut does not show it here.) The same hook when dropped down and hooked into the same eye holds the planter out of gear and shoe out of ground. The revolving wire brush is driven by hand corn-sheller fan belt wheel eight inches in diameter, which turns a two-inch pulley on the end of brush axle. (Neither can be seen in the cut, as they are on opposite side of the hopper.) The cut shows machine with shoe setting level on ground and three-inch blocks under wheels. I use a marker so adjusted that each horse walks in the mark, the wheels following in the same track. This makes nice even rows and requires very little driving. The potatoes, to make them feed at all times, require some attention and must be kept pushed down so as to keep the drop full at all times, but this is easily done, as the team will readily follow the mark. I plant the rows thirty-four inches apart and fifteen inches between hills. Such a drop as I have described will plant from eight to nine bushels per acre. I cut the pieces so they will drop through a one and one-fourth inch screen. This makes them just right and they will be planted one to two in a hill, and if the driver watches his business and keeps the seed thrown into the drop it will hardly ever miss a hill.

J. W. MARTIN.

Leon, Kans.

About Kaffir-corn Headers.

Editor Kansas Farmer:—An agricultural paper fulfills an important mission in calling its readers' attention to new devices for use upon the farm. In your issue of July 6, you illustrate two Kaffir-corn head-

short as possible, thrown into a moving wagon and hauled directly to the stack-pen, which was built as follows: A well-drained spot was selected in the stack-yard, a slight mound of dirt thrown up and a rail pen built upon this. Ten-foot rails were used first; these were laid, or rather the mound was so shaped that the pen stood surrounded by a shallow drain. As the pen rose, it was gradually enlarged—twelve-foot rails being used at the finish. The pen was floored with a little fodder. The heads were pitched in with a fork, care being taken to land each forkful in the middle of the pen. As the pile rose and sloped down to the rails, more rails were added, and the pen, containing eight acres of heads, was topped with a piece of canvas. This plan insured perfect drainage and the grain threshed out without a sign of mold. Had we piled the heads in the field to cure, we would have gained nothing in the curing process, but would have added much labor, lost shelled grain, and run the risk of having the heads wet on the ground.

As to the leaning and "down" stalks, we are almost sure to find them at harvest. I have seen dry weather and "bugs" completely down large patches. It is evident that the successful machine must nose under these stalks, after the fashion of the corn binder, and lift them and gather the heads.

WALTER J. BURTIS.

Fredonia, Kans.

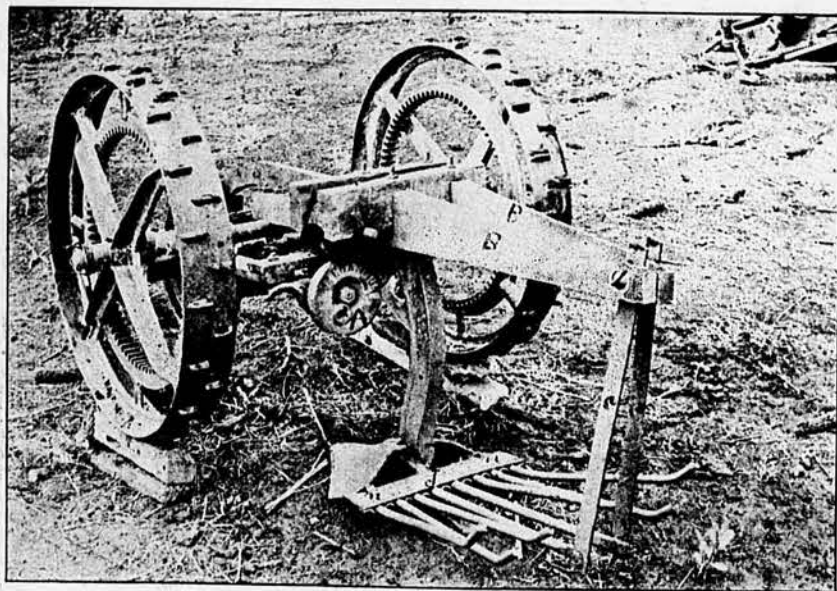
Alfalfa Yield Increased.

S. J. Hunter, of the department of entomology of Kansas State University, has gone to western Kansas to continue the work begun last summer for the benefit of the farmers. The university party is fifteen miles southeast of Dodge City. The object of the trip this summer is primarily to acquire and prepare material for laboratory studies in embryology, to make additions to the university museums.

One thousand three hundred acres of alfalfa are cultivated under directions from the department of entomology, and the results this year show a twofold increase as compared with land not so cultivated. The ranchmen offer the expedition every inducement and assistance in forwarding the work. The expedition will return to Lawrence about September 1.

The Nickel Plate Road

will sell excursion tickets to Chautauqua Lake and return on July 28, at one fare for the round trip, with return limit of August 29, 1899, by depositing ticket at



NO. 1.—HOME-MADE POTATO DIGGER.

of pitman wheel (a) one-half inch—that is, set your compass one-fourth inch from center. This will leave it in the shape of an eccentric, and as it passes under the wheel (e) it causes it to move up and down one-half inch, which gives the beams (bb) a motion of a little over an inch at the outer end, these beams being connected by bolt at (l) with the straps of iron (cc), which in turn are fastened to five-eighth center rods, which gives the rods their vibrating motion. The rods are twenty inches long, center rods five-eighths inch, outer rods one-half inch. They are fastened on a piece of flat iron (j) three inches wide, one-fourth inch thick, the rods being flattened at the ends and riveted, and having $\frac{1}{8} \times \frac{3}{4}$ inch strap of Norway iron bent to fit rods, and riveted between rods at back edge of flat iron (j).

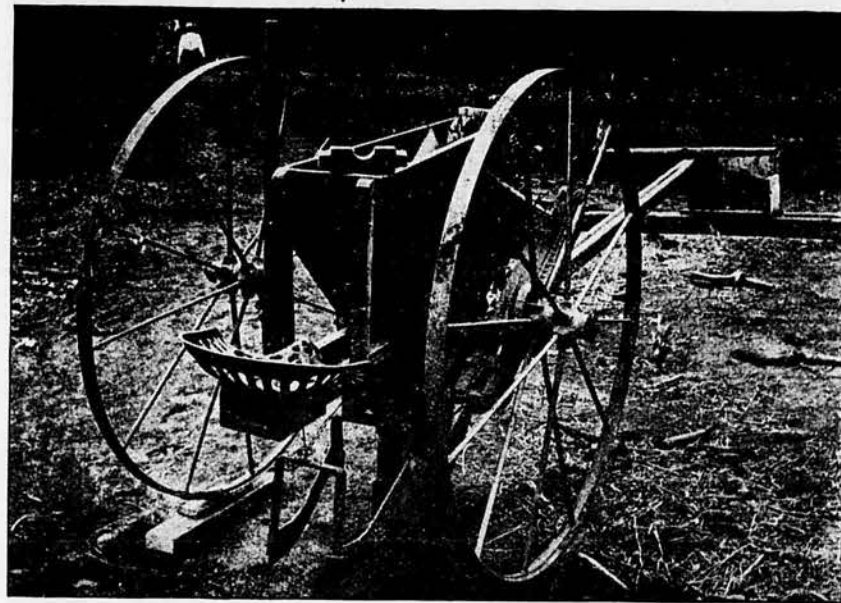
This is done in order not to weaken the rods. The beams (bb) are one-half by three inches; oak cross-beams (ff) are the same. The share is a sixteen-inch lister share, the center of it being cut out enough to make the back part of the share come even with back part of the beam, and the gang of rods are fastened to the share by thin strips of iron put through slot at (nn) and fastened by nuts on under side of share. The beam is that of an old lister, fastened at back end by stirrup through frame, and at front end is twisted down flat and fastened by a bolt to front end of frame at (g). The cut shows the machine sitting level on the ground with four-inch blocks under wheels, the depth being gauged by blocks between the beam and frame at (g). The ends of the wooden beams (bb) are fastened by stirrups to main axle at (i).

I have had good success with this machine; have used it two years and have had no trouble with it, and have been out nothing for repairs, except that I broke the wheel (e) and I got a heavier one and had a strong band of iron one-half inch thick welded and shrunk on it and it has stood me ever since. To turn the machine around I take hold of end beams at (l), throwing it up on the end of beam; to move it from one field to another, turn it bottom upwards.

No. 2 is the potato-planter. It is made of old stuff that most farmers have and their farms. If they have not the material at hand they can get it for the price of old iron. This machine does not cut, mash the potatoes, and I have always got a good stand with it. For the running-gears I used an old-fashioned, high-wheeled riding cultivator. I used the wheels, axle, tongue, neck-yoke, double-trees, and seat. I had the spindles upset, so that the wheels would fit perfectly tight and true, and had the axle cut and welded so the wheels measured thirty-four inches from center to center. The tongue, which was a two-piece one, I bolted together in front end and middle, leaving it open three inches at back end, and fastened it to center of axle with stirrups at (a). I then fastened from outside turn of axle to tongue, braces, or hounds, bolting them to

bottom upwards). The drop is made of blocks of soft pine and are boiled in oil to prevent the rain from affecting them; see (f) on top of hopper. The blocks are one and one-half inch thick, two inches wide, and eight inches long, having a one and three-fourth inch hole bored between every two blocks in the center. This just lacks one-fourth inch of cutting each block in two. The bottom of it is hollowed out a little so as to fit the four-inch roller, over which it passes at (gg) near top and at bottom of hopper. Twenty-five of these blocks are nailed with 3 d. nails to a piece of old engine belting, being put on squarely across it. This makes a drop long enough so that ten holes are under the hopper at once. You will notice the ends of blocks are cut away one-half inch deep and one inch long at each side of ends. This is done to insure its regular forward movement, there being six wooden pegs, or teeth, at each end of roller, between which the projecting ends of block fit. The drop is driven by right-hand wheel, on which is fastened a tough piece of one-inch oak, hollowed out to fit spokes and hub; on this is fastened with screws a five-inch cog-wheel (h), having the center cut out so as to fit over the hub of wheel. This wheel comes in contact with another just like it (when the shoe is thrown into the ground; it is in that position as shown in the cut), but when the shoe is thrown up the driving pinion is thrown away from the one just in front of it and hence stops the drop. As I said, the cog-wheel at (h) comes in contact with one just in front of it that is fastened to a sprocket-wheel. Both of them turn on a short axle. This sprocket-wheel, of course, carries the chain which runs the wheel (j), and this, being fast on axle (k), runs the cog-wheel (l), which in turn drives one like it, which is screwed fast to end of wooden roller just in front of (l). This causes the top of drop to move forward, or the same way the machine is moving. As the drop passes under the hopper the potatoes fall into it. As it passes over the roller at upper end of drop it is swept by a revolving spring wire brush (m), which is made of No. 18 brass wire driven into a wooden roller two inches wide and six inches in diameter, but I would recommend a four-inch roller, as it would give the wire length and it would stand it longer without breaking. (These wires are the only thing that have ever bothered me. I usually have to refill the brush each season.)

After the drop has passed under the revolving brush the potatoes are held into it by a sheet of galvanized iron, hung to end of hopper by a wire at (n) and fastened to the tongue just in front of axle, and it has a three-inch hole cut through it, through which the seed falls out. This should be immediately under where the drop begins to open as it passes over the bottom roller at (o). The sheet iron is held securely against the drop by a board and prevents the seed from getting mixed up. A piece of three-inch water pipe serves to carry the seed to the shoe, which is made



NO. 2.—HOME-MADE POTATO PLANTER.

ers. Perhaps you will allow remarks upon these machines and the work expected of them. Kaffir-corn has come to stay in this section of the country, therefore we are interested in a machine that will properly care for the ripened heads. I believe that more extensive use of these machines will show that the heads must be conveyed by the machine to the wagon-box or other suitable conveyance and hauled directly to the stack or shed. Therefore, I consider the "Stafford" header wrong in dumping the heads onto the ground. Regarding the "Elkhart" header, I see no opportunity to gather leaning and "down" stalks.

It is a common practice in gathering cane heads to cut them and throw them into piles in the field to cure. When we began growing Kaffir-corn, we adopted this practice, thinking it was essential to the preservation of the grain. With us, headed Kaffir-corn is hauled directly to the stack, one man with a suitable knife—an old-fashioned grass hook is excellent—covering about the amount of ground he would clear in husking corn. To illustrate my position, I wish to detail last year's experience. A field planted May 9 was headed the first week in October—five months from date of planting. The heads were cut as

Chautauqua not later than July 31. Tickets good on any of our three daily trains. Cheap rates to other Eastern points. Van Buren St. Passenger Station, on the Loop. For further information, address the General Agent, 111 Adams St., Chicago. (24)

Health for 10 cents. Cascarets make the bowels and kidneys act naturally, destroy microbes, cure headache, biliousness and constipation. All druggists.



BOUGHTRED STOCK SALES.

ed only for sales which are advertised or
advertised in this paper.

N. H. Gentry, Berkshires, Sedalia, Mo.
 27—Hamp B. Watts, Herefords, Fayette,
 2—George Bothwell, Shorthorns, Kansas
 2—H. C. Duncan, Shorthorns, Kansas City,
 2—Thos. W. Ragsdale, Shorthorns, Kansas
 2—John Burrus, Shorthorns, Kansas City
 E. E. Axline, Poland-Chinas, Oak Grove
 1—W. T. Clay, Shorthorns, Kansas City

recent meeting of the Iowa Swine Association the above subject retention. The views of two well-known members are given, as follows:

Nale.—I believe the future of the
to be somewhat different from
has been in the last few years. I
his fad of making the hog not a
animal but almost exclusively a
ing animal will pass away in our
to accommodate the farmer with
g possessing vitality, power of en-
and power to reciprocate and per-
himself on posterity. It has not
years since our parents kept
horses up. Our fathers would
y rods almost to catch a work
rein him up in the event of his
unreined, to keep him from get-
teful of grass so that he would

Those work horses were kept in stalls over night, and fed regularly systematically with grain and hay so they might endure the hardships of labor and hot weather. Now we have got over that foolishness and we feed the horse from the early spring, he goes to pasture after he is fed the hay and he rolls and enjoys his rest in freedom and does as much work as it with greater ease and greater and a good deal less expense than before. Now something of the same evolution transpiring with reference to the hogs. We used to keep our hogs in pens; we have gotten over that; we can afford to keep more ground and less in grain or corn. We have

Originally we thought the pe-
make-up of the hog's mouth and
are not adapted to grass eating, but
we learned that the hog is a grass
animal. I think we are falling more
into the habit of allowing the
not absolutely "root, hog, or die,"
thing of that kind, but to shift for
and to live upon the grasses, and
in proportion as we resort to that
just in that proportion do we dis-
but he increases in bone, increases
ss, increases in health and becomes
are capable of perpetuating, in my
nt, just that style of hog that the
seeks to produce. I believe the fu-
the hog will tend in that direction
than in the direction of the pam-
ll-kept show animal of every-day

J. Lambing.—A great many new
 entered into the business and became
 Without experience they fre-
 became buyers at fancy prices.
 to sell the produce at propor-
 prices, compared with what they
 The result is they became discour-
 and turned their minds to other busi-
 I think the business will find its
 level again, and is about there now.
 the future of the swine business
 right as it ever was for good legiti-
 mately prices. I remember the time
 years ago, about the time I first
 the acquaintance of your president
 that it was no trouble to sell all the
 thoroughbred hogs a man could grow
 thoroughbred breed at from \$20 to
 head, and get your money with the
 This time business was not known
 a dozen years ago; a man did not
 to buy on time. They were good
 an apparently growing business, too
 engaged in it that hadn't ought to,
 has been overdone, and it has to be
 out like any other business, but it
 nally taking care of itself. It will
 survival of the fittest, and those
 ing by the willows and breed good
 going to have a good trade, possibly
 the prices we had for a few years,
 prices that beat good pork all to
 That is my judgment of the future
 swine business.

BY GEORGE A. MARTIN.

fever may be the fluctuations of
ool market the people will always
mutton. One of the mutton breeds
is growing in popularity on both
f the Atlantic is the Oxford Down.
ning as it does with other blood.
the heavy Cotswold and the refined
own, it possesses great size, com-

paratively heavy fleece, and good quality of mutton. The Oxfords are the largest of the Down breeds, weighing at maturity from 200 to 300 pounds, and one ram imported a few years ago by a Maryland breeder weighed something over 400 pounds. The quality of the mutton is very good—not as fine in texture as that of the smaller Down sheep, but juicy and well marbled with fat and lean. They are very hardy and prolific, enduring well both summer heat and winter cold, the ewes bearing more than 100 per cent of lambs yearly, and proving to be good mothers with abundant supplies of milk. Such are the Oxford Down sheep in suitable situations and with proper food. But they deteriorate very rapidly with neglect and starvation. They are not fitted for steep and broken pastures even where the herbage is good, nor retain their best condition in winter on an exclusive diet of dry food. They endure unharmed any ordinary degree of cold, if kept dry, but must have shelter from long rains and melting snow. With good, fair pasturage in summer, such as is found on all well-kept farms, winter rations, which include a reasonable proportion of roots, silage, or other succulent food, and such shelter as should be provided for all farm stock, the Oxfords are kept up to as high a standard of excellence in the United States as in the land of their origin. The American Oxford Down Breeders' Association embraces in its membership men who have at heart the interests of the breed and the maintenance of its purity.

In England the Oxfords retain a high degree of popularity. At a recent ram fair at Oxford, one yearling ram was sold for a little over \$200 and several others were sold from the same flock at prices ranging from \$100 to \$150. Such prices afford very substantial evidence of the estimation in which these sheep are held.

H. L. Orcutt, at the Iowa Swine Breeders' meeting:

A very large subject handed to a person of my limited ability, yet, perchance, I can say something to start the older men of this meeting going on the subject, and by so doing will have done some good. I suppose I am expected to write along the line of supply with regard to breeding purposes, not to the filling of Armour's, Swift's, and Cudahy's pork barrels. I have been engaged in breeding pure-bred hogs for a little more than ten years. When I first began it seemed to me as if the supply would soon exceed the demand. At that time you could count the breeders of hogs eligible to record, within a radius of ten miles of the little town I live near, on the four fingers of one hand, and we could not nearly supply the farmers with good males for service. They were compelled to use grades. How is the supply of to-day? I can name you three times as great a number of breeders in the same territory, and yet, with all this increase of the supply of pure-bred hogs, the demand was greatly in excess of the supply last fall. The successful hog-producer of to-day is a man of progress; he is awake; he understands that it is the sweet, fancy bacon porker that the shippers are looking after. It is the nice, thrifty, well-bred, and well-fed hog he is willing to pay an extra price for. Why can they afford to make a difference of 50 cents per hundred in hogs? If you will notice the quotations on hogs at Chicago you will soon see. The great pork-packing concerns want the best. Why? They tell us the pork-consumers can readily see that from the time the well-bred pig is farrowed until he is served at the English lord's table he is constantly in demand.

Gentlemen, where do our progressive farmers of to-day get their seed? The day of the grade and scrub sires is a thing of the past. They come directly to us for their supply. Are we ready to supply the demand? Last fall in our section we were short on good, strong males and, oh, such a kick. One large farmer living just south of me four miles was so busy he put off buying his boars until late and had hard work to get what he wanted; he became so thoroughly disgusted that he said to me one day this winter, "I shall buy some good sows safe in pig this winter and raise my own sires for next fall." Just one word of advice here, brother breeders, don't be over-anxious to supply the ever-increasing demand. Sometimes we become too greedy for the almighty dollar and don't put enough of our crop of pigs in the fattening pens. Carry a good sharp knife and never be afraid to use it on pigs that are not what they should be. Perhaps I had better have left that last sentence out. Some one may think I occasionally have a litter of pigs with a runt among them. Some breeders claim they have herds of hogs that never produce an inferior pig. Well, I am glad some breeders are so very fortunate, but am very sorry for the unfortunate purchaser of some of those breeders' stock. When we breeders note the growing demand for our stock we surely have a right to feel pleased. For years we have labored,

mating our stock, carefully selecting the best, trying to produce an ideal thing.

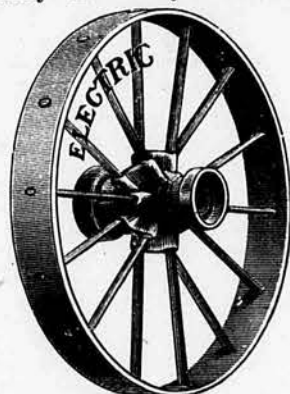
Some will ask what I mean by an ideal hog. Well, simply this, an animal so constructed as to be able to convert the produce of the farm into an article that is in such demand as to bring the farmer in the greatest price for the feed consumed. The hog of to-day has very nearly reached the goal.

This is probably our last meeting before the summer and fall trade of '99 opens up. From what I can learn from the different breeders the supply is short. The cold, wet spring has been hard on the young pigs; losses in farrowing and the present apparent supply of hogs on the market; as compared with former years, at the same time suggest that it will be well to care for the pigs that did survive, and grow them into the best hogs possible, for prices can hardly fail to be better in the fall than they have been for some time past. From what I can learn the supply is short. You breeders who are in touch with the market, no one need tell you of the increasing demand. Is there any reason why, with the supply limited and the demand increasing, the breeders need not reap their well-deserved profits?

E. G. Carpenter, of Reeves County, Texas, had 3,000 old ewes in February, last, that he saw he would be unable to get through the spring season on the open range, to say nothing of raising a crop of lambs. He rented 65 acres of alfalfa and put them on it, many of them being so poor they had to be hauled to the field. The result of the alfalfa pasture has been that he has not lost any of the ewes, and has a lamb crop much larger than usual. Where the 3,000 ewes would have been a complete loss on the range, he now has all of them left and a fine lot of lambs. Mr. Carpenter has now bought a farm of 1,000 acres on Toyah Creek, and is seeding it to alfalfa. His experience is just the same as that of every Chaves County sheepman that has tried alfalfa for sheep.

An enthusiastic farmer of Carroll County, Ind., gives his experience in the Wool Record as follows: A year ago last fall, bought 120 sheep for \$275. The following spring and summer 113 lambs were sold for \$448 and the wool clip netted \$129, making a total of \$577. He now has three lambs and all the sheep in the original flock, which he estimates are worth \$150 more than when they were bought.

This is the season when farmers and others begin to experience the difficulty and annoyance of having their wagon-wheels dry out, shed their tires, and become shaky and creaky. This condition



means one of several things: Either the wheels will have to submit to repeated soakings in water—which but helps on the general tendency to decay—or the tires will have to be cut and reset or reset in boiled oil, or a new set of wheels will have to be purchased. Every one of these exigencies means expense and no permanent good is the result. It is a safe principle in economy to always shut out or cut off if possible the expensive element of repair. That is one reason why so many people roof their houses and other buildings with slate. Slate lasts and obliterates for all time the expense of periodical repair.

This is no less true of wagon-wheels. If a practically indestructible wheel were bought in the first place, repairs, with their attendant expense, would be out of consideration entirely. Then, too, there would not be that waste incident to hauling half a load because the wheels were weak and would not stand more. Surely the remedy lays in buying wheels so made that the tires can not come off from any possible shrinkage; so that hubs, spokes, and felloes can not shrink, become loose nor rot; wheels that are strong enough at all times to carry any load two horses can draw with comfort, and finally, wheels with broad tires that afford perfect traction and ease of locomotion without rutting or cutting up the farm or roads.

Such wheels can be had at a mere nominal price from the Electric Wheel Company, Quincy, Ill. They make a solid metal

Wise people are also rich when they know a perfect remedy for all annoying diseases of the blood, kidneys, liver and bowels. It is Hood's Sarsaparilla, which is perfect in its action—so regulates the entire system as to bring vigorous health.

Hood's Sarsaparilla
Never Disappoints

wheel with straight or stagger oval steel spokes that will fit any wagon ever made. These wheels are of various heights for various purposes, have tires from 2 to 8 inches wide, and possess many other advantages. These people also make a low-down handy wagon of superior merit and very reasonable price.

One hundred head of good sheep in the hands of a careful, observing and painstaking farmer ought to yield an income of \$500 annually. The wool should bring at present prices \$120, and the lambs ought to bring from \$350 to \$450 more. Breeders differ as to which is the best breed. You will find either Cotswolds, Shropshires, Oxford, Suffolks or Dorsets to be profitable. The Shropshire is as popular among farmers as any other breed at present, and is an excellent sheep. We would advise you to get a flock of grades first, and breed to some pure-bred ram.

Allen County Agricultural Society—C. H. Wheaton, Secretary, Tola; September 5-8.
Anderson County Fair Association—C. H. Rice, Secretary, Garnett, September 20-29.
Baker County Fair Association—Grant W. Harrington, Secretary, Hiawatha; August 29-31.
Clay County Fair Association—E. E. Hoopes, Secretary, Clay Center; September 12-15.
Coffey County Fair Association—J. E. Woodford, Secretary, Burlington; September 11-15.
Cowley County Fair Association—W. J. Kennedy, Secretary, Winfield; September 20-22.
Douglas County—Kaw Valley Fair Association—Tracy Learned, Secretary, Lawrence; September 12-15.
Finney County Agricultural Society—D. A. Mims, Secretary, Garden City; September 12-15.
Franklin County Agricultural Society—E. M. Sheldon, Secretary, Ottawa; September 10-22.
Greely County Fair Association—I. B. Newman, Secretary, Tribune, October 4-5.
Jackson County Agricultural and Fair Association—S. B. McGrew, Secretary, Holton.
Jefferson County Agricultural and Mechanical Association—Edwin Snyder, Secretary, Oskaloosa; September 5-8.
Johnson County Co-Operative Fair Association—J. M. Warren, Secretary, Edgerton; September 26-29.
Linn County Fair Association—Ed. R. Smith, Secretary, Mound City.
Marshall County—Frankfort Fair Association—C. W. Brandenburg, Secretary, Frankfort; September 26-29.
Miami County Agricultural and Mechanical Fair Association—W. J. Carpenter, Secretary, Paola; September 12-15.
Montgomery County—Coffeyville Fair and Park Association—R. Y. Kennedy, Secretary, Coffeyville; August 15-19.
Morris County Exposition Company—E. J. Dill, Secretary, Council Grove; September 26-29.
Neosho County Fair Association—H. Lodge, Secretary, Erie; August 28-September 1.
Neosho County—Chanute Agricultural, Fair, Park and Driving Association—Aug. Bareis, Secretary, Chanute; September 6-9.
Ness County Fair Association—Sam G. Sheaffer, Secretary, Ness City; September 14-16.
Osage County Fair Association—C. H. Curtis, Secretary, Burlingame; September 5-8.
Osborne County Fair Association—M. E. Smith, Secretary, Osborne; September 12-15.
Riley County Agricultural Society—Charles Kleiner, Secretary, Riley; September 5-8.
Rooks County Fair Association—David B. Smith, Secretary, Stockton; September 19-22.
Saline County Agricultural, Horticultural and Mechanical Association—H. B. Wallace, Secretary, Salina; September 25-29.
Sedgwick County—Wichita State Fair Association—H. G. Toler, Secretary, Wichita; September 25-30.
Wilson County—Fredonia Agricultural Association—J. T. Cooper, Secretary, Fredonia; August 22-25.

An attractive illustrated and thoroughly reliable 64-page booklet, devoted to fruit culture along the Frisco Line in Missouri, Arkansas, Kansas, Oklahoma, and Indian Territory, just issued. A copy will be sent free upon application to Bryan Snyder, G. P. A., Frisco Line, St. Louis, Mo.

The St. Paul Press notes that a woman in New Hampshire captured a bald eagle by throwing her skirt over it. Some people seem to think that this reflects on the invincibility of the emblematic bird. As a matter of fact, however, it is no disgrace, even to an American eagle to succumb to a woman.

The Topeka Business College has placed hundreds of young persons in good, paying positions.

A FARMER'S BANQUET.

(Continued from last week.)
BY DESIGN OR BY CHANCE.
BY M. W. VAN VALKENBURG.

There appears to be no chance in the arrangements for the elegant spread which we have all so thoroughly enjoyed to-night; no chance presence of these guests, no chance and aimless remarks from those whom we have heard, but through it all we detect some design, some purpose.

Such little incidents as this serve well to illustrate the strength and power of purpose, as compared with the aimless element of chance in all the affairs of life. Then the question naturally arises what design has our host upon us? Be sure we have held what seemed to be fitting obsequies over select portions of that which is mortal in an innocent little steer, guaranteed "thoroughbred scrub," and so well have we testified to the fact that he has fulfilled his mission on earth that when we have occasion to refer to this meeting we shall probably speak of it as this "steerful" occasion.

Our host has demonstrated to us the result of thought and study in what is generally supposed to be the simple process of fattening a steer. Why, says one, anybody can fatten a steer. It is also a commonly accepted theory that anybody can farm. So he can, but not successfully. The successful farmer of to-day is progressive. How often we are reminded that we live in a progressive age, but did you ever attempt to ascertain how slight a hold the progressive idea has upon the average farmer of our country? We boast of our advancement, of our great school system, of the high percentage in educational matters among our people, all of which is true, but our farmers do not study what treats of their business, their life work, or if they do, accept it as merely theoretical and not practical. The ideas brought to our attention to-night will take a firmer hold upon the mind of each one present than pages read upon these topics. Their practicability and common sense commend them.

You gentlemen who have demonstrated to your own satisfaction and to the satisfaction of those who have taken the pains to investigate your work, and the practicability of your theory, have accomplished more than those who have written volumes, for the reason that by these means you reach those who should be reached. The practical demonstration of the fact that certain grains and certain grasses contain a relative percentage of quality for certain purposes, solves a problem wonderfully abstruse to the average agriculturalist.

It is a familiar picture to all of us, the failure of men in different branches of business, because of their lack of knowledge of its principles and requirements, their failure to study it, or inability to comprehend it, with the result that in the end their experience constitutes their capital. The same is applicable to him who has chosen the tilling of the soil as his life work. Oh! the weariness, depression, and discouragement we so often see stamped upon his features and those of the good wife who shares them all. The listless movement and the languid air we too often denominate laziness, and too often are we grossly in error. Follow him, my friends, for one short year and you will experience true weariness.

We call the life of a farmer an independent one. So it is, because he has nothing to depend upon but the result of chance. I speak now in the abstract sense. Industrious, frugal, and persistent, he wonders, and the wife with him, why results are not different; why the results they read of are not experienced by them; why their many acres do not produce as much as the few of some others. The investigating and progressive farmer knows why. The class I have described does not, and never can, until the theories and principles which you have demonstrated are made plain to them.

The man who takes his fellow farmer by the arm and leads him out into the fields o'er which he has aimlessly traveled the weary round of years, and demonstrates to him that this soil has a character, awakens at once a new life in the heart of that man, new hopes, new ambitions, and ultimately new results. The work of the practical progressive agriculturist is a God-given work. The central idea so vividly brought before us to-night can go out from this meeting and carry its influences to the uttermost confines of our State, aye, beyond. You have it in your power, gentlemen, to make Kansas the beacon light of progressive agriculture. Naturally an agricultural State, what better field could you ask? With the farmers of this State all interested, where would you turn for more powerful allies? The work and influence of our agricultural college should be broadened, and made to permeate every nook and corner of our State. Teach your farmers to be politicians only when their interests are threatened. Teach any executive who would

dare to toy with the efficient work of the agricultural college as a political perquisite that he does so at his peril. Place your standard high. Demand the best material in the administration of its affairs. Eliminate every element but those which constitute the object for which it was established, and for which you are taxed. Resolve and carry into effect the resolution that there shall be no political prostitution of its true purpose, and through the medium of this institution, ably seconded by the unselfish and intelligent experience of our worthy host and his co-workers, you solve the problem of the agricultural future, which carries with it the material future of our grand State. Cast out of the minds of our farmers the idea that chance results is their only hope, and replace it with the bright and intelligent element of purpose in all that they do. This is your work, gentlemen, and these are a few of the possibilities before you. Are you ready to assume the duties? Are the few advocates of progressive ideas and practices ready to apply this tincture of a new life to the many who are without it? The idea is ennobling and elevating, and should find a responsive chord in the heart of every man friendly to the agricultural interests of our great agricultural State.

THE MERCHANT'S VIEW.

BY E. H. CROSBY.

When our genial host informed me of the killing of the fatted calf, and asked that I give a short paper on the merchant's view, I at first reluctantly declined, owing to the fact that so many learned and distinguished gentlemen guests would gather around his festive board, but when he insisted that only thoughts such as would tend to bring us closer together in our every-day business pursuits would be indulged in, I readily consented.

The last nineteen years of my life have been spent in Topeka in mercantile business. During this time I have come in contact with many farmers, mostly those of Shawnee and adjacent counties. I propose to make a comparison with their brothers in my native State of Louisiana, the land of cotton and sugar-cane. I beg to say from the start that I do not for a moment wish to criticize the farmer. We, the farmer and the merchant, are in a measure partners in business, for one without the other couldn't exist. While the farmer may be up and about his work from daylight to sunset, straining every muscle to make both ends meet, interest included, the merchant is putting forth his best efforts and brains to buy what he can sell at a slight margin of profit, and while it should be that when our time of closing our stores comes our day's labors should cease, such is not the case. In the minds of most of our customers the idea prevails that what we sell them, even our staples such as calicos, ginghams, muslins, sugar, coffee, etc., bears a handsome profit, and while we don't claim for a minute to sell them at cost, still, after deducting expenses, such as freight and other fixed charges, there is very little left. These staples are with the merchant, as corn at 15 cents to 18 cents is to the Kansas farmer when he sells it direct, and profit on this kind of farming and merchandizing is a dream, an imaginary quantity.

But there are other items in the general make-up of a stock which, if handled properly, do show a profit, and that's where a proper display of intelligence and good management come to our rescue, just the same as the feeding of corn to stock. Meat, butter, milk, chickens, eggs, etc., might be classed as notions, as small wares are with us.

Prompt payment of obligations incurred for merchandise, for store, or for the home, is the main cause of success. The merchant who, in these days of sharp competition, can't take his 2 per cent off for cash, instead of 1 per cent, thirty days, is placed at a great disadvantage. Not only is the 2 per cent off merchant's business sought after by the manufacturer and jobber, but he is on the road to prosperity, and the better class of people want to trade with a prosperous merchant and farmer. "The nimble sixpence," etc., applies to both buyer and seller.

One of the most important points in the management of a commercial business is system, and a good system is as easily installed as a poor one. If this applies to a department store, why shouldn't it to a farmer? We have a customer, a Scotchman, living on the Wakarusa, who carries a day-book with him in which he itemizes every cent expended, who or what it is for, and credits every pound of butter, eggs, etc., in fact knows just how he stands for the past twenty years. That's what you can call department farm bookkeeping, a little troublesome to start with, but a successful life is made up of comparative trifles. The thing to do in merchandising is to find out what line of merchandise is most profitable and push it for all there is in it. The same will apply to farming. It's as easy and more remunerative to breed for a good horse, cow, pig, or fowl,

and to produce good butter, as the poorer and undesirable kind.

The menu of our host should be an object lesson to his guests, particularly those in the bovine line of trade.

The farmer has the advantage of the merchant in a vast number of ways. The most important is that the commodities of the farmer increase in value with a reasonable age (butter and eggs excepted), while with the storekeeper his goods become shelf- and shop-worn after a very brief period, and even the poorest and most shiftless farmer won't have them at 20 per cent on the dollar of the original cost. Then, again, while tillers of the soil are in sweet repose on their feather beds, their cereals and live stock growing into money, the maybe successful merchant is worrying his brain to get just the right sort of merchandise to exchange for the hard-earned dollars of his farmer friends, and must not lose sight of the carried-over stuff heretofore mentioned.

The greatest evidence of the prosperity of farmers is the buying of a better class of goods, and I think my brother merchants will bear me out in this statement. The people of Kansas as a whole are getting further and further away from the shoddy, a fact which is commented upon by the New York merchants. This is from personal observation.

Now, a few words of comparison of the Kansas and Louisiana farmer. Crosby Bros. own and operate a cotton plantation south of Mason and Dixon's line, and it's a great pleasure with business combined to go down once a year. In a little village of 1,200 to 1,500 people are a number of well-stocked stores, and the first thing that greets you, particularly if you go into the back door, is an immense pile of salt meat—Kansas hogs—stacked like cord-wood, and sold to the producer of 4-cent cotton (that cost 5 cents to 6 cents to raise), on nine to twelve months' time, maybe forever. It's a sight not to be forgotten to see some poor individual, either white or black, bring in two or three bales of cotton on his wagon—the result of a year's hard labor—drive to the station, have it weighed, get a ticket, thence to the merchant, pay as far as it will go, load up with three or four sides of salt pork, two or three barrels of meal, and one of flour—all from Kansas—a little sugar and coffee, a few yards of domestic and calico, and off he goes with his six months' or one year's supply, unless his merchant, who usually owns him soul and body, sees fit to restock him. You ask them why they don't live at home by raising their meat and bread, and using their cotton as a surplus. Some will say, too hot a climate for hogs, they don't do well. Others say, they have to run so much to keep out of the way of the "niggers" they die before they get big enough to eat. This is the home of the razor-back you all no doubt have seen or heard of. I don't wish to convey the idea that there are no prosperous farmers there. It's a poor man's country, so far as mildness of climate, richness of soil, and favorable conditions, generally, go, and failures as in most other localities are due to mismanagement, and buying household necessities on so long a credit.

Now let us go to the New England farmer. Take Maine, Vermont, or New Hampshire particularly, where fifty to eighty acres are considered a big possession. How do they manage to eke out an existence, where there seems to be no soil, simply a bed of gravel? Yet by strict economy, wasting not even a blade of grass, they are the most thrifty and prosperous of their class. Each barn has a cellar, in which is a pig pen directly under the stalls, where every particle of manure from horses and cattle is thrown. This is used, together with what leaves can be raked from the wood lands, as a fertilizer, in fact, a New England farmer's wealth is estimated by the size of his pile of manure.

Farmers should stand by their home merchants. One is indispensable to the other. In these days of circular or catalogue advertising all sorts of methods are resorted to for business by the larger houses in the East.

But your home merchant is entitled to your confidence. Business statistics tell us that only 5 per cent of merchants succeed. This goes to show that lack of profit, depreciation of stock, and bad debts, in short, mismanagement, wrecks most of them.

SCIENTIFIC MILLING.

BY J. L. SHELLBARGER.

The subject assigned to me is "Scientific Milling." The topic sounds too formidable for an ordinary miller—one who is familiar with the dusty garb which, history tells us, Sir Matthew Hale assumed on a noted occasion when he wished to conceal his ermine under the dress of an "honest fellow." I shall not, therefore, attempt any scientific discussion, but if I may briefly and simply tell the story of the change that within my recollection has come over the



able to regain their coveted health strength.

It is just these people that Dr. Pierce's Golden Medical Discovery is designed to aid. It is the strong, helping hand those who are in the extreme of weakness and nervous exhaustion, promptly tones, nourishes and builds the entire system. It gives keen appetite, good digestion, pure blood, muscular strength, nerve-force and renewed activity. "When I first wrote you I was completely discouraged," says Mrs. W. M. Satterly, of Richmond, Va. "I was in pain all the time, and I was in bed on account of severe cutting pains in my back and right hip. I paid all through the lower part of my back my elbows hurt me so much I could not lift my baby. My skin was dry, harsh, scaly and hung like sacks on my arms. My husband called the doctor, and he said I was weak, and my age. His medicine did me no good. I kept getting worse and weaker. I should go crazy. One day I read of Pierce's Golden Medical Discovery, his 'Pleasant Prescription' and 'Pleasant Pills' now I can lie in bed with some comfort and do a good day's work."

The most valuable book for both men and women is Dr. Pierce's Common Sense Medical Advice. A splendid 1008-page volume with engravings and colored plates. A copy, paper-covered, will be sent to any reader sending twenty-one cent stamps, to pay cost of mailing only, to R. V. Pierce, Buffalo, N. Y. Cloth-bound, 31 stamps.

milling process by the adoption of tific appliances, without trespassing duly on your time and patience, I undertake nothing more.

When we contrast the present of milling with that of my boyhood—not very long ago, for I would re-imputation of being an old man change is almost bewildering. When a lad, living near by my grandfather's favorite playground was with ample walls, for it was a big mill as try mills went in that day. No play delightful to us boys on a rainy day a game of "hide and seek," as the mill its dark corners and long rows of gran ranged along the sides of the two stories. We were fairly familiar, boy's standpoint, with the program of ing. The quiet old farm horse jogging to mill with a 3-bushel bag of grain his back and the farmer's lad perched top of it—or leaning over it from below was a sight too common to excite me. Then when at the mill door, to see noose-end of a long, strong rope from the "hoist-jack"—the projecting at the comb of the roof—slipped at the neck of the sack and it hoisted miller to its destination was an occasion to be witnessed almost any hour of day.

The wheat, after an ordinary day was dumped into the hopper—submerged the inevitable tolling—then passed through the shaking-shoe into the stones, where, to the hum of the mill the "click-clack" cadence of the rattle damsel, it was leisurely ground into thence to the bolt, which at one operation separated the flour from the shorts. What a charming sight about the whole process! How soon customer could load up his grist—was left of it after tolling—and was way homeward, knowing that it was product of his "very own" identical

The mills of that day were run by power. They ground slowly. As the rate of speed, there is the old of the boy who grew tired over long ing for his grist. He complained to miller and finally gave vent to his tience by wagering that he "could flour faster than the blasted old mill it." "How long could you do that boy?" queried the Dusty. "How long snorted the boy, 'why, till I starved death.'" However, this did not happen grandfather's mill.

The equipment of the old buhr-mill simple, the process simple. The mill of to-day is a complex arrangement of separators, cleaners, scourers, rolls, purifiers, aspirators, bolts, sieve-makers, gyrators, bran-dusters, dust-collectors connected together and combined into harmonious whole by a labyrinthine tem of spouts, conveyors, and elevators.

necessary part in the process of

old, the aim of the miller was to grind wheat to flour as nearly as possible. Yet the most skillful miller always left a large per cent of bran or coarse flour only partially ground middlings. These middlings were so mixed with fine bran and the articles of the grain (called dirt) that, although they were really a product was only a poor, low-grade flour. The advent of the mill machine that combines a system of suction with the sieve action of the first step from the old to the new device was at first intended only to get the dirt middlings and so increase the yield of good flour. But when the flour was purified middlings was tested it to be not only equal, but superior to the first flour—because completely of gluten, the more nutritious of the grain. This, a quarter of a century ago, was the origin of the famed flour of to-day. Finding its value in the progressive miller reversed the method, and, instead of making the greatest amount of flour by grinding, the present aim is to get the greatest quantity of middlings and then to convert these, after the

result is best accomplished by the gradual reduction, in which rolls planted millstones. The process from three to six reductions, or the first is intended only to split along the crease and so get rid of the coarse or seam-dirt and drop out. Each succeeding break crushes the still more and between each the product passes over sieves, or, to "scalp out" the middlings. By the final reduction the bran is clean and passes to the feed-ay of the bran-duster, which gives a brushing to free it from any particles or dust that may adhere. This bran is now in condition to be an important part of the balanced ration adapted by scientific feeding to the superior beef product our country has so hospitably dispensed to the world. The sizing, grading and purifying of the middlings, and the conversion into flour is the next chapping. The process involves supererations and reductions, but time admit of extended explanation.

contrast with the simplicity of the successful management of the new mill, intelligent direction and good work on the part of the miller. The adjustment of the machinery, the re-portionment of the work, the proper use of the middlings without waste, the maintenance of atmospheric conditions, the heat and cold and wet and dry, all consideration; and the miller's first duty is to thoroughly clean the wheat and to apply the application of steam, or water, as circumstances require, that it may be in proper grinding condi-

advantage gained by the modern mill is a largely increased yield of high-grade flour, and because of this the cost of manufacture is notably reduced.

milling industry has kept pace with the march of the age by being on the alert to avail itself of all scientific improvements adapted to its use. The Kansas miller is abreast with the procession and is his full share toward the extension of the country's commerce. His flour is known and called for in the principal markets of the world.

may not say the industry has reached its peak. The hoary-headed wisecracker who said "about milling" passed in his years ago, with the passing of the mill. The situation is one of expansion. The spirit of growth is universal; progress is in the saddle, and the milling industry stands for forward movement at the first opportunity.

THE HOST CALLED FOR.

Master Godard: We are gathered tonight, gentlemen, in the interest of the most important industry of our country and in the interest of the industry which has the greatest number of our population engaged. The matters which have been discussed to-night are of vital importance to every citizen of the State of Kansas, no matter what his occupation may be. We have been here at the invitation of one of our prominent citizens, who has long been in the line of work which has been discussed here to-night, and who has been here to bear upon that work not only his knowledge which is the result of his experience, but at the same time that hard business sense, that sense which is the result of a term horse-sense, which has made him a success in business life, and that we can not close this occasion

without hearing from our host, General Dudley.

THE HOST'S RESPONSE.

Kind Friends and Co-Laborers in the Cause of Agriculture: It is very pleasing to just a plain farmer to have you speak in such complimentary terms of just an every-day, common farmer. To think that the learned professors from our colleges, the distinguished co-laborers from the farms, and the representative members of the other professions here, all encouraging us on in the simple work of good agriculture, reminds me—as everybody is patriotic nowadays—of the success of a great general. If he has any merit, if he has any talent, it will be appreciated, but his success depends in a great measure upon the detail and the minutia of his management. He must not only look to the burnishment of his arms and quality of ammunition, but he must have in the quartermaster's store a supply of necessities of life. He must protect his supplies, and he must have the transportation to go forward with them, or he is not a success. And the men, here or elsewhere, who think for a moment that the great supplies of this State are not derived from agriculture are certainly not thinkers, and are not doing their whole duty to themselves and their State. What else have we but the products of agriculture? We have, of course, the middleman, who, by the way, is a farmer. We have the professors, we have the financiers and the bankers, who would not loan a little money on a high-grade steer, and we also have the brokers who would loan the money on a scrub steer, and we have had before us the development of a scrub steer, but no one has drawn the comparison and told us how much better one of Governor Glick's full-breeds or half-breeds would

boy; he had a head, and he had plenty of stamina and plenty of ability; he just lacked the disposition to apply it. Perhaps that may be something of our case in farming.

I hope that this gathering may be productive of a little organization, which may continue these gatherings of advanced and up-to-date farmers. It is worth our while, perhaps, to put out a committee and formulate a little style of government or constitution, an executive committee. There are farmers in this very presence who are up-to-date breeders of fine pork, and they tell us that away back in the Chinese ages there was never anything so fine as roast pig, and they have volunteered to furnish the pig. But it does not become me as host to suggest to this intelligent gathering what you would like to do. We believe in America and American principles, and that every one here is capable of suggesting such an organization as may be wanted.

Governor Glick—The subject of the balanced ration, by which the meat we have sampled to-night was produced, has been referred to a great many times this evening and I was in hopes General Dudley would tell us what that balanced ration was.

Mr. Dudley—The 100 head of steers averaged 1,040 pounds at the beginning of the experiment. After they had got onto full feed their daily rations consisted of the following:

Corn and cob chop, pounds.....	1,800
Bran, pounds.....	600
Oil-meal, pounds.....	200
Clover-hay pounds.....	300
Total for 100 steers, pounds.....	2,900.

A part of the steers were ripe before the



A CORN HARVESTER.

The most telling and pictorial literature ever issued regarding corn cutting, binding, and shredding machinery has just been issued by the McCormick Harvesting Machine Company, Chicago. Send for the pamphlet at once, as it is well worth having for preservation.

Herewith is shown the McCormick ver-

have been, or the gentleman's beautiful whiteface would have been, rather than this. But that leaves room for development, room for the next step onward and upward when we bring up one of these high-bred animals and test him as we have tested the scrub. And so we are all of us bending and pushing forward with our education, and all encourage the great industry of furnishing the supplies for our soldiers and for everybody else. We can not but think that in the near future we will all of us know more than we do now about farming.

You take down the encyclopedia and it will tell you that away back in the Egyptian times they farmed if the water of the Nile did not raise too high. If it did, they waited till the next year. In their farming they tethered their cattle on the clover fields. They tell us there that they raised chickens and how they used a process of artificial incubation. You go on again and take up another line of history. You take up Cicero and in one of his orations where he had an eye for farming he tells us that Aristotle, three hundred years—three whole centuries—before his day, taught that living organic matter originated and started in water, and that animal life afterwards had to learn to live upon the land, the very essence of the lesson inculcated by our Chancellor Snow in his admirable remarks on evolution. So that we are simply drifting back, taking up the lost knowledge of the ages. We do not know as much as we might, but we have a talent, we can learn. And that reminds me of what one of our good ladies tells of her boy. She had a smart

tical corn harvester. It has an adjustable binding attachment by which the band can be raised or lowered 12 inches. This is a peculiar and exclusive feature which commends it to users. This machine is a profit-maker for farmers. Wherever corn waves its tassels to the breeze the McCormick corn binder is a success to-day.

others and were sold for export. The others were sold for export yesterday. The average time on full feed was ninety-one days.

There is more catarrh in this section of the country than all other diseases put together, and until the last few years was supposed to be incurable. For a great many years doctors pronounced it a local disease, and prescribed local remedies, and by constantly failing to cure with local treatment, pronounced it incurable. Science has proven catarrh to be a constitutional disease, and, therefore, requires constitutional treatment. Hall's Catarrh Cure, manufactured by F. J. Cheney & Co., Toledo, Ohio, is the only constitutional cure on the market. It is taken internally in doses from 10 drops to a teaspoonful. It acts directly on the blood and mucous surfaces of the system. They offer one hundred dollars for any case it fails to cure. Send for circulars and testimonials. Address, F. J. CHENEY & CO., Toledo, O. Sold by all Druggists, 75c.

J. G. Haney, assistant in the farm department work at Kansas State Agricultural College took to Kansas City last week 80 hogs that had been fed one hundred and forty-two days in four lots of 20 each. The 80 head were bought of farmers near the college and averaged a fraction over 124 pounds when put on feed. The first lot, fed Kaffir-corn and skimmed-milk on alfalfa pasture, gained 1,411 pounds and brought \$4.10. The second, fed Kaffir-corn and skimmed-milk, gained 1,319 pounds and brought \$4.07½. The third gained 834

pounds on Kaffir-corn alone and brought \$4, and the fourth on Kaffir-corn and alfalfa pasture, gained 890 pounds and brought \$4.05. Armour got all of them and will make a killing test on each lot.

The Wathena Midsummer Chautauqua, July 28 to August 6, offers a most striking list of attractions. The management assures the public that everything will be just as advertised, with large, cool, shady grounds, plenty of good water, and abundance of food. This occasion will readily be recognized as something good, when the list of attractions is examined. Among them are, Gen. John B. Gordon, Georgia; Rev. Sam Jones, Georgia; Hon. Frank Nelson, Kansas; Dr. James Hedley, Ohio; Chas. T. Grille, Boston, Mass.; Col. George W. Bain, Kentucky; Dr. Jno. Hancher, New York; Dr. Robert McIntyre, Chicago, Ill.; Mrs. Anna Hobbs Woodcock, Wymore, Neb.; Mrs. L. S. Corry, Lincoln, Neb.; Hon. A. S. Zook, Indiana; Rev. M. M. Parkhurst, Chicago, Ill.; Rev. Jahu De Witt Miller, Pennsylvania; W. Hinton White, New York; Rev. Fr. Joseph Nugent, Des Moines, Ia.; Ed. Amherst Ott, Des Moines, Ia.; Rev. W. F. Packard, St. Joseph, Mo.; Apollo Male Quartette, Columbus, O.; Fourth Missouri Regiment Band, St. Joseph, Mo.; Prof. Wm. Apmadoc, Chicago, Ill., with large chorus class. Reduced rates on all roads, and special cheap-rate excursions both Sundays, July 30 and August 6.

Keep your system in perfect order and you will have health, even in the most sickly seasons. The occasional use of Prickly Ash Bitters will insure vigor and regularity in all the vital organs.

The lower courts have upheld the constitutionality of the inheritance tax, and its collection from the Pullman estate has been ordered, amounting to \$200,000. An appeal will be made to the Supreme Court.

Wheelmen's Excursion

to Boston and return via Nickel Plate Road at \$19 for the round trip. Date of sale, August 11 and 12. Good returning for arrival at initial starting-point not later than August 31, by depositing tickets in Boston with agent Fitchburg railroad. Two through trains daily with vestibuled sleeping-cars to Boston. Chicago depot, Van Buren street and Pacific avenue, on the Loop.

Notice of Appointment--Administrator.

State of Kansas, Shawnee County, ss.
In the matter of the estate of John S. Firey, late of Shawnee County, Kansas.
Notice is hereby given, that on the 7th day of July, A. D. 1899, the undersigned was, by the Probate Court of Shawnee County, Kansas, duly appointed and qualified as administrator of the estate of John S. Firey, deceased, late of Shawnee County. All parties interested in said estate will take notice, and govern themselves accordingly.
J. B. McAFEE, Administrator.

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STARK BROS. PAY FREIGHT
Stark, Mo. We

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FOR MAN AND BEAST.

An infallible remedy for Rheumatism, Cuts, Sprains and Bruises. For Barb Wire tears it has no equal. For the Destruction of the Screw-Worm it acts like magic. Sample sent free on application—a postal card is sufficient.

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Dana's White Metallic Ear Labels. Stamped with any name or address and consecutive numbers. Adopted by more than forty recording associations and thousands of practical stockmen. Samples free. Agents wanted. Prices reduced.
C. B. DANA, 62 Main Street, WEST LEBANON, N. H.

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Station B., Washington, D. C.

MARION HARLAND

has written four new books.

THE FARMERS VOICE

is the greatest Agricultural Weekly in the United States.

The Four Books and the Voice to Jan., 1900, for - - 50c.

The four volumes of Marion Harland are just out and are not on sale at book stores. Vol. I on "Health Topics"—Vol. II, "Home Topics"—Vol. III, "Household Management"—Vol. IV, "Cooking Hints." Finely printed on heavy paper from new type and plates. Bound in heavy paper cover. The retail price of each volume is 25 cents, \$1 for the set. The Farmers Voice is \$1 per year. The books will be sent you free of cost, postage paid, and the Voice to January 1, 1900, all for 50 cents. This phenomenal offer will be open for a short time only. Address,

THE FARMERS VOICE, Chicago, Ills.

The Home Circle.

THE DREAM SHIP.

When the world is fast asleep,
Along the midnight skies—
As though it were a wandering cloud—
The ghostly dream-ship flies.

An angel stands at the dream-ship's helm,
An angel stands at the prow,
And an angel stands at the dream-ship's
side
With a rue-wreath on her brow.

The other angels, silver-crowned,
Pilot and helmsman are,
And the angel with the wreath of rue
Tosseth the dreams afar.

The dreams they fall on rich and poor;
They fall on young and old;
And some are dreams of poverty
And some are dreams of gold.

And some are dreams that thrill with joy,
And some that melt to tears;
Some are dreams of the dawn of love,
And some of the old dead years.

On rich and poor alike they fall,
Alike on young and old,
Bringing to slumbering earth their joys
And sorrows manifold.

The friendless youth in them shall do
The deeds of mighty men,
And drooping age shall feel the grace
Of buoyant youth again.

The king shall be a beggarman—
The pauper be a king—
In that revenge or recompense
The dream-ship's dreams do bring.

So ever downward float the dreams
That are for all and me,
And there is never mortal man
Can solve that mystery.

But ever onward in its course
Along the haunted skies—
As though it were a cloud astray—
The ghostly dream-ship flies.

Two angels with their silver crowns
Pilot and helmsman are,
And an angel with a wreath of rue
Tosseth the dreams afar.

—Eugene Field.

ENTERTAINING IN THE COUNTRY.

By Mrs. John B. Sims, of Shawnee County, Kansas, in Ladies' Home Journal.

There is no better way of visiting, and there is no visit that has in it more possibilities for a delightful time, than the old-fashioned all-day visit in the country home, provided the host and hostess are what they should be—happy, whole-souled, proud-of-home, country people. When one goes visiting it is generally to get relaxation from home duties, and to forget, for a time at least, responsibility and care; to receive good gifts as well as to give them; and nothing will so quickly bring to the mind all possible and impossible troubles, which the absent are always heir to, as the time-honored salutation from the host: "How do you do and are you well; how are all the family; crops look poorly, don't they?" So talk of things as foreign to your daily tasks as can be; never make work of a holiday, and do not take out any work nor speak of work while you are conversing with your guests.

GIVE YOUR GUESTS A WARM WELCOME.

Begin to enjoy yourself when your guests arrive—in fact, before they arrive. Do not try to serve such an elaborate dinner that the work of getting it ready will draw so upon your physical powers that they will be strained to their utmost endurance.

When your visitors arrive, greet them with a hearty handshake; make them feel that you are ready for their coming; speak of the pleasure that you hope the day may bring; compliment them on their good appearance; notice the neckwear, the dainty handkerchief; be thoroughly interested in each and every one. When the time comes for you to prepare the dinner and place it upon the table, leave your guests as gracefully as possible. If the dinner be not too elaborate, and the mental atmosphere be clear and bright, your friends will come again. "Eat to live," and not "Live to eat," should be the motto of every household.

If hired help be no part of your household economy have a small table (a folding table is very convenient for such purposes) placed near the dining-room table and at your own right hand. On this small table have the dessert, water pitcher, glasses, and whatever extra dishes may be needed. A dinner for eight or ten people may be served without your leaving the table, if it has been well planned beforehand. The dish-washing is by far the hardest thing to be adjusted. This must be governed by circumstances and the social qualities of the guests as to whether the table shall be cleared, or left standing until after the departure of the visitors.

Visitors from town generally like a visit to the orchard, barns, and corals; indulge them all that is possible—in fact, to make the visit a success from every point of view you must efface yourself, and study the tastes and inclinations of your visitors.

IF YOU DECIDE TO GIVE AN EVENING PARTY.

If you wish to give an evening party first make out a list of families to be invited.

If you wish to be a little ceremonious the invitations may be written on small cards and enclosed in envelopes; generally a boy or a girl may be found who will enjoy nothing better than a gallop from farm to farm, leaving the little messages behind.

Plan carefully the dainty refreshments and the way in which they will be served. People who live in the country have so much to do all of the time that it is not wise to assume too much extra work even for an evening party.

A nice way in which to avoid it is to serve the refreshments from a previously arranged table in one of the rooms, on the porch, or on the lawn. Have the tray of sandwiches in reserve, but upon the table place two or three smaller plates of them. Hunt up all your pretty dishes, and use them for pickles, olives, or cheese, and arrange them on the corners of the table. Cut the cake and mix the different kinds on the cake-tray, or cake-stand, in an inviting manner. Be sure to have a centerpiece of either cut-flowers, or a pot of flowers, or foliage. Seat the guests so that congeniality will pervade the room. If you have neither boys nor girls of your own borrow some from your neighbors, and let them serve the guests from the center-table, handing plates and napkins first, and the refreshments, with water, last.

A PARTY AND A TRIP AROUND THE WORLD.

There are many ways of entertaining. A "Suggestion Party" affords an evening's entertainment. Let each guest wear something that will suggest a poetical or geographical name. Some very bright ideas will be evolved. A small ark whittled out of a new piece of pine may suggest New-ark; a cluster of bright balls of yarn hint strongly of Saxony. A warlike individual, armed with a spear shaken often in a very alarming manner, may suggest nothing more formidable than Shakespeare. The fun is in each one guessing what the other represents or suggests.

The invitations for a "Trip Around the World in Ninety Minutes" would read:

Dear Mrs. Andrews:
Yourself and family are invited to take a trip around the world in ninety minutes, to start: from out house August 1, 1899, at 7 o'clock p. m.
Please bring a lead-pencil.
Tickets furnished. Babies and baggage checked.
Your friends,
Mr. and Mrs. John Thomson.

The "trip" must be arranged for first of all. Cut from magazines or papers some pictures that will suggest geographical names; number them from one to forty; pin them on the walls, on the window drapery, etc. On a sheet of paper place corresponding numbers with the names which the pictures are to suggest—for instance, No. 1, an iceberg, would suggest Iceland.

When the guests arrive they should be shown into a room to remove their wraps. Let the conductor be there and give each one a blank card to represent a ticket. The conductor must start the trip and give small bits of information. The guests visit each picture and write upon their blank cards the number and name suggested to them. The one who guesses the largest number of names correctly may be rewarded in any way which the hostess may decide upon. All stiffness and formality are thus done away with. If some neighbor be a good reader arrange for some readings or recitations, and have music if you can. But do not let your guests know that special effort is being made to entertain them—let it apparently be spontaneous.

INCLUDE BOTH YOUNG AND OLD IN YOUR PLANS.

Have both the young people and the "old folks" included in the plans for neighborhood entertaining. Young people acquire dignity and equipose from the association, and old people renew their youth, and give their experience and knowledge of life to the gay, untried souls around them.

Company in the country is not always the invited guests. We have all had some experience with the uninvited and unexpected visitors. Be just a little more cordial in your greeting to them. If the immediate family be small a little extra trouble must of course ensue, but if the household be managed in a systematic way the extra visitors need cause very little more trouble. Should you be blessed with a large family and plenty of room they need not be any trouble at all. Give your unexpected guests what you have, freely, gladly; break the bread of hospitality with them, and make no excuses; put yourself in the visitors' place and act accordingly.

Show your pleasure at their coming by presenting them with the freedom of your home; if they are deserving of it, and as thoughtful as they should be, they will conform to the regular hour for serving



ECONOMY

How much is your time worth? How much do you value your strength? Is your money worth saving? These questions will all be answered to your entire satisfaction if you use

GOLD DUST

Washing Powder

in your cleaning. It will do your work in half the time, with half the labor, and at half the cost of soap or any other cleanser. It will make your housework easy and save you many an hour of worry.

For greatest economy buy our large package.

THE N. K. FAIRBANK COMPANY

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the meals. If one use good judgment in preparing the necessary viands for family consumption there will be no feasts during the guests' stay, nor any famine after their departure.

(Concluded next week.)

A Book Worth Reading.

On my table lies a little book, "The Redemption of Freetown." Its author, Rev. Charles M. Sheldon, called it a "book-let." It is not large nor pretentious. There is no need that it should be. The chit of an acorn is small, the oak is large; the gist of a discourse, the text of a sermon, the syllabus of a decision may lie in small compass, while the result may be world-wide. The Sermon on the Mount occupies still less space than the story-sermon in this booklet, but the entire human race has been affected by it.

"You may fire when you are ready," said George Dewey on that historic morning in Manila Bay, and those few simple words turned loose the concentrated energies of the mightiest Republic known to civilization, and in two hours' time relaxed forever the iron grasp of the bloodiest, cruellest nation of earth from the throat of a people numerous enough to make a splendid nation.

The Redemption of Freetown is a simple narrative of facts under the disguise of fictitious names, and somewhat embellished by the art of romance to bring it within the established form of fiction. But we who know well the "Dramatic Personae" of the story, know by whom and how well that redemption has been planned and started on its way to execution and fulfillment. That reform is, right now, going on in the capital city of the capital State of the capital nation of the world, and Mr. Charles M. Sheldon is the inspiring genius of the movement; and being granted the allotted span of human life he will yet see his dream converted into a living panorama, with plenty of color, force and life to match the dream.

He is not the kind of reformer to take to the woods when things go shy of his plan. He has a genius for heading off things that threaten his project. He has the courage to say and believe that whatever was right yesterday, is so to-day, and will be throughout the eternal to-morrows. He is the one minister out of the many who dares take a long, strong leap out of the beaten path of clericalism and say:

"Here is a better path to the kingdom; come with me." The friends of progress, purity, order, and good government will do well to read this little book.

HENRY W. ROBY, M. D.

A Believer in Heredity.

M. Bonjean does not believe in heredity. He thinks that a child's instincts are created by his environment, not by his inheritance. Any child can be absolutely changed from bad to good by the right kind of moral influence, by affection, and by confidence. Out of the hundreds and thousands of boys he had reformed he gave certain examples that touched us extremely. At one of his institutes he had a number of very young boys who had been in prison for incendiaries. He called them to him and represented that they had forfeited their right to the consideration of the world by endangering the lives and fortunes of other people. The only way in which they could get it back was by doing something in their turn, in case of fire, to help and save others. So he made them into a company of firemen, to which he presented a fire-engine. One night there was a fire, and M. Bonjean went out to see how his band were acquitting themselves. Part were at the engine and part were making a chain to pass pails of water from the river to the burning house, of which the end, plunged up to his waist in water, was a little chap of 8 who had had three incendiaries to his credit. It was a cold November night, and

M. Bonjean noticed that the boy was shivering. "You must not stay any longer," he said, "you are risking your life." "Does it matter that I am risking my life if I am only making reparation?" was the answer.

Another boy had been convicted of larceny. One of M. Bonjean's first acts was to send him to pay a bill. "I trust you perfectly," he said, and he counted out francs in gold. The little fellow flushed, but he took the money and ran off. When he came back he was with the receipted bill. "I paid it," he said, "knew you would," was M. Bonjean's answer, and the philanthropist has since seen this child grown up, with a perfect trust, and happily married, with a family of his own.—Paris Letter, in Harper's.

Women's World.

The only woman of royal lineage known to hold the title of M. D. is Amalie of Portugal.

Miss Elizabeth Plankinton, of Milwaukee, Wis., has made a gift of \$100,000 to build a home for the Young Women's Christian Association of that city. The gift is conditional in that a suitable site first be obtained.

Twelve of the county superintendents of Minnesota at the present time are women. Miss Gertrude C. Ellis, who has served this capacity for the longest time, twelve years, was elected to her present post in 1891.

At a recent meeting of members of various organizations of women in the New York resolutions were adopted denouncing the execution of women under a law which the sex has no voice in making, and urging the abolition of capital punishment.

"Balanced Ration" for an Editor.

The best and most healthy balance ration for man's breakfast these warm days is a sandwich rightly built. Here are the specifications: Take half a nice, cool canteloupe, eat it carefully and votedly, for while the Lord might have improved this fruit, He never finished the product of His thoughtful consideration. Eat that half with a full of fragrant coffee on the side. The nether layer. Then a small piece of toast, a little oatmeal and cream, one of crisp breakfast bacon, a large raw tomato, three hot, tender wheat coffee, ad lib and D. C., after which the remaining half of the canteloupe down fully where it belongs, thus forming upper covering of a most delicious and taining breakfast that should last until next morning.—Clay Center Times.

If you contemplate a course in bookkeeping or shorthand, you should send for catalogue of the Topeka Business College.

When writing our advertisers please mention Kansas Farmer.

HAIR SWITCHES

Finest of Human Hair at One-third Ordinary Price. SPECIAL OFFER THIS MONTH.

Weight	Length
2 ounces	20 inches
2 ounces	22 inches
2 ounces	24 inches
3 ounces	22 inches
3 ounces	24 inches
3 1/2 ounces	26 inches

The 6 1/2 ct. switch has long stem, the others are short. Send sample lock of hair cut near the roots. An immediate enables us to match perfectly any hair. All orders filled on receipt. Money refunded if unsatisfactory. Illustrated catalogue free. Everything in hair goods.

ROBERTS SPECIALTY CO. 114 Dearborn St. CHICAGO

Mothers! Mothers! Mothers!!!
MRS. WINSLOW'S SOOTHING SYRUP has been used for over FIFTY YEARS by MILLIONS OF MOTHERS for their CHILDREN while TEETHING, with PERFECT SUCCESS. IT SOOTHES THE CHILD, CURES THE GUMS, ALLAYS ALL PAIN, CURES COLIC, and is the best remedy for DIARRHOEA by druggists in every part of the world. Be sure and ask for "Mrs. Winslow's Soothing Syrup," and no other kind. Twenty-five cents a bottle.

The Young Folks.

WHEN THE GIRLS WORE CALICO.

There was a time, betwixt the days
Of linsey-woolsey, straight and prim,
And these when mode, with despot ways,
Leads woman captive at its whim,
Yet not a hundred years ago,
When girls wore simple calico.

Within the barn by lantern light
Through many a reel, with flying feet,
The boys and maidens danced at night
To fiddle measures, shrilly sweet;
And merry revels were they, though
The girls were gowned in calico.

Across the flooring rough and gray
The gold of scattered chaff was spread,
And long festoons of clover hay
That straggled from the loft o'erhead
Swung scented fringes two and fro
O'er pretty girls in calico.

They used to go a-Maying then,
The blossoms of the spring to seek
In sunny glade and sheltered glen,
Unweighed by fashion's latest freak;
And Robin fell in love, I knew,
With Phyllis in her calico.

A tuck, a frill, a bias fold,
A hat curved over gypsywise,
And beads of coral and of gold,
And rosy cheeks and merry eyes,
Made lassies in that long ago
Look charming in their calico.

The modern knight who loves a maid
Of graceful air and gentle grace
And finds her oftentimes arrayed
In shining silk and priceless lace
And Robin fell in love, I know,
In pink and lilac calico.
—Munsey's Magazine.

Written for Kansas Farmer.

THE "FOURTH" FROM MY WINDOW.

You and I can't go to town to-day to celebrate; you seem to feel bad about it, but I don't care in the least. It is so quiet and restful here with the dear noisy boys all away.

How glad I am that the distant cannon we hear is so far away, that the faint snapping of the firecrackers and torpedoes comes from the home of our nearest neighbor, a quarter of a mile off.

See that cloud of dust coming down the road—two or three clouds of dust; not little whirlwinds, are they? There's a vehicle of some kind in each one, and a horse or two—poor horses! That first team belongs to the Widow Bartlett, and is being driven very much out of a walk by her two boys and their man. Now, to my certain knowledge that team has been plowing corn steadily for several weeks, except when the blessing of rain fell and obliged them to rest—and how tired they must be! I am glad I am not riding after another such a team, nor after that horse with a sore shoulder, nor the one that limps. This isn't Independence Day for horseflesh, is it?

Some more clouds of dust going to celebrate! The nucleus of the first is Grant Prior and his girl. She has on a white dress and pink ribbons; and such a hat! fancy straw, white lace, and delicate flowers! I wonder how she will look after it is all over. Why didn't some one tell her how to dress more appropriately—with a cool, simple washable dress and a "sailor," etc.—if she must go; and I suppose she must.

That's Jennie King with Harvey Reynolds—yes, and just behind is John King and Grace Reynolds; swapped sisters, didn't they? I wonder why boys nearly always prefer to go with some other boy's sister. They've got on some more perishable ribbon and flowers, and fixings. The town will be full of such girls to-day. Such dress is a proclamation of country breeding, did they but know it. If the town girls come out at all to stand around in the streets, hover around soda-fountains, and sit in the park to hear the speaking and music which is advertised, they won't wear fancy dress, I wouldn't be afraid to wager.

"But it's nice to go to hear the Modocs?" Well, that was a drawing card. The uncertainty of their appearance offsets the possible pleasure of seeing or hearing something new.

"I'm getting so old I don't care to have 'times.'" Well, that depends. If riding through the dust and in the hot sun, anxiously watching the threatening clouds and keeping my skirts from catching fire from crackers are a necessary component of the "times," you are right. It would be nice to take a delicate, sensible lunch and go with the family friends or neighbors into some near-by grove, where some croquet-sets have been planted, some swings put up, maybe somebody's organ transported, to have a little exhibition of home musical talent. Because people live in the country is no reason why they should have poor time to their music, or make it as loud and discordant as the music of the blackbirds overhead. No one will object to the reading of the Declaration of Independence, if not something of more interest, if the reader is capable of intelligent rendering of interesting thought.

You are not listening—somebody else coming along the road? It's that gentlemanly-looking man of Mr. Jackson's, and he has Tommy Jackson with him in his

cart. Now, I think there's something fine in that circumstance; most young men—just common ones—would never have thought of the wishes of a child, Fourth of July, or any other time for that matter. "Couldn't be bothered with 'kids'!" Now, I think there is every reason why he should be gentlemanly-looking.

And if here doesn't come Bert Lyman and his mother and sister! I always knew there was something fine about him, so I am not in the least surprised to see him "waiting" on his mother and sister. He is unconsciously recommending himself to all the girls who see him to-day—and the thoughtful ones will bear it in mind; and it won't make any difference whether the others do or not.

There's a spick and span new, shiny buggy. Sam Karr has spent all of three months' wages upon that; so it doesn't represent a capital of some thousand, as one might suppose; and in a very few years he won't have even the old buggy, perhaps. But he may turn over a new leaf and invest his means in calves or prairie land. Of course to-day he will have to treat to ice-cream with a liberal hand in order to get some one to ride home with him in the new buggy.

No, I'm not particularly interested in Sam, but he represents a class to whom I would like to say, "Boys, don't spend all of your earnings upon the outside—not even in 'calves.' You need to go to school some more. If you have no one depending upon you there is no reason why you should not attend some college or high-school, no matter if you are 21 years old. No matter if you have no taste for books. Cultivate a taste! Interest yourself in some science. There is hidden some knowledge in every class of objects around you. Learn to dig it out—learn to love to dig it out. Cultivate a taste for reading, not alone neighborhood gossip and 'snap-shots,' but the news of the day—the news of the world. I wonder how many boys are interested in the Dreyfus case and are rejoicing that public sentiment has proved a pressure against tyranny, and that one man even has recovered his natural rights."

"Run on!" I should think I had. Just hear it thunder! What will become of all those pretty hats? No, I won't worry—a little wetting won't hurt the boys.

Now let us get our Fourth of July ice-cream ready, and do our celebrating after the boys get home. Yes, I know I am one of those women who are "always thinking about the boys."

Maxims of Joubert.

The true bon-mot surprises him who makes it as much as those who hear it.

Few men are worthy of experience. The greater part allow it to corrupt them.

Perhaps, for worldly success, we ought to have virtues that make us beloved, and faults that make us feared.

Conceited people always seem to me, like dwarfs, to have the stature of a child, and the countenance of a man.

A little vanity, and a little gratification of the senses. These are what make up the life of the majority of women and of men.

It is never other people's opinions that displease us, but only the desire they sometimes show to impose them upon us, against our will.

We may fall into inconsistency through error. It is a fine thing to fall into it through truth, and then we must throw ourselves into it headlong.

The man who sings when he is alone, and when, so to speak, his whole being is at a standstill, shows by this alone a certain balance and harmony in his condition—all his strings are in tune.

To receive benefits from some one is a surer way of gaining his affection than to render him a service. The sight of a benefactor is often irksome, while that of a man we are benefiting is always pleasant. In loving him we love our own handiwork.

Contradiction only irritates us, because it disturbs us in our peaceful possessions of some opinion, or of some pre-eminence. This is why it is more irritating to the weak than to the strong, and to the infirm than to the healthy.

First Camp-Meeting in America.

"The effect of the McGee Brothers' preaching—especially of John McGee—at a Presbyterian quarterly meeting on the banks of Red River, in Kentucky, was so startling, and seemed so clearly to indicate that it was the result of Divine agency or some mysterious force possessed by the preacher, that the news of the occurrence spread rapidly in all directions throughout that part of the State, and attracted unbounded interest," writes Clifford Howard in the July Ladies' Home Journal. "If it did not at once awaken a responsive religious feeling, it at least excited curiosity, and when it was learned that the McGee Brothers were to hold a meeting at Russellville, Kentucky, a newly settled town in Logan County, near the Muddy River, persons from all parts of the adjoining country, irrespective of their religious beliefs or church

allegiance, prepared to attend. It soon became evident that the four walls of a county meeting-house would not suffice to hold the large numbers that were making ready to go to Russellville. The problem thus presented was solved by determining to hold the meeting in the open air. Those coming from a distance were prepared to camp; it would be no hardship to them to remain out-of-doors. The recent experience at Red River had proved this. It was not expected by those who were coming that the lodging accommodations at the village of Russellville would be sufficient by any means. Why, therefore, attempt to house the people? Prepare a camping-ground, and let the meeting be a 'camp' meeting. This, then, was the origin of camp-meetings; and the first one held in America was on the banks of the Muddy River, near Russellville, Ky., in the month of August, 1799—one hundred years ago. Not that religious worship had never before been held in the open air, but the special feature of camping out and the nature of the services made the camp-meeting a distinctive institution, and characterized this particular gathering on the Muddy River as the first of its kind."

Pointed Paragraphs.

Garnets preserve health and joy.
Emeralds, friendship and constancy.
It's a short street that has no saloon.
Cat's eye is a charm against witchcraft.
The cellar excavator always gets in his work.

Sapphires impel the wearer to all good works.

The mule doesn't admire the short ears of the horse.

A lie often cripples where a cannon would be ineffective.

The lazier a man is the harder it is to discourage him.

Diamonds produce somnambulism and spiritual ecstasy.

The tramp would rather go to jail than be caught in the toils.

Amber is a cure for sore throats and granular swellings.

Opals are fatal to love and bring discord to giver and receiver.

Better kiss the girl before you propose—she may refuse you.

Coral is a talisman against thunder and evils by flood and field.

Happiness often depends upon what we do with our spare time.

The man who says that all men are thieves will bear watching.

Some men stop traveling afoot as soon as they begin to get ahead.

The onyx is apt to cause terror to the wearer as well as ugly dreams.

Truth may be stranger than fiction, but it is less valuable in literature.

Base ball is the one business in which an occasional strike is necessary.

A baggage-master checks your trunks and a physician checks your gripe.

The man who makes the most dollars usually makes the fewest friends.

The topaz is said to be a preventive to lung troubles and imparts strength.

The season is drawing nigh when the plumber will have a lead-pipe cinch.

The same food that stupifies the brain by day keeps it unduly active at night.

It is said that the agate quenches thirst and if put into the mouth allays fever.

Probably the tide has something to do

with the number of knots made by a vessel.

The ossified man in the museum leads a hard life, but the fat lady makes the most of it.

Experience is such a costly teacher that it keeps a man hustling to pay the tuition fees.

For every man who is unable to stand prosperity there are millions who would like to try.

One swallow doesn't make a spring; neither does one bottle of hair tonic make a football player.

It is said that an up-to-date west side maid who formerly walked in her sleep now rides a chainless wheel.

"There are no birds in last year's nests," says a poet. True—and, by the way, there are no nests for next year's birds.

A great many pictures are overdrawn and a great many bank accounts would be were it not for the watchful cashier.

When a man's mind is inflated with a visionary scheme and he attempts to practically apply it, the result is usually a puncture.

All precious stones are purified by a bath in honey, according to an old idea. Many curious notions are current in regard to gems.

The man who makes the most display about giving up his seat to a lady in a crowded car always does so just as the car reaches his destination.—Chicago News.

One Hundred Years Ago.

Stage coaches were used for traveling and they were very slow.

Newspapers were heavily taxed, and, moreover, everyone who advertised was taxed.

In England men had to pay a tax if they powdered their hair and buy a license in the bargain.

The poor complained they could buy no meat because the rich bought it all to feed their dogs, and it was advised that the dogs be killed.

The women of society one hundred years ago wore patches of powder and quilted skirts and the men were attired in knee breeches, ruffled shirts, wore queues, took snuff, fought duels and turned highwaymen when all else failed.

A Rose That Thrives in a Cemetery.

The best white rose, according to Ladies' Home Journal, for cemetery planting is Madame Plantier. It is a variety of somewhat slender growth, and on this account is sometimes termed a half-climber. But it requires no trellis, being much more graceful when allowed to train itself than when given a support of any kind. It throws up a great number of stalks, on which great quantities of milk-white double flowers are borne in clusters during June and July.

Samples copies of Kansas Farmer sent free on application.

Every young person should take a course in bookkeeping, penmanship, shorthand and typewriting.

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Instruments, Drums, Uniforms & Supplies. Write for catalog, 445 illustrations. FREE! It gives Music and Instructions for New Bands.
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H. A. HEATH, Advertising Manager.

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Display advertising, 15 cents per line, agate (fourteen lines to the inch).
Special reading notices, 25 cents per line.
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Electros must have metal base.
Objectionable advertisements or orders from unreliable advertisers, when such is known to be the case will not be accepted at any price.

To insure prompt publication of an advertisement, send cash with the order; however, monthly or quarterly payments may be arranged by parties who are well known to the publishers, or when acceptable references are given.

All advertising intended for the current week should reach this office not later than Monday.
Every advertiser will receive a copy of the paper free during the publication of the advertisement.

Address all orders—

KANSAS FARMER CO., Topeka, Kans.

The Kansas horse, John R. Gentry, on the 12th inst., at Detroit, Mich., paced a mile in 2:02 $\frac{1}{2}$. It was the feature of the harness race at Highland Park. He went against the track record of 2:02, and while he failed to beat it, paced a magnificent mile. His time by quarters was 0:31 $\frac{1}{4}$, 1:01 $\frac{1}{2}$, 1:33 $\frac{1}{2}$, 2:02 $\frac{1}{2}$.

That the power, as well as the star, of empire is taking its course westward is the admission made by Wall street last Saturday in conceding that "Chicago has made a considerable number of time loans during the past week to Wall street houses on more favorable terms than obtainable from New York institutions."

The mechanical department of the Kansas State Agricultural College is installing a vertical turning- and boring-mill taking work up to 52 inches in diameter. Seven thousand dollars is being invested in heavy machinery. The shops are constructing a large portion of their new appliances from the pig iron as it comes from the blast-furnace, and bar as it comes from the rolling-mill.

There is soon to be published by the Werner Company a magnificent book called "The United States Army and Navy." It will be a complete history of these arms of Government from the era of the Revolution to the close of the Spanish-American war. The book is to be in the highest possible style of the art of book-making, but is to be sold at a price far below that at which such books are usually placed on the market.

D. B. Robinson, president of the St. Louis & San Francisco road, is authority for the statement that the wheat crop of Oklahoma, which is being harvested, will amount to 40,000,000 bushels and that the cotton crop will aggregate 200,000 bales. The winter wheat crop of Kansas he estimates at 35,000,000 bushels, and the partial failure of that crop will be more than covered by the increased acreage of corn, rye, and other grains, which will be just as profitable for the railroads to carry. In Missouri the activity is greater than it ever has been. Prices have almost doubled for these products, and this has stimulated production. As a result the tonnage has greatly increased. The west-bound movement of harvesting machines is now unusually large, and altogether railroad interests in southwestern territory are in an exceedingly flourishing condition.

THE AUTOMOBILE.

The general reader has, up to this time, considered accounts of "automobiles" more interesting than important. An automobile is a carriage or vehicle which is propelled over common or improved roads by some power the mechanism of which is a part of the vehicle, so that neither team nor other separate propelling force is needed. Several means of power are used on automobiles, among them being electric storage batteries, gasoline, steam, and compressed air.

It has not been supposed that the automobile would seriously frighten anybody, however much they may exercise the timidity of horses. But now comes the stockholder in the smaller type of railroad—the short line usually designated as a feeder to some great trunk line—and declares that the automobile, as a conveyor of both passengers and freight, threatens to divide the

small business his little road has heretofore enjoyed.

Whether this frightened stockholder is worse scared than he is likely to be hurt, or whether he has secretly disposed of his stock in the railroad and invested in automobile stock which he wishes to boom, can not be definitely determined at this stage of the proceedings. But the farmer who is somewhat remote from the railroad station, or who is exasperated at the indifferent service rendered by "calamity branch," will not be averse to even a remote prospect of better service from the automobile.

AFTER THE TRUSTS.

After the meeting of the commercial travelers in New York last week the statement was made that the formation of trusts had thrown 35,000 traveling men out of jobs and reduced the wages of a good many who still hold their jobs.

This seems like a stunning sort of statement, but if it is a fact it will come near doing up the trusts. The commercial travelers are men of brains as a general proposition and also of gall. They are the sort of people who make politicians tremble, because they will make the politician think they come near running about everything in their respective wards, whether they do or not. A man who has a safe and sure job may do some considerable theorizing, but if he loses his job he is put in shape where it is necessary to do something more than theorize. If there are 35,000 commercial men out of jobs on account of trusts they will make things lively for Congressmen and legislators who want to let trusts alone.—Merchants' Journal.

Since when did the type of politician of which Congressmen and legislators are made, care anything about the "fellow that is down?" Thirty-five thousand commercial men, while they were holding their jobs, were able to exhibit 35,000 job-lots of brains and as many of gall. Any one of them could tell the merchant how to run his business so as to make it a success. Any one of them could tell the manufacturer how green he was in sticking to his antiquated notions, or in adopting some new-fangled ideas which any man "on the road" knew was all nonsense. Any one of them could tell the "fool farmer," when corn was low and hogs were high, that he ought to be smart enough to see that the way to make money is to have hogs, have lots of them; to feed up all his own corn and buy from his neighbors. If the next year hogs were down and corn was up any one of these same traveling men could tell the farmer what a fool he was making of himself to bother with hogs when it was "plain as the nose on a man's face" that the way to pay his debts and be independent was to sell corn and pocket the money without any such foolishness as the hog business.

Any such wise and knowing individual as the traveling man drawing a fat salary, the one individual to whom the august hotel clerk would take off his hat, from whom he would take all kinds of abuse, smilingly, and for whom he would reserve the best room in the house on suspicion of his coming, the traveling man on salary, whose visage if set in austerity against the ordinary, every-day citizen would indicate that he could eat any such commodity as a hackman for breakfast and retain an appetite as sharp as a steel trap for a double ration for dinner, the traveling man in position—35,000 of him possessed of brains and gall and salary was indeed an individual to be respected and feared and truckled to by legislators, Congressmen, Senators, cabinets, and Presidents. But the traveling man out of a job, out of pay, poor, and growing poorer, is not credited with having an oversupply of brains, is found to be rapidly losing his gall, and, to the ward politician, is about as interesting as "a last year's bird's nest."

The Kansas Farmer makes these observations, not for the purpose of ridiculing the great and sudden change in the position, influence, and manner of the once proud traveling man, but to point out the importance of prosperity in its relation to individual influence and the relations of individuals to society. There are those who hold that a fair degree of prosperity is within reach of every individual in this country who will either adapt circumstances to himself or himself to circumstances. If this be true, it is the duty of every one to prosper. The case of the 35,000 traveling men is but an exemplification of the severity of the penalty which organized society visits upon those who do not prosper even though the lack of prosperity appears to be from causes over which the unprosperous had no control.

True, there is now propagated with much energy a doctrine that (1) "the world owes every man a living;" or that (2) "society should provide place and opportunity for all;" or that (3) "God will provide." But (1) the world does not recognize any such obligation; (2) society is an aggregation of individuals and the sum of human good is the sum of the results of individual ef-

forts to make available the bounties offered by nature to well-directed efforts. While the country is but half developed there is place and there is opportunity for each individual who will take the trouble to properly equip himself for useful work, and set diligently about finding it, and continue vigorously to perform it. (3) God has provided opportunities, the possibilities of which we do not realize, but are learning year by year. He who assumes that God will provide, except in response to the intelligent use of his utmost individual powers, is guilty of sacrilege, and he should remember that no such cant will protect him from the penalties which society visits upon the unthrifty.

If the traveling man's occupation is gone he will have to find another, even though the despised trust be the cause of his misfortune.

OUR AGRICULTURAL COLLEGE.

The regents of the Kansas State Agricultural College held a five days' session last week. This was devoted to the many details of getting the institution into working order in time for the throngs of students who will seek its opportunities next September. The employment of persons for the various branches of the work was practically completed except as to the president. The first and most important position remains vacant. It is not to be assumed however, that consideration of this important matter was overlooked. Postponement was only to make assurance doubly sure of the selection of the right man.

It will be remembered that at the time the presidency of the college became vacant the Kansas Farmer, after carefully looking over the situation, suggested that the best available material of which to make a new president was the chairman of the board of regents, Prof. E. T. Fairchild. This suggestion has been most favorably received by such of the agricultural and kindred organizations of the State as have been able to give attention to the subject and by prominent papers of the State so far as they have become acquainted with Professor Fairchild. The ministers and citizens of Professor Fairchild's home community have added their cordial endorsement, coupled with regrets that his acceptance of the place would take him from their immediate service. There seems to be no room to doubt that on reassembling the regents will tender the presidency to Professor Fairchild by a vote unanimous except for his own. This solution of the problem with which every member of the board has conscientiously labored will place at the head of the college a strong and experienced man whose keen appreciation of merit will be an incentive inspiring everyone of his associates to labor to the extent of his ability, and creating additional ability by turning whatever of discord may have existed into useful work.

BOARD OF INSTRUCTION, KANSAS STATE AGRICULTURAL COLLEGE.

FACULTY.

[Note.—Words in parenthesis indicate the college or university at which the person graduated. Abbreviations, A. M., M. S., etc., indicate the degree to which the person graduated, as A. M., Master of Arts, M. S., Master of Science, etc.]

Ernest R. Nichols, A. M. (University of Iowa), acting president and professor of physics and electrical engineering.

John D. Walters, M. S. (Kansas State Agricultural College), professor of industrial art and designing.

Alexander B. Brown (Boston Music School), A. M. (Olivet), professor of music.

Julius T. Willard, M. S. (Kansas State Agricultural College), professor of applied chemistry.

Albert S. Hitchcock, M. S. (Iowa State Agricultural College), professor of botany.

Paul Fischer, B. Agr., M. V. D. (Ohio State University), professor of veterinary science.

Henry M. Cottrell, M. S. (Kansas State Agricultural College), professor of agriculture, superintendent of farm.

Miss Mary F. Winston, Ph. D. (Goettingen), professor of mathematics.

Fredric Augustus Metcalf, O. M. (Emerson College of Oratory), professor of oratory.

George F. Welda, Ph. D. (Johns Hopkins), professor of pure chemistry.

Miss Minnie A. Stoner (Boston N. S. of H. A.), B. S. (South Dakota Agricultural College), professor of household economics, dean of women's department.

Joseph D. Harper, M. S. (Rose Polytechnic Institute), professor of mechanics and engineering, superintendent of workshops.

Edwin A. Popenoe, A. M. (Washburn), professor of horticulture and entomology, superintendent of orchards and gardens.

Herbert J. Davenport, Ph. D. (Chicago), professor of history and economics.

George W. Kendrick, professor of English.

Miss Harriet Howell (Pratt Institute), superintendent of domestic art.

Joshua D. Rickman (I. T. U.), superintendent of printing.

OTHER OFFICERS AND INSTRUCTORS.

Miss Lorena E. Clemens, B. S. (Kansas State Agricultural College), secretary.

Septimus Sisson, B. S. (Chicago), V. S. (Toronto), associate professor of veterinary science.

Miss Josephine C. Harper, instructor in mathematics.

Miss Alice Rupp, instructor in English.

Miss Josephine Berry, librarian.

THE EXPERIMENT STATION.

The State of Kansas has, at Manhattan,

under one management, two institutions which are closely related to each other. These are (1) the agricultural college, and (2) the experiment station. The agricultural college is supported by interest on the endowment of nearly \$500,000, by appropriation from the State, by appropriation from the Government and by some minor incomes. The experiment station is supported by an appropriation of \$15,000 per year from the Government. The total income of the dual institution for the coming year will be about \$90,000. Officers and employees of the experiment station are nearly all officers and employees of the college. One board of regents governs both. The college is the largest of its class in the world and bids fair to continue its pre-eminence. It was never so widely known as now and there is no abatement of the purpose to keep it before the people by judicious advertising. The experiment station has never attained first rank among institutions of its class in the United States. It has done a good deal of good work but others have done more. At the meeting last week the regents gave some attention to this fact, and while they will doubtless give further study to details they proceeded so far in the matter of remedy as to adopt formally a resolution directing that two lines of experimental work, namely, plant-breeding and soil physics, be prosecuted with vigor.

These are branches of research which can be prosecuted with little expense while that little goes largely for the class of expert labor which advanced students of the college are glad to do at reasonable compensation. In financial importance to the farmers of Kansas nothing exceeds the improvement of our farm plants as to quantity and quality of product and as to adaptation to our soil and climate, by methods well known to the breeder of improved live stock, methods which have proved equally applicable to plants except that the plant-breeder requires a knowledge of manipulation which the stock-breeder need not acquire. Equally important is the discovery of the proper treatment of the soil so that its fertility may be utilized and conserved and so that the harmful effects of drought may be averted or at least mitigated.

It is not to be presumed that in directing that special attention be given to these two branches of experimentation the regents intended that others should be overlooked. A good deal can be accomplished with \$15,000 every year, especially when buildings and equipment are furnished by the college as seems to be the intention of the act under which the appropriations are made.

Prospects for the future of the college and of the experiment station are pleasing. Doubtless the time is approaching when, by thorough education along the lines which make the farmer a scientist, and by such scientific development of improved methods and improved plants and animals as shall yield larger, more valuable and surer returns, the Kansas farmer of the future is to maintain his place in the front ranks of the industrial army and to earn and enjoy a larger measure of the good things of life than is possible to those who fail to grasp the opportunities of the present.

Our friend, F. D. Coburn, secretary of the State Board of Agriculture of Kansas, tells us of a 52-pound fleece from a 4-year-old Merino ram, the ram after shearing weighing 120 pounds. The same ram sheared 37 $\frac{1}{2}$ pounds when 2 years old, and 44 $\frac{1}{4}$ pounds when 3 years old. He says—and we never doubt what he says—this ram was born and raised in Kansas. If any of our Merino breeders in this State care to run up against such figures as these, we would be very glad to hear from them, with such facts and figures as they have to submit. It will certainly not hurt us as a State to give publicity to some of our best clips, and also some of our best weights for mutton lambs. We have a good State for sheep, both of the wool and mutton breeds, whether we have any 52-pound fleeces or not, and to report the best we have, and discuss it will have a stimulating effect upon the industry, and if we fail to produce as heavy a fleece as Kansas maybe we can produce a much finer and better quality. Report what you have.—West Virginia Farm Review.

"Duly Feed Man and Steed." Feed your nerves, also, if you would have them strong. Blood made pure and rich by Hood's Sarsaparilla is the only true nerve food. Be sure to get Hood's. It never disappoints.

Hood's Pills cure constipation. Price, 25c.

\$10 to Boston and Return, via Nickel Plate Road, August 11 and 12. Good returning for arrival at initial starting-point not later than August 31. Write General Agent, 111 Adams street, Chicago, for particulars and sleeping-car accommodations.

Government Crop Report.

Preliminary returns to the statistician of the Department of Agriculture on the acreage of corn planted indicate an increase of about 5 per cent over the acreage harvested last year. Of the twenty-one States having 1,000,000 acres or upward in corn last year, all but Virginia, Kentucky, and Ohio show an increase, and the decrease in the three States named is very small. A much larger increase than has actually taken place is reported as having been contemplated, but a late or otherwise unfavorable planting season has restricted operations in Illinois, Indiana, and several other important States. The average condition is 86.5, as compared with 90.5 on July 1, 1898, 82.9 at the corresponding date in 1897, and 91.1, the mean of July averages for the last ten years. The condition of the principal States is as follows: Ohio and Missouri 85, Indiana 90, Illinois 86, Iowa 81, Kansas 92, and Nebraska 93.

The condition of winter wheat has further declined during the month of June, being 65.6 on July 1 as compared with 85.7 on July 1, 1898, 81.2 at the corresponding date in 1897, and 82.4 the mean of July averages for the last ten years.

The average condition of spring wheat is 91.7, as compared with 91.4 one month ago, 95 on July 1, 1898, 91.2 at the corresponding date in 1897, and 88.7 the mean of the July averages for the last ten years. The principal State averages are as follows: Minnesota 95, Iowa 93, Nebraska 73, South Dakota 102, North Dakota 94.

The average condition of winter rye is 83.3, as compared with 93.8 on July 1, 1898, 95 at the corresponding date in 1897, and 90.6 the mean of the July averages for the last ten years. The condition in New York and Pennsylvania, the two principal winter rye-producing States, is 93 and 87, respectively.

The average condition of spring rye is 87.7, as against 96.9 on July 1, 1898, 90 at the corresponding date in 1897, and 90.6 the mean of the July averages for the last ten years. The condition in Wisconsin, the principal spring rye-producing State, is 94.

The average condition of the oat crop is 90, as against 88.7 one month ago, 92.8 on July 1, 1898, 87.5 at the corresponding date in 1897, and 87.7 the mean of the July averages for the last ten years.

The average condition of barley is 92, as against 91.4 last month, 85.7 on July 1, 1898, 88.5 at the corresponding date in 1897, and 88.3 the mean of the July averages for the last ten years. The condition in New York and California is 88, in Wisconsin 98, in Minnesota 96, Iowa 100, South Dakota 95, and North Dakota 93.

There is an increase of 1 per cent in the acreage in potatoes, and the crop promises well. The wool reports indicate the average weight per fleece as being 5.95 pounds, an increase of .15 pound over last year.

The proportion of the wheat crop of 1898, still on farms, is reported at 9.5 per cent, or about 64,000,000 bushels.

The condition of the forage crops and principal fruits will appear in the printed report, the unprecedentedly large number of correspondents reporting this month having rendered it impossible to tabulate all the products reported upon in time for the telegraphic synopsis, even by working overtime.

W. W. Short, of Manhattan, Kans., now engaged in traveling principally for pleasure and observation, has been gathering some facts concerning the egg traffic of the country, and says that during 1898 over 17,000,000 dozen eggs were used by the cotton-mills of the United States in coloring calico. This year it is estimated that double that number will be used. About four weeks ago twelve car-loads of eggs were shipped by Perry Bros., from Manhattan, Kans., to be put in cold storage. Manhattan is in a very productive part of Kansas and its annual receipts of eggs, poultry, and butter are very large. Thirty dozen to a case, 400 cases to a car-load, at 10 cents a dozen for the eggs means \$14,400. And that is one of the growing industries of Kansas. The butter and eggs of Kansas farms beat the output of the Klondike.

The official agricultural returns for Great Britain for 1898 give the total area of land as 32,477,000 acres, a decrease from the previous year of 43,000 acres. Of this total 27,857,000 acres were farmed by tenants and 4,520,000 acres only by the owners—a considerable decrease of the latter since 1888. The acreage in wheat was 2,102,000, an increase over 1897 of 11.3 per cent, and over 1896 of 24.1 per cent, and nearly equal to that of 1894. Lincolnshire had the largest acreage, Norfolk next, Essex third, and Suffolk fourth. The average yield for the whole country was 34.74 bushels per acre, an excess of 5.55 bushels over the average of the decennial period 1888-97. Of barley the average acre yield was 35.75 bushels; of oats, 40.76 bushels.

Good bookkeepers and stenographers are always in demand at large salaries.

WEEKLY WEATHER-CROP BULLETIN.

Weekly Weather-Crop Bulletin of the Kansas Weather Service, for week ending July 17, 1899, prepared by T. B. Jennings, Section Director:

GENERAL CONDITIONS.

A fine growing, working week, with temperature about normal in the central counties, slightly below normal in the eastern and western, and with the rainfall in excess in the larger part of the western division, across the middle division from Kiowa to Dickinson, and in the central and northern counties of the eastern. Light rains in the southern counties of the middle and eastern divisions and in the central northern counties.

RESULTS.

EASTERN DIVISION.

Corn is tasseling and silking in the middle and northern counties; it tasseled short in the southeastern on account of too much rain. Oats are mostly harvested and generally a good crop; in Atchison some oats were injured in shock by the rains. Flax is being harvested in Allen. Haying is in progress in several counties. The second crop of alfalfa is being cut in Morris, and is in stack in Chase and Pottawatomie. Potatoes are rotting in Allen, Bourbon, and Osage; grapes rotting in Atchison. Fall plowing has begun in Chautauqua. Grass-fed cattle are being marketed from Chase. Watermelons are ripe in Chautauqua.

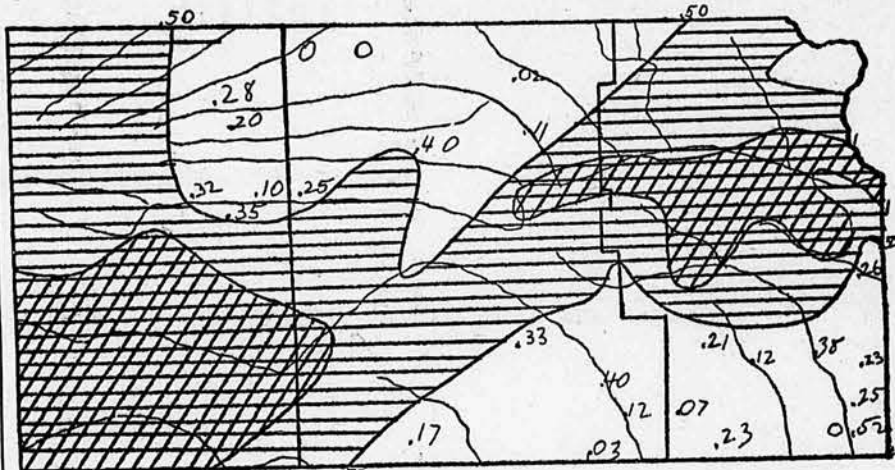
Allen County.—Fair week for work; most of the oats and flax harvested, good crops; potatoes rotting badly, too much rain; corn doing well; haying in progress, a large crop.

Atchison.—Corn is beginning to tasseland silk, and too large to plow; oats mostly cut, much better than expected, some in shock injured by wet weather; grapes rotting badly.

Bourbon.—Corn tasseled low, but looks well; flax fair; potatoes rotting; oats small acreage and fair; grass good.

Chase.—Corn in tasseland, promises large crop; second crop alfalfa in stack; potatoes and gardens fine; marketing grass-fed cattle begun.

Chautauqua.—A good week for work; haying and fall plowing begun; threshing



ACTUAL RAINFALL FOR WEEK ENDING JULY 15, 1899.

continues; soil in good condition for the plow; watermelons on the market.

Cherokee.—A good growing week; threshing begun, yield of wheat some better than expected, quality generally good; oats well filled; flax late; corn generally small; apples poor crop; no peaches.

Coffey.—A growing week; some late corn cultivated; early corn in very fine condition.

Crawford.—Fine week for farm work, and good for crops; corn growing finely; wheat threshing begun.

Doniphan.—Corn laid by in good condition; oats good but somewhat damaged by rain; potatoes, all vines but few tubers; apples a fair crop; hay crop good.

Douglas.—Wet week, wheat sprouting in shock; much hay being spoiled; corn growing fairly well, but some very weedy.

Elk.—One of the best crop weeks of the season; all crops doing well.

Franklin.—Fine weather for corn; oats all cut; flax about ripe, some cut.

Greenwood.—Fine week for growth of crops; corn generally clean and promising; prairie-grass good.

Jackson.—A good growing week; much hay put up in good condition.

Jefferson.—Fine week for all work; corn very fine; flax harvest begun, with fair promise of crop.

Johnson.—Corn in fine condition; most of the wheat and oats in stack; flax a good crop.

Labette.—A good week for stacking and threshing; corn needing rain.

Lyon.—All crops doing well; apples abundant.

Marshall.—Wheat harvest done; oats harvested well along, grain good; corn prospect best for years; tame hay crop very good; apples and plums developing well.

Miami.—Oats good; flax very good; corn prospects very favorable; tame hay meadows yielded well; crop outlook very good.

Morris.—A good week for growing crops; millet heading; corn in silk and tasseland; some in roasting-ear; early apples gone; grapes doing well; second alfalfa crop being cut; some wheat taresed, badly shriveled; grass very fine.

Nemaha.—Corn tasseling and silking; rain stopped oats harvest and haying; some danger of potatoes rotting; apples are falling some; pastures fine.

Neosho.—Water in bottoms receding; great damage to crops in bottoms; upland corn fine.

Osage.—Potatoes rotting, too wet; corn in fine condition; blackberry crop short; peaches scarce; grapes will average half a crop; prairie-grass fine.

Pottawatomie.—Corn laid by in fine condition; second crop alfalfa in stack; new wheat coming into market, yield good, grade 3.

Riley.—Temperature and rainfall normal; sunshine above normal; a favorable week.

Shawnee.—Corn growing finely, tasseling and silking; oats cut; very fine; wheat

stacking begun; pastures good; cattle doing well.

Wyandotte.—Corn tasseling and doing well; wheat stacking progressing; ground in fine condition for fall plowing; pastures fine.

MIDDLE DIVISION.

Wheat harvest is generally over. Oats harvest is progressing in Ottawa and Jewell yet, and is a good crop. Wet weather is damaging oats in shock in Cowley. Threshing is progressing in most of the counties; in Cloud the yield is better than expected; in Dickinson the wheat is good in quality; in Marion the wheat is not as good as anticipated, but the oats are the best for some years; in Sumner the wheat is light and poor. Corn is in fine condition and is in the roasting-ear stage in the central counties. The second crop of alfalfa is being cut in Jewell, Reno, and Saline. Apples are abundant in Reno, light crop in Sedgwick. Plowing for fall seeding has begun in Rush and Stafford.

Barber.—Harvest about ended, much of the wheat not worth threshing; corn in fine condition; fodder crops never more promising; grass and water abundant and cattle in fine condition.

Barton.—Harvest over; corn fine and roasting-ears in market; grass abundant.

Butler.—A good growing week; corn in fine condition; alfalfa looking very well.

Cloud.—Corn continues to improve and in fine condition; cloudy weather interferes with alfalfa-haying; harvest about done, threshing in progress, yield better than expected.

Cowley.—A fine week for farm work; too damp to thresh well; oats damaging in shock; corn doing very well.

Dickinson.—Threshing begun, wheat good quality; oats good; early corn about made, prospects good for best crop in ten years.

Harper.—Very dry; growing crops and pastures needing rain—not suffering yet.

Harvey.—Corn in first-class condition; harvesting finished and stacking in progress; oats good.

Jewell.—Corn continues to grow rapidly; oats harvest in progress; cutting millet and second crop alfalfa.

Marion.—Oats and wheat harvest completed, threshing in progress; wheat not so good as expected; oats, best in years; corn in fine condition and indicates largest crop for years; alfalfa, sorghum, and grass fine.

Ottawa.—Wheat harvest finished and threshing begun, some pieces very good,



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fine condition; corn looking fine, more rain needed soon; very little fruit this year.

Kearney.—Fine week; late crops of sorghum and Kafir growing rapidly; grass luxuriant; some wheat and barley harvested.

Morton.—Showers and cloudy weather improving pastures and fodder crops.

Ness.—Fine growing weather; corn looking better than for years, early corn in roasting-ears; forage crops looking well; harvest nearly finished; oats and barley poor.

Norton.—Good growing week; corn tasseling; second crop alfalfa ready to cut, much of it kept for seed; chinch-bugs hurting corn near small grain-fields; harvest in progress; wheat short, but good berry.

Scott.—Everything looks fine; harvest begun.

Sherman.—A good growing week; corn doing well; rains have benefited all growing crops; harvest general; pastures fine and stock doing well.

Sheridan.—Wheat harvest well along; spring wheat, oats, and barley good crops; corn growing rapidly, but will need rain soon; pastures good; chinch-bugs appearing.

Thomas.—Fine growing week; harvest general; corn growing rapidly, early planted tasseling; grasshoppers bad on corn in western part.

Trego.—Harvest continues, straw short, good heads; corn in silk and tasseland; second crop alfalfa very heavy yield, good quality; potatoes abundant and ripening.

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Horticulture.

PLANT PHYSIOLOGY.

By Prof. A. S. Hitchcock, read before the Shawnee County Horticulturists, State Reform School, July 6, 1899.

Plant physiology is a study of how plants live. Within the limits of this paper I can merely touch upon those parts of the subject which are of economic importance to the horticulturist. And I shall limit my remarks and examples chiefly to those plants which are familiar in the field and orchard.

Ordinary plants consist of a few primary organs whose structure depends upon the function they are to perform. These organs are the root, the stem, the leaf (the two last together being called the shoot), and the flower and fruit which, from a botanical standpoint, are only modifications of the shoot, and with which I shall not concern myself in this discussion. Let us take up briefly each of these in succession.

THE ROOT.

The root is primarily the absorptive organ of the plant and furthermore serves to hold the plant in place in the soil. It is more or less finely divided but each part consists of a central woody cylinder surrounded by softer tissue called the cortex. The ultimate branches of the root, known as the rootlets, are covered for a short distance back of the tip with fine velvety hairs, barely visible to the naked eye, called the root-hairs. If the dirt is carefully washed from the roots of a plant growing in loose soil, fine particles will still remain attached to the portion provided with root-hairs. Since the rootlet elongates at the end no root-hairs are formed there, for if they were they would be scraped off as the end advanced through the soil. The soft tissue at the end of the rootlet is protected from injury by a cap of more resisting cells which gradually wear off as they impinge against the particles of soil. The little root-hairs are the actual absorptive portions of the root. They occupy an inch or two of the region immediately back of the tip, the zone dying off at one end as it advances at the other. The individual hairs are tube-like extensions of the outer cells of the cortex. They are thin-walled and very active. They have the power of greedily absorbing the water from the soil-particles with which they come in contact. After being absorbed, the water is forced through the cortex into the central cylinder and then passes up into the stem, sometimes with considerable pressure. This root-pressure is greatest in the spring when the sap starts, and may then be equal, in extreme cases, to two or three atmospheres. This is what causes the bleeding of plants when cut. In small plants this pressure may be so great that drops of water are forced out at the points of the leaves. This shows very nicely in a field of young corn in the morning. During the night evaporation from the leaves ceases but the roots continue to pump up the water and hence little drops exude from the ends of the leaves. Tomatoes are subject to a disease, when grown in forcing-houses, that is caused by the accumulation of water in the leaves due to excessive root-pressure and reduced evaporation from the leaves. The cells of the leaves are swollen and distorted into little bladders containing water.

It is the function of the root to take up from the soil the mineral food of the plant and transfer it to the shoot. These minerals are in solution in the soil water and are taken up in the form of a liquid—never as a solid. Of the mineral elements necessary to plant growth all are likely to be present in the soil in sufficient quantity except nitrogen, potassium, and phosphorus. Some soils may be lacking in lime, but this is not often the case in Kansas. Nitrogen is most easily available to the plant when in the form of nitrates. As nitrates are easily soluble in water they are likely to be washed out of the soil. In cultivated fields the furnishing of the nitrogen supply becomes a serious problem. There are two distinct methods by which this may be accomplished, by a dressing of manure, either barn-yard or the so-called artificial manures or fertilizers, or, secondly, by growing leguminous crops upon the field. It is well known that legumes have the power to absorb nitrogen from the air and transfer it to the soil in a form suited to the plant. Which method the horticulturist should use depends upon conditions, the second being a comparatively slow process but inexpensive, while with the first, the amount of nitrogen added is entirely within the control of the operator and is, therefore, more suited to intensive methods. It must be remembered that too much nitrogen is hurtful to the plant and may produce serious disease.

Phosphorus in the soil is usually in the form of phosphates and is not so readily washed out. When exhausted from the soil it must be supplied in the form of artificial fertilizer such as the Florida "phosphates." The salts of potassium are es-

sential to the production of carbohydrates in the plant. Intensive methods of fruit-growing nearly always require after a few years the addition of potash fertilizer to the soil. All the mineral food in the soil, with the exception of part of the nitrogen, is made available to the plant by the gradual disintegration or solution of the soil-particles, which in their turn were derived from the original rock of the locality. This is a gradual process but suffices for the needs of the native vegetation because the food is in part restored to the soil by the decay of the plants. Horticultural methods, however, soon exhaust the soil in the less abundant but very essential elements mentioned. By lying fallow the soil would gradually regain its fertility, but too slowly for the purposes of horticulture. By judicious rotation from the beginning the process of exhaustion can be retarded, but in such crops as strawberries artificial fertilizing usually pays well.

The gradual rise of soluble material to the surface of the soil is illustrated by the injurious effects which sometimes follow over-irrigation. The water reaches far down into the subsoil and takes up considerable mineral matter. The water evaporates at the surface, leaving there a layer of various kinds of salts which increases in time till ordinary plants are unable to live in the soil. Various weeds thrive for a time but as the amount of mineral increases these are replaced by plants such as are found in salt marshes and along the seashore. Good drainage and limiting the supply of water to what is actually needed will prevent these disastrous results.

Another point that must not be overlooked is the necessity that the roots be abundantly supplied with air. If the roots are deprived of air they gradually suffocate and die. This is one of the reasons why an excessive amount of water around the roots is deleterious to ordinary land-plants. Marsh-plants have special methods of conducting air down to the roots. This need of air to the roots is another reason for keeping the soil porous.

THE STEM.

The function of the stem is to carry water and mineral matter from the roots to the leaves and to carry the elaborated food from the leaves to the roots, and also to serve as a support to the leaves, flowers, and other appendages. The structure of such a stem as the apple will serve to illustrate the manner in which these functions are performed. An examination of a twig will show that there are several distinct regions, the pith in the center, then a cylinder of wood, a zone of what botanists call the phloem, the cortex, and, finally, the epidermis. The cylinder of wood is made up partly of wood-cells which give the necessary strength and partly of small tubes which serve as channels for carrying the water from the roots. The water in which is dissolved the mineral matter from the soil travels upward in the young wood (sap-wood) and is called the crude sap. The heart-wood is mostly dead and carries very little water. The phloem, like the wood, consists of strengthening cells or bast fibers and tubes for carrying sap. The sap which is carried here, however, is not soil-water, but is the elaborated sap filled with organic nourishment. Between the wood and the phloem is a very thin layer of soft tissue called the cambium layer. The cortex is a layer of rather soft tissue usually green, found on twigs, in which considerable starch is stored in winter. This is protected by the epidermis. Like the root the stem must have air. The air gains access through the minute warts in the epidermis, known as lenticels. As the twig grows older, the epidermis and cortex wear off and the phloem is exposed. But meantime there is developed a layer of corky tissue which serves to protect the interior from mechanical injury and also from drying out. The phloem and cork together are what is commonly known as bark. It comes about then that in an old trunk both the inside central portion and the outside layer are dead, while the cambium layer and a zone on each side of this are alive.

The importance of the cambium layer depends upon the fact that it is capable of growth. The twig, or branch, increases in diameter through the activity of the cambium. It forms a layer of wood on the side next to wood and a layer of phloem on the opposite side. The cambium is thus pushed farther from the center. The bark is also pushed out in consequence of the strain, and splits or flakes off at the outer surface. The wood-cells formed in the spring are much larger than those formed in the fall and the contrast in size gives the annual rings. In the propagation of plants by grafting or budding the scion is brought in close contact with the stock in such a way that the cambiums will unite.

THE LEAF.

The ordinary foliage leaf is a flat green organ which has two important functions, to aid in the evaporation of water (trans-

piration), and to use the light and air in the formation of carbohydrates. As to the first function, we know that the plant depends upon the ascending current of sap for its supply of mineral matter. The water evaporates from the leaves and the minerals remain. An upward current is, therefore, necessary and can be kept up only by the evaporation from the leaves. But since the evaporation would vary, greatly depending upon the atmospheric conditions, the leaf must be able to regulate the loss of water, at least within the usual limits of variation. A leaf is provided with an epidermis upon each surface. Through the active thin-walled cells of the interior pass the numerous veins which serve to maintain the flat position of the leaf and to distribute the nourishment. The water does not easily pass through the epidermis, but the vapor escapes through small openings, the breathing pores or stomata. These pores are so constructed that they expand when the atmosphere is moist and contract when it is dry. The evaporation is in this way controlled within certain limits. If from any cause the evaporation exceeds the supply from the roots the plant wilts. Plants which have wilted during the day may revive during the night. This is not because the leaves have absorbed water from the air, but because the evaporation ceases at night (if there has been a dew) and consequently the roots have been able to catch up as it were in the pumping process. Leaves of ordinary plants are unable to absorb water from the air.

The production of carbohydrates depends among other things upon the presence of chlorophyll, the green coloring matter of plants. This substance is distributed in the interior cells of the leaf in the form of minute grains indistinguishable to the naked eye. The chemistry of the process is too complex to be explained here, but under the influence of light the leaf (or any other organ containing chlorophyll) is enabled by means of this substance to unite water with the carbon dioxide of the air to form carbohydrates. This power to store the energy of the light in the substance of the plant is of vast importance in the economy of nature. When a piece of wood is burned the material is broken up into water and carbon dioxide, the two substances from which it was formed, and at the same time gives the same amount of energy off in the form of heat that was stored from the light. Carbon dioxide is

Mr. H. N. Warner, of Minden, Neb., said:

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familiar to all. It is given off in breath of animals and forms a part of smoke when a substance containing carbon is burned, such as wood, coal, or oil. It is present in the air about four parts in thousand and is being constantly absorbed by the green parts of plants.

Animals take in their food already prepared, digest, and assimilate it. Green plants must first prepare their food, stated in the preceding paragraph, and then they digest and assimilate it much as animals. As in the case of animals, food of plants consists of proteins or nitrogenous materials, fats and oils, and carbohydrates. As has been stated the carbohydrates are first formed and from these others are produced. Foods of any kind must be distributed to various parts of the plant where they are assimilated, actually used in building up new tissue. Food can only be transferred from one part of the plant to another in the form of liquid, hence a solid such as starch must first be changed into a liquid, that is, gested. Foods are often stored for future use. Proteids are stored in the onion bulb and in the gluten layer of wheat and other grains. Oils are frequently stored in seeds for the nourishment of the germinating plantlet. Sugar is stored in such roots as the beet. The most common stored food, however, is the carbohydrate starch. It is found in roots, tubers, seeds, and the twigs of trees. When starch is digested it is usually changed into sugar, hence the sap of trees is likely to be sweet in spring. The soluble food travels chiefly in the young bark of woody plants. This explains the effect of girdling the trunk of a tree. If a ring of bark is taken from the trunk down to the cambium layer the upward flow of the soil-water or crude sap is not interfered with and the tree will not wilt. If the girdling was done during the greatest activity of the cambium which is usually about the first of July a new layer of bark may be formed and no fatal results will follow. If the work was done at any other time, however, a portion of the tree above the girdle would die in the course of a season or two. Dead results from the fact that the elaborated sap or soluble food can no longer pass down to the roots, and they starve. The length of time elapsing before death depends upon the amount of food already in the roots.

In the above discussion I have alluded to only a few of the commonest physiological processes. It is quite necessary that the grower of plants should be familiar with the laws of plant growth and to successful the methods of culture must be in harmony with these laws.

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Conducted by D. H. OTIS, Assistant in Dairying, Kansas Experiment Station, Manhattan, Kans., to whom all correspondence with this department should be addressed.

CLEOMARGARINE UNDER A MICROSCOPE.

By W. F. Jensen, Secretary Kansas State Dairy Association.

One great reason that there is not more active opposition to oleomargarine, and the every-day practice of selling it for pure butter can be attributed to the indifference of the consuming public. People are ignorant of its character, in most instances innocently so, in that they suppose they are eating pure butter, when they are eating oleomargarine. There is far more of this indifference among consumers than there would be if they were aware of the character of the food substances they are eating.

Adulteration of food is carried farther than many suspect. Dr. H. W. Wiley, of the United States Department of Agriculture, is authority for the statement that 90 per cent of manufactured food and drink prepared in this country is found to be adulterated. This fact works great hardship on the producer directly, on the consumer indirectly; but if every one would learn by heart and seriously consider the question, "I wonder what's in it?" written by Dr. Wiley, this fraud on the public, for which there is no excuse, will have seen its best days.

"WONDER WHAT'S IN IT?"

We sat at a table delightfully spread,
And teeming with good things to eat,
And daintily fingered the cream-tinted bread,
Just needing to make it complete
A film of the butter so yellow and sweet,
Well suited to make every minute
A dream of delight, and yet while we eat,
We can not help asking "What's in it?"
Oh, maybe this bread contains alum and chalk,
Or sawdust chopped up very fine,
Or gypsum in powder about which they talk,
Terra alba just out of the mine,
And our faith in its butter is apt to be weak,
For we haven't a good place to pin it,
Annatto's so yellow and beef fat so sleek,
Oh, I wish I could know what is in it.

Ah, be certain you know what is in it,
'Tis a question in place every minute.
Oh, how happy I'd be could I only see
With a certainty all that is in it.

The pepper, perhaps, contains cocoanut shells,
And the mustard is cottonseed meal,
The coffee, in sooth, of baked chicory smells,
And the terrapin tastes like roast veal,
The wine which you drink never heard of a grape,
But of tannin and coal tar is made,
And you could not be certain, except by their shape,
That the eggs by a chicken were laid,
And the salad which bears such an innocent look
And whispers of fields that are green,
Is covered with germs, each armed with a hook
To grapple with liver and spleen.
No matter how tired and hungry and dry;
The banquet how fine; don't begin it
Till you think of the past and the future, and sigh,
Oh, I wonder, I wonder what's in it.

Ah, be certain you know what is in it,
'Tis a question in place every minute.
Oh, how happy I'd be could I only see
With a certainty all that is in it.

We will confine ourself to the one subject that has come under our immediate investigation. It has been said by some that oleomargarine is cleaner than butter. It is desirable to throw a little light on this subject, and here we have secured the assistance of the microscopists.

The creamery has given to the people butter that is unsurpassed in quality by any in the world, yet the manufacturers of oleomargarine are putting on the market, to compete with this delicate product, a mixture of fats and colors, samples of which the microscope has revealed to be simply a mass of nastiness and disease germs.

The whole aim of scientific butter-making is to prevent contamination of milk and cream. The milk from which butter comes is pure. It comes into the pail an undefiled article. Choice butter is the result of careful, clean handling of cow, milk, cream, and the dairy utensils. Everything known to science, in order to secure an absolutely pure and unadulterated product, is employed in the manufacture of butter. In contrast to this, the fats from which oleomargarine is made are handled in such a way that it would ruin butter in thirty seconds.

It is well known that there are different grades of oleomargarine, some of it being made of oils from the choicer fats of the animal, and some from the inferior fats, with a proper mixture of cottonseed-oil, paraffined wax, etc. Preparatory to expressing the oil the fat is heated to 130°. That is not a sufficiently high temperature to kill the animalcule that is in the fat. The stuff, from the moment it is made, begins to rot and become filthy.

Those scientific men who defend oleomargarine as a whole admit that some of its ingredients are miserable.

Our position is this: when a product procured from the general market furnishes a sample which will develop the horrible forms that are shown under the microscope, the whole product should be con-

demned. Microscopists say this of one grade of oleomargarine: "When placed upon the slide in the first place shreds of animal tissue, salt, and fat crystals and spores were seen, and also a peculiar form which I have met with in foul water. The other objects, many of which were active, living forms, together with the fungi, were obtained after the stuff had been boiled in distilled water in a test tube and allowed to stand over night. On cooling, the top of the fluid was covered with a coating of grease. Through this cover, which, of course, was impervious to outward floating organisms, the pipette was thrust and the specimen thus obtained. Many of these forms are such as are present in all putrefying animal matter, while others are, perhaps, the bacteria of special diseases, or morbid changes in the animal tissue."

(To be continued.)

Mr. Sample on Skim-Milk Calves.

We publish this week an article from C. W. Sample, in which he pleads that calves should be fed on whole milk from beginning to end. He maintains that skim-milk calves are scrawny and when 6 months old weigh from 100 to 150 pounds, while whole-milk calves weigh from 350 to 400 pounds.

Evidently Mr. Sample is not posted on what can be done with skim-milk. Because some farmers fail to make a success of feeding and have such poor skim-milk calves is no argument against the skim-milk, but is an argument against the way the milk is handled by the creamery or patron. When the milk is received in a good, sweet condition at the creamery, the skim-milk sterilized as soon as separated, and then handled on the farm in a way to keep it sweet until fed, there is no reason why skim-milk calves can not be made to gain so as to reach the figures quoted by Mr. Sample for whole-milk calves. It is being done by farmers in various parts of the State. At the agricultural college we have two calves, 6 months old, which have been raised on skim-milk. One of them is a heifer which we are raising for a dairy cow and have purposely avoided allowing her to get too fat. When 6 months old she weighed 305 pounds. The other is a steer calf which weighed 385 pounds at 6 months. Other experiment stations have had similar results. Whatever may be our theories in regard to skim-milk, we must admit facts wherever found. Farmers with good dairy cows are finding that the fat needed by the calf can be provided cheaper in the form of corn or Kaffir-corn than in butter fat.

The dairy department of the Kansas Farmer is always glad to hear from those who have had experience in feeding and hopes that others will follow in this discussion and give us the benefit of their experience.

D. H. O.

The Kansas Dairy School.

We have an appropriation of \$25,000 for a dairy building, \$6,000 for dairy apparatus, and \$3,000 for a dairy herd and shelter. This amount—\$34,000—will be expended before January 1, 1900, and, added to our present equipment, will give Kansas one of the best-equipped dairy schools in the United States. The school will be held January 3 to March 24, 1900, and thorough instruction will be given in milk production, creamery butter-making, factory cheese-making, and private dairying.

Kansas offers ideal conditions for profitable dairying—mild climate, short winters, fertile soils, cheap feeds, and good markets. The mild winters necessitate cheap shelter only. Kansas butter can be delivered in good condition to our best eastern markets for 1 1/4 cents per pound—a lower rate than that paid by many eastern farmers situated within a hundred miles of these markets. Kansas butter can be delivered to Rocky Mountain markets for 2 cents per pound. A good market is opening in China and Japan.

Dairying offers to Kansas farmers the advantages of monthly cash returns the year round, profitable employment for the entire year, a good home market for the farmers' crops on the farm where they are produced. Butter brings more per pound than any other farm product, and Kansas farmers, many of whom live distant from the railroads, can condense tons of cheap, rough feed into pounds of high-priced, easy-marketed butter.

There are nearly 500 creameries, skimming-stations, and cheese-factories in Kansas. The more milk each of these plants receives the less will be the cost of operation per 1,000 pounds of milk received and the higher can be the price per pound paid for butter fat. To be most profitable to the farmers of the State, these plants must receive ten times their present supply of milk. The greater the production of milk and butter fat in the State, the greater will be the profits to all connected with the dairy interests. Kansas is well equipped with dairy manufacturing establishments, but the milk supply is much too small to

make dairying most profitable. For these reasons the chief work of the Kansas Dairy School will be to give instruction to farmers in milk production—including the selection of the cow and handling and feeding her, the care of her milk and calf and the feeding of skim-milk, buttermilk, and whey to secure greatest profit.

Kansas cows have been bred chiefly for beef. Secretary Coburn reports the average yearly value of the product of the Kansas dairy cow to be \$9.05. Several creameries report that the average receipts per cow per year for their patrons is \$20. This college secured in 1898 an average per cow of \$37.75 for butter fat at creamery prices from a scrub herd that in quality were much below the average cows of the State, and one scrub cow, for which we paid \$30, returned \$60.88 for butter fat and gave a net profit above cost of feed of \$40.37.

These records show that with the cows they now own Kansas dairymen can, with proper feed and care, double and treble the present milk yield and make an even greater increase in their net profits. We want farmers and farmers' boys from every township in Kansas to attend our dairy school and learn to feed and handle cows so as to secure these results. Kansas dairymen buy thousands of tons of mill feed. Those who know how can secure the highest milk yields with feed grown on the farm. Come and learn how.

After the Kansas dairyman has learned to feed and handle the cows he now owns he can still further increase his profits by selection and breeding. T. A. Borman, Navarre, Kans., after six years of selection and breeding, selling his milk to a creamery, secured last year an average income per cow of \$81.17. You can do as well when you know how. Come to our dairy school this winter and learn.

Whole Milk for Calves.

Editor Kansas Farmer—For some time I have read all cattle notes with great interest, and especially those on the hand-raising of calves. After a long experience I conclude that the Creator knew his business when he created that marvelous piece of machinery called the cow, and that farmers who are financially wise will give Him credit of knowing His business, and when they commence with their next crop of calves they will commence with whole milk and end with it. There is certainly no money in raising the poor little scrawny calves that we see on many Kansas farms, which when 6 months old ought to weigh 350 to 400 pounds, and instead weigh 100 to 150 pounds, and at 1 year old 300 pounds. I weighed a calf of my own raising a few days ago that was fed one-half his mother's milk until he was 4 months old, then one-fourth till he was 6 months old, and he tipped the beam at 490 pounds. He was fed bran and meal mixed in equal parts. I do not think there is a better calf in the country, and he would bring \$25 any day. There was sold from the cow two quarts of milk per day, which paid for the feed of the cow. I want to ask if any farmer who has half fed his calves and sold his milk to the creamery thinks it pays to starve his calves and stunt them to such an extent they never get over it. Such a system is a dead loss; besides it is absolutely cruel and the farmer who follows it will wind up poor. The calf above named is well bred, being sired by one of ex-Governor Glick's best bulls. At 12 months old I think there will be no trouble to make him weigh 1,000 pounds. I am a believer in hand-raised calves, but do not believe the ingenuity of man is equal to the wisdom of the Creator in fixing up decoctions to feed calves. I am in favor of whole milk, and the farmer who feeds it will wear diamonds first. Hand-starved calves can not be condemned too severely. I think the creamery a good thing to take the surplus milk, but each calf, if well fed, will pay better than any

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C. W. SAMPLE.

Kingman, Kans.

The Meriden Creamery Company, Meriden, Kans., has made arrangements for holding a series of dairy picnics at the factory and skimming-stations from August 16 to August 26. The agricultural college is to be represented by Professor Cottrell and Harper.

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A. H. DUFF, Larned, Kans.

Dairymen, Don't You Know

That you are losing cream and doing work
That might be saved if you were using the

IMPROVED U. S. SEPARATOR

It has been proved often that it not only

SKIMS THE CLEANEST,

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The Veterinarian.

We cordially invite our readers to consult us when they desire any information in regard to sick or injured animals, and thus assist us in making this department one of the interesting features of the Kansas Farmer. Give age, color and sex of animal, symptoms accurately, of how long standing, what treatment, if any, has been resorted to, replies through this column are free. In order to give a prompt reply, all letters for this department should give the inquirer's postoffice, should be signed with his full name, and should be addressed to the Veterinary Department, K. S. A. C., Manhattan, Kansas. Such inquiries will receive prompt attention from Dr. J. H. Fischer, B. Agr., M. V. D., Professor, and A. J. Kholider, D. V. S., M. D., Assistant, Kansas State Agricultural College.

CHRONIC INDIGESTION.—I lost a cow this morning, and wish your opinion as to cause of her death. I looked through back numbers of the Farmer but could find nothing on the subject.

My cow was a thrifty, 6-year-old animal, suckling a yearling calf. Seemed all right when brought in last night but this morning showed signs of great distress; could scarcely breathe and would open her mouth and pant, get up and lie down again. Within an hour she was dead.

Examination showed nothing out of the ordinary, except that her lungs were hot and swollen and discolored with what resembled bruised blood. The third stomach seemed to be unusually dry. Let me know what it may be. I had a similar case last year but the animal was sick longer and her lungs had an offensive odor. R. C. Leoti, Kans.

Answer.—This animal had a form of chronic indigestion, the first symptoms of which probably escaped your attention. Most of the observable changes in such cases are found in the stomachs and intestines, but as a rule only after carefully emptying these vessels of their contents and flooding them with water. The changes to describe in the lungs are mainly post mortem changes.

The causes of indigestion are very numerous; among the chief may be mentioned irregularities in feeding, sudden change from one kind of food to another, digestible food, spoiled food (fermented, etc.), improperly cured, etc., certain pasture plants, swampy or very dry pastures, pure and irregular water supply, and so indefinitely. The first symptoms of such cases are lack of appetite, rumination (chewing cud) ceasing, constipation, diarrhoea, dry muzzle, uneasiness, signs of pain, and finally death.

In future guard as much as possible against the causes, and on appearance of the first symptoms give the animal a change of diet; give short rations of easily digested, tempting food. Give the animal drench, two or three times daily, made by boiling two ounces of chamomile tea in quart of water for ten minutes. If the animal is constipated, give, in addition to above, one pound of sulphate of sodium, one ounce of powdered Barbadoes leaves, one-half ounce of powdered ginger. Solve these ingredients in a quart of linseed gruel and give as a drench in a dose. It may require twenty-four to forty-eight hours before this has any effect. Be patient, therefore, in awaiting results.

Remember the general rule that sick animals should be made comfortable as possible, in every way—a cool place, free from draught in summer, and a warm place with plenty of fresh air, in winter. Always have plenty of pure water where the animal can get to it.

Gossip About Stock.

D. E. Ballard, of Ballards Falls, Kans., had a car of 280-pound hogs in Kansas City last week, and as usual topped the market at \$4.30. Last year out of eight shipments Mr. Ballard topped the market seven times. He has 400 hogs and 160 cattle on hand.

The sale of the Pleasanton stock farm, one of the most famous training quarters in California for trotters, has been announced. With its equipments it has passed into the hands of a company of English capitalists, headed by H. F. Anderson and G. B. Arlesworth. They intend to make extensive improvements and to establish a center for running as well as harness races.

"There is no time when a man feels so lined to say 'peace on earth and good will towards man,' and is so inclined to love his neighbor as himself," as when singing from having eaten a good, rich, juicy steak from a pure-bred Shorthorn," said Col. John McCoy, of Sabetha, Kans., in an address before the Missouri and Kansas Shorthorn Breeders' Association recently.

Last week's Kansas City receipts of cattle, hogs, and sheep have shown a liberal increase as compared with the week before. With over 13,000 more cattle on sale, prices closed about steady with close on the very dry lot cattle and steady to strong on the light-weight steers and heifers. Medium flesh grassy steers were up to 10 cents to 25 cents lower, as well as green killing cows and heifers. While

there was a fair demand for stockers and feeders, buyers asked some concessions, the best grades selling steady to 10 cents lower, while the medium to common kinds were 10 cents to 20 cents lower.

The receipts of sheep at Kansas City last week exceeded those of the previous week by 3,000, with no quotable change in price of good mutton; medium grades weak. Spring lambs declined 25 cents to 35 cents, but sold stronger at the close than during the middle of the week. While there was no quotable change in prices of stockers and feeders, a freer movement was noted and prospects were for higher prices.

According to the Western Swine Breeder, the effects of the boom in Poland-Chinas, so notorious last year, are disappearing very fast. Breeders everywhere are reporting an increasing demand for breeding stock, and good prices prevail, and many are the predictions made that by another year the business will be on a more solid foundation than ever before. Poland-China breeders believe that you can not keep a good thing down.

George Theis, president of the Bank of Ashland, Kans., usually handles from 10,000 to 20,000 head of cattle every year, his operation being confined mainly to shipping in herds from Arizona and New Mexico to Kansas and selling them to growers in smaller lots for fattening on the ranges. Mr. Theis has probably shipped more cattle into Kansas than any man now living in the State, having in the last twelve years brought in 300,000 head of cattle to the value of more than \$5,000,000. He thinks the ranges in Kansas will grow smaller as people come in and contest for lands, and that in a few years western Kansas will be a country of fairly well settled communities.

Something over 9,000 more hogs were received last week than the week before at Kansas City and prices were higher all along the line. Top, Friday, \$4.35, paid for fancy heavies for the Mexican trade. Bulk, \$4.00 to \$4.22½ against \$4.02½ and \$3.85 to \$3.97½ bulk the same day of the previous week. Prices were high enough to curtail eastern orders for light-weights, and few good enough for Mexico in sight. Packers were good buyers up till Friday, when an uncertain feeling in the labor question and the high values kept competition down and caused a weak feeling in the trade in Kansas City as well as among Chicago packers. On Saturday prices broke 10 to 12½ cents.

The Iowa Register says: "We took occasion to visit the farm of C. J. Norton last week and he is indeed a genius. He carries on his farm practically as he writes for various farm publications. He was grinding feed for his stock, using two yearling colts in his tread-power, as that was sufficient power for grinding chop. The colts did the work without any attention while Mr. Norton attended to the grinding in another room. His ensilage, fodder-cutter, shredder, elevator, etc., are all run by the same tread-power, using three horses on a well-equipped outfit. He also showed us his fodder-lifting device and apparatus, his hedge-trimming machine mounted on a wagon, with self-made trip for hay and fodder sling, and they are all practical machines, too. He also showed us his methods in cultivation and his crop spoke loudly in evidence. His aged father and young son are his only help. He is a genius." See his new advertisement this week.

Kirkpatrick & Son, Connor, Wyandotte County, Kansas, this week advertise 200 Shropshire rams for sale, the best lot in every way they have ever offered. They write as follows concerning the Shropshires: "The demand for more and better sheep is growing; wool values are getting on a higher range. There is no better sheep for both wool and mutton than the Shropshire. They have been bred pure for a long period of years and are, therefore, strongest in prepotency, making them the best of all mutton breeds for crossing on the common breeds of this country as well as breeding pure. They produce the largest and highest-priced fleece of any of the mutton breeds, and a carcass that is not surpassed for quality of meat. Their early maturity, great feeding qualities, their adaptability to the different sections of the country, their hardiness and vigor of constitution, their power of impressing their qualities on other breeds, their size and thick, meaty, plump, smooth bodies, the sweetness and juiciness of their meat and its entire freedom from the wool taste, their quick fattening qualities, their heavy, fine, long, staple fleeces, combine to make them the best sheep for the farmer, the ranchman, or the fine stock fancier. We should be pleased to have you visit our flock and make selections in person, but if you can not do so, write us fully what you may wish to do or for any information you may desire, and should you want to buy we will make you prices as low as can be made and treat you always fairly."

Recently Mr. T. F. B. Sotham, proprietor of the Weavergrace Herefords, was offered by Mr. George Tuggle \$2,500 for his cele-

brated Corrector bull, Thickset. Inasmuch as Mr. Sotham has been offered this sum by three different parties, the offer was declined with thanks. Last week Mr. Tuggle visited Weavergrace, in company with Mr. J. M. Curtice, of Kansas City. They were very much pleased with what they saw, and Mr. Tuggle doubled his offer for Thickset. In refusing \$5,000 for Thickset Mr. Sotham was quite sensible of the fact that it is a great price for any bull, yet, inasmuch as he had refused to price Thickset to a number of his very best customers, he did not feel warranted in accepting this very handsome price. Without doubt the majority of cattlemen consider Thickset the best bull Mr. Sotham has ever bred, although there have been differences of opinion as to the merits of Thickset and Sir Bredwell, some preferring the latter. Thickset will be seen in the Weavergrace show herd at the fall fairs, and while it is not certain that Mr. Sotham will ever sell him at any price, this much has been determined upon, that if Thickset is ever sold it will not be privately, but it will be at the regular annual auction of the Weavergrace surplus. It is understood that Mr. Tuggle is not buying for himself, but representing some one else. In this connection we might add that Messrs. Walter B. Wadell and T. S. Sawyer, of Lexington, Mo., during their recent visit to Weavergrace, offered Mr. Sotham \$1,000 for Goodwin, a yearling full brother to Thickset, a bull which Mr. Sotham believes in every way the equal of his illustrious brother, and for which he has been obliged to refuse several tempting offers lately. Should Thickset be sold Goodwin is expected to take his place at Weavergrace.

For a clear complexion, bright, sparkling eye, and vigorous digestion take Prickly Ash Bitters. It puts the system in perfect order.

More Money per Pound.



The advantages of a farm separator are not alone in the increased amount of butter produced from the same milk, but also in its improved quality, which brings the extra few cents per pound. The Little Giant Separator produces these results surely every time, everywhere. It makes the dairy business pay. Isn't that what you want? Send for Catalogue No. 19.

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BE HUMANE
And Profit at a Cost of Only One Cent per Day by Using



The only reliable Lotion positively preventing Flies, Gnats and Insects of every description from annoying Horses and Cattle. Soothing and Healing if applied to sores. Applied to cows it secures gains in Flesh and Milk. Guaranteed Pure, Harmless and Effective. Gallon Can, \$1.50; ½ Gallon \$1.00; Quarts, 50c. Beware of Imitations. Sold by Druggists, Saddlery, Agricultural Implement, Flour and Feed and Seed Houses, or The Crescent Chemical Co., Philadelphia, Pa.

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Dr. Swift, whose miracles in the cure of rheumatism and gout have gained for him an international reputation, has decided to distribute broadcast 100,000 bottles of his great specific free to all who apply before August 31st.

These are full 25-dose bottles, not the usual 2 or 3 dose sample packages sent out by irresponsible manufacturers and quacks.

If you suffer from rheumatism or gout in any form, including sciatica, lumbago, neuralgia, pains in back or loins, stiffness, pains or aches in the muscles, inflammatory or muscular rheumatism, send for a free bottle of Dr. Swift's Rheumatic and Gout Cure, and you will be supplied promptly.

This is a legitimate offer, made to enable Dr. Swift to prove everywhere that he has really discovered an absolute cure for this dread disease.

The Chicago Medical Times says Dr. Swift's discovery "is taking practitioners everywhere by storm, for the reported cures are astonishing to a degree."

Old cases which have gone the rounds of hospitals, sanitariums, and eminent specialists and have been pronounced incurable are being cured constantly. Less than four failures in every hundred!

The only treatment guaranteed to cure or money refunded.

Mrs. James G. Bevil sent for a free bottle and later sent \$1 for a second bottle and was cured of her misery after everything else had utterly failed.

DR. SWIFT'S FAME IS SPREADING.
Mrs. Emily A. Burnham, of Pella, Iowa, says:

"The three bottles of Dr. Swift's Rheumatic and Gout Cure I am now ordering are for a friend in the next town. Ever since I was cured a year ago I have spread the news, and to-day Dr. Swift's fame in adjoining towns is well known. Percy Hart has got well enough to go back to work."

DR. SWIFT ASTONISHED HER.

Mrs. Sarah Tenny Jackson, of 81 West 108th St., New York, says:

"Less than half a bottle of Dr. Swift's marvelous cure brought me out of bed, and just two bottles completely cured me of sciatica. Two doctors had failed with the aid of morphine to kill the pain."

Don't delay a day if you suffer. Don't be prejudiced when it costs you nothing to try this scientific preparation which is curing thousands. Simply write Dr. Swift, 102 Swift Building, New York, and a bottle will be mailed upon receipt of 10 cents to pay cost.

Ten thousand agents wanted to introduce in new territory. Extra inducements during July and August. Book about rheumatism free.

MARKET REPORTS.

Kansas City Live Stock.

Kansas City, July 17.—Cattle—Receipts since Saturday, 4,267 cattle; 886 calves; shipped Saturday, 539 cattle; no calves. The market was steady to strong on best and slow on others. The following are representative sales:

DRESSED BEEF AND SHIPPING STEERS.

No.	Ave. Price.	No.	Ave. Price.
41.....	1,330 \$5.20	1 Jer.....	820 \$3.75

WESTERN STEERS.

204.....	1,237 \$5.25	34 Tex.....	1,193 \$4.75
44 Tex.....	1,146 4.50	1.....	900 3.75
26.....	1,170 4.70	4.....	1,175 4.25
3.....	1,120 4.25	2.....	810 3.50

NATIVE HEIFERS.

1.....	850 \$4.50	1.....	960 \$4.50
2.....	855 4.25	2.....	930 3.85
1.....	980 3.75		

NATIVE COWS.

2.....	995 \$3.85	3.....	1,003 \$3.70
1.....	1,150 3.50	3.....	945 3.40
4.....	880 3.25	7.....	978 3.20
9.....	711 3.00	1.....	750 2.50

NATIVE FEEDERS.

2.....	1,235 \$4.65	9.....	1,055 \$4.00
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NATIVE STOCKERS.

1.....	800 \$4.75	1.....	530 \$4.75
4.....	440 4.50	4.....	750 3.90

Hogs—Receipts, since Saturday 4,613; shipped Saturday, 453. The market opened steady to strong and closed strong to 5c higher. The following are representative sales:

87.....	280 \$4.25	54.....	294 \$4.25	85.....	315 \$4.22½
80.....	256 4.22½	69.....	261 4.20	65.....	257 4.20
120.....	205 4.20	79.....	219 4.17½	56.....	201 4.17½
69.....	251 4.17½	90.....	209 4.15	75.....	237 4.15
83.....	220 4.15	55.....	188 4.15	40.....	242 4.15
6.....	213 4.15	74.....	196 4.12½	90.....	202 4.12½
4.....	226 4.12½	92.....	203 4.12½	85.....	190 4.12½
24.....	226 4.10	58.....	103 4.10	7.....	194 4.10
62.....	206 4.10	68.....	218 4.10	106.....	161 4.07½
21.....	150 4.05	41.....	165 4.05	3.....	166 4.05
21.....	181 4.05	22.....	142 4.05	84.....	179 4.05
80.....	158 4.00	88.....	148 4.00	87.....	203 4.00
66.....	174 4.00	11.....	130 4.00	22.....	135 4.00
1.....	15.....	23.....	190 4.00	14.....	116 3.95
5.....	170 3.95	11.....	461 3.85	98.....	133 3.75
23.....	132 3.75	1.....	280 3.70	4.....	390 3.60
1.....	180 3.50	1.....	330 3.50	10.....	230 3.50
1.....	380 3.50	2.....	240 3.40	10.....	233 3.25

Sheep—Receipts since Saturday, 2,613; shipped Saturday, 324. The market was steady to strong. The following are representative sales:

110 lambs.....	63 \$5.15	62 lambs.....	68 \$4.75
73 sheep.....	97 4.40	16 sw. sh.....	106 4.35
44 mixed.....	96 4.25	2 ewes.....	175 4.00
43 stock.....	90 3.45	31 feeders.....	90 3.40

St. Louis Live Stock.

St. Louis, July 17.—Cattle—Receipts, 2,700; market steady for natives to a shade lower for Texans; native shipping steers, \$4.75@5.50, with strictly fancy, \$5.75; light and butcher steers, \$4.00@5.55; stockers and feeders, \$3.25@5.00; cows and heifers, \$2.25@5.15; Texas and Indian steers, \$2.90@4.95; cows and heifers, \$2.25@4.00.

Hogs—Receipts, 5,000; market easy to 5c lower; pigs and lights, \$4.25@4.30; packers, \$4.20@4.30; butchers, \$4.30@4.40.

Sheep—Receipts, 5,500; market strong; native sheep, \$4.00@4.25; lambs, \$4.50@6.00.

Chicago Live Stock.

Chicago, July 17.—Cattle—Receipts, 18,000; market steady; beefs, \$4.50@5.80; cows and heifers, \$1.75@5.00; Texas steers, \$3.75@5.00; stockers and feeders, \$3.50@4.80.

Hogs—Receipts, 45,000; market strong to shade higher on shipping; mixed and butchers, \$4.15@4.35; good heavy, \$4.30@4.40; rough heavy, \$4.15@4.25; light, \$4.20@4.35.

Sheep—Receipts, 12,000; market steady; sheep, \$3.25@4.90; lambs, \$4.50@6.00.

Chicago Grain and Provisions.

July 17.	Opened	High'st	Lowest	Closing
Wh't—July....	71½	71½	70½	70½
Sept.....	72½	72½	71½	71½
Dec.....	74½	74½	73½	73½
Corn—July....	34	34	33½	33½
Sept.....	33½	33½	32½	32½
Dec.....	32½	32½	31½	31½
Oats—July....	24½	24½	24	24½
Sept.....	20½	20½	20½	20½
Dec.....	20½	20½	20½	20½
Pork—July....	9 25	9 25	9 12½	9 15
Sept.....	5 50	5 52½	5 47½	5 47½
Lard—July....	5 50	5 52½	5 47½	5 47½
Sept.....	5 22½	5 22½	5 17½	5 20

Kansas City Grain.

Kansas City, July 17.—Wheat—Receipts here to-day were 178 cars; a week ago, 61 cars; a year ago, 296 cars. Sales by sample on track: Hard, No. 2, 66½@66¾c; No. 3 hard, 62½@65c; No. 4 hard, 60½@64c; rejected hard, 58@60½c. Soft, No. 2, nominally 69@70c; No. 3 red, 65@67c; No. 4 red, 60c. Spring, No. 2, nominally 64@66c; No. 3 spring, 63½c.

Corn—Receipts here to-day were 86 cars; a week ago, 27 cars; a year ago, 68 cars. Sales by sample on track: Mixed, No. 2, 30½@31½c; No. 3 mixed, 30½c; No. 4 mixed, nominally 29c; no grade, nominally 24@25c. White, No. 2, 32c; No. 3 white, 31c; No. 4 white, nominally 29@30c.

Oats—Receipts here to-day were 19 cars; a week ago, 7 cars; a year ago, 13 cars. Sales by sample on track: Mixed, No. 2, 24c; No. 3 mixed, nominally 20@22c; No. 4 mixed, nominally 18c. White, No. 2, 26c; No. 3 white, 24½c.

Rye—No. 2, nominally 56c; No. 3, nominally 55c; No. 4, nominally 54c.

Hay—Receipts to-day were 91 cars; a week ago, 13 cars; a year ago, 71 cars. Quotations are: Choice prairie, \$5.50; No. 1, \$6.00@6.25. Timothy, choice, \$7.50@8.00. Clover, pure, \$5.50. Alfalfa, \$6.00@7.00.

Chicago Cash Grain.

Chicago, July 17.—Wheat—Cash, No. 2 red, 73@74c; No. 3 red, 71@73c; No. 2 hard winter, 70½c; No. 3 hard winter, 70c; No. 1 northern spring, 72@72½c; No. 2 northern spring, 71@72c; No. 3 northern spring, 68@71c.

Corn—Cash, No. 2, 33½c; No. 3, 33½c.

Oats—Cash, No. 2, 24½@24½c; No. 3, 24½@24½c.

St. Louis Cash Grain.

St. Louis, July 17.—Wheat—Cash, No. 2 red, elevator, 72½c; track, 73@73½c; No. 2 hard, 70c. Corn—Cash, No. 2, 33½c; track, 34c.

Oats—Cash, No. 2, 25½c; track, 25½@26½c; No. 2 white, 29½@29½c.

Kansas City Produce.

Kansas City, July 17.—Eggs—Strictly fresh, 10c per doz.

Butter—Extra fancy separator, 16½c; firsts, 14½c; seconds, 11c; dairy, fancy, 14c; store packed, 11c; packing stock, 10½c.

Poultry—Hens, 7½c; broilers, 10c; roosters, 15c each; ducks, 5@5c; geese, 5@7c; turkeys, 15c; toms, 6c; pigeons, \$1.00 per doz.

Berries—Gooseberries, \$1.25@1.75 per crate. Currants, \$2.00@2.25 per crate. Blackberries, \$1.75@2.00 per crate. Raspberries, \$1.50@2.50 per crate.

Vegetables—Lettuce, home grown, 15@25c per bu. Pieplant, 10c per doz. bunches. Spinach, home grown, 60@75c per bu. Asparagus, home grown, 25@40c per doz. bunches. Radishes, 5c per doz. bunches. Green beans, 20@35c per bu. Peas, 40@75c per bu. Sweet corn, 3@6c per doz. Tomatoes, home grown, 15@30c per peck. Cucumbers, 10@30c per doz. Cabbage, home grown, 15@60c per doz.

Potatoes—Home grown, new, 25@30c per bu.

THE STRAY LIST.

FOR WEEK ENDING JULY 6, 1899.

Cherokee County—S. W. Swinney, Clerk.
HORSE—Taken up by Wick Aubert, June 5, 1899, in Pleasant View tp., 1 roan horse, 15 hands high, 9 years old; valued at \$30.

MARE—Taken up by W. H. Vickers, June 6, 1899, in Spring Valley tp., 1 black mare, 15½ hands high, 7 years old, no marks or brands; valued at \$15.

Labette County—E. H. Hughes, Clerk.
HORSE—Taken up by G. A. Madison, June 15, 1899, in Elm Grove tp. (P. O. Edna), 1 gray horse, 4 feet 8 inches high, marks of medicine on both shoulders, no brands.

FOR WEEK ENDING JULY 13, 1899.

Lyon County—H. E. Peach, Clerk.
STEER—Taken up by M. D. Frost, in Agnes City tp., June 26, 1899, one red steer, 2 years old, branded "F" on left side, and underbit in left ear; valued at \$20.

Coffey County—Dan K. Swearingen, Clerk.
MARE—Taken up by G. J. Wheeler, in Burlington tp. (P. O. Burlington), May 25, 1899, one black mare, about 15 years old, weight about 800 pounds, left hip sunken, white in face, breast sore from collar; no marks or brands.

FOR WEEK ENDING JULY 20, 1899.

Harper County—W. W. Taylor, Clerk.
HEIFER—Taken up by T. T. Sevier, in Eagle tp. (P. O. Anthony City), May 25, 1899, one 2-year-old red heifer with white face and belly, and red spots on face. Branded a T on left hip and with under bit out of left ear, and upper bit out of right ear; valued at \$20.

Lyon County—H. E. Peach, Clerk.
STEERS—Taken up by Antone Delbott, in Center tp., four 2-year-old steers, two red and white spotted, one red, and one roan, all small sized, all branded with an indistinct brand, all have tails cropped about six inches, and have both ears slit; value of each steer is \$25.

Cherokee County—S. W. Swinney, Clerk.
HORSE—Taken up by John Russell, in Shawnee tp., June 26, 1899, one roan horse, 10 years old, star in forehead and shod; valued at \$20.

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A valuable book for the farmer or breeder. It fully describes Hog Cholera and Swine Plague, and gives positive and proven

CURE

It is so plainly written that even a child can learn to know the two diseases. Free for the asking. Address publishers,

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Principal Buyers for Export and Domestic Markets in Constant Attendance.

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Official Receipts for 1898	1,846,233	3,672,909	980,200
Sold in Kansas City 1898	1,757,163	3,596,828	815,500

C. F. MORSE, Vice-Pres. and Gen. Mgr. E. E. RICHARDSON, Secy. and Treas. H. P. CHILD, Asst. Gen. Mgr. EUGENE RUST, Traffic Manager

The Poultry Yard.

ONE WAY OF RAISING YOUNG CHICKS.

Perhaps the subject of raising chicks may be so old nothing new can be said to help who are willing to accept new ideas. I have been very successful in this line; have tried various methods, and find raising by hand the most satisfactory. The hen beats all the incubators in Christendom. I set two or three hens at once, taking the chicks away as soon as hatched, they then never miss their mother, and place them in a basket in warm flannels for twenty-four hours. I have a ready-made brooder with a glass window for cover. This brooder I make in two compartments, with a slide piece or door in the center so that I can close it, in order to place the food in one side before allowing them to get in there. I put chaff on hay on the floor of the brooder, and scatter in this millet seed, for which they will scratch and dig. I have great faith in a sort of bread made of bran or shorts and corn-meal, half and half, a little bone-meal added, the whole mixed with sour milk and well baked. Put a piece of this in the coop and the chicks will pick it up at it. Also feed cooked meat after they are 10 days old, and you should see them work for hours at a bone. They look clean and happy, no lice when once rid of them, which, of course, is done on taking out of the nest. I never give young chicks anything but milk to drink for two weeks. I put in a saucer and turn a cup upside down in it. They can all drink without getting wet. More chickens die from drinking too much and getting wet than ever raised. I have watched them un-der the water escaped out of their mouths as fast as it went in. Chicks have no sense, but we have the sense for them and give them just enough and no more.

Last year I raised so many chicks I had room for them and was obliged to dis-pose of them. I go to my neighbors and see old chicks lying around. The old hen has cramped them down or else they have been drowned. I keep this house brooder perfectly clean. Every day it is renewed. I have ready an outdoor brooder similar to this, and on warm days the chicks go out in the ground and grass. I have a little place for dusting, and they all just get into fat too quick, and I change them about every place to place. When they are 4 weeks old I put them into a good warm brooder with glass door on hinges and a small board at one corner to let them in and out. I have a board slanted up one side from which an old cloth is hung and falls down to the ground, and you should see them under that at night. I have fences, lathes around the coops, the latter be-coming large enough to contain roosts. Here the chicks learn to roost and they grow daily. I turn over the soil every few days and throw in some old manure from the stable for a change. That's a chicken's taste—something to keep them busy. I clean the coops every day and I have a dozen litters all over. One can raise them the way with hens if desirable, only bear in mind that too much cold water kills chicks. I could raise a thousand and lose very few if I desired.

I omitted to say I slant a board in one end of the brooder at night and throw over any old cloth. They huddle against this and keep warm and one does not mind the extra trouble to get prize-winners. You also save coal-oil and the trouble arising from its use. Any crumbs from the table are valuable for your chicks.

Do not let the chicks get chilled, as they are of no earthly use after that. I hear people say, "Oh, I can't bother that way; it is too much trouble." Well, I go to poultry-houses where lice get onto me for a moment. I say those people have no business to have any chickens. We white-wash twice a year and use a lice-killer once a week, putting fresh sod into every coop at least three times a week. Our chicks will show alive and it pays. Eternal vigilance is the price of chicks—good ones, and I want no others.—Mrs. Bella Curry, in Pacific Poul-tryman.

Poultry on the Farm.

The feeding of fowls for best results requires considerable common sense as well as practical experience, says the Farmers' Choice. There is no set formula for mixing and or rules for feeding poultry that will cover the whole ground in even a majority of cases. Feeding poultry is one of the things that can not be learned by reading. It requires study in the poultry-yard and reason we are often puzzled to know just what to do. The best that can be done is giving directions to an amateur is to indi-vidually in a general way the course that should be followed. With this as a guide, by one who is interested in the business, to soon begin to have some practical ideas of his own and find what is best for a location and surroundings.

Some writers always are warning their

readers not to feed too much corn to laying hens for fear of making them too fat. We feed corn almost every day in the year and do not know of a substitute for it, unless it is Kaffir-corn or sorghum seed and it is by no means certain either of these would take the place of the good old Indian corn that fed the flocks of the Pilgrims—if they kept hens—and has been the stand-by of farm poultry from that day to this. Next to corn is wheat, and after that buck-wheat, probably, and then oats, barley, and rye in about the order named. We have never been able to get much good out of oats, rye, or barley when fed to chickens. Green feed is always relished and it is im-possible to get hens to eat more milk, sweet or sour, than is good for them. Young poultry are especially fond of milk in all stages, and it is a good and nourishing feed for them. It is a waste of time to fix up soft feeds of any kind for poultry, young or old. Grains may be broken or fed whole with about equal results when fed to old hens or old fowls of any kind. For young stuff all the grains should be cracked into small bits in order that it may be swal-lowed without difficulty. We have yet to find a feed for young poultry that is su-perior to "pin-head" oatmeal. This may seem a contradiction, for we have just said no good results came from feeding oats. The difficulty in feeding whole oats prob-ably is that the husks of the grains irritate the stomach, get compacted in the crop and interfere otherwise in the work of the digestive organs. In the case of oat-meal this husk has been taken off and only the nutritious inner grain is used.

During the summer poultry that is at liberty needs very little feed of any kind. Our flock consists of about 100 hens and these eat less than a peck of grain a day when they are fed all they will eat, and as a rule they do not eat more than 6 quarts of feed in a day. They are given as much sour milk as they will eat and have unlimited range where they can get all the grass they want. These hens are not at all fat, although three-fourths of all the grain they get to eat is corn. More than 200 little chicks have the run of the place and eat with the hens if they happen to be around, and they swallow grains of corn with ease after they are 2 weeks old.

If a flock of hens is laying well do not change the feed, no matter what advice may be given. If they do not lay well, look to feed, care, and health. It may be over-feeding, too crowded quarters, or lice and mites. First find the weak spot and then apply the remedy.

A Valuable Book

The Kansas Farmer is in receipt of "The Diseases of Poultry," by Dr. D. E. Salmon, being Vol. I, No. 3, of the Feather Library, published by Geo. E. Howard & Co., Wash-ington, D. C. Probably no one is better fitted to treat this subject than Dr. Sal-mon, Chief United States Bureau of Animal Industry, and the work in hand testifies as to his ability. The book is well gotten up, with numerous illustrations, and treats quite exhaustively and scientifically the various diseases to which poultry is sub-ject. From the author's preface we make the following extracts: "The author has for years given attention to the diseases en-counter in the poultry-yard, and long since became impressed with the desir-ability of a systematic treatise on the sub-ject. The pamphlets, by various authors, which have appeared in the English lan-guage have been very useful, but they have been far too brief. They have not con-tained the results of modern investigations and they have lacked illustrations. * * If this volume is the means of attracting more attention, in this country, to the dis-eases of birds, if it saves a part of the loss which now occurs from such diseases, and if it serves to mitigate the sufferings of these uncomplaining but highly sensitive creatures, the purpose of the author will be accomplished." This valuable book will be supplied from this office for 50 cents, postage paid, the publishers' price.

Poultry Notes.

No unvarying rule can be laid down as to the number of times food should be sup-plied nor as to the amount. Of course, un-till the young poultry have made a suf-ficient growth to be allowed to run about, they must be fed early and often, but after they can be given a free range, less feed-ing is necessary, and the amount and the number of times must be largely deter-mined by the opportunity afforded for their receiving food. When there is plenty of scattered grain, bugs, and insects they can pick up, not very much food is required over and above what they can get in that way. They will keep healthier and thrive better if they are able to pick up a good part of their food in this way. When there is little they can find, more must be sup-plied.

When other conditions will admit the poultry-house should face the south or southeast, and should be arranged so as to admit plenty of sunlight. It should be arranged so as to be readily and thoroughly

ventilated and at the same time to avoid direct draughts upon the fowls, and espe-cially so when they are upon the roosts. There should be two rooms, one for the nests and the other for the roosts and places to feed. It should be sufficiently roomy so that on severely cold or stormy days the fowls may be confined without crowding unnecessarily. Fowls must have plenty of room to be kept healthy with the least trouble. Arrange so that the nests and perches may be readily taken out when desired to clean. Have them warm, dry, and convenient.

One of the best ways of utilizing the kitchen's wastes is to feed it to poultry, and one of the best ways of feeding is to cook thoroughly. This is especially the case with potato- and apple- and, in fact, all kinds of vegetable-parings. The small vegetables thrown out because they are too small to use to an advantage, the waste pieces of meat, scraps of bread, and all this class of material can be mixed together and cooked until soft, and it makes one of the very best foods for the poultry. A little care should be taken to have it clean. There is no possible advantage in feeding filth of any kind to fowls, but with a little care there is no need of having this kind of food filthy or unwholesome. By keep-ing a pot or vessel on the stove and throw-ing these scraps into it as fast as made, they can be cooked soft with very little trouble, and, with a little care, a considera-ble amount of food that would otherwise be wasted, may be secured.

N. J. Shepherd.

Eldon, Mo.

Chautauqua Lake and Return.

On July 28 the Nickel Plate Road will run an excursion to Chautauqua Lake at one fare for the round trip. Write to Gen-eral Agent, 111 Adams St., Chicago, for particulars. (23)

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DIGS POTATOES Rapid Clean and Cheap.



HOOVER, PROUT & CO. Avery, Ohio.

KEYSTONE QUICK HAYING MACHINES.

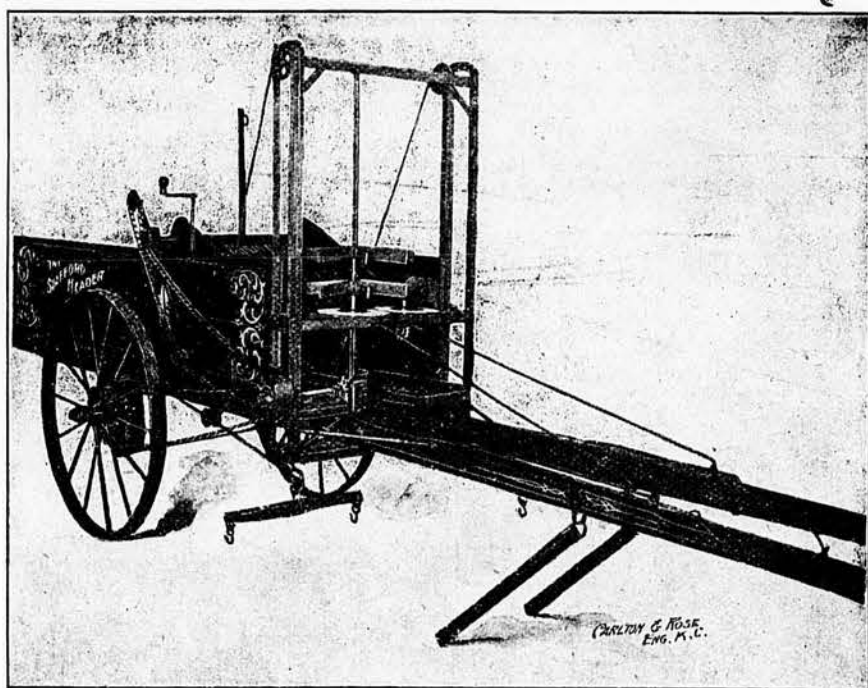
Keystone Side-Delivery Rake means "Quick Haying, Quality Prime." Turns the hay com-pletely and leaves it in a light, loose windrow ready for loader. Its use means alfalfa, not sun bleached hay. Better than a Sulky Rake and saves use of tedder. Takes up no trash, that means clean hay.

Made entirely of steel and iron. Horse power only. Mount-ed on steel wheels, and stands on the wheels when operating. Write for our special circulars fully describing these machines.

KEYSTONE MANUFACTURING CO., 43 RIVER ST., STERLING, ILL.

STAFFORD HEADER FOR KAFFIR-CORN.

ONLY • COMPLETE • MACHINE • MANUFACTURED.
CAPACITY—TEN ACRES PER DAY.



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SEEDS AND POULTRY SUPPLIES.

Seeds, bulbs and poultry supplies, T. Lee Adams, 419 Walnut street, Kansas City, Mo.

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For 16 years we have man-ufactured and placed on the market, our celebrated Cy-linder Mills for cleaning Wheat, Oats, Barley, Flax, and Rye for Seed or for Mar-ket, removing all foul seed at one operation, such as Cockle, Wild Buckwheat, Chess, Mustard, Pigeon Grass, etc. Indorsed by the Wheat Growers' Conven-tion held at Fargo, N. D. last March, which was the greatest test ever given in interest to the farmer for clean seed. Write for circular and price list. We pay freight. Address
MINNEAPOLIS GRAIN CLEANER CO.,
224 Third St., South Minneapolis, Minn.

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SEEDS

Special Want Column.

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

SPECIAL:—Until further notice, orders from our subscribers will be received at 1 cent a word or 7 cents a line, cash with order. Stamps taken.

FOR SALE—Ten full-blood and high-grade Short-horn bulls from 18 to 20 months, all reds. Also litter of St. Bernard pups. F. H. Foster, Mitchell, Kans.

FLIES! FLIES!—Send 10 cents, and learn how to make tanglefoot fly paper. Holds all that can get on. Inexpensive; no humbug. Box 267, Newton, Kans.

FARM FOR SALE CHEAP—Of 160 acres in eastern Kansas, two miles from town, 75 miles from Kansas City, in good cultivation, fine orchard, good buildings and fences. A snap at \$18. Easy payments. Address owner, Geo. E. Winders, Mount Ida, Kans.

RAMS FOR SALE—A few choice thoroughbred R. Cotswold and Shropshire rams at \$10 per head. Write or call on Geo. B. Bell, Wakarusa, Kans.

FARM FOR SALE—320 acres, ten miles from Topeka, at \$20 per acre. Improvements cost \$4,000. 60 acres creek-bottom, plenty timber, water, orchard, and small fruits, evergreens and blue grass in front yard. Address T. J. Nichols, 509 Kansas Ave., Topeka, Kans.

FOR SALE—10 high-grade Hereford and 10 high-grade Shorthorn bulls, 12 to 20 months old. Address Hugh A. Hodgins, Topeka, Kans.

PURE-BRED Aberdeen-Angus cows and heifers: also bull calves old enough to wean, can be got from Conrad Kruger, Norfolk, Kans.

ESSEX SWINE, SHETLAND PONIES, SCOTCH COLLIES, Great Danes, Fox Terriers at half value for next 30 days. All pure bred and registered. Burton & Burton, Topeka, Kans.

PUPS, SCOTCH COLLIES—Eligible to pedigree. (From registered stock), for only \$3 and \$5. A. P. Chacey, North Topeka, Kans.

WE POSITIVELY PAY \$16 a week and expenses, to men with rigs, to introduce Egyptian Lice Killer and Poultry Compound in country. Address with stamp, Egyptian Drug Co., Parsons, Kans.

BREEDERS' ANNUAL REPORT FOR 1899—The great Kansas Live Stock Manual and proceedings of the Ninth Annual Convention of the Kansas Improved Stock Breeders' Association, contains 125 pages; price 25 cents. Address H. A. Heath, Secretary, Topeka, Kans.

FOR SALE—Imported English Coach stallion and Galloway bulls. W. Guy McCandless, Cottonwood Falls, Chase Co., Kans.

FOR SALE—\$8.00 per acre for improved 160-acre farm 1 1/4 miles north of Bushong Station, Lyon Co., Kans. Address, J. B. McAfee, Topeka, Kans.

EGGS FROM PURE-BRED WHITE AND BARRED PLYMOUTH ROCKS, \$1 per 15. S. F. Glass, Marion, Kans.

FOR SALE—100 cars cottonseed meal. Also corn and feed. Address Western Grain and Storage Co., Wichita, Kas.

WANTED—Every breeder in Kansas to become a member of the Kansas Improved Stock Breeders' Association. Send membership fee of \$1.00 to H. A. Heath, Secretary, Topeka, Kans., and you will receive the Breeders' Annual Report for 1899.

BERKSHIRE SOWS BRED—To farrow in May. Choice of individuality and breeding, eligible to registry, at \$20. Also two fine boars ready for service. Rutger Farms, Russell, Kans.

POLAND-CHINAS—No better anywhere. Five dollars each. Write for breeding. Hemenway, Hope, Kans.

BLOSSOM HOUSE—Opposite Union depot, Kansas City, Mo., is the best place for the money, for meals or clean and comfortable lodging, when in Kansas City. We always stop at the Blossom and get our money's worth.

NO EXCHANGE—A daughter of Hadley Jr., dam by Klever's Model, for ten bushels of alfalfa seed on track. F. W. Baker, Council Grove, Kans.

FOR SALE—Poland-Chinas and Duroc-Jerseys, all sizes. Barred Plymouth Rocks and Single Comb Brown Leghorns. Eggs \$1 per 15. Write D. Trott, Abilene, Kans.

FOR SALE—Good hedge posts, in car lots. E. W. Melville, Eudora, Kans.

If you have timothy, clover, prairie, alfalfa, or millet hay to market, correspond with J. W. Lowe & Co., 1313 W. Eleventh street, Kansas City, Mo. Liberal advances on shipments.

FOR SALE—Imported and full-blood Percheron, Clydesdale and Coach stallions. Good individuals, colors and ages. For further information address W. H. McMillen, Manager, Box 204, Topeka, Kans.

675-ACRE FARM FOR SALE—Only ten miles from the State capital; improved; has never-failing water. \$15.50 per acre if taken soon. Address J. Ferguson, Station B., Topeka, Kans.

ABERDEEN-ANGUS BULLS—Twelve extra individuals of serviceable ages; registered. Wm. B. Button & Son, Russell, Kas.

WHITE TO ALEX RICHTER—Hollywood, Kas., how to sub-irrigate a garden, etc., and cost of same. Send him the size or dimensions of your garden, and he will give full information.

HORSES.

PROSPECT FARM—CLYDESDALE STALLIONS, SHORT-HORN CATTLE, and POLAND-CHINA HOGS. Write for prices of finest animals in Kansas. H. W. McAfee, Topeka, Kas.

RIVERSIDE STOCK FARM.

Percheron and Roadster Horses and Shetland Ponies; also one Denmark Saddle Stallion; also Shorthorn Cattle. Stock of each class for sale. Also a car-load of young Shorthorn bulls for sale. Pedigrees guaranteed. Address
O. L. THISLER, Chapman, Kas.

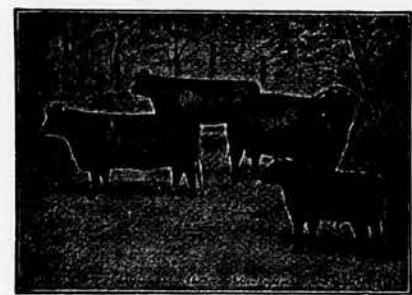


HERD BULLS FOR SALE

KANSAS LAD 134085, eighteen months old sired by Duke of Kansas 123126, and tracing to Imp Orlando and Imp. Golden Galaxy. Also
CONSTANCE DUKE 134083, twenty months old, by Duke of Kansas out of 14th Constance of Hillsdale by 60th Duke of Oxford 55734.
These two grand bulls should be herd-heads. Come and see them or address
B. W. GOWDY, Garnett, Kansas.



GLENDAL SHORTHORNS, Ottawa, Kans
Leading Scotch and Scotch-topped American families compose the herd, headed by the Cruickshank bulls, Glendon 119370, by Ambassador, dam Galanthus, and Scotland's Charm 127264, by Imp. Lavender Lad, dam by Imp. Baron Cruickshank. Young bulls for sale.
C. F. WOLF & SON, Proprietors.



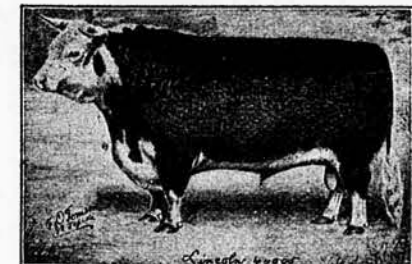
CEDAR HILL FARM.

Golden Knight 108086 by Craven Knight, out of Norton's Gold Drop, and Baron Ury 24 by Godoy, out of Mysie 50th, head the herd, which is composed of the leading families. Young bulls of fine quality for sale.
**C. W. TAYLOR,
PEARL, DICKINSON CO., KANS.**

ELDER LAWN HERD OF SHORTHORNS.



THE HARRIS-BRED BULL, GALLANT KNIGHT 124466, a son of Gallahad, out of 8th Linwood Golden Drop, heads herd. Females by the Cruickshank bulls, Imp. Thistle Top 83876, Earl of Gloster 74523, etc. Size, color, constitution and feeding qualities the standard. A few good cows for sale now bred to Gallant Knight. A few young bulls of serviceable age for sale. Address
T. K. TOMSON & SONS, DOVER, KANS.



SPRING VALLEY HEREFORDS.

Lincoln 47095 by Beau Real and Klondike 42001, at the head of the herd. Young stock of fine quality and extra breeding for sale. Personal inspection invited.
ALBERT DILLON, HOPE, KANS.

Successful Dairyman use 1 cent's worth of SHOO-FLY.

Saves 3 quarts milk daily if used in time. NO FLIES, TICKS, VERMIN OR SORES ON COWS. Thousands duplicate 10 gallons. Beware of imitations. "I have used several so-called 'Cattle Comforts', none equal to 'SHOO-FLY'. It is effective and cheap. Used 100 gallons." H. W. COMFORT, Fallington, Pa., President Pennsylvania Dairy Union. Send 25 cents. Money refunded if cow is not protected.
SHOO-FLY MFG. CO., 1005 Fairmount Ave., Philadelphia, Pa.

When writing our advertisers please mention Kansas Farmer.

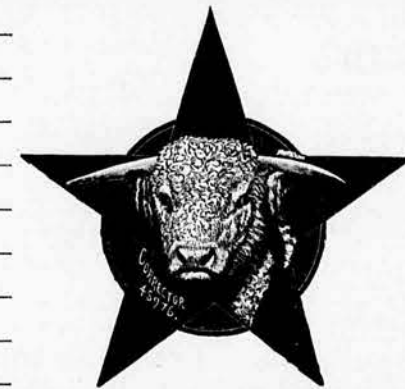
1839.

THE "CORRECTORS" ARE HERE.
THE "IMPROVERS" ARE COMING.

1899.

WEAVERGRACE BREEDING ESTABLISHMENT.

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Past is
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The
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Future
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All
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Achievements.

The Weavergrace present will bear the closest investigation and comparison. No Hereford is too good for Weavergrace. Neither time, labor, money nor any other factor within our reach will be spared in honest, energetic effort to make the **WEAVERGRACE HEREFORDS** the best herd of beef cattle in the world. Nothing from the herd offered privately. All reserved for annual spring auction. Three hundred and sixty-four days of the year devoted to the general Hereford interests, one day to the sale of the Weavergrace Herefords.
I have an Unrivalled List of registered Herefords (both sexes) and of grade Hereford steers and females on file for sale throughout the country, in my office, New York Building, Chillicothe. These are great bargains. All are invited to inspect this list, and spend a day at Weavergrace.
Hereford literature on application; also a colortype reproduction (16x22) of an oil painting of Cor-
T. F. B. SOTHAM, Chillicothe, Mo.

Sunny Slope Herefords.



**100
HEAD
FOR
SALE.**

CONSISTING OF 32 BULLS, from 12 to 18 months old, 21 2-year-old HEIFERS, the get of Wild Tom 51292, Kodax of Rockland 40731 and Stone Mason 13th 42397, and bred to such bulls as Wild Tom, Archibald V 544 '83, Imported Keep On 76015 and Sentinel 76063, Java 64045.
40 1-year-old HEIFERS and 7 COWS.
These cattle are as good individuals and as well bred as can be bought in this country. Finding that 400 head of the prospective increase of my 24 breeding cows is beyond the capacity of my farm, I have decided to sell the above-mentioned cattle at private sale, and will make prices an object to prospective buyers.

Address **C. A. STANNARD,** Emporia, Kans.

VALLEY GROVE SHORT-HORNS.

THE SCOTCH BRED BULLS

**Lord Mayor 112727 and
Laird of Linwood 127149
HEAD OF THE HERD.**



LORD MAYOR was by the Baron Victor bull Baron Lavender 2d, out of Imp. Lady of the Meadow and is one of the greatest breeding bulls of the age. Laird of Linwood was by Gallahad out of 11th Linwood Golden Drop. heifers bred to Laird of Linwood for sale. Also bred Shetland ponies. Inspection and spondee solicited. A few young bulls sired by Lord Mayor for sale.
Address **T. P. BABST, PROP., DOVER, SHAWNEE CO., KAS.**

Nelson & Doyle

Room 220, Stock Yards Exchange Building, KANSAS CITY, MO.

Have for sale at all times, singly or in car lots... **Registered Herefords and Shorthorns.**

Stock on Sale at Stock Yards Sale Barn, also at Farm Adjoining it.

N. B.—We have secured the services of John Gosling, well and favorably known as a practical and expert judge of beef cattle, who will in the future assist us in this branch of our business.

FOR SALE.

Ten Shropshire Ram Lambs,

80 to 100 pounds each, well marked, low and blocky, and with magnificent quality of fleece. These ram lambs are the result of the eighth top cross of registered Shropshire rams on Merino topped Cotswold cross. Price, \$10 and \$12 crated and delivered at Moran, Kansas. Pacific and M., K. & T. Cash must accompany order.

**J. Clarence Norton,
Moran, Allen Co., Kansas.**

200 Shropshire Rams.

Extra Choice Registered Rams to Head Pure-bred Flocks.
Car Lots of pure-bred and high-grade yearlings, large, strong, well-wooled rams for range trade, all meet hardest competition.
Come and see them or write wants.

KIRKPATRICK & SON, Connor, Wyandotte Co., Kansas.

GALLOWAYS ARE THE ORIGINAL POLLED BEEF BREED!

For full particulars write to **FRANK B. HEARNE, Secretary American Cattle Breeders' Association, Independence, Mo.** If you want to buy a Galloway he can give you the address of breeders.